

2012
**Scientific
Report**

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Presentation



Central to the biomedical research model based on centres of excellence and accredited institutes are cooperation efforts between major teaching/research hospitals, universities and other related healthcare organizations. Biomedical research institutes seek to concentrate resources in order to be more efficient and competitive in ultimately gearing biomedical research towards care and public health needs. It was with this ambitious yet pressing aim in mind that the Sant Pau Biomedical Research Institute (IIB Sant Pau) was first created. This report demonstrates how, in its second year as an accredited institute, IIB Sant Pau has managed to successfully compete for public and private research resources and to sustain its scientific growth.

Nevertheless, an organization's capacity to ensure its continuity and relative autonomy depends critically on the economic health of all the agents involved. We should not become discouraged by the current economic difficulties, however. The HSCSP Research Institute -the managing body of IIB Sant Pau- successfully balanced its books for four years, although the fall in regular revenues and the lack of expected growth in

structured financial support from its main trustees have led to notable difficulties in achieving budgetary equilibrium in the last year.

The current scenario -with constraints on R+D+I investment by the public sector and the pharmaceutical industry and with financial difficulties affecting the research capacity of hospitals- forces us to be more objective and explicit in how we use resources. It also forces us to adopt a more rigorously analytical perspective on the recruitment and retention of research talent and on the competitiveness, growth and viability of our biomedical research models. Now more than ever we need to defend the crucial role of hospital-centred research and the active commitment of accredited hospitals as the main guarantees of an inclusive healthcare model that balances care, teaching and research. In light of these reflections, we will endeavour to move forward in our aim of becoming a national and international biomedical research landmark, while continuing to provide opportunities for talented healthcare professionals and to encourage researchers in promoting innovative scientific advances focused on the health and healthcare needs of society.

Jaume Kulisevsky
IIB Sant Pau Manager



Who We Are

The Sant Pau Biomedical Research Institute (IIB Sant Pau) conducts research into basic, clinical and epidemiological medicine and healthcare services. Ten entities cooperate to perform high-level research into new techniques and processes aimed at improving the quality of life of patients. Stakeholders include the following:

- Hospital de la Santa Creu i Sant Pau Healthcare Management Foundation
- Hospital de la Santa Creu i Sant Pau Private Foundation
- Hospital de la Santa Creu i Sant Pau Research Institute
- Autonomous University of Barcelona - Ageing Institute
- Catalan Institute of Cardiovascular Sciences
- Puigvert Foundation
- Blood and Tissue Bank
- Iberoamerican Cochrane Centre
- Barcelona-Sardenya Primary Health Care Centre
- Public Health Agency of Barcelona

IIB Sant Pau was founded in 2009 as an association of healthcare entities carrying out their own research. Throughout 2010, IIB Sant Pau became consolidated as a research centre, while continuing to implement an accreditation process as a Healthcare Research Institute with the Spanish Ministry of Science and Innovation. This accreditation was finally obtained in early 2011. The institutions participating in IIB Sant Pau, which together form a natural alliance for historical and geographical proximity reasons, jointly implement research activities and cooperate in other scientific areas. The cooperation between these institutes represents a qualitative leap in terms of fostering translational research projects that bridge the gap between basic and clinical research.

The knowledge developed in this kind of research is channelled to society by the application of discoveries to clinical practice and to healing patients. The most tangible benefits are the application of technology to health and the scientific communication of new knowledge. This research infrastructure also generates employment and spotlights Catalonia's contributions to biomedical research. The success as a research centre ultimately translates to patient health.



Strategic Objectives

IIB Sant Pau's mission is to manage, promote, develop and communicate research into the health sciences.

To fulfil its mission, IIB Sant Pau has set itself a number of strategic objectives that guide its activities:

- Promote and consolidate relationships and knowledge exchanges between IIB Sant Pau researchers and with other public and private organizations, prioritizing the implementation of joint projects and the creation of multidisciplinary teams so as to strengthen alliances and implement translational research with a bearing on clinical activities.
- Organize courses, conferences, open days, seminars and workshops aimed at communicating scientific advances to society and at facilitating innovation and technology transfers to the productive sector.
- Organize and participate in continuous professional development, whether by developing teaching activities or arranging grant-aided stays abroad for researchers.
- Participate in developing policies aimed at coordinating biomedical research in Catalonia, while ensuring a strong presence in national and international research projects and networks of excellence.
- Acquire, maintain and optimize use of scientific and technological infrastructures and equipment.

IIB Sant Pau Entities



Hospital de la Santa Creu i Sant Pau Healthcare Management Foundation

The Hospital de la Santa Creu i Sant Pau Healthcare Management Foundation (HSCSP Healthcare Management Foundation) is a high-technology specialist care hospital performing patient care, teaching and research activities in the clinical, epidemiological and healthcare services fields. It offers accredited specialist and undergraduate health science training courses.



Hospital de la Santa Creu i Sant Pau Research Institute

The Hospital de la Santa Creu i Sant Pau Research Institute (HSCSP RI) promotes, manages and communicates biomedical research conducted in the HSCSP. It raises and manages funds and other resources for health science research in the basic, clinical, epidemiological and healthcare service fields.



Hospital de la Santa Creu i Sant Pau Private Foundation

The Hospital de la Santa Creu i Sant Pau Private Foundation (HSCSP Private Foundation), which owns the HSCSP, is responsible for building, improving and maintaining buildings and premises used for medical care and associated and complementary activities.

Autonomous University of Barcelona (UAB) - Ageing Institute

The UAB, a leading university renowned for quality and innovation in research, coordinates an influential scientific and technological centre, called Esfera UAB, responsible for promoting new business projects. The UAB also projects its productive activity in such a way as to disseminate new knowledge in society.



The Ageing Institute, attached to this university, is a non-profit foundation governed by a board of trustees formed by the UAB, the UAB Foundation and the Agrupació Mútua del Comerç i de la Indústria. Its mission is to improve knowledge of different aspects related to ageing with the aim of enhancing the quality of life of older people and promoting actions that contribute to adapting society and people to the challenges of demographic change.



Catalan Institute of Cardiovascular Sciences (ICCC)

The ICCC performs basic and clinical research into cardiovascular and heart diseases. The fact that it competes successfully at the international level enables it to avail of the infrastructure necessary to transfer basic research to the development of therapies and diagnostic methods, ultimately improving medical care for patients.



Puigvert Foundation

The Puigvert Foundation has the aim of deepening medical knowledge and perfecting medical techniques in the field of research and treatment of urinary and male reproductive system disorders and diseases. More specifically, it performs urology, nephrology and andrology research, focusing particularly on medical care, teaching, training and studies.



Iberoamerican Cochrane Centre

This independent, not-for-profit organization has as its main aim the promotion of medical practice based on the best available scientific evidence. To this end, it ensures that valid, useful, up-to-date and thoroughly reviewed information is made available for clinical and healthcare decision making.



Barcelona-Sardenya Primary Care Centre

Part of the public healthcare system, this teaching and care centre provides primary care services in its catchment area of Barcelona and has a research unit which performs clinical trials and epidemiology studies.



Public Health Agency of Barcelona

This autonomous body, created by the Barcelona Health Consortium, has as its main mission to analyse and monitor the health of the population of Barcelona with a view to improving health and preventing risk. It is also responsible for epidemiological surveillance and the provision of medical care to substance abusers. It has an excellent track record in the public health and applied research fields.



Blood and Tissue Bank

The Blood and Tissue Bank is a public healthcare body which carries out patient care, teaching and research activities in the blood transfusion and tissue bank fields.

IIB Sant Pau Scientific Structure

IIB Sant Pau has seven research areas that can be divided into two research lines: vertical, transversal and associated groups.

The vertical line has five main areas:

- Cardiovascular Diseases
- Genetic, Metabolic and Inflammatory Diseases
- Haematological and Oncological Diseases
- Neurological and Mental Disorders
- Urology and Experimental Surgery

The transversal line consists of two areas:

- Epidemiology, Public Health and Healthcare Services
- Molecular, Genomic, Cellular and Kinetic-Dynamic Bases for Diseases and their Treatment

Activities in the transversal line complement and support research in the vertical line.



Vertical Areas of Research



Cardiovascular Diseases

The incorporation of new technologies that facilitate molecular profiling and gene regulation has led to innovative research into heart disease. The great diversity of the groups in this area gives research varied perspectives, whether in developing or testing the effectiveness of new biomarkers (as in the investigation of the metabolic and genetic bases of diseases) or improving the range of results and possible applications in short-term therapies.



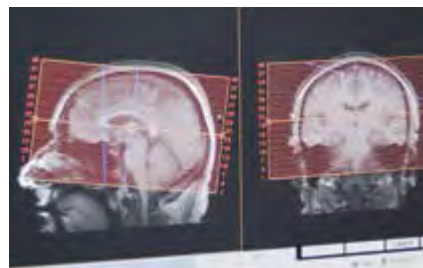
Genetic, Metabolic and Inflammatory Diseases

Identifying the genes and mutations responsible for genetic diseases is an essential component of knowledge and understanding of the physiological bases of metabolic pathways and also in the development of new forms of treatment for common diseases affecting large proportions of the population, such as diabetes and obesity, known but with a hereditary diseases, infectious diseases (AIDS, tuberculosis, etc) and rare diseases (not well know but with a devastating impact on those affected).



Haematological and Oncological Diseases

A broad range of research is conducted in this area, particularly in head-and-neck, breast, ovary, colorectal and haematological cancers, among others. Research in covers a wide range of fields, with disciplines that include nanomedicine, new anticancer agents and predictive molecular markers. Initiatives of specific relevance include the GAIT (Genetic Analysis of Idiopathic Thrombophilia) project, a world pioneer in the identification of genes influencing the risk of thromboembolic disease, and research into antitumour immunotherapy in animals and humans.



Neurological, Mental Disorders and Ageing

This area covers research in a broad range of disciplines. Besides the study of ageing and the most common neurodegenerative disorders such as Alzheimer and Parkinson, neurological research is also focused on stroke, neuroimmunology and neuromuscular diseases. Research into cognitive, affective, psychotic and personality disorders ranges from identification and evaluation of new therapeutic targets to neurogenesis and the effects of deep-brain stimulation. Research in this field has the support of the Drug Research Centre, which assesses the effectiveness of new drugs and therapies in humans.



Uronephrology and Experimental Surgery

IIB Sant Pau promotes experimental surgery in the knowledge that this area has a promising future both as an independent research line and as a complement to general surgery. This interdisciplinary approach provides valuable new insights and ensures techniques and procedures of great clinical relevance. Current areas of interest include the development of minimally invasive techniques and the application of deep-brain stimulation in different pathologies. In the fields of andrology, urology and nephrology research, the Puigvert Foundation is a leading centre in Spain.

Transversal Areas of Research



Epidemiology, Public Health and Healthcare Services

Research in these fields aims to determine the magnitude and distribution and identify the determinants of public health problems in order to evaluate the effectiveness and efficiency of public interventions and prevention practices. This area also aims to reduce patient risk and make healthcare safer by promoting evidence-based medical practice and ensuring the use of conscious, explicit and rational decision making concerning patient care.



Molecular, Genomic, Cellular and Kinetic-Dynamic Bases for Diseases and their Treatment

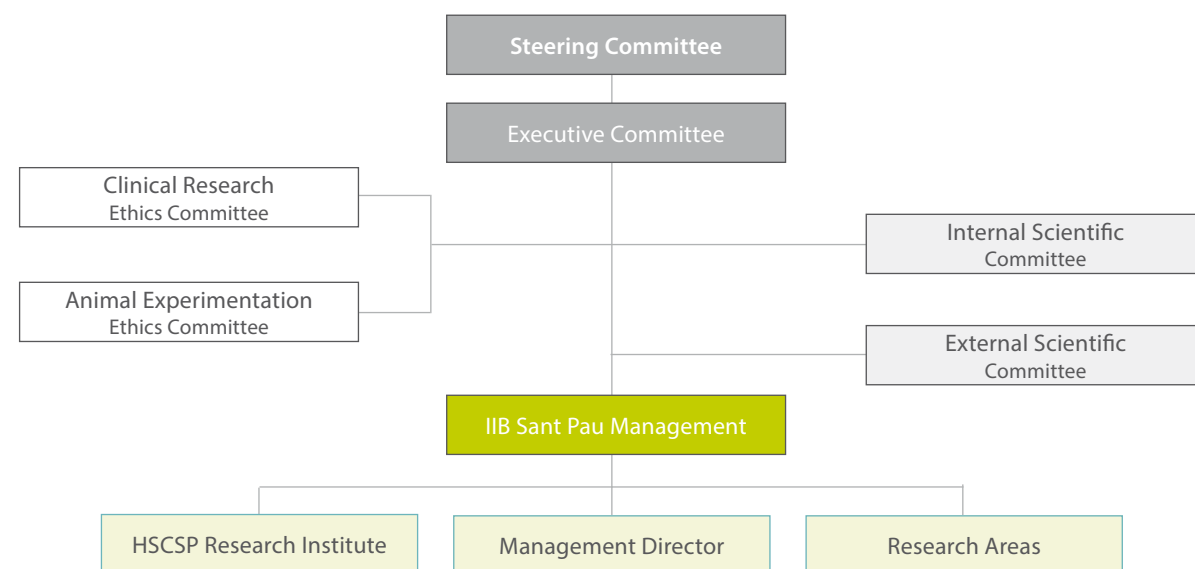
This area focuses on the structure of proteins associated with neurodegenerative diseases and inflammatory processes and on factors linked to the innate immune system. Research is also conducted in the area of osteoporosis, ageing-related macular degeneration and coagulation-cascade factors closely linked to cardiovascular disease and haemophilia. Such studies are vital to the understanding of diseases of the heart, blood and nervous systems and to advances in the fields of cancer and epidemiology.

Associated Groups



This area includes HSCSP Research Institute groups that do not form part of IIB Sant Pau because they have not, as yet, been accredited by the External Scientific Committee.

Organization Chart



Steering Committee

Chair

Dr. Alberto Salazar
Hospital de la Santa Creu i Sant Pau Healthcare Management Foundation

Members

Dr. Jordi Bachs
Hospital de la Santa Creu i Sant Pau Private Foundation

Dr. Lluís Tort
Autonomous University of Barcelona

Dr. Lina Badimon
Catalan Institute of Cardiovascular Sciences

Mr. Martí Masferrer
Puigvert Foundation

Dr. Jordi Sierra
Blood and Tissue Bank

Dr. Xavier Bonfill
Iberoamerican Cochrane Centre

Mr. Conrad Casas
Public Health Agency of Barcelona

Mr. Jaume Sellarès
Barcelona-Sardenya Primary Care Centre

Dr. Jaume Kulisevsky
Hospital de la Santa Creu i Sant Pau Research Institute

Executive Committee

Chair

Dr. Jaume Kulisevsky
IIB Sant Pau Manager

Representatives of Associated Entities

Dr. Manel Trias
Autonomous University of Barcelona

Dr. Ramon Mangués
Hospital de la Santa Creu i Sant Pau Research Institute

Dr. Xavier Bonfill
Iberoamerican Cochrane Centre

Dr. Juan Cinca
Hospital de la Santa Creu i Sant Pau Healthcare Management Foundation

Dr. Gemma Craywinckel
Hospital de la Santa Creu i Sant Pau Private Foundation

Dr. Lina Badimon
Catalan Institute of Cardiovascular Sciences

Dr. Helena Isabal
Puigvert Foundation

Dr. Jordi Sierra
Blood and Tissue Bank

Dr. Carme Borrell
Public Health Agency of Barcelona

Dr. Carlos Brotons
Barcelona-Sardenya Primary Care Centre

Internal Scientific Committee

Chair

Dr. Jaume Kulisevsky
IIB Sant Pau Manager

Vice-Chair

Dr. Antonio López Pousa
Chair, Clinical Research Ethics Committee

4 members designated by the IIB Sant Pau Manager

Dr. Antoni Salvà
Autonomous University of Barcelona - Ageing Institute

Dr. Carlos Brotons
Barcelona-Sardenya Primary Care Centre

Dr. Lina Badimon
Catalan Institute of Cardiovascular Sciences

Dr. Sílvia Mateu
Puigvert Foundation

2 members each representing IIB Sant Pau thematic areas

Cardiovascular Diseases

Dr. Jordi Ordóñez
Hospital de la Santa Creu i Sant Pau:
Cardiovascular biochemistry

Dr. Luis Vila
Hospital de la Santa Creu i Sant Pau
Research Institute: Vascular biology and inflammation

Genetic, Metabolic, Inflammatory and Infectious Diseases

Dr. Cándido Juárez
Hospital de la Santa Creu i Sant Pau:
Inflammatory diseases

Dr. Carlos Guarner
Hospital de la Santa Creu i Sant Pau:
Cirrhosis complications

Haematological and Oncological Diseases

Dr. Josep Nomdedéu
Hospital de la Santa Creu i Sant Pau:
Haematological diagnosis

Dr. Jaime Prat
Hospital de la Santa Creu i Sant Pau:
Molecular cancer pathology

Neurological, Mental Disorders and Ageing

Dr. Víctor Pérez
Hospital de la Santa Creu i Sant Pau: Clinical psychiatry

Dr. Alberto Lleó
Hospital de la Santa Creu i Sant Pau Research Institute: Neurobiology of dementia

Urology and Experimental Surgery

Dr. José Ballarín
Puigvert Foundation: Nephrology research

Dr. Manel Trias
Hospital de la Santa Creu i Sant Pau:
General and digestive surgery

Epidemiology, Public Health and Healthcare Services

Dr. Gerard Urrútia
Hospital de la Santa Creu i Sant Pau:
Clinical epidemiology and healthcare services

Dr. Carles Ariza
Public Health Agency of Barcelona:
Evaluation of public health policies and programmes

Molecular, Genomic, Cellular and Kinetic-Dynamic Bases for Diseases and Treatments

Dr. Jordi Sierra
Blood and Tissue Bank: Generation of advanced treatments

Dr. José Manuel Soria
Hospital de la Santa Creu i Sant Pau Research Institute: Genomics and bioinformatics for genetically complex disease

External Scientific Committee

Dr. José López-Barneo
Physiology professor
Institute of Biomedicine of Seville (Spain)

Dr. Ángel María Carracedo
Genomic medicine group researcher
Institute of Legal Medicine
Faculty of Medicine and Dentistry
Santiago de Compostela University (Spain)

Dr. Vicente Vicente
Haematology group researcher
Faculty of Internal Medicine
Murcia General University Hospital (Spain)

Dr. José Palacios
Head of the pathology/anatomy Department
Ramón y Cajal Hospital (Madrid, Spain)

Dr. Agustín Gómez de la Cámara
Clinical epidemiology group researcher
Doce de Octubre Teaching Hospital (Madrid, Spain)

Dr. John Louis McGregor
Director of Research-INSERM Unit 689
Cardiovascular Research Centre–Lariboisière Hospital (Paris, France)

Dr. Jordi Alonso
Health Services Research Unit
Hospital del Mar Municipal
Institute for Medical Research (Barcelona, Spain)

Mr. Guillem López Casasnovas
Professor
Faculty of Economics and Business Sciences
Pompeu Fabra University (Barcelona, Spain)

Financial Data

Public/Private Income Summary 2005-2012



In millions of euros

Income Statement year ending 31 December 2012

Income from activities	11,234,116
Services	3,435,878
Collaborations with partners and sponsors	448,897
Government grants	6,505,216
Other grants, donations and legacies	1,148,249
Repayment of grants, donations, etc	-304,124
Stocks and supplies	-1,388,522
Material and equipment for activities	-1,388,522
Other income	5,100
Additional and management income	5,100
Personnel expenditure	-7,995,917
Salaries	-6,283,016
Social security	-1,712,900
Other operating expenses	-3,629,883
External services	-3,049,299
Repairs and maintenance	-169,564
Freelance services	-451,631
Insurance	-78,406
Banking	-18,679
Sundry	-236
Other services	-2,330,784
Taxes	-16,548
Loss, deterioration and variation in provisions for operations	-22,964
Other operating expenses	-541,072
Depreciation of fixed assets	-1,115,140
Grants, donations and bequests transferred to results	914,047
Deterioration and gains/losses on disposal of fixed assets	-80,691
Gains/losses from disposal and other	-80,691
Other gains/losses	-1,122
Incidental expenses	-132,828
Incidental income	131,706
OPERATIONAL PROFIT/LOSS	-2,058,010
Financial income	531,535
From investments in equity instruments	0.00
Negotiable costs	531,535
Financial expenditure	-157,101
Debts with third parties	-157,101
Exchange differences	0
FINANCIAL PROFIT/LOSS	374,434
OVERALL PROFIT/LOSS	-1,683,576

In euros

Scientific Outcomes

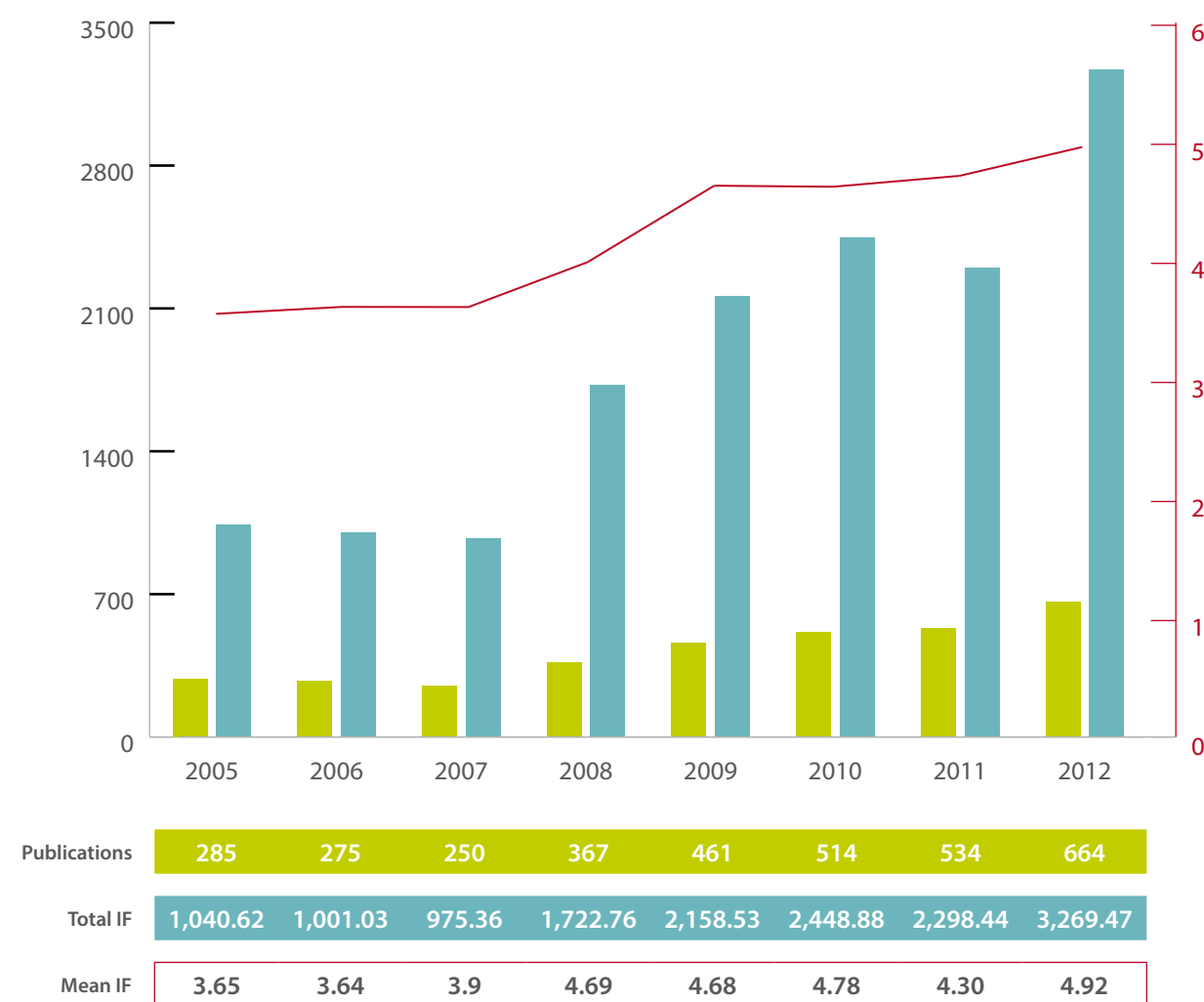
Outcomes for IIB Sant Pau's scientific activities are summarized in the following pages as follows:

- **Publications with an Impact Factor (IF):** This figure shows IIB Sant Pau publications over the years with an impact factor, one of the most important indicators used to identify the relevance of a science journal in its field and to give an approximate idea of the quality of the publications of researchers.
- **Publications by Thematic Area:** This figure reflects the relative importance of each of the thematic areas covered by IIB Sant Pau.
- **Publications by Quartile:** This figure depicts IIB Sant Pau publications by quartiles that reflect the importance of the scientific journal. The journals in a specific category are listed in descending order according to their impact factor and the list is divided into four equal quartiles. Thus, journals in the top quartile (Q1) are the most important journals in their category.
- **Research Resources and Training:** These tables show the list of institutions providing support to IIB Sant Pau and sharing its vision of research.
- **Doctoral Theses:** This table reflects the potential of up-and-coming IIB Sant Pau staff members and their ability to generate new ideas and drive new projects.
- **Patents:** This table shows the patents requested by IIB Sant Pau researchers between 2009 (foundation year) and 2012.
- **Technology Transfer Agreements:** This table reflects agreements signed between 2009 (foundation year) and 2012.



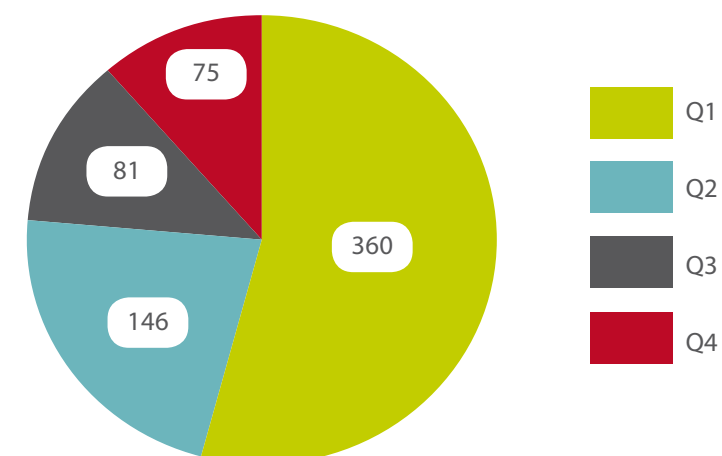
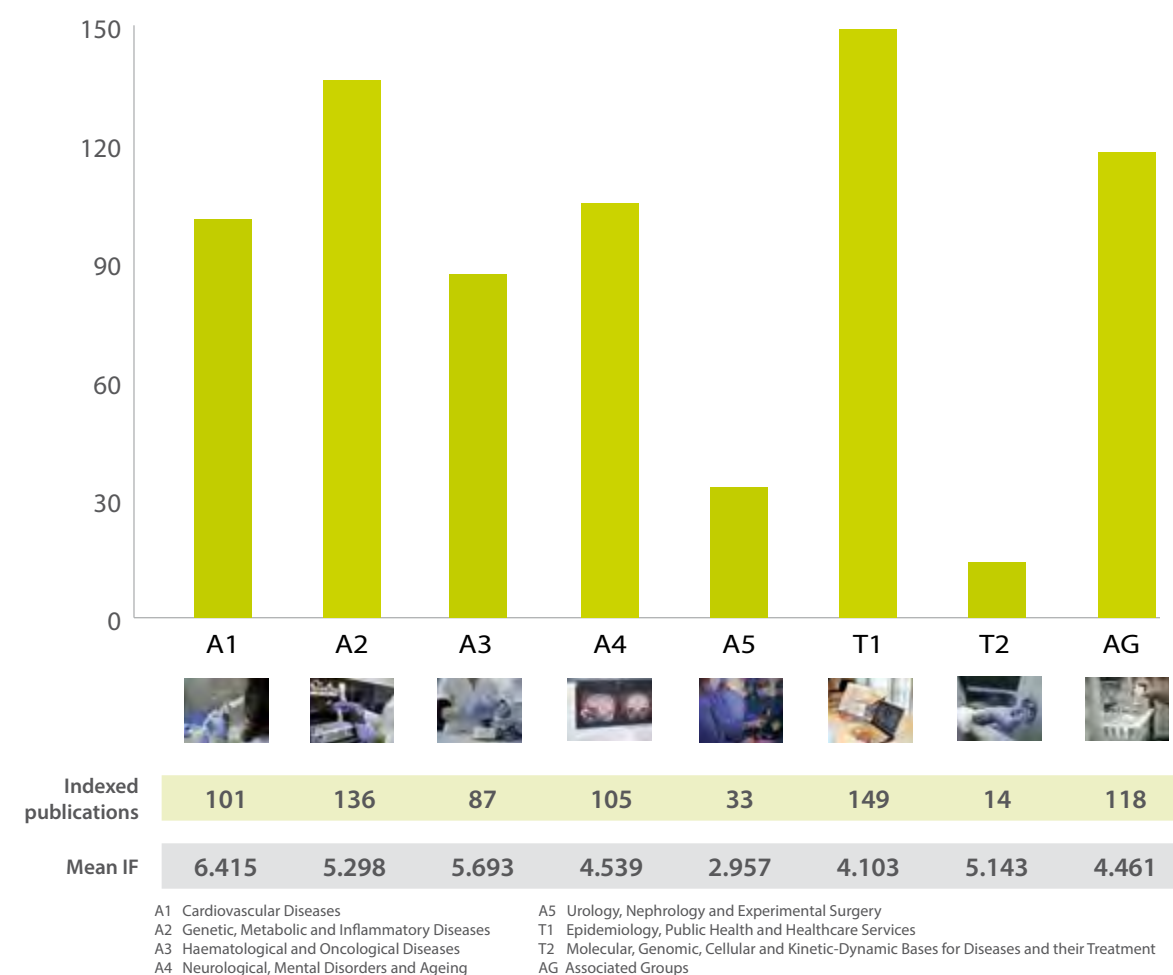
Publications with an Impact Factor

Production status



Publications by Thematic Area and Quartile

Indexed publications



Research Resources

Centre	Active		Granted	
	2011	2012	2011	2012
AGAUR (Catalan Agency for University and Research Support Management)	20	19	1	0
European projects	7	6	4	2
American projects	1	0	0	1
Caixa Tarragona	1	0	0	0
CNIC (National Cardiovascular Research Centre)	1	1	0	0
COIB (Official College of Nurses of Barcelona)	5	5	1	0
FEA (Spanish Arteriosclerosis Foundation)	1	0	0	0
FIPSE (Foundation for AIDS Research and Prevention in Spain)	1	0	0	0
Spanish Genome Foundation	0	0	0	1
Caixa Navarra	1	0	0	0
La Marató de TV3 Foundation	14	16	3	0
FMM (Mutua Madrileña Foundation)	3	1	1	0
Farmaindustria	2	2	0	0
MAPFRE Foundation	3	2	0	1
Spanish Ministry of Economy and Competitiveness - ISCIII (Carlos III Health Institute)	103	110	32	29
Spanish Ministry of Economy and Competitiveness (Secretariat of Research, Development and Innovation)	8	6	2	0
Spanish Ministry of Health, Social Services and Equality	7	12	6	0
Spanish Ministry of Industry, Energy and Tourism	2	1	1	0
Spanish Ministry of Education, Culture and Sports	0	1	1	0
SEOM (Spanish Medical Oncology Society)	1	0	0	0
SEPAR (Spanish Pneumology and Thoracic Surgery Society)	1	1	0	0
SERAM (Spanish Medical Radiology Society)	2	2	0	0
GEIS (Spanish Sarcoma Research Group)	1	0	0	0
AECC (Spanish Association Against Cancer)	0	1	1	0
Merk Serono	0	1	1	1
ACMCB (Catalan and Balearic Academy of Medical and Health Sciences Foundation)	0	1	1	0
SOCAP (Catalan Society of Pneumology)	0	0	0	1
ISHLT (The International Society for Heart and Lung Transplantation)	0	0	0	1
SED (Spanish Diabetes Society)	0	0	0	1
FUCAP (Catalan Pneumology Foundation)	0	3	0	0
SEC (Spanish Society of Cardiology)	0	3	0	0
AEA (Spanish Arthroscopy Association)	0	1	0	0
	185	195	55	38

Source: Hospital de la Santa Creu i Sant Pau Research Institute

Research Training

Centre	Type of grant	Active		Granted	
		2011	2012	2011	2012
AGAUR (Catalan Agency for University and Research Support Management)	Renewal of the grants programme for researcher training	4	4	2	2
	Study grants for outside Catalonia	1	0	0	1
Catalan Department of Health	Stabilization agreement	1	3	2	1
	Stabilization agreement for support technicians	0	0	3	3
Catalan General Directorate for Research	Programme i3 agreement	1	0	0	0
HSCSP Management Foundation	MIA contract	4	4	4	5
Spanish Ministry of Economy and Competitiveness (Secretariat of Research, Development and Innovation)	Juan de la Cierva	2	3	1	0
	Research staff training (FPI)	1	1	0	0
	University teacher training (FPU)	1	1	0	0
	Ramón y Cajal	0	1	1	0
Spanish Ministry of Economy and Competitiveness - ISCIII (Carlos III Health Institute)	Predoctoral grants for research training	7	7	1	3
	Miguel Servet contracts for national health service researchers	6	4	1	0
	Sara Borrell postdoctoral research training contracts	5	4	1	4
	Rio Hortega post-training contracts for specialist healthcare personnel	7	8	3	1
	Contracts for support technicians for national health service research	2	2	1	0
		42	42	20	20

Source: Hospital de la Santa Creu i Sant Pau Research Institute

Doctoral Theses

IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Inflammation and Vascular Remodelling	ICCC	Anna Guadall	Cristina Rodríguez, José Martínez	Mechanisms for regulating lysyl oxidase and fibulin-5 in the vascular wall: modulation by hypoxia	University of Barcelona
Multi-organ Damage	HSCSP	Ana María Laiz	Jordi Casademont, Jordi Farrerons	Mortality and functional status the first year after femoral fracture	Autonomous University of Barcelona
Multi-organ Damage	HSCSP	Esther Francia	Jordi Casademont	Predicting intrahospital mortality in internal medicine	Autonomous University of Barcelona
Multi-organ Damage	HSCSP RI	Jorge Malouf	Josep Baños	Pain treatment in hospitalized patients: relationship between satisfaction and analgesic treatment	Autonomous University of Barcelona
Healthcare Inequalities	ASPB	Davide Malmusi	Carme Borrell, Joan Benach	Determinants of social inequalities in self-rated health: analysis at the intersection of gender, class and migration type	Pompeu Fabra University, Barcelona
Healthcare Inequalities	ASPB	Mercè Gotsens	Carme Borrell, Catherine Pérez	Socioeconomic inequalities in injury mortality in small urban areas	Pompeu Fabra University, Barcelona
Healthcare Inequalities	ASPB	Marc Marí	Miguel Ángel Martínez, Carme Borrell	Multivariate extensions of the Besag- York-Mollié model: application to the study of socioeconomic inequalities in mortality	Pompeu Fabra University, Barcelona
Healthcare Inequalities	ASPB	Laia Palència	Carme Borrell	Socioeconomic inequalities in the use of healthcare services in Europe: the role of public coverage and population-based cancer screening programmes	Pompeu Fabra University, Barcelona
Healthcare Inequalities	ASPB	Amaia Bacigalupe	Carme Borrell	Magnitude and evolution of social inequalities in smoking addiction in the Basque Country 1986-2007	Autonomous University of Barcelona
Generation of Advanced Therapy Medicines	BST	Arnau Pla	Joan Garcia, Francesc Gòdia, Jordi Joan Cairó	Expansion of haematopoietic stem cells - basis for developing an advanced therapy product	Autonomous University of Barcelona
Molecular Neuropharmacology	HSCSP RI	Arnau Hervera	Olga Pol	Role of gaseous neurotransmitters in the effects and expression of opioid and cannabinoid receptors in neuropathic pain	Autonomous University of Barcelona

Evaluation of Public Health Policies and Programmes	ASPB	Xavier Garcia	Ma José López	Adolescent risk behaviours and attitudes: the FRESC survey	Pompeu Fabra University, Barcelona
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IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Evaluation of Public Health Policies and Programmes	ASPB	Gemma Serral	Rosa Puigpinós	Breast cancer incidence: the role of screening programmes	Pompeu Fabra University, Barcelona
Ear, Nose and Throat Cancer	HSCSP	Montserrat López	Xavier León, Miquel Quer	The lymph node ratio as a predictor of survival in head and neck squamous cell carcinoma	Autonomous University of Barcelona
Ear, Nose and Throat Cancer	HSCSP	Jacinto García	Xavier León, Miquel Quer	Evaluation of a classification and staging method for second-time head and neck cancers	
Genetics in Neurodegenerative Diseases	HSCSP RI	Núria Setó	Jordi Clarimon	Genetic risk factors implicated in cognitive decline in neurodegenerative diseases	Rovira i Virgili University, Tarragona
Primary Care Research	EAP Sardenya	Flora López	Carlos Brotons, Vicente Gil	Determinants of metabolic control and cardiovascular risk factors in type 2 diabetic patients in primary care	Miguel Hernández University, Elche, Alicante
Molecular and Therapeutic Pathologies of Ischaemic and Atherothrombotic Diseases	ICCC	Judit Cubedo	Lina Badimon	Identification of new cardiovascular disease biomarkers using proteomics techniques	University of Barcelona
Transmissible Diseases	ASPB	Joan Pau Millet	Joan A. Caylà	Study of recurrence and survival in patients with tuberculosis who completed treatment in the city of Barcelona	Autonomous University of Barcelona
Transmissible Diseases	ASPB	Javier de Benito	Ma Teresa Mora	Horse meat: slaughterhouse damage, expert opinions and chemical composition	Autonomous University of Barcelona
Oncogenesis and Antitumour Drugs	HSCSP RI	Marta Téllez	Ramon Mangués, Miguel Angel Pavón	Identification of prognostic markers for locally advanced head and neck squamous cell carcinoma: role of Rab-25 and Serpin-1	Autonomous University of Barcelona
Oncogenesis and Antitumour Drugs	HSCSP RI	Patricia Álamo	Ramon Mangués, Ma Virtudes Céspedes	Human colorectal cancer: metastatic phenotype associated with expression of different K-ras gene mutants	University of Barcelona
Human Experimental Neuropsychopharmacology	UAB	Rafael Guimaraes	Jordi Riba	Ayahuasca: physiological and subjective effects, comparison with d-amphetamine and repeated dose assessment	Autonomous University of Barcelona
Human Experimental Neuropsychopharmacology	HSCSP RI	José Carlos Bouso	Jordi Riba	Personality, psychopathology, life attitudes and neuropsychological performance of ritual users of ayahuasca	Autonomous University of Barcelona
Angiology, Vascular Biology and Inflammation	UAB	Ana Quintana	Mercedes Camacho, Luis Vila, Xavier León	Prognostic role of nuclear factor kappa-B in head and neck squamous cell carcinoma treated with radiotherapy	Autonomous University of Barcelona
Pharmacological Research in Humans	HSCSP RI	Sandra Giménez	Rosa M. Antonijoan	Effect of neuroleptics on humans. Atypical neuroleptics, traditional polysomnographs and microstructure quantification	Autonomous University of Barcelona
Cell Therapy	ICCC	Julio Rodríguez	Jerónimo Blanco, Nuria Rubio	Cell differentiation in tissue regeneration monitored by non-invasive imaging procedures	Autonomous University of Barcelona

Doctoral Theses

IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Cell Therapy	ICCC	Elisabet Aguilar	Jerónimo Blanco	Adipose tissue mesenchymal stromal cells with a powerful proliferative capacity: characterization and applications in therapy	University of Barcelona
Cell Therapy	ICCC	Maria Alieva Krashennnikova	Jerónimo Blanco	Adipose tissue mesenchymal stromal cells as therapeutic vehicles against glioblastoma	University of Barcelona
Clinical Oncology	HSCSP	David Páez	Agustí Barnadas, Montserrat Baiget	Pharmacogenetics in colorectal cancer treatment	Autonomous University of Barcelona
Molecular Bases of Disease	HSCSP RI	Elena de Mendoza	Pablo Fuentes-Prior, Eduardo López-Collazo	Activation mechanisms of the innate immune system: structure-function studies of interactions between death domains of MyD88 and IRAK proteins	Autonomous University of Madrid
Genetic Diseases	Genoma España	Eva Also	Eduardo Tizzano	SMN2 as a therapeutic target in spinal muscular atrophy	University of Barcelona
Genetic Diseases	Carlos III Health Institute	Rebeca Martínez	Eduardo Tizzano	Neuromuscular junction and innervation in normal human development and in spinal muscular atrophy	University of Barcelona
Neuroradiology	IMIM	Gonzalo Sánchez-Benavides	Jordi Peña-Casanova, Beatriz Gómez-Ansón	Cognitive and neuroimaging profiles in mild cognitive impairment and Alzheimer disease	Autonomous University of Barcelona
Neuroradiology	HSCSP	Esther Granell	Beatriz Gómez-Ansón, A. Martínez-Noguera	Radiological findings, cortical thickness and hippocampal alterations in structural MRI in carriers of the fragile X premutation	Autonomous University of Barcelona
Neuroradiology	HSCSP	Idoia Corcuera	Beatriz Gómez-Ansón, Jaume Kulisevsky	Study of cortical thickness using automated methods in a GRID environment in structural high-field MRI studies of patients with cognitive impairment associated with Parkinson disease	Autonomous University of Barcelona
Neuroradiology	PIC-UAB	Patricia Pires	Beatriz Gómez-Ansón, Susan Webb	White matter alterations in Cushing disease studied by high-field MRI (3T)	Autonomous University of Barcelona

IIB Sant Pau Associated Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Plastic Surgery	HSCSP	Susana López	Jaume Masià, Xavier León	Reconstructive surgery with free flaps in the treatment of head and neck carcinomas. Clinical and biologic prognostic factors in the occurrence of complications	Autonomous University of Barcelona
Locomotor System Research	HSCSP	Gemma González	Enric Càceres, Joan Carles Monllau	Meniscal transplantation. Effect of preservation methods and medium-term outcomes	Autonomous University of Barcelona
Intensive Medicine	HSCSP	Lluís Zapata	Antoni Betbesé, Jordi Ordóñez	Diastolic dysfunction in critically ill patients: clinical implications and usefulness of natriuretic peptides for evaluation purposes	Autonomous University of Barcelona
Intensive Medicine	HSCSP	Paula Vera	Francisco Álvarez	Indicators of quality and of antimicrobial use in critically ill patients	Autonomous University of Barcelona
Intensive Medicine	HSCSP	Ferran Roche	Laurent Brochard	Sleep in the intensive care unit	Université de Paris Est
Nursing Care Research	HSCSP	Carne Jover	José Luis Medina, Lourdes Garcia	Reflective practice and professional development in nursing. Care leadership	University of Barcelona
Chronic Respiratory Diseases	HSCSP RI	Rebeca Fraga	David Ramos	Role of apoptosis in airway remodelling in asthma	University of A Coruña

Patents

IIB Sant Pau Group	Researchers	Organizations	Title	Application Number	Year
Lipids and Cardiovascular Pathology / Molecular and Therapeutic Pathologies of Ischaemic and Atherothrombotic Diseases	Vicenta Llorente-Cortés, Lina Badimon	CSIC-ICCC	LRP1 as a key receptor for cholesteryl ester transfer from very low density lipoproteins to ischaemic myocardium	PCT/ES2012/070483	2011
Oncogenesis and Antitumour Drugs	Ramon Mangues, Isolda Casanova, Ma Virtudes Céspedes, Esther Vazquez, Ugutz Unzueta, Neus Ferrer, Antonio P Villaverde	HSCSP RI, UAB, CIBERBBN	Methods and reagents for efficient and targeted delivery of therapeutic molecules to CXCR4 cells	PCT/EP2012/050513	2011
Nephrology	Jordi Bover	Puigvert Foundation, Biomedical Reserach Foundation of the Hospital General Universitario Gregorio Marañón, University of Alcalá	Method for diagnosing kidney failure	ES 2397461	2011
Andrology	Lluís Bassas	Puigvert Foundation, IDIBELL	In vitro method for predicting semen fecundity	EP 2532757	2011
Molecular and Therapeutic Pathologies of Ischaemic and Atherothrombotic Diseases, Biomarkers for Disease Status	Lina Badimon, Judit Cubedo, Teresa Padró	CSIC-ICCC	APO J isoforms as biomarkers of tissue lesions	ES 2364169	2010
Regulation of Cardiac Rhythm and Contraction	Raúl Benítez, Enrique Álvarez, Leif Hove	CSIC-ICCC, UPC	Method for detecting local intracellular calcium release events	PCT/ES2010/000102	2009
Oncogenesis and Antitumour Drugs	Ramon Mangues, Isolda Casanova, Fernando Palomera, Mercedes Álvarez, Savina Svetlana	HSCSP RI, Fundació Bosch i Gimpera Foundation	Antitumour 1,2-diphenylpyrrole compounds and their preparation	PCT/EP2010/060983	2009

Technology Transfer Agreements

IIB Sant Pau Group	Organizations	Company	Application Number	Year
Clinical and Translational Cardiology	HSCSP RI, Genetrix	Transactel Therapeutics	PCT/ES2008/000543	2012
Clinical Oncology	University of Valencia, USC, ICN	Nanotargets	PCT/EP2009/067136	2011
Oncogenesis and Antitumour Drug	HSCSP RI, Bosch i Gimpera Foundation	Argon Pharma	PCT/EP2010/060983	2009

Research Support Services

The main objective of the research support services, which are divided into two blocks, is the sharing and pooling of resources as an effective way to optimize funds and boost research.

Research Support Services

These provide facilities and equipment that are exclusively available to any specific research group but are shared among groups at all institutions within IIB Sant Pau.

IIB Sant Pau has 13 services:

- Clinical Trial Documentation Management
- Research Institute Management
- Tumour Bank
- Quality and Information Systems Unit
- Radioactivity Unit
- Centre for Drug Research (CIM Sant Pau)
- Central Clinical Research and Clinical Trials Unit (UCICEC Sant Pau)
- Animal Housing
- Transfer and Innovation Unit
- Author Editing
- Communications Coordination Team
- Clinical Research Ethics Committee
- Clinical Research Ethics Committee Secretariat

Scientific and Technical Service Platforms

The main aim of these support services is to manage, allocate and optimize the top-level research resources available to IIB Sant Pau. They provide researchers with support and scientific and technical assessment and advise on the most appropriate methods to prepare samples and to plan optimal work flows for each objective.

IIB Sant Pau has 5 platforms:

- Genomics and Transcriptomics Platform
- Functional and Cellular Analysis Platform
- Microscopy and Immunohistochemistry Platform
- Innovation Platform i2Health Sant Pau
- Biobank

The platforms also have access to equipment available for general use to complement their functioning.



Research Support Services



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Clinical Trial Documentation Management

Functions:

- > Manage and supervise all documentation associated with active clinical trials in the experimental phase and destruction of documentation for terminated clinical trials located in the external archive.
- > Manage restricted access by clinical trial monitors to the clinical workstation.
- > Supervise data processing and management.
- > Coordinate researchers and monitors, draw up agendas for meetings and monitor studies.
- > Oversee and manage the documentation for Centre for Drug Research (CIM) completed studies.
- > Provide logistical support to the cold area and the clinical materials store associated with clinical trials in the experimental phase.
- > Maintain and update the clinical workstation database and manage clinical studies.
- > Ship of biological samples to central laboratory services.

Facilities:

Several areas have been designated for the implementation of these functions:

- > Head office and administration area.
- > Data processing and management area.
- > Clinical trial monitoring meeting rooms.
- > Documentation filing area.
- > Cold room.

Research Institute Management

Functions:

- > Management of HSCSP Research Institute and IIB Sant Pau finances: manage accounts and fiscal matters; design, administer and control budget-related issues; manage and monitor financial and material resources.
- > Management of public body funding requirements: fulfil obligations imposed by government and official regional and state entities; ensure compliance with current fiscal, financial, labour and legal regulations and with HSCSP Research Institute–IIB Sant Pau management policies.
- > Administration and management of activities, providing management support for research groups in different areas; project management, human resources, procurement, invoicing, control and monitoring of projects, general administration, management of services (courses, travel and continuing professional development).
- > Design, elaboration, development and maintenance of information systems for management area units, both for HSCSP Research Institute–IIB Sant Pau and research groups.



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Quality and Information Systems Unit

Functions:

- > General:
 - Support management with strategic projects (accreditation, CERCA evaluation, biobank legalization, evaluation of research groups, etc).
 - Manage IIB Sant Pau research groups: creation, dissolution and changes in composition.
 - Manage new laboratory works performed under the contingency plan.
 - Implement the functional plan for the new research building.
 - Support management of the IIB Sant Pau Internal Scientific Committee, External Scientific Committee, Executive Committee and Delegate Committee.
 - Implement policies for the dissemination of research among the general public and especially among secondary pupils and health science university students.
 - Manage the HSCSP Research Institute Biosafety Committee.
 - Participate in the Animal Experimentation Ethics Committee.
 - Participate in the UCICEC Sant Pau Technical Committee.
 - Represent the HSCSP Research Institute before external organizations.
- > Quality:
 - Implement policies to improve quality under GLP, GCP, GMP and ISO 9001 standards.
- Lead the quality assurance programme at CIM Sant Pau and in clinical trials where the HSCSP Research Institute acts as sponsor.
- Oversee auditing for protocols, databases, experimental phases, facilities, processes and final reports for clinical trials.
- Oversee supplier audits.
- Monitor non-conformity in internal and external audits.
- Draw up own SOPs and provide support for SOPs preparation by other units.
- Establish mechanisms to assess quality and good scientific practices in IIB Sant Pau.
- > Information systems:
 - Design mechanisms and implement tools for the collection and organization of data and information to feed decision making.
 - Manage and transform information and data to contribute to the fulfillment of objectives and strategies.
 - Respond to external requests for data and information (statistical surveys, SIRECS, etc).
 - Implement policies to improve information systems.
 - Develop new indicators of use for the institution.
 - Update research group staff details on the intranet.

Research Support Services



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Radioactivity Unit

Functions:

- > The Radioactivity Unit provides groups with specific research laboratories in which to work with radioactive isotopes in liquid form. These areas are fully equipped and adapted for the handling of radioactive material and apply optimum measures for the safety and radioprotection of staff and the environment.
- > This area has been authorized by the nuclear safety authority and its staff supervise compliance with the corresponding laws, guidelines and regulations..
- > Services include support for:
 - In vitro labelling of proteins, lipoproteins and liposomes.
 - Cellular proliferation and toxicity.
 - Nucleic acid labelling.
 - Immunoassay techniques.
 - Determination of enzymatic activities using radiolabelled substrates.
 - Analysis and separation of labelled molecules.
 - Cellular cholesterol efflux.
 - Metabolism in vivo.

Facilities:

The Radioactivity Unit has the following facilities:

- > 1 room for radioactive material storage.
- > 7 equipped laboratories, one of them refrigerated.
- > 1 room for gamma- and beta- counters.
- > 1 room for radioactive waste storage.
- > 1 room for controlled disposal of radioactive waste.
- > Radioactive liquid waste containers for controlled radioactive waste disposal.
- > Shielding accessories for radiation safety (table top shields, shielded containers, protective equipment, etc)
- > Portable radiation and environmental contamination detectors.
- > 1 ventilated rack for in vivo studies.
- > 2 chemical safety cabinets for gas extraction.
- > 1 vertical laminar air flow cabinet for cell cultures.
- > 1 CO₂ incubator for cell cultures.

Tumour Bank

Functions:

- > Create and maintain a collection of healthy and diseased tissue samples in optimal conditions for use in research projects that may include morphology, phenotype and molecular analyses and which may also be used in diagnosis.
- > Guarantee the quality of stored material by means of morphology analyses of samples, assuring anatomical and pathological correlation with definitive diagnoses for tissues.
- > Supply material to research groups on a non-profit basis (investigators may apply for samples as long as their project complies with current regulations and is scientifically, technically and ethically viable).

Equipment:

- > 4 fast-freeze apparatus (isopentane bath, stored at -50°C).
- > Storage and cryopreservation systems: 2 freezers -80°C and 1 deposit for liquid nitrogen.
- > 1 cryostat.
- > 1 manual tissue arrayer.



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Centre for Drug Research (CIM Sant Pau)

Functions:

Perform clinical drug trials and/or clinical research in compliance with methodological, ethical and legal requirements in the context of international GCP guidelines concerning:

- > Clinical trials that are not of therapeutic interest for participants (phase I, special populations, psychopathological research, biomarkers, proof of concept).
- > Clinical trials in neuropsychopharmacology.
- > Clinical trials in initial developmental phases.

Facilities:

Three separate work areas have been designated for the trials:

Healthcare:

- > Admission zone.
- > 24 beds distributed in 4 units: trials in healthy volunteers and patients.
- > 2 individual rooms for CNS studies.
- > Ambulatory zone.
- > 4 consulting rooms for complementary testing, mainly related to CNS.
- > 3 cubicles to evaluate psychomotor performance.

Logistical support:

- > Rest area for clinical trial participants with bathrooms and kitchen.
- > Areas for the preparation, centrifugation and separation of biological samples.
- > Cold room.
- > Archives.

Management, administration and data processing:

- > Offices.
- > Area for monitors.
- > IT equipment for clinical trial activities of a non-experimental nature.

Communications Coordination Team

Functions:

- > Coordinate IIB Sant Pau communications.
- > Prepare IIB Sant Pau annual reports and other communication materials.
- > Provide an effective news distribution service and generate positive media coverage.
- > Respond to media enquiries.
- > Update website content.
- > Establish standards concerning graphics and linguistic style to ensure visual uniformity in all IIB Sant Pau communications.

Research Support Services



Central Clinical Research and Clinical Trials Unit (UCICEC Sant Pau)

Functions:

Comprehensive methodological, regulatory, administrative, financial and practical support to researchers developing independent research projects (not supported by the pharmaceutical industry).

Knowledge Management:

- > One-stop information and advice for independent research group projects.
- > Communications point for researchers and technical units.
- > Notification of adverse events.
- > Knowledge management:
 - Project dimensionality and viability studies.
 - Project needs analyses.
 - Documentation preparation advice: protocol, informed consent, final report.
 - Identification of spinoff projects.
 - Exploitation of research results.
 - Publication planning.
 - Training needs analyses.

Methodological and statistical support unit:

- > Study design.
- > Data collection.
- > Data processing.
- > Statistical reports.
- > Electronic CRF validation and management.
- > Documentation and reports.

Documentation, archiving, monitoring and follow-up unit:

- > Document drafting: EUDRA/ requests / follow-up.
- > Monitoring .
- > Initial, monitoring and final reports.
- > Processing of applications, amendments and clarifications regarding clinical trials, post-authorization studies and other studies: Spanish Medicines and Health Products Agency (AEMPS), clinical research ethics committees, health authorities, etc
- > Custody of the sponsor's master file.
- > Other communications to ethics committees, the Catalan government and the AEMPS.

Finance and administration unit:

- > Management of clinical trial contracts with participating centres when the HSCSP Research Institute is the sponsor.
- > Management of collaboration agreements regarding funding with laboratories/companies.
- > Management of clinical trial-related contracts (CROs, E-CRFs, statistics, rights transfers, etc).
- > Management of clinical trial-related client and supplier invoices.
- > Management of clinical trial insurance policies for HSCSP Research Institute as sponsor.
- > Preparation of financial reports for the submission of studies to ethics committees.
- > Payment of AEMPS clinical research fees.
- > Collaboration with HSCSP Research Institute Projects Unit to financially evaluate grants in the presentation phase.



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Staff:

Animal welfare advisor:
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Veterinary surgeon:
Eder Fredy Mateus

Animal care workers:
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Animal Housing

Functions:

- > Produce different small rodent strains in-house for research and teaching purposes.
- > Manage the purchase and transportation of animals from domestic and international breeding and supply centres.
- > Receive and house incoming animals and deliver them to users once quarantine and health requirements are met.
- > House and maintain experimental animals while ensuring their welfare.
- > Regularly check rodent health status.
- > Perform twice-yearly health checks.
- > Clean and sterilize of materials and maintain the pathogen-free area.
- > Feed animals according to experimental protocols.
- > Provide support for animal surgery, anaesthesia and euthanasia.
- > Supply laboratory materials and collect samples.
- > Monitor mating, mating plugs, pregnant females and weaning.
- > Provide healthcare.
- > Advise the animal welfare expert.
- > Perform periodic health checks with sentinel screening in all rooms.
- > Maintain monitoring protocols.
- > Ensure the hygiene and safety of facilities and equipment.
- > Manage waste disposal.
- > Attend training in relation to all protocols developed in the animal house.
- > Advise on the drafting of research projects involving the use of animals.
- > Attend training in relation to all protocols developed in the animal house.
- > Advise on the drafting of research projects involving the use of animals.

Facilities:

Standard area:

- > Mice rooms (2), total capacity 2400.
- > Rat room, capacity 200.
- > Quarantine room.
- > Washroom.
- > Clean-storage room.
- > Standard storeroom.
- > Surgery.
- > CO2 euthanasia equipment.
- > Treatment room.
- > Office.
- > Shower.
- > WC.

Pathogen-free area:

- > Autoclave and washing area.
- > Animal housing and changing area.
- > Work area.
- > Store.
- > Pre-changing room.
- > Changing room.
- > Airshower.

Research Support Services



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Transfer and Innovation Unit

Functions:

- > Promote an innovation culture and education.
- > Develop a framework for innovation management.
- > Evaluate technological opportunities originating with IIB Sant Pau staff, detect inventions and assess their protection, transfer and commercialization.
- > Manage the intellectual property of the institution.
- > Establish links with the business sector.
- > Assist researchers in developing projects with companies.
- > Manage competitive official innovation announcements.
- > Manage competitive European official research announcements.
- > Develop technological platforms.



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Clinical Research Ethics Committee

The Ethics Committee for Clinical Research (CEIC) of the HSCSP Healthcare Management Foundation is an independent body that, according to the laws that accredit it, has the mission to ensure the protection of rights, safety and welfare of the subjects involved in a trial and provide public assurance of that

protection, protection by reviewing the protocol, the suitability of the researchers, facilities, equipment and methods to be used in obtaining and documenting the informed consent of the subjects.

Its specific functions are:

- > Evaluate the methodological, ethical and legal aspects of:
 - Clinical trials with drugs and health products.
 - Observational studies.
 - Pharmacogenetic and pharmacogenomic studies.
 - Studies evaluating surgical or psychological treatments.
 - Studies involving invasive procedures or the use of health data or biological samples.
- > Evaluate the relevant amendments in projects approved by the CEIC.
- > Monitor of clinical drug trials and clinical research with medical devices.



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Clinical Research Ethics Committee Secretariat

The Clinical Research Ethics Committee is an independent agency whose mission is to protect the rights, safety and wellbeing of persons participating in HSCSP research projects which may entail physical or psychological harm. The Secretariat of the Clinical Research Ethics Committee evaluates the methodological, ethical and

legal aspects as well as any other relevant information regarding all research projects listed in the minutes of the Committee's meetings. It also advises researchers in the HSCSP and the HSCSP Research Institute regarding the preparation and presentation of clinical research projects.

Functions:

- > Receive, log and validate documentation for clinical research projects submitted to the Committee for evaluation.
- > Arrange and call Committee meetings, inform members of the agenda and provide them with copies of protocol summaries and patient informed consent and information sheets.
- > Prepare and submit reports to the Committee containing a methodological, ethical and legal description and analysis (and any other relevant information) of the research projects listed in agendas.
- > Act as a reference point in communications with and between researchers, sponsors, medical administrators and managers and healthcare authorities regarding all aspects of the activities of the Committee and of the research projects evaluated by the Committee.
- > Prepare and sign the reports of the Committee and communicate its decisions to the corresponding sponsors and researchers.
- > Prepare the minutes of meetings and distribute them to Committee members within the established period.
- > Manage all documentation associated with the operations and activities of the Committee and with the research projects evaluated by the Committee.
- > Administer contracts for all clinical trials to be performed at the HSCSP.
- > Certify the actions of the Committee.
- > Prepare the annual report of the Committee.
- > Ensure compliance with the SOPs of the Committee.

Author Editing

Functions:

- > Review and edit research papers, abstracts, posters, presentations and other scientific documents written in English.
- > Assist in the preparation and delivery of presentations, lectures, speeches, etc in English for meetings, conferences and similar events.



Coordinator:
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Scientific and Technical Service Platforms



Genomics and Transcriptomics Platform

> GENOMICS LABORATORY

Functions:

- > Next-generation sequencing: full transcriptome genotyping, RNA-Seq, Ampli-Seq, ChIP-Seq, amplicon sequencing and sequencing and identification of microorganisms.
- > Capillary sequencing: mutational analysis, microorganism identification and validation of cell lines.
- > Analysis of fragments: microsatellite instability, loss of heterozygosity studies in pathological conditions, mutation detection and genotyping, quantification of gene copy numbers, methylation studies and studies of polymorphisms associated with disease states.

Equipment:

- > Ion Torrent Personal Genome Machine.
- > Ion OneTouch (TM) System.
- > 3130xl Genetic Analyzer capillary electrophoresis sequencer.

> TRANSCRIPTOMICS LABORATORY

Functions:

- > Hybridization and analysis of Affymetrix microarrays:
 - RNA and micro-RNA expression profiles in normal conditions and in diseases and treatment.
 - Loss of heterozygosity, copy number analysis and genome-wide mutation detection.
 - Genome-wide linkage and association studies.
- Real time quantitative PCR (gene expression, allelic discrimination).
- Nucleic acid quality assessment.
- Quantification of nucleic acids (Bioanalyzer, Nanodrop).

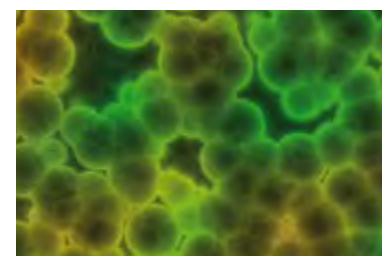
Equipment:

- > Affymetrix array platform (upgrade 7G).
- > Real time quantitative PCR ABI 7900HT (384-well plates and TLDA).
- > Bioanalyzer 2100
- > Nanodrop 2000.

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Functional and Cellular Analysis Platform

> FLOW CYTOMETRY LABORATORY

Functions:

- > Conventional cytometry in homogenous (cell line) or heterogeneous (biological fluid) samples:
 - Detection of the presence of proteins and determination of cell populations (cell markers).
 - Studies of signalling cascades (cell cycle, cell proliferation, apoptosis, intracellular calcium determination).
 - Quantification of transfection efficiency.
 - Phenotype changes and relative and absolute presence.
- Production of mediators.
- Detection of minority populations.
- > Cell separator (separation of cell populations in sterile conditions):
 - Microarrays.
 - Western blot.
 - Cell cultures.
 - RT-PCR.

Equipment:

- > FACSCalibur (BD) conventional flow cytometry.
- > MACSQuant (Milteny Biotech) conventional flow cytometry.
- > FACSria (BD) flow cytometry cell sorter.

> CELL CULTURE LABORATORY

Functions:

- > To make adequate facilities and equipment available to researchers working with cell cultures in a BSL2 laboratory.

Equipment:

- > 4 CO₂ incubators.
- > 2 hypoxia incubators (2-21% O₂).
- > 2 IIA biosafety cabinets (BSL2).
- > 2 hypoxia cabinets (BSL1).
- > Culture baths.
- > Olympus inverted microscope with high-resolution colour camera.
- > Refrigerated centrifuge.
- > Fridge 4°C and freezer -20°C.
- > Thermo-desinfector and autoclave.

Scientific and Technical Service Platforms



Microscopy and Immunohistochemistry Platform

> IMMUNOHISTOCHEMISTRY LABORATORY

Functions:

- > Tissue processing.
- > Microtome paraffin-block cutting and OCT.
- > Block cutting with microtome/cryostat.
- > Automatic immunostaining (simple and dual).
- > Staining (Giemsa, haematoxylin-eosin, trichomic, PAS, Oil Red, etc).
- > Preparation of tissue arrays.
- > Image acquisition and analysis using high-resolution colour microscopy and specialist software.

Equipment:

- > Tissue processor (Sakura).
- > Paraffin bath (Sakura).
- > Microtome (Microm).
- > Cryostat (Leica).
- > Immune autostainer AS48 (Dako).
- > Autostainer (Sakura).
- > Semiautomatic tissue arrayer.

> MICROSCOPY LABORATORY

Functions:

- > Confocal microscopy in live and fixed cells:
 - Immunofluorescence of 2 to 5 fluorochromes.
 - Reconstruction of 3D and 4D images.
 - Colocalization studies.
- Inter- and intra-interactions (FRET and FLIM).
- Molecular diffusion times (FCS).
- > Conventional fluorescence microscopy (immunofluorescence with 1 or 2 fluorochromes, FISH) in live and fixed cells.

Equipment:

- > Confocal multispectral Leica SP5 AOBS with high-resolution scanning system and high-speed tandem scanning, FLIM/FCS modules and time-lapse incubation system.
- > Zeiss digital time-lapse microscope.

Innovation Platform i2Health Sant Pau

Functions:

- > Promote the development of the information and communication technologies in the health sector.
- > Support researchers and healthcare staff undertaking e-health projects.
- > Provide a dedicated space within the hospital to create a living lab by bringing together medical staff, engineers, technologists, industry and health administration.



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Biobank

Functions:

- > Create and maintain a collection of healthy and diseased biological human samples in optimal conditions for use in research projects.
- > Facilitate collaboration projects by putting investigators in touch and making biological human sample cession possible.
- > Supply (non-profit) human biological samples to research groups, in accordance with legal regulations.
- > Obtain, process and store human biological samples in accordance with international standards, maintaining sample traceability and security in accordance with legal requirements.
- > Provide training in legal and ethical regulations governing biological human sample management.

Grants:

- > HSCSP Research Institute. Biobank Network 2009. Amount: €138,000.00.

Equipment for General Use

> IMAGE ANALYSIS LABORATORY:

Equipment:

- > Revolution 4200 microarray scanner (Vidar).
- > Image Station 4000MM Pro (Kodak) gel documentation: luminescence, fluorescence, absorption.

> OTHER EQUIPMENT

Equipment:

- > Precision weighing balances (Sartorius).
- > Bioanalyzer 2100 (Agilent).
- > Nanodrop 2000 (Thermo).
- > Infinite 200 (Tecan) microplate reader: spectrophotometer, fluorometer, luminometer.

Grants:

- > HSCSP Research Institute. Innovation Network 2009. Amount: €123,414.
- > Kulisevsky, J. Expert system integrating teleassistance and medicine to prevent dependence and promote autonomy of the elderly in the home environment. E-HEALTH Platform for Healthy Ageing. Plan Avanza. Amount: €60,848.55.

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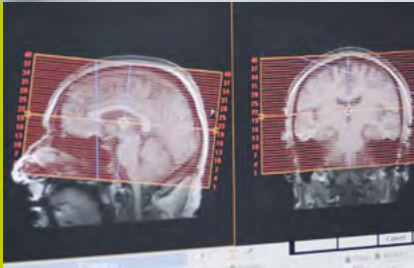
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Associated Groups

AREA 1

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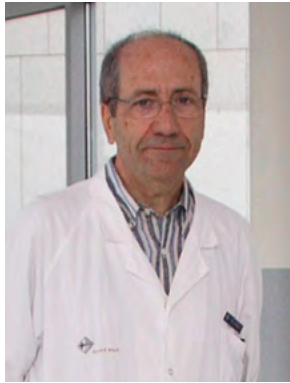
Clinical and Translational Cardiology

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Main Lines of Research

- Cardiac electrophysiology and arrhythmias.
- Heart failure.
- Ischaemic heart disease.
- New diagnostic techniques.
- Non-invasive multidetector CT coronary angiography.
- Cardiac magnetic resonance imaging.

Challenges

- Describe cardiac repolarization (T wave genesis) in the isolated perfused human heart (Langendorff).
- Develop new drugs to treat atrial fibrillation based on involvement of atrial receptors for adenosine.
- Set up basic research lines related to cardiac physiology in experimental models.
- Develop new diagnostic techniques for myocardial involvement based on myocardial electrical impedance measurements.
- Non-invasive multidetector CT coronary angiography: consolidate use in clinical practice by improving viewing and quantification tools that confirm its diagnostic value for cardiology.
- Cardiac magnetic resonance imaging: to improve physiopathological knowledge of ischaemic heart disease, cardiomyopathies and heart failure.
- To explore and understand heart mechanics and to study ventricular function.
- To design ventricular electro-mechanical computer models.
- To improve cardiac imaging diagnostic techniques for a complete non-invasive assessment of heart diseases.

Active Grants

- Cinca J. Electrophysiological and molecular characterization of cardiac repolarization in the isolated human heart. La Marató de TV3 Foundation. March 2009-December 2012.
- Cinca J. Remodelling of adenosine receptors in human atrial fibrillation: A novel mechanism for atrial arrhythmogenesis. CNIC-Carlos III Health Institute Grant. January 2008-April 2012.
- Cinca J. Redinscor. Spanish Heart Failure Research Network. Coordinated Project. Carlos III Health Institute Grant. January 2007-December 2013.
- Guerra J. Comparative study of electro-mechanical effects of epicardial and endocardial biventricular stimulation of the left ventricle in an animal model of heart failure. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Hove L. Effects of atrial fibrillation on the distribution and frequency of spontaneous calcium release events in human atrial myocytes. SAF Grant. Ministry of Economy and Competitiveness. January 2012-December 2014.
- Roig E. Detection of acute heart transplant rejection by determining high-sensitivity cardiac troponin T (cTnT-HS). Multi-site pilot study. Spanish Society of Cardiology Grant. November 2010-December 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Lipids and Cardiovascular Pathology.

External Collaborations

- Rafael Vázquez. Hospital Universitario Virgen de Valme, Seville, Spain / Hospital Puerta del Mar, Cádiz, Spain.
- Josep Brugada. Hospital Clínic, Barcelona, Spain.
- Josep Ma Verdú. ICS, Spain.
- Fernando Worner. Hospital Universitari Arnau de Vilanova, Lleida, Spain.
- Alfredo Bardají. Hospital Universitari Joan XXIII, Tarragona, Spain.
- José Ramón González. Hospital Clínico Universitario, Santiago de Compostela, Spain.
- Arturo Fernández-Cruz. Hospital Clínico San Carlos, Madrid, Spain.
- Julián Pérez-Villacastín. Cardiovascular Institute, Hospital Clínico San Carlos, Madrid, Spain.

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- Juan Francisco Delgado. Hospital Doce de Octubre, Madrid, Spain.
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- Leif Hove Madsen. CSIC-ICCC, Barcelona, Spain.
- Blas Echebarria. UPC-Barcelona Tech, Barcelona, Spain.
- Rubén Coronel. Academic Medical Centre, Amsterdam, Holland.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Borras X., Murga N., Ripoll T., Gomez-Doblas J.J. Advances in clinical cardiology: New approaches to old challenges [Novedades en cardiología clínica: Nuevos enfoques de viejos retos]. Revista Espanola de Cardiologia; 65(SUPPL. 1):65-72. IF: 3.204
- Munoz-Guijosa C., Permanyer E., Leta R. Anomalous origin of right coronary artery from the left coronary sinus: Sudden death and successful surgical reimplantation. European Heart Journal; 33(11):1308. IF: 14.097
- Avellana P., Segovia J., Ferrero A., Vazquez R., Brugada J., Borras X., Alonso-Pulpon L., Cinca J. Anticoagulation therapy in patients with heart failure due to systolic dysfunction and sinus rhythm: Analysis of REDINSCOR registry [Tratamiento anticoagulante en pacientes con insuficiencia cardiaca por disfunción sistólica y ritmo sinusal: análisis del registro REDINSCOR]. Revista Espanola de Cardiologia; 65(8):705-712. IF: 3.204

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- Devereaux P.J., Chan MaT.V., Alonso-Coello P., Walsh Ma, Berwanger O., Villar J.C., Wang C.Y., Garutti R.I., Jacka MaJ., Sigamani A., Srinathan S., Biccand B.Ma, Chow C.K., Abraham V., Tiboni Ma, Pettit S., Szczeklik W., Buse G.L., Botto F., Guyatt G., Heels-Ansdell D., Sessler D.I., Thorlund K., Garg A.X., Mrkobrada Ma, Thomas S., Rodseth R.N., Pearse R.Ma, Thabane L., McQueen MaJ., VanHelder T., Bhandari Ma, Bosch J., Kurz A., Polanczyk C., Malaga G., Nagele P., Le Manach Y., Leuwer Ma, Yusuf S. Association between postoperative troponin levels and 30-day mortality among patients undergoing noncardiac surgery. JAMA - Journal of the American Medical Association; 307(21):2295-2304. IF: 29.978
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Clinical and Translational Cardiology

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Scientific Production

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08 Fernandez-Ortiz A., Pan Ma, Alfonso F., Aros F., Barrabes J.A., Bodi V., Cequiera A., Garcia-Moll X., Jimenez-Candil J., Lopez-Palop R., Pena C., Worner F., Alonso Gomez A.Ma, Anguita Ma, Cequier A., Comin J., Alonso J., Bardaji A., Baron-Esquivas G., Bover R., Angel-Ferrer J., Goicolea J., Gomez-Doblas J.J., Iniguez A., Mainar V., Marin F., Pedreira Ma, Roldan I., Sabate Ma, Sanchez P.L., Sanchis J. Comments on the ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent st-segment elevation. A report of the task force of the clinical practice guidelines committee of the Spanish society of cardiology [Comentarios a la guía de práctica clínica de la ESC para el manejo del síndrome coronario agudo en pacientes sin elevación persistente del segmento ST. Un informe del Grupo de Trabajo del Comité de Guías de Práctica Clínica de la Sociedad Española de Cardiología]. *Revista Española de Cardiología*; 65(2):125-130.
IF: 3.204

09 Alonso Gomez A.Ma, Comin J., Borrás X., Del Castillo S., Elvira Gonzalez A., Mazon P., Monserrat L., Pijuan A., Salvador Sanz A., Anguita Ma, Cequier A., Fernandez-Ortiz A., Pan Ma, Worner F., Alonso C., Bardaji A., Cobo Ma, Garcia-Pavia P., Gonzalez Costello J., Oliver J.Ma, Pedreira Ma, Serrano J.Ma, Subirana Ma, Tornos P. Comments on the ESC guidelines on the management of cardiovascular diseases during pregnancy. A critical vision of Spanish cardiology [Comentarios a la guía de práctica clínica de la ESC para el tratamiento de las enfermedades cardiovasculares durante el embarazo. Una visión crítica desde la cardiología española]. *Revista Española de Cardiología*; 65(2):113-118.
IF: 3.204

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11 Cardona Ma, Mirabet S., Martin V., Martí V., Sabate Ma, Bayes-Genis A. Comparison of restenosis rate of bare-metal and drug-eluting stents in cardiac allograft vasculopathy [Comparación de la tasa de reestenosis entre stents convencionales y stents farmacoactivos en la enfermedad vascular del injerto]. *Medicina Clínica*; 138(13):562-564.
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14 Anguita Ma, Castillo J.C., Ruiz Ma, Castillo F., Jimenez-Navarro Ma, Crespo Ma, Alonso-Pulpon L., De Teresa E., Castro-Beiras A., Roig E., Artigas R., Zapata A., Lopez De Ullibarri I., Muniz J. Differences in outcome of heart failure with preserved or depressed systolic function in patients older than 70 years who receive beta blockers [Diferencias en el pronóstico de la insuficiencia cardíaca con función sistólica conservada o deprimida en pacientes mayores de 70 años que toman bloqueadores beta]. *Revista Española de Cardiología*; 65(1):22-28.
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15 Cubedo J., Padro T., Alonso R., Cinca J., Mata P., Badimon L. Differential proteomic distribution of TTR (pre-albumin) forms in serum and HDL of patients with high cardiovascular risk. *Atherosclerosis*; 222(1):263-269.
IF: 3.706

16 Ferreira-Gonzalez I., Marsal J.R., Ribera A., Permyer-Miralda G., Garcia-Del Blanco B., Martí G., Cascant P., Masotti-Centol Ma, Carrillo X., Mauri J., Batalla N., Larrousse E., Martin E., Serra A., Rumoroso J.R., Ruiz-Salmeron R., De La Torre J.Ma, Cequier A., Gomez-Hospital J.A., Alfonso F., Martin-Yuste V., Sabate Ma, Garcia-Dorado D. Double antiplatelet therapy after drug-eluting stent implantation: Risk associated with discontinuation within the first year. *Journal of the American College of Cardiology*; 60(15):1333-1339.
IF: 14.086

17 Alegria-Barrero E., Chan P.H., Paulo Ma, Duncan A., Price S., Moat N., di Mario C., Serra A., Garcia E., Franzen O. Edge-to-edge percutaneous repair of severe mitral regurgitation - state-of-the-art for Mitraclip® implantation -. *Circulation Journal*; 76(4):801-808.
IF: 3.578

18 Sabate Ma, Cequier A., Iniguez A., Serra A., Hernandez-Antolin R., Mainar V., Valgimigli Ma, Tsepili Ma, Den Heijer P., Bethencourt A., Vazquez N., Gomez-Hospital J.A., Baz J.A., Martin-Yuste V., Van Geuns R.-J., Alfonso F., Bordes P., Tebaldi Ma, Masotti Ma, Silvestro A., Backx B., Brugaletta S., Van Es G.A., Serruys P.W. Everolimus-eluting stent versus bare-metal stent in ST-segment elevation myocardial infarction (EXAMINATION): 1 year results of a randomised controlled trial. *The Lancet*; 380(9852):1482-1490.
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19 Martin-Yuste V., Barros A., Leta R., Ferreira I., Brugaletta S., Pujadas S., Carerras F., Pons G., Cinca J., Sabate Ma Factors determining success in percutaneous revascularization of chronic total coronary occlusion: Multidetector computed tomography analysis [Determinantes del éxito de la revascularización de las oclusiones coronarias crónicas: estudio mediante tomografía computarizada con multi-detectores]. *Revista Española de Cardiología*; 65(4):334-340.
IF: 3.204

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IF: 5.247

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vera Ma, Cinca J., Badimon L., Llorente-Cortes V. Low density lipoprotein receptor-related protein 1 expression correlates with cholesteryl ester accumulation in the myocardium of ischemic cardiomyopathy patients. *Journal of Translational Medicine*; 10(1).
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IF: 3.204

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IF: 5.247

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IF: 3.204

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Clinical and Translational Cardiology

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	► Li C.-H., Barros A.J., Carreras F., Teresa Subirana Ma, Pons-Llado G. Idiopathic pulmonary artery aneurysm compressing the left main coronary artery. European Heart Journal Cardiovascular Imaging; 13(8):696.
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	► Poveda F, Martí E, Gil D, Carreras F, Ballester Ma Helical structure of ventricular anatomy by diffusion tensor cardiac MR tractography. JACC: Cardiovascular Imaging 2012;5(7):754-5.
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*Total Impact Factor **Mean Impact Factor - PUBLISHED ON PAPER IN 2012

Thrombosis and Haemostasis

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Main Lines of Research

- Investigation of the genetic basis of venous and arterial thrombosis. GAIT-1 and GAIT-2 projects.
- Investigation of new antithrombotic drugs: thrombin inhibitors, molecules against activated factor X, low molecular weight heparin with oral activity, among others.
- Biomarkers of prothrombotic states in patients under 55 years with venous thromboembolic disease, acute ischaemic stroke, or acute myocardial infarction.
- Applied clinical development of the self-management model of oral anticoagulant treatment.
- Mathematical models of prediction of the individual risk of thromboembolic disease. RETROVE and PAN projects.
- CITA project. Centre for Antithrombotic Therapy Management. Research into a new ambulatory management model for patients receiving any kind of antithrombotic therapy (anti vitamin-K, new oral anticoagulants, low molecular weight heparins, antiplatelets) by incorporating new educational programmes, specialized nursing and new communication technologies.

Challenges

- Study the QTL detected in GAIT-1 families in relation to phenotypes of haemostasis with thrombosis risk (resistance to activated protein C, factor VIII, homocysteine, factor XII and others).
- Replicate the QTL related to thrombosis in GAIT-1 families by means of the linkage analysis using the new GAIT-2 families.
- Genome-wide association study (GWAS) of the phenotypes included in GAIT-1.
- Design new epidemiological projects on the risk of venous thromboembolism, including the MIRTO (Modelling Individual Thrombosis Risk in Oncology) project, with the goal of establishing an individual risk score for venous thromboembolism (RETROVO sub-project) and for ischaemic stroke (SINO sub-project) in patients with cancer.
- Continue collaboration with the RCV Spanish cardiovascular patient network and with other European groups, mainly with the goal of applying the GAIT project findings to cohorts of patients with venous and arterial thrombosis in Spain and other European countries.
- EDUCANT clinical trial (start date March 2013) to evaluate effectiveness of an educational programme for patients taking antiplatelet therapy (aspirin and/or clopidogrel) in reducing severe complications.

Active Grants

- Fontcuberta J. Funds in support of Catalan research groups. Thrombosis and Haemostasis Group. AGAUR Grant. September 2009-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Angiology, Vascular Biology and Inflammation.
- Genomics of Complex Diseases.
- Haematological Diagnosis.

- Cerebrovascular Diseases.
- Reproductive Health.

*TIF: 115.683 **MIF: 8.263

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- 04 Camacho Ma, Martinez-Perez A., Buil A., Siguero L., Alcolea S., Lopez S., Fontcuberta J., Souto J.-C., Vila L., Soria J.-Ma Genetic determinants of 5-lipoxygenase pathway in a Spanish population and their relationship with cardiovascular risk. *Atherosclerosis*; 224(1):129-135.
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- 05 Navarro S., Bonet E., Medina P., Martos L., Ricart J.Ma, Vaya A., Todoli J., Fontcuberta J., Estelles A., Espana F. Haplotypes of the endothelial protein C receptor gene and Behçet's disease. *Thrombosis Research*; 129(4):459-464.
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- 05 Navarro S., Bonet E., Medina P., Martos L., Ricart J.Ma, Vaya A., Todoli J., Fontcuberta J., Estelles A., Espana F. Haplotypes of the endothelial protein C receptor gene and Behçet's disease. *Thrombosis Research*; 129(4):459-464.
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- 11 de la Morena-Barrio MaE., Anton A.I., Martinez-Martinez I., Padilla J., Minano A., Navarro-Fernandez J., Aguila S., Lopez MaF., Fontcuberta J., Vicente V., Corral J. Regulatory regions of SERPINC1 gene: Identification of the first mutation associated with antithrombin deficiency. *Thrombosis and Haemostasis*; 107(3):430-437.
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- 13 Heneghan C., Ward A., Perera R. (col. Souto J.C.). Self-monitoring of oral anticoagulation: Systematic review and meta-analysis of individual patient data. *The Lancet*; 379(9813):322-334.
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Cardiovascular Biochemistry

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Main Lines of Research

- ▶ Mechanisms of atherogenicity in low density lipoproteins (LDL).
- ▶ Electronegative LDL, interaction with cells from atheromatous lesions.
- ▶ Vulnerability markers in atheromatous plaque: electronegative LDL, myeloperoxidase, phospholipase.
- ▶ New markers of acute cardiovascular disease: cardiac troponins, natriuretic peptides, ST-2.
- ▶ New markers of cardiovascular risk in HIV: phospholipases, LDL size.
- ▶ New markers of cardiovascular risk in diabetes: phospholipases, HDL function, electronegative LDL.

Challenges

- ▶ Demonstrate that electronegative LDL is a marker of vulnerable atheromatous plaque.
- ▶ Determine the intracellular mechanisms involved in the inflammatory response induced by LDL(-) and the components of the particle that entail atherogenicity.
- ▶ Develop novel molecular strategies to inhibit the aggregation and binding to arterial wall proteoglycans of LDL.
- ▶ Find new markers of cardiovascular risk in diseases such as diabetes, HIV or cardiac failure.

Active Grants

- ▶ Benítez S. Study of the mechanisms involved in the inflammatory effects of LDL(-) in monocytes and the inhibitory role of HDL. FIS Grant. Carlos III Health Institute. January 2010-April 2013.
- ▶ Ordóñez J. Funds in support of Catalan research groups. Cardiovascular Biochemistry Group. AGAUR Grant. August 2009-December 2013.
- ▶ Sánchez-Quesada JL. Molecular strategies to inhibit the aggregation and binding to arterial wall proteoglycans of low-density lipoproteins. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- ▶ Ordóñez J. Metabolic effects of Atazanavir/Ritonavir versus Darunavir/Ritonavir in combination with Tenofovir/Emtricitabine in naïve HIV-1 infected patients. ATADAR Trial. 2011-2012.
- ▶ Ordóñez J. Performance Study of the Cobas b101 device for lipid profile and hemoglobin A1c evaluation. Roche Diagnostics. 2011-2012.
- ▶ Ordóñez J. TRAPID (hsTnT for the RAPID rule-out of AMI). Roche Diagnostics. 2012-2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Metabolic Bases of Cardiovascular Risk.
- ▶ Endocrinology, Diabetes and Nutrition.
- ▶ Angiology, Vascular Biology and Inflammation.
- ▶ Clinical and Translational Cardiology.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Pascual-Figal D.A., Casas T., Ordóñez-Llanos J., Manzano-Fernandez S., Bonaque J.C., Boronat Ma, Munoz-Esparza C., Valdes Ma, Januzzi J.L. Highly sensitive troponin T for risk stratification of acutely destabilized heart failure. American Heart Journal; 163(6):1002-1010. **IF: 4.497**
- Sánchez-Quesada J.L., Vinagre I., De Juan-Franco E., Sánchez-Hernández J., Blanco-Vaca F., Ordóñez-Llanos J., Pérez A. Effect of improving glycemic control in patients with type 2 diabetes mellitus on low-density lipoprotein size, electronegative low-density lipoprotein and lipoprotein-associated phospholipase A2 distribution. American Journal of Cardiology; 110(1):67-71. **IF: 3.209**
- Apple F.S., Collinson P.O., IFCC Task Force on Clinical Applications of Cardiac Biomarkers (Ordóñez J.). Analytical characteristics of high-sensitivity cardiac troponin assays. Clinical Chemistry; 58(1):54-61. **IF: 7.149**
- Saumoy Ma, Sánchez-Quesada J.L., Martínez E., Llibre J.Ma, Ribera E., Knobel H., Gatell J.Ma, Clotet B., Curran A., Curto J., Maso Ma, Ordóñez-Llanos J., Podzamcz D. LDL subclasses and lipoprotein-phospholipase A2 activity in suppressed HIV-infected patients switching to raltegravir: Spiral substudy. Atherosclerosis; 225(1):200-207. **IF: 3.706**
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- Sánchez-Quesada J.L., Villegas S., Ordóñez-Llanos J. Electronegative low-density lipoprotein. A link between apolipoprotein B misfolding, lipoprotein aggregation and proteoglycan binding. Current Opinion in Lipidology; 23(5):479-486. **IF: 5.839**
- Martínez-Selles Ma, Doughty R.N., Poppe K., Whalley G.A., Earle N., Tribouilloy C., McMurray J.J.V., Swedberg K., Kober L., Berry C., Squire I., Meta-Analysis Global Group In Chronic Heart Failure (MAGGIC) (Ordóñez J.). Gender and survival in patients with heart failure: Interactions with diabetes and aetiology. Results from the MAGGIC individual patient meta-analysis. European Journal of Heart Failure; 14(5):473-479. **IF: 5.247**
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- Sánchez-Quesada J.L., Estruch Ma, Benítez S., Ordóñez-Llanos J. Electronegative LDL: A useful biomarker of cardiovascular risk?. Clinical Lipidology; 7(3):345-359. **IF: 0.867**
- McAlister F.A., Ezekowitz J., Tarantini L., Squire I., Komajda Ma, Bayes-Genis A., Gotsman I., Whalley G., Earle N., Poppe K.K., Doughty R.N., Meta-analysis Global Group in Chronic Heart Failure (MAGGIC) Investigators (Ordóñez J.). Renal dysfunction in patients with heart failure with preserved versus reduced ejection fraction impact of the new chronic kidney disease-epidemiology collaboration group formula. Circulation: Heart Failure; 5(3):309-314. **IF: 6.684**
- Galvez-Monton C., Ordóñez-Llanos J., De Luna A.B., Bayes-Genis A. One hundred years of myocardial infarction. European Heart Journal; 33(23):2888-2891. **IF: 14.097**
- Meta-analysis Global Group in Chronic Heart Failure (MAGGIC) (Ordóñez J.). The survival of patients with heart failure with preserved or reduced left ventricular ejection fraction: An individual patient data meta-analysis: Meta-analysis Global Group in Chronic Heart Failure (MAGGIC). European Heart Journal; 33(14):1750-1757. **IF: 14.097**

Other Publications

Letter

- ▶ Zapata L, Ordóñez-Llanos J, Betbesé AJ. Increases in B-type natriuretic peptide for detecting weaning-induced heart failure: Reply to Liu et al. Intensive Care Med 2012;38(1):174.

Angiology, Vascular Biology and Inflammation

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Main Lines of Research

Cardiovascular research:

- ▶ Inflammatory mechanisms involved in vascular disorders.
- ▶ Genetic basis of vascular pathologies: atherothrombosis, aortic aneurism and chronic venous insufficiency.
- ▶ New, more effective targets. Research into pharmacologic targets for NSAIDs of cardiovascular interest.

Cancer research:

- ▶ Intense peritumoural inflammatory response as a therapeutic strategy in solid tumours.
- ▶ Role of inflammatory mediators in head and neck squamous carcinoma, and in regulating gene expression in tumour relapse.

Challenges

- ▶ Increase cooperation between clinicians and experimental researchers in order to enhance the translation level of our research by setting up training programmes for clinical physicians.
- ▶ Increase the number of researchers with PhDs in the group.
- ▶ Increase funding resources by establishing collaborations with the industry sector.
- ▶ Improve research quality in terms of the standard evaluation index.

Active Grants

- ▶ Vila L. RECAVA. FIS Grant. Carlos III Health Institute. January 2008-December 2012.
- ▶ Vila L. Microsomal PGE-synthase-1 as a target for generation of new anti-inflammatory drugs useful in cardiovascular disorders: study in the abdominal aortic aneurysm context. Spanish Ministry of Economy and Competitiveness Grant. January 2011-December 2013.

Awards

- ▶ 20th CEF National Congress. AULA-TVP Communication Award First Prize. Martínez L, Bellmunt S, Dilmé J, Soto B, Hmimina S, Escudero JR. Double jugular-atrial bypass as treatment for symptomatic superior vena cava thrombosis.
- ▶ 58th SEACV National Congress. CARDI-VA-VASCUTEK award for the best original research into technological innovation in angiology and vascular surgery. Bellmunt S, Dilmé J, Barros A, Escudero JR. Compression assisted by removable coils as a new treatment for iatrogenic femoral pseudoaneurysms.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Ear, Nose and Throat Cancer.
- ▶ Inflammation and Vascular Remodelling.
- ▶ Genomics of Complex Diseases.
- ▶ Thrombosis and Haemostasis.
- ▶ Nephrology.
- ▶ Multi-organ Damage.
- ▶ Cerebrovascular Diseases.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

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- 04 Diaz Sanchez S., Piquer Farres N., Fuentes Camps E., Bellmunt Montoya S., Sanchez Nevarez I., Fernandez Quesada F. Criteria for referral between levels of care of patients with peripheral vascular disease. SEMFYC-SEACV consensus document [Criterios de derivación entre niveles asistenciales de pacientes con enfermedad vascular. Documento de consenso SEMFYC-SEACV. Resumen ejecutivo]. Atencion Primaria; 44(9):556-561.
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- 05 Rabe E., Guex J.-J., Puskas A., Scuderi A., Fernandez Quesada F., Alberti T., Andercou A., Giurcaneanu C., Puskas A., Dinh Thi Thu H., Le Nu Thi Hoa H., Escotto Sanchez I., Escudero J.R., Guex J.J., Hoyos A.S., Kazim Y., Swidan A., Kecelj Leskovec N., Planinsek Rucigaj T., Larisa C., Liptak P., Matyas L., Paocharoen V., Pargalava N., Radak D., Maksimovic Z., Saveliev V., Scuderi A., Yuwono H.S. Epidemiology of chronic venous disorders in geographically diverse populations: Results from the Vein Consult Program. International

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IF: 1.462

- 06 Romero J.-Ma, Bover J., Fite J., Bellmunt S., Dilmé J.-F., Camacho Ma, Vila L., Escudero J.-R. The modification of diet in renal disease 4-calculated glomerular filtration rate is a better prognostic factor of cardiovascular events than classical cardiovascular risk factors in patients with peripheral arterial disease. Journal of Vascular Surgery; 56(5):1324-1330.
IF: 2.879
- 07 Lozano Sanchez F.S., Carrasco Carrasco E., Diaz Sanchez S., Gonzalez Porras J.R., Escudero Rodriguez J.R., Marinello Rouira J., Sanchez Nevarez I. Chronic venous disease in Spain: Doctor-patient correlation. European Journal of Vascular and Endovascular Surgery; 44(6):582-586.
IF: 2.82
- 08 Camacho Ma, Martinez-Gonzalez J., Rodriguez C., Siguero L., Seriola C., Romero J.-Ma, Vila L. Imidazolineoxyl N-oxide induces COX-2 in endothelial cells: Role of free radicals. Frontiers in Bioscience; E4(7):2654-2669.
IF: 3.286

Letter

- ▶ Bellmunt S, Roset PN, Escudero JR. Cilostazol in NICE guideline. Heart 2012;98(14):1107.

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Martínez Carnovale L, Artigas Raventós V, Llagostera Pujol S, Dilmé Muñoz J, Bellmunt Montoya S, Escudero Rodríguez JR. Importance of prior or simultaneous aorto-iliac surgery in the outcome of renal transplant. Angiologia 2012;64(3):115-8.
- ▶ Bellmunt Montoya S, Díaz Sánchez S, Sánchez Nevárez I, Fuentes Camps E, Fernández Quesada F, Piquer Farrés N. Criteria for between-care-level referrals of patients with vascular disease. sem-

FYC-SEACV consensus document. Angiologia 2012;64(3):135-45.

Scopus Indexed Publications

- ▶ Guex J, Rabe E, Escotto SI, Escudero J, Scuderi A, Yuwono HS. The "COs" patient: Worldwide results from the vein consult program Phlebolympology 2012;19(4):182-92.

Others

- ▶ Bellmunt S. Screening of abdominal aortic aneurysms. Applicability in the Spanish National Health System Angiologia 2012;64:92-5.

Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases

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Main Lines of Research

- Physiopathological role of LRP family proteins in chronic diseases.
- Identification and characterization of transcription factors and genetic targets. Role of HDL and LDL.
- Vascular impact of ischaemia and angiogenesis in heart disease. Cell therapy.

Challenges

- Use nuclear magnetic resonance to answer questions arising from myocardial perfusion.
- Broaden the experimental focus to include transgenic animal models with/without cardiovascular risk factors in order to proceed to in-depth analysis of molecules involved in the modulation of new proteins identified by post-genomic technologies and systems biology approaches.
- Maintain present scientific networks and establish new multidisciplinary collaborations.
- Increase international funding for the extension of new and established platforms in order to implement proposed activities.

Awards

- IV FENIN Award for Technological Innovation in Healthcare (November 2012).
- SETH-FETH Award for Best Published Article on Thrombosis and Haemostasis in 2011 (October 2012).
- HDL Cholesterol Bueno award from the Co-fradía del Colesterol association for invaluable scientific contributions in the cardiovascular health area (October 2012).
- Honorary Membership of the Spanish Hypertension Society (March 2012).

Active Grants

- Badimon L. Development of new methodologies and emerging technologies to provide evidence of foods with health properties for the reduction of the risk of chronic pathologies from middle age (HENUFOOD). Spanish Ministry of Economy and Competitiveness/CENIT Grant. May 2010-December 2013.
- Badimon L. Consolidated research group. AGAUR Grant. January 2009-December 2013.
- Badimon L. Safer and Faster Evidence-Based Translation. European Union. September 2009-December 2014.
- Badimon L. European Network for Cell Imaging and Tracking Expertise. European Union. June 2009-November 2012.
- Badimon L. Atherosclerotic plaque instability in relation to in-

creasing cardiovascular risk: targeting angiogenesis (CARDIO-RISK). Spanish Ministry of Economy and Competitiveness Grant. January 2011-December 2013.

- Badimon L. Thematic Physiopathology Network for Obesity and Nutrition (CIBEROBN). CIBER Grant. Carlos III Health Institute. December 2006-December 2015.
- Badimon L. Cellular Therapy Network TERCEL. Carlos III Health Institute Grant. December 2006-December 2013.
- Vilahur G. Functional and molecular effects of different HDL constituents on cardiac remodeling post myocardial infarction: magnetic resonance assessment and identification of molecular targets modulated by HDL. Spanish Society of Cardiology. October 2012-December 2014.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Clinical and Translational Cardiology.
- Biomarkers for Disease Status.
- Cerebrovascular Diseases.
- Inflammation and Vascular Remodelling.

- Endocrinology, Diabetes and Nutrition.
- Pharmacological Research in Humans.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Fernandez A.F., Assenov Y., Martin-Subero J.I., Balint B., Siebert R., Taniguchi H., Yamamoto H., Hidalgo Ma, Tan A.-C., Galm O., Ferrer I., Sanchez-Céspedes Ma, Villanueva A., Carmona J., Sanchez-Mut J.V., Berdasco Ma, Moreno V., Capella G., Monk D., Ballestar E., Ropero S., Martinez R., Sanchez-Carbayo Ma, Prosper F., Agirre X., Fraga MaF., Grana O., Perez-Jurado L., Mora J., Puig S., Prat J., Badimon L., Puca A.A., Meltzer S.J., Lengauer T., Bridgewater J., Bock C., Esteller Ma A DNA methylation fingerprint of 1628 human samples. *Genome Research*; 22(2):407-419. **IF: 14.397**
- 02 Lugano R., Pena E., Badimon L., Padro T. Aggregated low-density lipoprotein induce impairment of the cytoskeleton dynamics through urokinase-type plasminogen activator/urokinase-type plasminogen activator receptor in human vascular smooth muscle cell. *Journal of Thrombosis and Haemostasis*; 10(10):2158-2167. **IF: 6.081**
- 03 Rosa B.-L., Ma, Vicenta L.-C., Victor G.-C., Dolores L.-C., Fernando C., Ricardo G.-H., Lina B., J.T.F. Alterations of specific biomarkers of metabolic pathways in vascular tree from patients with Type 2 dia-

betes. *Cardiovascular Diabetology*; 11(0). **IF: 4.209**

- 04 Suades R., Padro T., Vilahur G., Badimon L. Circulating and platelet-derived microparticles in human blood enhance thrombosis on atherosclerotic plaques. *Thrombosis and Haemostasis*; 108(6):1208-1219. **IF: 6.094**
- 05 Caballero P., Alonso R., Rosado P., Mata N., Fernandez-Friera L., Jimenez-Borreguero L.J., Badimon L., Mata P. Detection of subclinical atherosclerosis in familial hypercholesterolemia using non-invasive imaging modalities. *Atherosclerosis*; 222(2):468-472. **IF: 3.706**
- 06 Cubedo J., Padro T., Alonso R., Cinca J., Mata P., Badimon L. Differential proteomic distribution of TTR (pre-albumin) forms in serum and HDL of patients with high cardiovascular risk. *Atherosclerosis*; 222(1):263-269. **IF: 3.706**
- 07 Brugaletta S., Martin-Yuste V., Padro T., Alvarez-Contreras L., Gomez-Lara J., Garcia-Garcia H., Cola C., Liuzzo G., Massotti Ma, Crea F., Badimon L., Serruys P.W., Sabate Ma Endothelial and smooth muscle cells dysfunction distal to recanalized chronic total coronary occlusions and the relationship with the collateral connection grade. *JACC: Cardiovascular*

Interventions; 5(2):170-178. **IF: 6.552**

- 08 Arderiu G., Pena E., Aledo R., Espinosa S., Badimon L. Ets-1 transcription is required in tissue factor driven microvessel formation and stabilization. *Angiogenesis*; 15(4):657-669. **IF: 3.972**
- 09 Garcia-Marirrodiga I., Amaya-Romero C., Ruiz-Diaz G.P., Fernandez S., Ballesta-Lopez C., Pou J.Ma., Romeo J.H., Vilahur G., Badimon L., Ybarra J. Evolution of lipid profiles after bariatric surgery. *Obesity Surgery*; 22(4):609-616. **IF: 3.102**
- 10 Vilahur G., Casani L., Juan-Babot O., Guerra J.Ma, Badimon L. Infiltrated cardiac lipids impair myofibroblast-induced healing of the myocardial scar post-myocardial infarction. *Atherosclerosis*; 224(2):368-376. **IF: 3.706**
- 11 Vilahur G., Casani L., Guerra J.Ma, Badimon L. Intake of fermented beverages protect against acute myocardial injury: Target organ cardiac effects and vasculoprotective effects. *Basic Research in Cardiology*; 107(5). **IF: 5.904**
- 12 Badimon L. Interleukin-18: A potent pro-inflammatory cytokine in atherosclerosis. *Cardiovascular Research*; 96(2):172-175.

*TIF: 123.862 **MIF: 5.161

Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases

*TIF: 123.862 **MIF: 5.161

Scientific Production

IF: 5.94

13 Badimon L., Vilahur G. LDL-cholesterol versus HDL-cholesterol in the atherosclerotic plaque: Inflammatory resolution versus thrombotic chaos. *Annals of the New York Academy of Sciences*; 1254(1):18-32.
IF: 4.364

14 Padro T., Lugano R., Garcia-Arguinzonis Ma, Badimon L. LDL-induced impairment of human vascular smooth muscle cells repair function is reversed by HMG-CoA reductase inhibition. *PLoS ONE*; 7(6).
IF: 3.73

15 Samouillan V., Dandurand J., Nasarre L., Badimon L., Lacabanne C., Llorente-Cortes V. Lipid loading of human vascular smooth muscle cells induces changes in tropoelastin protein levels and physical structure. *Biophysical Journal*; 103(3):532-540.
IF: 3.668

16 Cal R., Juan-Babot O., Brossa V., Roura S., Galvez-Monton C., Portoles Ma, Rivera Ma, Cinca J., Badimon L., Llorente-Cortes V. Low density lipoprotein receptor-related protein 1 expression correlates with cholesteryl ester accumulation in the myocardium of ischemic cardiomyopathy patients. *Journal of Translational Medicine*; 10(1).
IF: 3.459

17 Llorente-Cortes V., Barbarigo V., Badimon L. Low density lipoprotein receptor-related protein 1 modulates the proliferation and migration of human hepatic stellate cells. *Journal of Cellular Physiology*; 227(10):3528-3533.
IF: 4.218

18 Cal R., Castellano J., Revuelta-Lpez E., Aledo R., Barriga Ma, Farr J., Vilahur G., Nasarre L., Hove-Madsen L., Badimon L., Llorente-Corts V. Low-density lipoprotein receptor-related protein 1 mediates hypoxia-induced very low density lipoprotein-cholesteryl ester uptake and accumulation in cardiomyocytes. *Cardiovascular Research*; 94(3):469-479.
IF: 5.94

19 Aledo R., Alonso R., Mata P., Llorente-Cortes V., Padro T., Badimon L. LRP1 gene polymorphisms are associated with premature risk of cardiovascular disease in patients with familial hypercholesterolemia [Los polimorfismos del gen LRP1 se asocian al riesgo prematuro de enfermedad cardiovascular en pacientes con hipercolesterolemia familiar]. *Revista Espanola de Cardiologia*; 65(9):807-812.
IF: 3.204

20 Hernandez Vera R., Vilahur G., Ferrer-Lorente R., Pena E., Badimon L. Platelets derived from the bone marrow of diabetic animals show dysregulated endoplasmic reticulum stress proteins that contribute to increased thrombosis. *Arteriosclerosis, Thrombosis, and Vascular Biology*; 32(9):2141-2148.
IF: 6.338

21 Ibanez B., Giannarelli C., Cimmino G., Santos-Gallego C.G., Alique Ma, Pinero A., Vilahur G., Fuster V., Badimon L., Badimon J.J. Recombinant HDL Milano exerts greater anti-inflammatory and plaque stabilizing properties than HDL wild-type. *Atherosclerosis*; 220(1):72-77.
IF: 3.706

22 Pena E., Arderiu G., Badimon L. Subcellular localization of tissue factor and human coronary artery smooth muscle cell migration. *Journal of Thrombosis and Haemostasis*; 10(11):2373-2382.
IF: 6.081

23 Arderiu G., Pena E., Aledo R., Badimon L. Tissue factor-Akt signaling triggers microvessel formation. *Journal of Thrombosis and Haemostasis*; 10(9):1895-1905.
IF: 6.081

24 Oñate B, Vilahur G, Ferrer-Lorente R, Ybarrá J, Díez-Caballero A, Ballesta-López C, Moscatiello F, Herrero J, Badimon L. The subcutaneous adipose tissue reservoir of functionally active stem cells is reduced in obese patients. *FASEB Journal* 2012;26(10):4327-36.
IF: 5.704

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

► Luque A, Turu MM, Rovira N, Juan-Babot JO, Slevin M, Krupinski J. Early atherosclerotic plaques show evidence of infection by chlamydia pneumoniae. *Frontiers in Bioscience* 2012;E4(7):2423-32.

► Agúndez JAG, del Barrio J, Stephens C, Farré M, Andrade RJ, Badimon L, García-Martín E, Vilahur G, Lucena MI. Trends in qualifying biomarkers in drug safety. Consensus of the 2011 Meeting of the Spanish Society of Clinical Pharmacology. *Frontiers in Pharmacology* 2012;3 JAN.

Scopus Indexed Publications

► Castellano J, Aledo R, Sendra J, Costales P, Badimon L, Llorente-Cortés V. Hypoxia stimulates LRP1 expression through HIF-1α transcription factor in human vascular wall smooth muscle cells. *Clin Invest Arterioscler* 2012;24(3):115-30.

Others

► Slevin M, Ahmed N, Wang Q, McDowell G, Badimon L. Unique vascular protective properties of natural products: Supplements or future main-line drugs with significant anti-atherosclerotic potential? *Vascular Cell* 2012;4.

► Badimon L, Padro T, Vilahur G. Atherosclerosis, platelets and thrombosis in acute ischaemic heart disease. *European Heart Journal – Acute Cardiovascular Care*;1(1):60-74.

► Badimon L, Romero JC, Cubedo J, Borrell-Pagés Ma Circulating biomarkers. *Thrombosis Research* 2012;130, Suppl 1:S12-15.

► Palomo I, Fuentes E, Padro T, Badimon L. Platelets and atherogenesis: Platelet anti-aggregation activity and endothelial protection from tomatoes (solanum lycopersicum). *Experimental and Therapeutic Medicine* 2012;3(4):577-584.

► Badimon L, Padro T, Vilahur G. Extracorporeal assays of thrombosis. In: *Platelets and Megakaryocytes: Methods and Protocols. Volume 3 Additional Protocols and Perspectives, Methods in Molecular Biology*. Eds. Jonathan Ma Gibbins and Martyn P. Mahaut-Smith. Edit. Humana Press Inc., Springer Science+Business Media vol. 788; pp: 43-57; 2012.

► Badimon L. Atherosclerosis coronaria: Bases fisiopatológicas (Ch. 56). *Cardiologia-Sección No. 3*. In: Farreras- Rozman, Medicina Interna 17 edición. Eds. Rozman C/Farreras P. Ed. Elsevier España, SL pp: 464-467;2012.

► Badimon L, Fuster V. Les malalties cardiovasculars. Aterosclerosi i Trombosi. In: *La Biologia d'ahir i d'avui. Cent Anys de la Societat Catalana de Biologia. Treballs de la Societat Catalana de Biologia-vol. 63*. Edit. F. Piferrer. Ed. Societat Catalana de Biologia, pp:123-140; 2012.

► Badimon L, Vilahur G, Padro T. Fisopatologia del proceso aterotrombótico: Desarrollo de la placa vulnerable y formación del trombo. In: *Diabetologia Cardiovascular*. Edit. Esper RJ, Vilariño JO. Ed. Hai Editorial SRL, Ch. 1, pp: 15-32; 2012.



Inflammation and Vascular Remodelling

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Estefanía Segalés ICCC

Collaborators
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Main Lines of Research

- Inflammation and vascular remodelling: regulation of vascular homeostasis by extracellular matrix components and modifying enzymes.
- Molecular and cellular mechanisms in atherosclerosis: identification of new therapeutic targets.
- Molecular basis of abdominal aortic aneurysm (AAA): new pharmacological strategies.
- Epigenetics in cardiovascular diseases.

Challenges

- Identify new therapeutic targets, progression markers and biomarkers in atherosclerosis and AAA.
- Establish genetically modified animal models that could become useful disease models in atherosclerosis and AAA.
- Expand and consolidate the scientific staff.
- Increase regular funding through national and international calls.
- Set up new stable collaborations within IIB Sant Pau and with national and international groups and consolidate those already established.

Active Grants

- Rodríguez C. Mechanisms involved in the control of vascular homeostasis by lysyl oxidase: lysyl oxidase as a new marker of the evolution of abdominal aorta aneurysms. FIS Grant. Carlos III Health Institute. 2009-2012.
- Rodríguez C. Epigenetic mechanism implicated in the control of intimal hyperplasia: lysyl oxidase role in restenosis. SEC Grant. October 2012-October 2013.

Awards

- Best Communication Award. 6th Meeting on Vascular Physiopathology Research (SEH-LE-LHA, Madrid, Spain). Rodríguez C, González-Díez M, Alegre F, Orriols M, Martínez-González J. FTY-720 induces PGI2 release and vascular COX-2 expression in vivo: statin potentiation.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Angiology, Vascular Biology and Inflammation.
- Atherosclerosis and Vascular Biology.
- Regulation of Cardiac Rhythm and Contraction.

External Collaborations

- Jain K. Mukesh. Case Western Reserve University School of Medicine, Cleveland, Ohio, USA.
- Mark Slevin. Manchester Metropolitan University, UK.
- Vicente Andrés. National Cardiovascular Research Centre, Spain.

- José Manuel Redondo. National Cardiovascular Research Centre, Spain.
- Jesús Egido. Jiménez Díaz Foundation, Madrid, Spain.
- Jesús Osada. CIBEROBN, University of Zaragoza, Spain.
- Mercedes Salices. Autonomous University of Madrid, Spain.
- Victoria Cachofeiro. Complutense University of Madrid, Spain.
- Jerzy Krupinski. Hospital Mutua Universitaria, Terrassa, Barcelona, Spain.
- Francisco Sánchez. Hospital de la Princesa, Madrid, Spain.

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Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 De Lizarrondo S.Ma, Roncal C., Calvayrac O., Rodríguez C., Varo N., Purroy A., Lorente L., Rodríguez J.A., Doeuvre L., Heras-Stubbs S., Angles-Cano E., Paramo J.A., Martínez-Gonzalez J., Orbe J. Synergistic effect of thrombin and CD40 li-

gand on endothelial matrix metalloproteinase-10 expression and microparticle generation in vitro and in vivo. Arteriosclerosis, Thrombosis, and Vascular Biology; 32(6):1477-1487.
IF: 6.338

- 02 Ramos-Mozo P., Rodríguez C., Pastor-Vargas C., Blanco-Colio L.Ma, Martínez-Gonzalez J., Meilhac O., Michel J.-B.,

De Ceniga MaV., Egido J., Martín-Ventura J.L. Plasma profiling by a protein array approach identifies IGFBP-1 as a novel biomarker of abdominal aortic aneurysm Atherosclerosis; 221(2):544-550.
IF: 3.706

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Camacho M, Martínez-Gonzalez J, Rodríguez C, Siguero L, Seriola C, Romero J-, Vila L. Imidazolineoxyl N-oxide induces COX-2 in endothelial cells: Role of free radicals. Frontiers in Bioscience 2012;E4(7):2654-69.

Biomarkers for Disease Status

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Rosa Suades BFI-ISCI



Main Lines of Research

- Identification of new biomarkers of atherothrombosis and ischaemic heart disease with potential use in diagnosis and prognosis, performing studies in cell cultures, animal models of cardiovascular disease and human samples of patients with coronary heart disease risk factors.

Challenges

- Advance research aiming to identify and characterize new biomarkers of vascular injury, atherothrombotic disease and/or ischaemic, coronary and cerebrovascular syndromes using post-genomic techniques.
- Generate new information on potential soluble biomarkers (in serum, plasma) and in microparticles circulating in blood, as well as in blood and/or vascular cells, using proteomic techniques based on liquid chromatography and bidimensional electrophoresis, antibody array systems and mass spectrometry (MALDI-ToF/ToF; linear ion trap).

Collaborations

Collaborations with other IIB Sant Pau Groups

- Molecular and Therapeutic Pathologies of Ischaemic and Atherothrombotic Disease.
- Clinical and Translational Cardiology.
- Endocrinology, Diabetes and Nutrition.
- Pharmacological Research in Humans.

Awards

- SETH-FETH Award for Best Published Article on Thrombosis and Haemostasis in 2011.

Active Grants

- Padró T. Proteomic characterization of intracoronary thrombi in STEMI patients. Spanish Foundation on Thrombosis and Haemostasis (FETH). October 2012-October 2014.
- Padró T. Safer and Faster Evidence-Based Translation. European Union. September 2009-December 2013.
- Padró T. Low-density lipoproteins and stability of arteriosclerotic plaques. FIS Grant. Carlos III Health Institute. December 2010-December 2013.

Active Grants

- Padró T. Biomarker for cardiovascular risk assessment in Europe (BIOMARCARE). European Union. 2011-2015.
- Padró T. Keys to healthy vascular ageing in octogenarian population-CEVASALU. Spanish Ministry of Health, Social Services and Equality Grant. 2012-2013.
- Badimon L. Thematic Physiopathology Network for Obesity and Nutrition (CIBEROBN). CIBER Grant. Carlos III Health Institute. December 2006-December 2015. Since May 2012.
- Badimon L. Celular Therapy Network TERCEL. Carlos III Health Institute Grant. December 2006-December 2013.
- Badimon L. Consolidated research group. AGAUR Grant. January 2009-December 2013.
- Badimon L. Development of new methodologies and emerging technologies to provide evidence of foods with health properties for the reduction of the risk of chronic pathologies from middle age (HENUFOOD). Spanish Ministry of Economy and Competitiveness/CENIT. May 2010-December 2013.
- Llorente-Cortés V. Cardiovascular Network-REDINSCOR. Carlos III Health Institute Grant. December 2006-December 2013. Until May 2012.

Scientific Production

***TIF: 45.845 **MIF: 4.584**

ISI Web of Knowledge Indexed Publications with an IF

01 Cubedo J., Padró T., Alonso R., Cinca J., Mata P., Badimon L. Differential proteomic distribution of TTR (pre-albumin) forms in serum and HDL of patients with high cardiovascular risk. *Atherosclerosis*; 222(1):263-269. **IF: 3.706**

02 Aledo R., Alonso R., Mata P., Llorente-Cortés V., Padró T., Badimon L. LRP1 gene polymorphisms are associated with premature risk of cardiovascular disease in patients with familial hypercholesterolemia [Los polimorfismos del gen LRP1 se asocian al riesgo prematuro de enfermedad cardiovascular en pacientes con hipercolesterolemia familiar]. *Revista Española de Cardiología*; 65(9):807-812. **IF: 3.204**

03 Suades R., Padró T., Vilahur G., Badimon L. Circulating and platelet-derived microparticles in human blood enhance thrombosis on atherosclerotic plaques. *Thrombosis and Haemostasis*; 108(6):1208-1219.

04 Arderiu G., Pena E., Aledo R., Espinosa S., Badimon L. Ets-1 transcription is required in tissue factor driven microvessel formation and stabilization. *Angiogenesis*; 15(4):657-669. **IF: 3.972**

05 Lugano R., Pena E., Badimon L., Padró T. Aggregated low-density lipoprotein induce impairment of the cytoskeleton dynamics through urokinase-type plasminogen activator/urokinase-type plasminogen activator receptor in human vascular smooth muscle cell. *Journal of Thrombosis and Haemostasis*; 10(10):2158-2167. **IF: 6.081**

06 Pena E., Arderiu G., Badimon L. Subcellular localization of tissue factor and human coronary artery smooth muscle cell migration. *Journal of Thrombosis and Haemostasis*; 10(11):2373-2382. **IF: 6.081**

07 Arderiu G., Pena E., Aledo R., Badimon L. Tissue factor-Akt signaling triggers microvessel formation. *Journal of Thrombosis and Haemostasis*; 10(9):1895-1905. **IF: 6.081**

08 Palomo I., Fuentes E., Padró T., Badimon L. Platelets and atherogenesis: Platelet anti-aggregation activity and endothelial protection from tomatoes (*Solanum lycopersicum* L.) (Review). *Experimental and Therapeutic Medicine*; 3(4):577-584. **IF: 0.344**

09 Padró T., Lugano R., García-Arguinzonis Ma, Badimon L. LDL-induced impairment of human vascular smooth muscle cells repair function is reversed by HMG-CoA reductase inhibition. *PLoS ONE*; 7(6). **IF: 3.73**

10 Brugaletta S., Martín-Yuste V., Padró T., Alvarez-Contreras L., Gomez-Lara J., Garcia-Garcia HM, Cola C, Liuzzo G, Masotti M, Crea F, Badimon L, Serruys PW, Sabaté M. Endothelial and smooth muscle cells dysfunction distal to recanalized chronic total coronary occlusions and the relationship with the collateral connection grade. *JACC: Cardiovascular Interventions* 2012;5(2):170-8. **IF: 6.552**

ISI Web of Knowledge Indexed Publications without an IF

► Jose Rodríguez Cristobal J, Alonso-Villaverde Grote C, Travé Mercadé P, M Pérez Santos J, Peña Sendra E, Muñoz Lloret A, Fernández Pérez C, Bleda Fernández D. Randomised clinical trial of an intensive intervention in the primary care setting of patients with high plasma fibrinogen in the primary prevention of cardiovascular disease. *BMC Research Notes* 2012;5.

► Agúndez JAG, del Barrio J, Stephens C, Farré M, Andrade RJ, Badimon L, García-Martín E, Vilahur G, Lucena MI. Trends in qualifying biomarkers in drug safety. Consensus of the 2011 meeting of the Spanish Society of Clinical Pharmacology. *Frontiers in Pharmacology* 2012;3 JAN.

Others

► Badimon L, Padró T, Vilahur G. Atherosclerosis, platelets and thrombosis in acute ischaemic heart disease. *European Heart Journal: Acute Cardiovascular Care* (ACC) 2012;1(1):60-74.

► Badimon L, Vilahur G, Padró T. Fisiopatología del proceso aterotrombótico: desarrollo de la placa vulnerable y formación del trombo. In: *Diabetología Cardiovascular*. Eds. RJ. Esper/ JO. Vilariño. Hai Editorial SRL; Ch. 1, pp:15-32.

► Badimon L, Padró T, Vilahur G. Extracorporeal assays of thrombosis. In: *Platelets and Megakaryocytes: Methods and Protocols*. Volume 3. Additional Protocols and Perspectives, Methods in Molecular Biology. Eds. Jonathan Ma Gibbins and Martyn P. Mahaut-Smith. Humana Press Inc., Springer Science+Business Media Vol. 788; pp: 43-57.

Sant Pau Biomedical Research Institute

Back Areas Area 1 Index

Scientific Report 2012

*Total Impact Factor **Mean Impact Factor - PUBLISHED ON PAPER IN 2012

Lipids and Cardiovascular Pathology

Coordinator

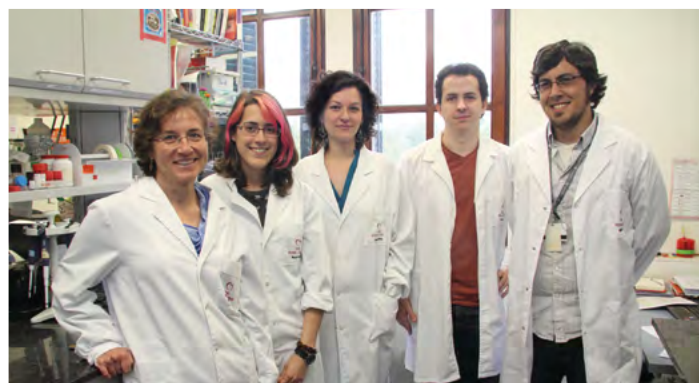
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Researchers

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Technicians

Laura Nasarre REDINSOR



Main Lines of Research

- ▶ Molecular mechanisms involved in the modulation of LRP1 by cardiovascular risk factors.
- ▶ Impact of LRP1 on vascular and myocardial cholesterol accumulation.
- ▶ Impact of lipoproteins and angiotensin II on LRP1-Intracellular signal pathways.
- ▶ Alterations in LRP1 expression and LRP1-intracellular signal pathways in hypoxia/ischaemia in in vitro and in vivo models.
- ▶ LRP1 and breast cancer.
- ▶ LRP1 and inflammation.

Challenges

- ▶ Develop transgenic mice with tissue-specific LRP1 modulation to proceed to in-depth analysis of LRP1-dependent mechanisms.
- ▶ Maintain and amplify relationship with IIB-Sant Pau groups to gain translation in this research area.
- ▶ Maintain and strengthen international collaborations to set up future applications for European funding.
- ▶ Establish collaborations with companies with the aim of developing new products useful for prognosis and diagnosis.

Active Grants

- ▶ Llorente V. Identification of one possible pathophysiological link between alterations of LRP1 expression and ischemic cardiomyopathy. Carlos III Health Institute Grant. 2011-2014.
- ▶ Llorente V. Intracellular signal pathways involved in the modulation of low density lipoprotein receptor-related protein (LRP1) expression by hypercholesterolemia and hypertension. Consequences for vascular cell and cardiomyocyte activity. Implications in cardiovascular pathophysiology. La Marató de TV3 Foundation. 2008-2012.
- ▶ Llorente V. Identification of pathological molecular mechanisms involved in heart failure and their contribution to the pathogenesis of this syndrome. Carlos III Health Institute Grant. 2008-2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Clinical and Translational Cardiology.
- ▶ Breast Cancer.
- ▶ Clinical Oncology.
- ▶ Cardiovascular Biochemistry.
- ▶ Inflammatory Diseases.

*TIF: 14.549 **MIF: 3.637

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Samouillan V., Dandurand J., Nasarre L., Badimon L., Lacabanne C., Llorente-Cortes V. Lipid loading of human vascular smooth muscle cells induces changes in tropoelastin protein levels and physical structure. *Biophysical Journal*; 103(3):532-540.
IF: 3.668
- 02 Llorente-Cortes V., Barbarigo V., Badimon L. Low density lipoprotein receptor-related protein 1 modulates the proliferation and migration of human

hepatic stellate cells. *Journal of Cellular Physiology*; 227(10):3528-3533.

IF: 4.218

- 03 Aledo R., Alonso R., Mata P., Llorente-Cortes V., Padro T., Badimon L. LRP1 gene polymorphisms are associated with premature risk of cardiovascular disease in patients with familial hypercholesterolemia [Los polimorfismos del gen LRP1 se asocian al riesgo prematuro de enfermedad cardiovascular en pacientes con hipercolesterolemia familiar]. *Revista Espanola de Cardiologia*; 65(9):807-812.
IF: 3.204

- 04 Cal R., Juan-Babot O., Brossa V., Roura S., Galvez-Monton C., Portoles Ma, Rivera Ma, Cinca J., Badimon L., Llorente-Cortes V. Low density lipoprotein receptor-related protein 1 expression correlates with cholesteryl ester accumulation in the myocardium of ischemic cardiomyopathy patients. *Journal of Translational Medicine*; 10(1).

IF: 3.459

Other Publications

Scopus Indexed Publications

- ▶ Castellano J, Aledo R, Sendra J, Costales P, Badimon L, Llorente-Cortés V. Hypoxia stimulates LRP1 expression through HIF-1α transcription factor in human vascular wall smooth muscle cells. *Clínica e Investigación en Arteriosclerosis* 2012;24(3):115-30.

Cell Therapy

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Main Lines of Research

- ▶ Tissue engineering.
- ▶ Tumour cell therapy.
- ▶ Interaction between tumour and therapeutic cells.
- ▶ Monitoring Tumour Therapy.

Challenges

- ▶ Promote biomaterial development to reach the market place.
- ▶ Develop biomaterials for delivery of cell-based tumour therapy.
- ▶ Develop clinical trials of cell-based antiangioma therapies.

Active Grants

- ▶ Blanco J. Vascular-targeted photodynamic therapy against tumours. Spanish Ministry of Economy and Competitiveness Grant. 2012-2014.
- ▶ Blanco J. Highly porous bioactive scaffolds controlling angiogenesis for tissue engineering. ANGIOSCAFF. European Union Grant. 2009-2012.
- ▶ Blanco J. Rational development of antitumour cell therapy strategies. Spanish Ministry of Economy and Competitiveness Grant. 2009-2012.
- ▶ Blanco J. Development of a dual agent for cell therapy and MRI contrast of vehicle cells. Spanish Ministry of Economy and Competitiveness Grant. 2010-2013.
- ▶ Blanco J. Cardiac Insufficiency and Cardiac Regeneration. Grants to support research groups in Catalonia. AGAUR Grant. 2009-2013.
- ▶ Blanco J. Grants to support research groups in Catalonia. 7th Research Framework Programme European Union Grant. 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Neurosurgery.

External Collaborations

- ▶ Dr. T. Thompson. IBMB, Barcelona, Spain.
- ▶ Dr. José Becerra, Dr. José Antonio Andrades. Cell Biology, Genetics and Physiology Department, Faculty of Sciences, University of Malaga, Spain.
- ▶ Dr. Carles Arús. Group for Biomedical Applications of Magnetic Molecular Resonance. Faculty of Sciences, Autonomous University of Barcelona, Spain.
- ▶ Dr. Antonio Bayés. Cardiology Cellular Physiology Group, ICCG, Barcelona, Spain.

- ▶ Prof. Josep Planell. IBEC, Barcelona, Spain.
- ▶ Dr. Ángel Raya. CMR, Barcelona, Spain.
- ▶ Prof. Miguel Beato. Chromatin and Gene Expression Group, CRG, Barcelona, Spain.
- ▶ Prof. Jöns Hilborn. Department of Materials Chemistry, University of Uppsala, Sweden.
- ▶ Prof. Jeffrey A. Hubbell. Institute of Bioengineering, Ecole Polytechnique Fédérale de Lausanne, Switzerland.
- ▶ Prof. Ralph Müller. Institute for Biomechanics, Zurich, Switzerland.

*TIF: 20.272 **MIF: 6.757

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Celia-Terrassa T., Meca-Cortes O., Mateo F., De Paz A.Ma, Rubio N., Arnal-Estape A., Ell B.J., Bermudo R., Diaz A., Guerra-Rebollo Ma, Lozano J.J., Estaras C., Ulloa C., Alvarez-Simon D., Mila J., Vilella R., Paciucci R., Martinez-Balbas Ma, De Herreros A.G., Gomis R.R., Kang Y., Blanco J., Fernandez P.L., Thomson T.Ma Epithelial-mesenchymal transition can suppress major attributes of human epithelial tumor-initiating cells. Journal of Clinical Investigation; 122(5):1849-1868.
- 02 Alieva Ma, Bago J.R., Aguilar E., Soler-Botija C., Vila O.F., Molet J., Gambhir S.S., Rubio N., Blanco J. Glioblastoma therapy with cytotoxic mesenchymal stromal cells optimized by bioluminescence imaging of tumor and therapeutic cell response. PLoS ONE; 7(4).

press major attributes of human epithelial tumor-initiating cells. Journal of Clinical Investigation; 122(5):1849-1868.

IF: 12.812

IF: 3.73

- 03 Roura S., Bago J.R., Soler-Botija C., Pujal J.Ma, Galvez-Monton C., Prat-Vidal C., Lucia-Valdeperas A., Blanco J., Bayes-Genis A. Human Umbilical Cord Blood-Derived Mesenchymal Stem Cells Promote Vascular Growth In Vivo. PLoS ONE; 7(11).

IF: 3.73

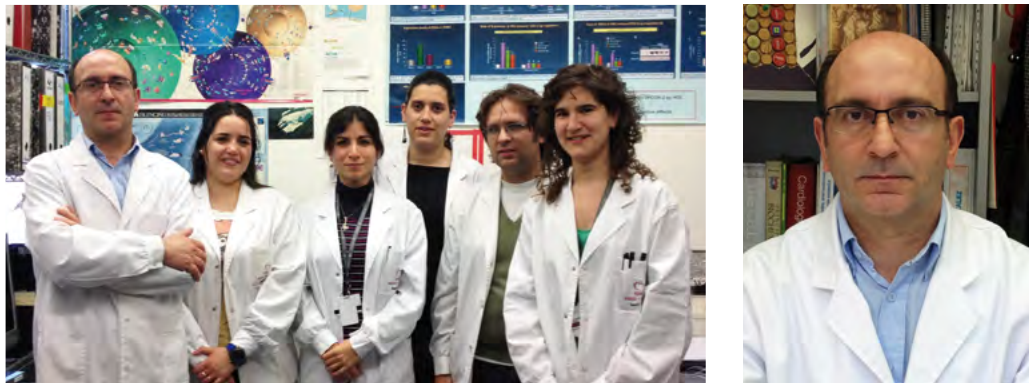
Other Publications

- ▶ Rubio N, Fernández-Vila O., Alieva M, Bagó J.R and Blanco J. In vivo non-invasive bioluminescence imaging: a short course. In: Hot Topics in Cell Biology. Eds: Becerra J, Santos-Ruiz L. Oxford: Chartridge, 2012.

Atherosclerosis and Vascular Biology

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Main Lines of Research

- Identification and characterization of master genes involved in the onset, development and complication of ischaemic heart disease (IHD) and abdominal aortic aneurysm (AAA).
- Validation of new targets for diagnosis, prognosis and treatment of cardiovascular diseases.
- Mechanisms involving nuclear receptors in atherosclerosis and restenosis, the major limitation to percutaneous coronary intervention and stenting.
- Cardioprotective mechanisms mediated by nuclear receptors.

Challenges

- Develop of new (genetically modified) animal models for atherosclerosis, restenosis and AAA.
- Incorporate new PhD and postdoctoral students as well as staff investigators to preserve the core group and implement new technical expertise and experimental approaches.
- Find affinities with other IIB Sant Pau groups in order to increase critical mass and implement joint strategies to optimize resources and access to alternative funding sources.
- Consolidate present relationships with national collaborators and expand our international collaborations.

Active Grants

- Martínez J. Vascular function regulation by the NOR-1 nuclear receptor: a new therapeutic target to modulate coronary artery disease. Spanish Ministry of Economy and Competitiveness Grant. January 2010-December 2012.
- Martínez J. Risk factors, evolution and treatment of cardiovascular diseases and their molecular and cellular mechanisms (RECAVA). Carlos III Health Institute Grant. January 2007-December 2012.
- Martínez J. Inflammation and atherosclerosis: activation mechanisms in vascular cells and modulation by the NOR-1 nuclear receptor. Atherosclerosis Spanish Foundation- Atherosclerosis Spanish Society Grant. January 2012-December 2013.
- Martínez J. Cardiacomic. 3rd International Cartoon Contest on Cardiovascular Research and Disease. Generalitat de Catalunya. 2011-2012.

Awards

- Best Communication Award. 6th Meeting on Vascular Physiopathology Research (SEH-LELHA, Madrid, Spain). Rodríguez C, González-Díez M, Alegre F, Orriols M, Martínez-González J. FTY-720 induces PGI2 release and vascular COX-2 expression in vivo: statin potentiation.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Angiology, Vascular Biology and Inflammation.
- Inflammation and Vascular Remodelling.
- Regulation of Cardiac Rhythm and Contraction.

External Collaborations

- Jain K. Mukesh. Case Western Reserve University School of Medicine, Cleveland, Ohio, USA.
- Mark Slevin. Manchester Metropolitan University, UK.
- Vicente Andrés. National Cardiovascular Research Centre, Spain.
- José Manuel Redondo. National Cardiovascular Research Centre, Spain.
- Jesús Egido. Jiménez Díaz Foundation, Madrid, Spain.
- Jesús Osada. CIBEROBN, University of Zaragoza, Spain.
- Mercedes Salices. Autonomous University of Madrid, Spain.
- Victoria Cachofeiro. Complutense University of Madrid, Spain.
- Jerzy Krupinski. Hospital Mutua Universitaria, Terrassa, Barcelona, Spain.
- Francisco Sánchez. Hospital de la Princesa, Madrid, Spain.
- Juan Miguel Redondo. National Cardiovascular Research Centre, Spain.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

***TIF: 14.23 **MIF: 3.5575**

01 Ramos-Mozo P, Rodríguez C, Pastor-Vargas C, Blanco-Colio L, Martínez-González J, Meilhac O, Michel J-B, De Ceniga MaV, Egido J, Martín-Ventura J.L. Plasma profiling by a protein array approach identifies IGFBP-1 as a novel biomarker of abdominal aortic aneurysm Atherosclerosis; 221(2):544-550. **IF: 3.706**

02 De Lizarrondo S, Ma, Roncal C, Calvayrac O, Rodríguez C, Varo N, Purroy A, Lorente L, Rodríguez J.A., Doeuvre L, Heras-Stubbs S, Angles-Cano E, Paramo J.A., Martínez-González J, Orbe J. Synergistic effect of thrombin and CD40 ligand on endothelial matrix metalloproteinase-10 expression and microparticle generation in vitro and in vivo. Arteriosclerosis, Thrombosis, and Vascular Biology; 32(6):1477-1487. **IF: 6.338**

03 Camacho Ma, Martínez-González J, Rodríguez C, Siguero L, Seriola C, Romero J.-Ma, Vila L. Imidazolineoxyl N-oxide induces COX-2 in endothelial cells: Role of free radicals. Frontiers in Bioscience; E4(7):2654-2669. **IF: 3.286**

04 Redondo S, González-Rocaforat T, Navarro-Dorado J, Ramajo Ma, Hristov Ma, Gordillo-Moscote A, Reguillo F, Carnero Ma, Martínez-González J, Rodríguez E, Weber C, Tejerina T. Decreased pre-surgical CD34 +/CD144 + cell number in patients undergoing coronary artery bypass grafting compared to coronary artery disease-free valvular patients. Journal of Cardiothoracic Surgery; 7(1). **IF: 0.9**

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Ramajo M, Redondo S, González-Rocaforat Á, Navarro-Dorado J, Reguillo F, Carnero M, Martínez-González J, Rodríguez E, Tejerina T. CD34 +/CD144 + cell depletion in coronary artery bypass patients is not related to increased apoptosis by plasmatc TGF-beta. Clinica e Investigación en Arteriosclerosis 2012;24(1):12-20.

Regulation of Cardiac Rhythm and Contraction

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Grant Holders
Carmen Tarifa

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Main Lines of Research

- ▶ Receptor-mediated changes in intracellular calcium handling in atrial fibrillation.
- ▶ Contribution of genetic variants to electrical remodelling and arrhythmogenesis.
- ▶ Effects of development and ageing on calcium handling in cardiac myocytes.
- ▶ Functional effects of lipid accumulation in cardiomyocytes.

Challenges

- ▶ The main goal is to consolidate the group as a reference in research into calcium handling in main fibrillation and to establish it within other lines of research by including emerging technology and fields of research. Specifically we aim to:
 - Develop computational tools and models to improve the analysis and understanding of intracellular calcium handling in cardiac myocytes.
 - Incorporate emerging technology such as stretching and measurements of force in single cardiomyocytes.
- Consolidate current national and international collaborations and establish new strategic collaborations within emerging fields of research such as the use of super-resolution fluorescence imaging (STORM, STED techniques), the detection and role of reactive oxygen species in diseased cardiomyocytes and the role of telomere length in cardiac senescence and regeneration.
- Achieve international funding for incorporation of scientific expertise and participation in multidisciplinary international research projects.

Active Grants

- ▶ Hove-Madsen L. Remodelling of adenosine receptors in human atrial fibrillation: A novel mechanism for atrial arrhythmogenesis. Spanish Ministry of Economy and Competitiveness Grant. March 2008-May 2012.
- ▶ Hove-Madsen L. Functional cellular bases of PITX2 involvement in human atrial fibrillation. Spanish Ministry of Economy and Competitiveness Grant. July 2011-November 2014.
- ▶ Hove-Madsen L. Effects of atrial fibrillation on the distribution and frequency of spontaneous calcium release events in human atrial myocytes. Spanish Ministry of Economy and Competitiveness Grant. January 2012-December 2014.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Clinical and Translational Cardiology.
- ▶ Lipids and Cardiovascular Pathology.
- ▶ Artherosclerosis and Vascular Biology.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

01 Molina C.E., Leroy J., Richter W., Xie Ma, Scheitrum C., Lee I.-O., Maack C., Rucker-Martin C., Donzeau-Gouge P., Verde I., Llach A., Hove-Madsen L., Conti Ma, Vandecasteele G., Fischmeister R. Cyclic adenosine monophosphate phosphodies-

*TIF: 20.026 **MIF: 10.013

terase type 4 protects against atrial arrhythmias. Journal of the American College of Cardiology; 59(24):2182-2190.
IF: 14.086

02 Cal R., Castellano J., Revuelta-Lpez E., Aledo R., Barriga Ma, Farr J., Vilahur G., Nasarre L., Hove-Madsen L., Badimon L., Llorente-Corts V. Low-density lipopro-

tein receptor-related protein 1 mediates hypoxia-induced very low density lipoprotein-cholesteryl ester uptake and accumulation in cardiomyocytes. Cardiovascular Research; 94(3):469-479.
IF: 5.94

AREA 2

Genetic, Metabolic and Inflammatory Diseases

- 78 Genetic Diseases
- 82 Metabolic Bases of Cardiovascular Risk
- 84 Inflammatory Diseases
- 86 Endocrinology, Diabetes and Nutrition
- 90 Pituitary Gland Disorders
- 92 Digestive Diseases
- 96 Microbiology and Infectious Diseases
- 104 Multi-organ Damage

Genetic Diseases

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Eduardo Tizzano HSCSP

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Ma Jesús Barceló HSCSP
Mónica Cornet HSCSP
Elisabeth del Río HSCSP
Montserrat Domènech HSCSP
Ma José Rodríguez HSCSP

Collaborators
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Rebeca Martínez FIS



Main Lines of Research

- Pharmacogenetics: genetic determinants in drug-response profiles.
- Monogenic muscular disorders: dystrophinopathies, dysferlinopathies, limb girdle dystrophies. Myotonic dystrophy.
- Hereditary breast/ovarian cancer.
- Motor neuron disorders: pathogenic mechanisms during human development and validation of biological markers for therapeutic follow-up.
- Monogenic blood disorders: haemochromatosis, haemophilia A and B, thalassemic syndromes.

Challenges

Pharmacogenetics:

- Colorectal cancer treatment.
- Chronic inflammatory disease treatment.

Muscular dystrophies:

- Post-transcriptional regulation of the dystrophin gene using nonsense-mediated decay analysis in DNA from patients with Duchenne muscular dystrophy.
- Genes associated with new phenotypic forms of limb girdle muscular dystrophy.

Hereditary breast/ovarian cancer:

- DNA studies to classify DNA variants found in the BRCA1 and BRCA2 genes as pathogenic or neutral.
- Circulating tumour cells (CTCs) as prognostic markers in patients with locally advanced and disseminated breast cancer.
- Workflow development for the analysis of BRCA1 and BRCA2 genes by next-generation sequencing (NGS) techniques.

Hereditary motor neurone diseases:

- Development of neuromuscular junction in health and disease. Generation of iPSCs from fibroblasts or keratinocytes from patients.
- Broadening the spectrum of study of motor neuron diseases to include bulbar and spinal muscular atrophy, distal muscular atrophies and amyotrophic lateral sclerosis.

Monogenic hereditary haematological diseases:

- Genetic factors in the appearance of inhibitors to treatment with factor VIII and in the variability of phenotypic expression in haemophilia A.

Active Grants

- Baiget Ma Funds in support of consolidated Catalan research groups. AGAUR Grant. August 2009-December 2013.
- Baiget Ma Pharmacogenetic studies in the treatment of colorectal cancer with biological therapies. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Baiget Ma Phase II randomized pharmacogenetic trial to evaluate the efficacy and safety of the FOLFIRI regimen with high doses of irinotecan (FOLFIRI-AD) in patients with metastatic colorectal cancer UGT1A genotype 1. Spanish Ministry of Health, Social Services and Equality Grant. January 2012-December 2013.
- Gallano P. Study of messenger RNA of the gene for Duchenne muscular dystrophy (DMD): interference of the mRNA degradation mechanism mediated by nonsense mutations (nonsense-mediated decay) in suppression therapy for premature termination codons. FIS Grant. Carlos III Health Institute. January 2009-March 2012.
- Gallano P. Development of molecular diagnosis panels for hereditary monogenic pathology using Fluidigm access array system and Next Generation Sequencing GS Junior System FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Tizzano E. Translational research in spinal muscular atrophy: phenotype modifiers, iPSCs derived motor neurons and developmental neuromuscular pathology. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Tizzano E. Genotype characterization of Argentine patients with spinal muscular atrophy. Spanish Ministry of Economy and Competitiveness grant. December 2011-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Molecular Bases of Disease.

External Collaborations

- Renata Lonigro. University of Udine, Italy.
- Kwang-Kuk Kim University of Ulsan, Seoul, South Korea.
- Miguel Lafarga. University of Cantabria, Santander, Spain.
- Rafael Yáñez. Royal Holloway University of London, UK.
- Josep Esquerda. University of Lleida, Spain.
- Concepción Hernández. Genetics Department. Ramón y Cajal Hospital, Madrid, Spain.
- CIMBA (Consortium of Researchers of BRCA1/BRCA2 Modifiers).
- A. Veiga. Molecular Medicine Department of the Galician Public Foundation for Genomic Medicine, Hospital Clínico Universitario, Santiago de Compostela, Spain.
- Eladio Velasco. Institute of Biology and Molecular Genetics, University of Valladolid, Spain.
- Spanish National Cancer Research Centre (CNIO), Madrid, Spain.

Scientific Production

***TIF: 44.186 **MIF: 2.945**

ISI Web of Knowledge Indexed Publications with an IF

- 01 Juan-Mateu J., Paradas C., Olive Ma, Verdura E., Rivas E., Gonzalez-Quereda L., Rodriguez MaJ., Baiget Ma, Gallano P. Isolated cardiomyopathy caused by a DMD nonsense mutation in somatic mosaicism: Genetic normalization in skeletal muscle. Clinical Genetics; 82(6):574-578. **IF: 3.944**
- 02 Ramos Arroyo MaA., Trujillo-Tiebas MaJ., Mila Ma, Millan J.Ma, Borrego S., Molano J., Planells J.G., Gallano P., Gallego J., Martinez A., Ayuso C. Recommendations of good practices for molecular diagnosis of Huntington disease [Recomendaciones de buena práctica para el diagnóstico genético de la enfermedad de Huntington]. Medicina Clínica; 138(13):584-588. **IF: 1.399**
- 03 Domingo P., Guardiola J.Ma, Salazar J., Torres F., Mateo MaG., Pachó C., Del Mar Gutierrez Ma, Lamarca K., Fontanet A., Martín J., Muñoz J., Vidal F., Baiget Ma Association of ITPA gene polymorphisms and the risk of ribavirin-induced anemia in HIV/hepatitis C virus (HCV)-coinfected patients receiving HCV combination therapy. Antimicrobial Agents and Chemotherapy; 56(6):2987-2993. **IF: 4.565**
- 04 Blanco A., De La Hoya Ma, Balmana J., Ramon Y Cajal T., Teule A., Miramar MaD., Esteban E., Infante Ma, Benitez J., Torres A., Tejada Ma-I., Brunet J., Grana B., Balbin Ma, Perez-Segura P., Osorio A., Velasco E.A., Chirivella I., Calvo Ma-T., Feliubadalo L., Lasa A., Diez O., Carracedo A., Caldes T., Vega A. Detection of a large rearrangement in PALB2 in Spanish breast cancer families with male breast cancer. Breast Cancer Research and Treatment; 132(1):307-315.

IF: 4.469

- 05 Pena L., Pico Ma, Rosatelli C., Meloni A., Del Rio E., Tizzano E.F., Baiget Ma UGT1A1 genotype in a white boy with Crigler-Najjar syndrome type 2. Journal of Pediatric Gastroenterology and Nutrition; 55(5):e136-e137. **IF: 2.196**
- 06 De La Fuente-Gonzalo F., Baiget Ma, Badell I., Ricard P., Vinuesa L., Martinez-Nieto J., Ropero P., Villegas A., Gonzalez F.A., Diaz-Mediavilla J. Study of three families with Hb agraio [a29(B10) Leu-Pro, CTG>CCG (a2)] in the spanish population: Three homozygous cases. Hemoglobin; 36(6):526-532. **IF: 0.894**
- 07 Paez D., Labonte MaJ., Lenz H.-J. Pancreatic Cancer: Medical Management (Novel Chemotherapeutics). Gastroenterology Clinics of North America; 41(1):189-209. **IF: 3**

Genetic Diseases

*TIF: 44.186 **MIF: 2.945

Scientific Production

08

Tapia O., Bengoechea R., Palanca A., Arteaga R., Val-Bernal J.F., Tizzano E.F., Berciano MaT., Lafarga Ma Reorganization of Cajal bodies and nucleolar targeting of coilin in motor neurons of type i spinal muscular atrophy. Histochemistry and Cell Biology; 137(5):657-667.
IF: 2.613

09

Lim Y.-Ma, Koh I., Park Y.-Ma, Kim J.-J., Kim D.-S., Kim H.-J., Baik K.-H., Choi H.-Y., Yang G.-S., Also-Rallo E., Tizzano E.F., Gamez J., Park K., Yoo H.-W., Lee J.-K., Kim K.-K. Exome sequencing identifies KIAA1377 and C5orf42 as susceptibility genes for monomelic amyotrophy. Neuromuscular Disorders; 22(5):394-400.
IF: 3.464

10

Pineiro-Gallego T., Corton Ma, Ayuso C., Baiget Ma, Valverde D. Molecular approach in the study of Alström syndrome: analysis of ten Spanish families. Molecular vision; 18():1794-1802.
IF: 1.987

11

Vencesla A., Baena Ma, Garrido R.P., Nunez R., Velasco F., Rosell J., Villar A., Jimenez-Yuste V., Baiget Ma, Tizzano E.F. F8 gene dosage defects in atypical patients with severe haemophilia A. Haemophilia; 18(5):708-713.
IF: 3.17

12

Parra J., Alias L., Also-Rallo E., Martinez-Hernandez R., Senosiain R., Medina C., Alejos O., Rams N., Amenedo Ma, Ormo F., Jesus Barcelo Ma, Calaf J., Baiget Ma, Bernal S., Tizzano E.F. Evaluation of fetal nuchal translucency in 98 pregnancies at risk for severe spinal muscular atrophy: Possible relevance of the SMN2 copy number. Journal of Maternal-Fetal and Neonatal Medicine; 25(8):1246-1249.
IF: 1.518

13

Parra J., Tizzano E.F. Raising obstetricians' awareness of spinal muscular atrophy: Towards early detection and reproductive planning. Journal of Maternal-Fetal and Neonatal Medicine; 25(12):2555-2558.
IF: 1.518

14

Juan-Mateu J., Rodriguez MaJ., Nascimento A., Jimenez-Mallebrera C., Gonzalez-Quereda L., Rivas E., Paradas C., Madruga Ma, Sanchez-Ayaso P., Jou C., Gonzalez-Mera L., Munell F., Roig-Quilis Ma, Rabasa Ma, Hernandez-Lain A., Diaz-Manera J., Gallardo E., Pascual J., Verdura E., Colomer J., Baiget Ma, Olive Ma, Gallano P. Prognostic value of X-chromosome inactivation in symptomatic female carriers of dystrophinopathy. Orphanet Journal of Rare Diseases; 7(1).
IF: 4.315

15

Salazar J., Altes A., Del Rio E., Estella J., Rives S., Tasso Ma, Navajas A., Molina J., Villa Ma, Vivanco J.L., Torrent Ma, Baiget Ma, Badell I. Methotrexate consolidation treatment according to pharmacogenetics of MTHFR ameliorates event-free survival in childhood acute lymphoblastic leukaemia. Pharmacogenomics Journal; 12(5):379-385.
IF: 5.134



Metabolic Bases of Cardiovascular Risk

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PhD and Master Students
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Xiangyu Chen UAB
Sergio Quesada UAB



Main Lines of Research

- ▶ HDL and susceptibility to diabetes / arteriosclerosis: modification of the relationship by metabolic disorders, genetic modification and drug intervention.
- ▶ Genetic determinants of metabolic factors of cardiovascular risk: dyslipidaemia, type 2 diabetes, hyperhomocysteinaemia.
- ▶ Positive health effects of phytosterols.
- ▶ Development, validation and application of new clinical laboratory methods in the field of metabolic and cardiovascular medicine.

Challenges

- ▶ Analyse the effects of diabetes mellitus and hyperhomocysteinaemia in reverse cholesterol transport in vivo.
- ▶ Determine the pathogenic relevance of alterations in cholesterol metabolism in diabetic retinopathy.
- ▶ Compare the effects of niacin and fenofibrate in the HDL of patients with type 2 diabetes.
- ▶ Evaluate the importance of liver lipase and endothelial lipase on macrophage-specific reverse cholesterol transport in vivo.
- ▶ Study anti-cancer mechanisms of phytosterol action in depth.
- ▶ Define the genes/polymorphisms in chromosome 3p related to type 2 diabetes.
- ▶ Demonstrate the relationship of the four SNPs identified in the NNMT gene with homocysteine and thrombosis in a case-control study.
- ▶ Develop new molecular techniques to diagnose metabolic inherited diseases to be used in the clinical laboratory.

Active Grants

- ▶ Blanco F. Role of the lipases involved in lipoprotein metabolism in modulating the anti-atherogenic properties of HDL (reverse cholesterol transport specific to macrophage and antioxidant capacity). FIS Grant. Carlos III Health Institute. January 2009-May 2012.
- ▶ Blanco F. Functionality of high density lipoproteins (HDL) and pleiotropic effects in diabetes, retinopathy and breast cancer. efectos pleiotrópicos en diabetes, retinopatía y cáncer de mama. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Julve J. HDL functionality in diabetes mellitus and hyperhomocysteinaemia: studies in patients and in animal models. FIS Grant. Carlos III Health Institute. January 2011-January.
- ▶ Escolà J. Functional analysis of antiatherogenic properties of HDL (reverse cholesterol transport specific to in vivo macrophages and antioxidant capacity) in animal models of type 2 diabetes mellitus and atherosclerosis. FIS Grant. Carlos III Health Institute. January 2010-December 2012.
- ▶ Blanco F. Diabetes and Associated Metabolic Diseases CIBER (CIBERDEM). Carlos III Health Institute. January 2008-present.
- ▶ Blanco F. Antiatherogenic properties of HDL in hyperhomocysteinemia: search for novel biomarkers using proteomic analysis. Spanish Arteriosclerosis Society/Foundation-Almirall. June 2010-June 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Cardiovascular Biochemistry.
- ▶ Genomics of Complex Diseases.
- ▶ Molecular Bases of Disease.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Silvennoinen R., Escolà-Gil J.C., Julve J., Rotllan N., Llaverias G., Metso J., Valledor A.F., He J., Yu L., Jauhiainen Ma, Blanco-Vaca F., Kovanen P.T., Lee-Rueckert Ma Acute psychological stress accelerates reverse cholesterol transport via corticosterone-dependent inhibition of intestinal cholesterol absorption. Circulation Research; 111(11):1459-1469. **IF: 11.861**

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- 02 Sanchez-Quesada J.L., Vinagre I., De Juan-Franco E., Sanchez-Hernandez J., Blanco-Vaca F., Ordonez-Llanos J., Perez A. Effect of improving glycemic control in patients with type 2 diabetes mellitus on low-density lipoprotein size, electro-negative low-density lipoprotein and lipoprotein-associated phospholipase A2 distribution. American Journal of Cardiology; 110(1):67-71. **IF: 3.209**

- 03 Martin-Campos J.Ma, Roig R., Mayoral C., Martínez S., Martí G., Arroyo J.A., Julve J., Blanco-Vaca F. Identification of a novel mutation in the ANGPTL3 gene in two families diagnosed of familial hypobeta-lipoproteinemia without APOB mutation. Clinica Chimica Acta; 413(5-6):552-555. **IF: 2.85**

Inflammatory Diseases

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Main Lines of Research

- ▶ The role of the natural immune system in the development of autoimmune and inflammatory processes.
- ▶ Immunological response and clinical course in immunomodulator treatment.
- ▶ The role of autoantibodies, components of the adaptive immunity system, in the pathogenesis of autoimmune processes and their use as diagnostic and prognostic markers in these diseases.
- ▶ Mechanisms involved in immunodeficiency.
- ▶ Study of lymphocyte subpopulations involved in chronic graft rejection in cardiac post-transplant patients.

Challenges

- ▶ Research into the role of innate immunity molecules in the development and control of inflammatory processes, in the appearance of autoimmune phenomena, immunodeficiencies, infections, cardiovascular diseases and development of tumours.
- ▶ Analysis of the evolution of immunological parameters and their correlation with clinical response to treatment with immunomodulators.
- ▶ Role of TLR and STAT signalling in inflammatory diseases.
- ▶ Involvement of STAT family of transcription factors in response to superantigens.
- ▶ Study of mechanisms implicated in immunodeficiency caused by alterations of the CD8a molecule.
- ▶ Effects of rituximab, tocilizumab and adalimumab in immunological variables and their correlation with the clinical response in patients with inflammatory diseases.
- ▶ Role of perivascular adipocytes and TLR signalling pathways in the development of atherosclerosis.
- ▶ Inflammation and rejection in heart transplantation.
- ▶ Effects of immunobiological treatments on immunological variables.

Active Grants

- ▶ De la Calle O. Redirecting T cell specificity against WT1 tumour antigen peptides restricted by HLA-A2. Translational preclinical study. FIS Grant. Carlos III Health Institute. January 2010-December 2013.
- ▶ Juárez C. Perivascular adipocytes and signaling via Toll-like receptors: role in the pathophysiology of atherosclerosis. La Marató de TV3 Foundation. February 2009-February 2012.
- ▶ Juárez C. Mechanisms involved in the action of Rituximab in Myasthenia Gravis: differential effect on AChR autoantibodies and anti-MuSK. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Vidal S. Involvement of TLRs in intestinal tumorigenesis: a study of the inflammation mechanisms mediated by TLRs involved in intestinal tumourigenesis. FIS Grant. Carlos III Health Institute. January 2010-June 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Multi-organ Damage.
- ▶ Nephrology.
- ▶ Digestive Diseases.
- ▶ Chronic Respiratory Diseases.

Awards

- ▶ Prize for the best poster. Catalan Immunology Society (SCI). Roldán C, Mirabet S, Cecilia C, Brossa V, Álvaro Y, Moltó E, López L, Roig E, Gelpí C. Evolution of lymphocyte populations and relationship with development of graft vascular disease in cardiac transplantation. Identification of prognosis populations.
- ▶ Prize for the best poster. Catalan Transplant Society (SCT). Roldán C, Mirabet S, Cecilia C, Brossa V, Álvaro Y, Moltó E, López L, Roig E, Gelpí C. Evolution of lymphocyte populations and relationship with development of graft vascular disease in cardiac transplantation. Identification of prognosis populations.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

01 Labrador-Horrillo Ma, Martinez MaA., Selva-O'Callaghan A., Trallero-Araguas E., Balada E., Vilardell-Tarres Ma, Juarez C. Anti-TIF1 α antibodies (anti-p155) in adult patients with dermatomyositis: Comparison of different diagnostic assays. Annals of the Rheumatic Diseases; 71(6):993-996. **IF: 9.111**

02 Diaz-Manera J., Martinez-Hernandez E., Querol L., Klooster R., Rojas-Garcia R., Suarez-Calvet X., Munoz-Blanco J.L., Mazia C., Straasheijm K.R., Gallardo E., Juarez C., Verschuuren J.J., Illa I. Long-lasting treatment effect of rituximab in MuSK myasthenia. Neurology; 78(3):189-193. **IF: 8.249**

03 Roldan C., Mirabet S., Brossa V., Molto E., Lopez L., Alvaro Y., Sole E., Padro J.Ma, Gelpi C., Roig E. Correlation of immunological markers with graft vasculopathy

04 Martinez-Martinez L., Gonzalez-Santesteban C., Badell I., de la Calle-Martin O. The polymorphism p.G219R of CD40L does not cause immunological alterations in vivo: Conclusions from a X-linked hyper IgM syndrome kindred. Molecular Immunology; 52(41367):237-241. **IF: 2.645**

05 Vidal S., Bellido-Casado J., Granel C., Crespo A., Plaza V., Juarez C. Flow cytometry analysis of leukocytes in induced sputum from asthmatic patients. Immunobiology; 217(7):692-697. **IF: 2.814**

06 Martinez-Martinez L., Vazquez-Ortiz Ma, Gonzalez-Santesteban C., Martin-Nalda A., Vicente A., Plaza A.Ma, Badell I., Alsina L., de la Calle-Martin O. From Severe Combined Immunodeficiency to Omenn syndrome after hematopoietic

development in heart transplantation. Transplantation Proceedings; 44(9):2653-2656. **IF: 0.952**

07 Zamora C., Canto E., Nieto J.C., Angels Ortiz Ma, Juarez C., Vidal S. Functional consequences of CD36 downregulation by TLR signals. Cytokine; 60(1):257-265. **IF: 2.518**

08 Rojas-Garcia R., Querol L., Gallardo E., Salva N.D.L., Juarez C., Garces Ma, Fages E., Casanovas C., Illa I. Clinical and serological features of acute sensory ataxic neuropathy with antiganglioside antibodies. Journal of the Peripheral Nervous System; 17(2):158-168. **IF: 2.57**

09 Nieto J.C., Canto E., Zamora C., Ortiz MaA., Juarez C., Vidal S. Selective loss of chemokine receptor expression on leukocytes after cell isolation. PLoS ONE; 7(3). **IF: 3.73**

stem cell transplantation in a RAG1 deficient family. Pediatric Allergy and Immunology; 23(7):660-666. **IF: 3.376**

Sant Pau Biomedical Research Institute

Back

Areas

Area 2 Index

Scientific Report 2012

*Total Impact Factor **Mean Impact Factor - PUBLISHED ON PAPER IN 2012

Endocrinology, Diabetes and Nutrition

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Main Lines of Research

- ▶ Endocrine neoplasms: investigation of tumour dedifferentiation mechanisms through genomic, proteomic and bioinformatic procedures.
- ▶ Autoimmune diabetes mellitus (classic type 1 and LADA) and gestational diabetes. Telemedicine and intelligent systems for therapeutic optimization of diabetes mellitus (telemedical artificial pancreas).
- ▶ Optimization of the treatment of obesity, hyperlipidaemia, metabolic syndrome and complications: design, organization, implementation and validation of technology platforms for monitoring and preventing cardiometabolic risk in the general population.

Challenges

Endocrine neoplasms:

- ▶ Molecular markers of the epithelial lineage: expression of the ABCG2 gene/BCRP1 transporter.
- ▶ Importance of thyroglobulin and anti-thyroglobulin antibodies as prognostic prediction markers in differentiated thyroid cancer of epithelial lineage.
- ▶ Transcriptomics and proteomics as prediction and prognosis instruments for epithelial thyroid cancer.
- ▶ Intramural CELL-NANO-THYROID project: investigation of human mesenchymal cell capacity as an instrument for administering anti-tumour cell drugs in the form of conjugated nanoparticles.

Autoimmune diabetes mellitus and gestational diabetes:

- ▶ Classic type 1 autoimmune diabetes mellitus: discovery of genes that influence susceptibility to autoimmune diabetes (classic type 1).
- ▶ LADA type diabetes: prevalence of me-

tabolic syndrome among patients with LADA compared to prevalence among patients with classic type 1 diabetes, type 2 diabetes and the general non-diabetic population in European countries.

- ▶ Diabetes and pregnancy: clinical research aimed at optimizing care for women with pre-gestational and gestational diabetes at different pre-conception, pregnancy, birth and postpartum stages.

Optimization of the treatment of obesity, hyperlipidaemia, metabolic syndrome and complications:

- ▶ Optimal treatment and prevention of cardiovascular risk associated with obesity, hyperlipidaemia, metabolic syndrome and diabetes mellitus 2.
- ▶ Research into impaired glucose tolerance in women suffering from polycystic ovary syndrome.
- ▶ Acquisition of information to help assess the clinical and socioeconomic relevance of cardiometabolic risk.

Awards

- ▶ Corcoy R. The Jorgen Pedersen Medal 2012. Maximal recognition for research of excellence in Europe.

Active Grants

- ▶ Corcoy R. Vitamin D and Lifestyle Intervention for Gestational Diabetes Mellitus (GDM) Prevention (DALI). European Union Grant. March 2010-August 2014.
- ▶ Chico A. Idosing: helping tool for optimal insulin dosage for diabetic patients based on interactive learning control techniques integrated in a telemedicine platform. FIS Grant. Carlos III Health Institute. January 2009-June 2012.
- ▶ De Leiva A. Grants to support research groups in Catalonia. Diabetes and other endocrine diseases. AGAUR Grant. September 2009-December 2013.
- ▶ De Leiva A. Cell-Nano-Thyroid. CIBER-BBN, Intramural Project. Carlos III Health Institute Grant. January 2011-December 2012.
- ▶ De Leiva A. Investigation of the predictive and diagnostic value of molecular markers that make up a genetic signature of poor prognosis for thyroid samples and involvement in the process of tumour differentiation. FIS Grant. Carlos III Health Institute. January 2010-December 2012.
- ▶ De Leiva A, Corcoy R. CONCEPTT: Continuous Glucose Monitoring in Women with Type 1 Diabetes in Pregnancy Trial. Juvenile Diabetes Research Foundation Grant. January 2010-December 2013.
- ▶ De Leiva A. Clinical effectiveness of telemedical artificial pancreas in patients with type 1 diabetes mellitus (PAT-DIA1). CAIBER Grant. January 2011-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Oncogenesis and Antitumour Drugs.
- ▶ Ophthalmology.

External Collaborations

- ▶ CIBER-BBN.
- ▶ CELL-NANO-THYROID Project.
- ▶ CONCEPTT: Women with type 1 diabetes in pregnancy trial.

- ▶ Clinical effectiveness of telemedical artificial pancreas in patients with type 1 diabetes mellitus (PAT-DIA1) - CAIBER grant.
- ▶ Vitamin D and lifestyle intervention for gestational diabetes mellitus prevention (DALI) project.
- ▶ Action LADA European Consortium.
- ▶ Type 1 Diabetes Genetics European Network (ET1DGC) - Asia-Pacific, North America and the United Kingdom.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Sanchez-Quesada J.L., Vinagre I., De Juan-Franco E., Sanchez-Hernandez J., Blanco-Vaca F., Ordonez-Llanos J., Perez A. Effect of improving glycemic control in patients with type 2 diabetes mellitus on low-density lipoprotein size, electro-negative low-density lipoprotein and lipoprotein-associated phospholipase A2 distribution. *American Journal of Cardiology*; 110(1):67-71.
IF: 3.209
- Perez A., Franch J., Cases A., Gonzalez Juanatey J.R., Conthe P., Gimeno E., Matallí A. Relationship between the degree of glycemic control and diabetes characteristics and hyperglycemia treatment in type 2 diabetes. *DIABES Study* [Relación del grado de control glucémico con las características de la diabetes y el tratamiento de la hiperglucemia en la diabetes tipo 2. Estudio DIABES]. *Medicina Clínica*; 138(12):505-511.
IF: 1.399
- Buckley B.S., Harreiter J., Damm P., Corcoy R., Chico A., Simmons D., Vellinga A., Dunne F. Gestational diabetes mellitus in Europe: Prevalence, current screening practice and barriers to screening. *A review. Diabetic Medicine*; 29(7):844-854.
IF: 3.241
- Balsells Ma, Garcia-Patterson A., Gich I., Corcoy R. Major congenital malformations in women with gestational diabetes mellitus: A systematic review and meta-analysis. *Diabetes/Metabolism Research and Reviews*; 28(3):252-257.
IF: 2.968
- Tundidor D., Garcia-Patterson A., Maria MaA., Ubada J., Ginovart G., Adelantado J.Ma, De Leiva A., Corcoy R. Perinatal maternal and neonatal outcomes in women with gestational diabetes mellitus according to fetal sex. *Gender Medicine*; 9(6):411-417.
IF: 1.69
- Desoye G. "Vitamin D and lifestyle intervention for gestational diabetes mellitus prevention" - European project for pre-

vention of gestational diabetes ["Vitamin D and Lifestyle Intervention for Gestational Diabetes Mellitus Prevention" - Europäisches Projekt zur Prävention des Gestationsdiabetes]. *Diabetologie*; 0:1-5.
IF: 0.25

- Garcia-Patterson A., Aulinas A., Maria MaA., Ubada J., Orellana I., Ginovart G., Adelantado J.Ma, De Leiva A., Corcoy R. Maternal body mass index is a predictor of neonatal hypoglycemia in gestational diabetes mellitus. *Journal of Clinical Endocrinology and Metabolism*; 97(5):1623-1628.
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Endocrinology, Diabetes and Nutrition

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Pérez A. Glycemic control at hospital: Why does it not improve? *Endocrinología y Nutrición* 2012;59(3):153-4.
- González Blanco C, Mato Matute E, de Leiva Hidalgo A. Molecular biomarkers involved in the tumor dedifferentiation process of thyroid carcinoma of epithelial origin: Perspectives. *Endocrinología y Nutrición* 2012;59(7):452-8.
- Pérez A, Miñambres I. Insulin aspart for the treatment of hospital hyperglycemia. *Avances en Diabetología* 2012;28(SUPPL. 1):32-8.

Letters

- Alcántara V, Cubero JM, Prados A, Pérez Pérez J, Corcoy R. Seizure in a diabetic patient. hypoglycemia or a side effect of continuous glucose monitoring? *Endocrinología y Nutrición* 2012;59(2):144-6.
- González C, Corcoy R. Response to “studies assessing risk of treatments for diabetes mellitus and adverse pregnancy outcomes should control for known risk factorsa”. *Diabetes Technology and Therapeutics* 2012;14(12):1185-6.
- Hunt KA, Smyth DJ, Balschun T, Ban M, Mistry V, Ahmad T, Anand V, Barrett JC, Bhaw-Rosun L, Bockett NA, Brand OJ, Brouwer E, Concannon P, Cooper JD, Dias K-M, Van Diemen CC, Dubois PC, Edkins S, Fölster-Holst R, Fransen K, Glass DN, Heap GAR, Hofmann S, Huizinga TWJ, Hunt S, Langford C, Lee J, Mansfield J, Marrosu MG, Mathew CG, Mein CA, Müller-Quernheim J, Nut-

land S, Onengut-Gumuscu S, Ouwehand W, Pearce K, Prescott NJ, Posthumus MD, Potter S, Rosati G, Sambrook J, Satsangi J, Schreiber S, Shtir C, Simmonds MJ, Sudman M, Thompson SD, Toes R, Trynka G, Vyse TJ, Walker NM, Weidinger S, Zhernakova A, Zoledziwska M, Weersma RK, Gough SCL, Sawcer S, Wijmenga C, Parkes M, Cucca F, Franke A, Deloukas P, Rich SS, Todd JA, Van Heel DA, Type 1 Diabetes Genetics Consortium (col. De Leiva A). Rare and functional SIAE variants are not associated with autoimmune disease risk in up to 66,924 individuals of european ancestry. *Nat Genet* 2012;44(1):3-5.

Clinical Guide

- Chico A, González C. Quick Guide for CSII (continuous subcutaneous insulin infusion). New Technologies Working Group of the Spanish Diabetes Society.

Others

- De Leiva A, Brugués E, de Leiva-Pérez A, Pérez-Aguado MC. Misery, Disease and Death in Picasso’s Early Work. *Analecta Histórico Médica* 2012; 8(1):29-38.
- Pérez-Aguado MC, Brugués E, de Leiva-Pérez A, de Leiva A. Los expedientes de depuración del franquismo en el Hospital de Sant Pau. *Analecta Histórico Médica* 2012;8(1):69-79.
- Pérez-Aguado MC, Brugués E, de Leiva-Pérez A, de Leiva A. Medical Services of the International Brigades in the Spanish Civil War. *Analecta Histórico Médica* 2012;8(1):87-96.

Pituitary Gland Disorders

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Main Lines of Research

- Morbimortality, low grade inflammation and cardiovascular risk in patients with acromegaly or Cushing syndrome. FIS PI05/0448.
- ERCUSYN: European Registry on Cushing syndrome. SANCO, EU Public Health Programme: PHP A800200 (www.ercusyn.eu).
- Neuroradiological, neuropsychological and clinical study of endogenous hypercortisolism: comparison of Cushing syndrome and chronic major depressive disorder. FIS 08/0302.
- Validation of psychological properties of specific questionnaires to evaluate health-related quality of life (HRQoL) in Cushing syndrome and acromegaly.
- Study of signal transduction of GH in muscle by gene expression in a C2C12 cell line stimulated with GH.
- Etiology of cardiopathy in acromegaly and its relation to body composition. FIS 11/0001.
- Role of telomeres in endocrine diseases.

Challenges

- Investigate the neuropsychological, neuroradiological and clinical correlation of patients with endogenous hypercortisolism (due to Cushing syndrome or chronic major depressive disorder) or exogenous exposure to low-dose glucocorticoids (due to treatment of adrenal insufficiency or rheumatoid arthritis). Similar studies for acromegaly.
- Study gene expression in cultured muscle cells after exposure to GH, by means of microarrays.
- Correlate neuropsychological status and circadian rhythm of cortisol in patients with hypercortisolism (Cushing syndrome) and without hypercortisolism (non-functioning pituitary adenomas) compared to normal controls.
- Evaluate long-term morbidity and mortality in patients who have had Cushing syndrome or acromegaly in the last 25 years.
- Analyse and update the European database of patients with Cushing syndrome (ERCUSYN), in which over 850 patients from 36 countries were included by the end of 2012.
- Conduct in vitro molecular analysis of operated pituitary adenomas within the REMAH (Molecular Registry of Pituitary Adenomas) study, sponsored by the Spanish Endocrinology and Nutrition Society.
- Investigate correlations of telomere length and different clinical and biochemical parameters in patients with Cushing syndrome.

Awards

- Webb S. Medal of the Spanish Endocrinology and Nutrition Society-Foundation, financed by LILLY.
- Merck Serono Research Award 2012 in the area of clinical research in Endocrinology. Etiopathogeny of cardiopathy in acromegaly and its relationship with body composition.

Active Grants

- Webb S. Neuropsychological, neuroradiological and clinical study in endogenous hypercortisolism: Comparison in Cushing syndrome and chronic major depressive disorders. FIS Grant. Carlos III Health Institute. January 2009-March 2012.
- Webb S. Etiology of cardiopathy in acromegaly and its relation to body composition. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Webb S. Etiopathogeny of cardiopathy in acromegaly and its relation to body composition.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Neuromuscular Diseases.
- Clinical and Translational Cardiology.
- Multi-organ Damage.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Webb S.Ma, Santos A., Valassi E. The value of a European registry for pituitary adenomas: The example of Cushing's syndrome registry. *Annales d'Endocrinologie*; 73(2):83-89.
IF: 1.022
- Colao A., Petersenn S., Newell-Price J., Findling J.W., Gu F., Maldonado Ma, Schoenherr U., Mills D., Salgado L.R., Biller B.MaK., Pasireotide B2305 Study Group (Webb S.). A 12-month phase 3 study of pasireotide in Cushing's disease. *New England Journal of Medicine*; 366(10):914-924.
IF: 51.658
- Valassi E., Crespo I., Gich I., Rodriguez J., Webb S.Ma A reappraisal of the medical therapy with steroidogenesis inhibitors in Cushing's syndrome. *Clinical Endocrinology*; 77(5):735-742.
IF: 3.396
- Santos A., Resmini E., Martinez-Momblan MaA., Crespo I., Valassi E., Roset Ma, Badia X., Webb S.Ma Psychometric performance of the CushingQoL questionnaire in conditions of real clinical practice. *European Journal of Endocrinology*; 167(3):337-342.
IF: 3.136

*TIF: 81.988 **MIF: 8.198

- Roset Ma, Merino-Montero S., Luque-Ramirez Ma, Webb S.Ma, Lopez-Mondejar P., Salinas I., Soto A., Bernal C., Villabona C., De Luis D., Donnay S., Pascual H., Perez-Luis J. Cost of clinical management of acromegaly in Spain. *Clinical Drug Investigation*; 32(4):235-245.
IF: 1.915
- Van Der Lely A.J., Biller B.MaK., Brue T., Buchfelder Ma, Ghigo E., Gomez R., Hey-Hadavi J., Lundgren F., Rajcic N., Strasburger C.J., Webb S.Ma, Koltowska-Haggstrom Ma Long-term safety of pegvisomant in patients with acromegaly: Comprehensive review of 1288 subjects in ACROSTUDY. *Journal of Clinical Endocrinology and Metabolism*; 97(5):1589-1597.
IF: 6.43
- Resmini E., Santos A., Gomez-Anson B., Vives Y., Pires P., Crespo I., Portella MaJ., De Juan-Delago Ma, Barahona Ma-J., Webb S.Ma Verbal and visual memory

- performance and hippocampal volumes, measured by 3-tesla magnetic resonance imaging, in patients with Cushing's syndrome. *Journal of Clinical Endocrinology and Metabolism*; 97(2):663-671.
IF: 6.43
- Minuto F.Ma, Resmini E., Boschetti Ma, Rebora A., Fazzuoli L., Arvigo Ma, Giusti Ma, Ferone D. Biochemical diagnosis and assessment of disease activity in acromegaly: A two-decade experience. *Pituitary*; 15(2):215-221.
IF: 2.667
- Valassi E., Crespo I., Santos A., Webb S. Ma Clinical consequences of Cushing's syndrome. *Pituitary*; 15(3):319-329.
IF: 2.667
- Aulinas A., Colom C., Ybarra J., Munoz F., Tresserras P., Resmini E., Webb S.Ma Immediate and delayed postoperative morbidity in functional and non-functioning pituitary adenomas. *Pituitary*; 15(3):380-385.
IF: 2.667

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Puig Domingo M, Castaño J, Álvarez-Escolá C, Resmini E, Venegas E, García Arnés J, Torres E, Lecumberri B, Barahona MJ, Lamas C, Fajardo C, Cámara R, Vicente A, Blanco C, Villabona C, Del Pozo C, Halperin I, Salinas I, Sesnilo G, Aller J, Marazuela M, Webb SM, Bernabeu I. Neuroendocrinology in 2011. *Endocrinología y Nutrición* 2012;59(5):311-25.

Others

- Ma Antonia Martínez, Gómez C, Santos A, Resmini Eugenia, Webb SM, Gómez MJ, Egea L, Campillo B, Martínez J, Úbeda I. Información recibida en los pacientes con el síndrome de Cushing y riesgo cardiovascular. *Ágora* 2012;16:17-22.

Digestive Diseases

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Main Lines of Research

Experimental research:

- ▶ Experimental rat model of cirrhosis and ascites.
- ▶ Mechanisms and prevention of bacterial translocation in rats with cirrhosis.
- ▶ Experimental model of spontaneous and induced bacterial peritonitis: physiopathology and treatment.
- ▶ MiRNAs expression profile in inflammatory bowel disease after stimulation with toll-like receptor ligands.

Clinical investigation:

- ▶ Physiopathology, diagnosis, treatment and prevention of bacterial infections, ascites and hepatorenal syndrome in cirrhosis.
- ▶ Diagnosis and treatment of hepatic encephalopathy in cirrhosis.

- ▶ Physiopathology, diagnosis, treatment and prevention of digestive haemorrhage due to portal hypertension of non-varicose origin.

- ▶ Diagnosis and treatment of chronic hepatitis B and C.

- ▶ Diagnosis and treatment of hepatocarcinoma.

- ▶ Physiopathology, diagnosis and treatment of intestinal inflammatory disease (inflammatory bowel disease).

- ▶ Polyps and colorectal cancer: epidemiology and early diagnosis.

- ▶ Diagnosis and treatment of acute pancreatitis.

- ▶ Prevention of acute post-ERCP pancreatitis.

- ▶ Chronic pancreatitis and pancreatic neoplasms: molecular studies, early detection and treatment.

Challenges

- ▶ Consolidate the CIBEREHD research group by studying complications in cirrhosis.
- ▶ Expand the hepatology research lab and develop new research.
- ▶ Consolidate the portal hypertension research group.
- ▶ Consolidate the pancreatic illness research line.

- ▶ Consolidate the inflammatory bowel disease research line.
- ▶ Consolidate the polyps and colon cancer research line.
- ▶ Develop a digestive endoscopy research line.

Active Grants

- ▶ Gómez C. Double-blind randomized study of the effectiveness of the administration of bolus somatostatin followed by a brief intravenous infusion as prophylaxis for acute pancreatitis after performing an endoscopic retrograde cholangiopancreatography. FIS Grant. Carlos III Health Institute. January 2009-December 2012.
- ▶ Guarner C. Experimental model of induced or spontaneous bacterial peritonitis in rats with cirrhosis and ascites: characterization of humoral, hormonal and haemodynamic and evaluation of a new therapeutic strategy. FIS Grant. Carlos III Health Institute. September 2009-December 2012.
- ▶ Guarner C. Clinical and experimental study of bacterial translocation in cirrhosis by pyrosequencing. FIS Grant. Carlos III Health Institute. 2011-December 2014.
- ▶ Soriano G. Relationship of polymorphisms of toll-like receptors TLR2, TLR4 and TLR9 with infection incidence, disease progression and inflammatory response in cirrhotic patients. FIS Grant. Carlos III Health Institute. January 2010-December 2012.
- ▶ Soriano G. Study of the effect of VSL#3 on systemic inflammatory response, bacterial translocation and liver damage in cirrhotic rats. VSLPharma. January 2010-December 2012.
- ▶ Torras X. Validation of a questionnaire of adherence to treatment in patients infected with hepatitis B. IMIM Hospital del Mar (Barcelona, Spain). July 2010-December 2012.
- ▶ Torras X. Study diSHCovery. Noninterventionist observational study to analyse the clinical profile of patients with chronic hepatitis, management and monitoring in hospitals in Spain. October 2011-May 2012.

- ▶ Villanueva C. Prevention of portal hypertension developing clinically significant hepatic cirrhosis compensated by selective hepatic vasodilation. Multicenter, double-blind, randomized trial. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- ▶ Villanueva C. Clinical study on the effects of prolonged administration of albumin 20% on the kidney cardiocirculatory function and hepatic haemodynamics in patients with advanced cirrhosis and ascites. Grifols SA Institute. January 2011-December 2013.
- ▶ Villanueva C. Efficacy and safety of self-expanding oesophageal prosthesis versus Sengstaken balloon catheter as emergency haemostatic therapy in patients with acute variceal bleeding and failure of endoscopic and pharmacological treatment. FIS Grant. Carlos III Health Institute. January 2009-December 2013.
- ▶ Villanueva C. Association of statins to standard therapy in the prevention of rebleeding in patients with cirrhosis and variceal bleeding. Multicenter study. Clinic Foundation. January 2010-December 2013.
- ▶ Villanueva C. Multicentre randomized double-blind, placebo-controlled study of the efficacy of treatment with beta-blockers to prevent the decompensation of cirrhosis with portal hypertension. FIS Grant. Carlos III Health Institute. January 2009-June 2013.
- ▶ Villanueva C. Randomized controlled study comparing acenocoumarol versus bempiparin in patients requiring anticoagulation restart after a serious digestive bleeding episode. Spanish Ministry of Health, Social Services and Equality. January 2011-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Parkinson Disease and Movement Disorders.
- ▶ Pharmacological Research in Humans.
- ▶ Neuroradiology.
- ▶ Inflammatory Diseases.

External Collaborations

CIBEREHD Groups:

- ▶ Dr. José Such. Hospital General Universitario, Alicante, Spain.
- ▶ Dr. Joan Córdoba. Hospital de la Vall d'Hebron, Barcelona, Spain.

- ▶ Dr. Vicente Arroyo. Hospital Clínic de Barcelona, Barcelona, Spain.
- ▶ Dr. Pere Ginés. Hospital Clínic, Barcelona, Spain.
- ▶ Dr. Jaume Bosch. Hospital Clínic, Barcelona, Spain.
- ▶ Dr. Agustín Albillos. Hospital Universitario Ramón y Cajal, Madrid, Spain.
- ▶ Dr. Rafael Banyares. Hospital General Universitario Gregorio Marañón, Madrid, Spain.
- ▶ Dr. Raúl Andrade. Hospital Universitario Virgen de la Victoria, Málaga, Spain.

Digestive Diseases

*TIF: 142.280 **MIF: 6.467

ISI Web of Knowledge Indexed Publications with an IF

01 Soriano G., Roman E., Cordoba J., Torrens Ma, Poca Ma, Torras X., Villanueva C., Gich I.J., Vargas V., Guarner C. Cognitive dysfunction in cirrhosis is associated with falls: A prospective study. *Hepatology*; 55(6):1922-1930. **IF: 12.003**

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05 Chaparro Ma, Andreu Ma, Acosta MaB., Garcia-Planella E., Ricart E., Domenech E., Esteve Ma, Merino O., Nos P., Penalva Ma, Gisbert J.P. Effectiveness of infliximab after adalimumab failure in Crohn's disease. *World Journal of Gastroenterology*; 18(37):5219-5224. **IF: 2.547**

06 Barreiro-De Acosta Ma, Garcia-Bosch O., Gordillo J., Manosa Ma, Menchen L., Souto R., Marin-Jimenez I. Efficacy of adalimumab rescue therapy in patients with chronic refractory pouchitis previously treated with infliximab: A case series. *European Journal of Gastroenterology and Hepatology*; 24(7):756-758.

IF: 1.915

07 Bermejo F., Garrido E., Chaparro Ma, Gordillo J., Manosa Ma, Algaba A., Lopez-Sanroman A., Gisbert J.P., Garcia-Planella E., Guerra I., Domenech E. Efficacy of different therapeutic options for spontaneous abdominal abscesses in Crohn's disease: Are antibiotics enough?. *Inflammatory Bowel Diseases*; 18(8):1509-1514. **IF: 5.119**

08 Soriano G., Román E. El reto de la calidad de vida en pacientes con cirrosis. *Gastroenterologia y Hepatologia*; 35():52-59. **IF: 0.567**

09 Lorenzo-Zuniga V., Garcia-Planella E., Moreno de Vega V., Domenech E., Boix J. Endoscopic management of luminal stenosis in inflammatory bowel disease [Manejo endoscópico de las estenosis lumbinales en la enfermedad inflamatoria intestinal]. *Gastroenterologia y Hepatologia*; 35(6):404-410. **IF: 0.567**

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11 Chaparro Ma, Burgueno P., Iglesias E., Panes J., Munoz F., Bastida G., Castro L., Jimenez C., Mendoza J.L., Barreiro-De Acosta Ma, Gomez Senent S., Gomollon F., Calvet X., Garcia-Planella E., Gomez Ma, Hernandez V., Hinojosa J., Manosa Ma, Perez Nyssen O., Gisbert J.P. Infliximab salvage therapy after failure of ciclosporin in corticosteroid-refractory ulcerative colitis: A multicentre study. *Alimentary Pharmacology and Therapeutics*; 35(2):275-283. **IF: 4.548**

12 Urban T.J., Shen Y., Stolz A., Chalasani N., Fontana R.J., Rochon J., Ge D., Shianna K.V., Daly A.K., Lucena Mal., Nelson MaR., Molokhia Ma, Aithal G.P., Floratos A., Pe'Er I., Serrano J., Bonkovsky H., Davern T.J., Lee W.Ma, Navarro V.J., Talwalkar J.A., Goldstein D.B., Watkins P.B., International Serious Adverse Events Consortium (col. Guarner C.). Limited contribution of common genetic variants to risk for liver injury due to a variety of drugs. *Pharmacogenetics and Genomics*; 22(11):784-795. **IF: 3.608**

13 Chaparro Ma, Panes J., Garcia V., Merino O., Nos P., Domenech E., Penalva Ma, Garcia-Planella E., Esteve Ma, Hinojosa J., Andreu Ma, Munoz F., Gutierrez A., Mendoza J.L., Barrio J., Barreiro-de Acosta Ma, Vera I., Vilar P., Cabriada J.L., Montoro MaA., Aldeguer X., Saro C., Gisbert J.P. Long-term durability of response to adalimumab in Crohn's disease. *Inflammatory Bowel Diseases*; 18(4):685-690. **IF: 5.119**

14 Garcia-Planella E., Manosa Ma, van Domselaar Ma, Gordillo J., Zabana Y., Cabre E., Lopez San Roman A., Domenech E. Long-term outcome of ulcerative colitis in patients who achieve clinical remission with a first course of corticosteroids. *Digestive and Liver Disease*; 44(3):206-210. **IF: 3.162**

15 Gomez-Oliva C., Guarner-Argente C., Concepcion Ma, Jimenez F.J., Rodriguez S., Gonzalez-Huix F., Mugica F., Cabriada J.L., Rodriguez C., Aguilar C.G. Partially covered self-expanding metal stent for unresectable malignant extrahepatic biliary obstruction: Results of a large prospective series. *Surgical Endoscopy and Other Interventional Techniques*; 26(1):222-229. **IF: 3.427**

16 Craxi A., Koutsounas S., Ogurtsov P., Chemello L., Maticic Ma, Torras J., Diago Ma, Tartaglione MaT., Witthoeft T., Yu X., Faruqi R., Chaudhri E., Pedicone L.D., Zuckerman E. Peginterferon alfa-2b plus weight-based ribavirin for 24 weeks in patients with chronic hepatitis C virus genotype 1 with low viral load who achieve rapid viral response. *Journal of Viral Hepatitis*; 19(2):e120-e125. **IF: 3.082**

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Spontaneous Bacterial Peritonitis. *Clinical Gastroenterology and Hepatology*; 10(3):309-315. **IF: 6.648**

19 Wong F., Watson H., Gerbes A., Vilstrup H., Badalamenti S., Bernardi Ma, Gines P., Satavaptan Investigators Group (col. Guarner C.). Satavaptan for the management of ascites in cirrhosis: Efficacy and safety across the spectrum of ascites severity. *Gut*; 61(1):108-116. **IF: 10.732**

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Group of the Spanish Gastroenterological Association (col. Roman E.). Seeking genetic susceptibility variants for colorectal cancer: The EPICOLON consortium experience. *Mutagenesis*; 27(2):153-159. **IF: 3.5**

21 Giraldez MaD., Lopez-Doriga A., Bujanda L., Abuli A., Bessa X., Fernandez-Rozadilla C., Muneoz J., Cuatrecasas Ma, Jover R., Xicola R.Ma, Llor X., Pique J.Ma, Caracado A., Ruiz-Ponte C., Cosme A., Enriquez-Navascues J.Ma, Moreno V., Andreu Ma, Castells A., Balaguer F., Castellvi-Bel S., Gastrointestinal Oncology Group of the Spanish Gastroenterological Association (col. Roman E.). Susceptibility genetic variants associated

with early-onset colorectal cancer. *Carcinogenesis*; 33(3):613-619. **IF: 5.635**

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Other Publications

Letter

► Soriano G, Sánchez E, Guarner C, Schiffrin EJ. Lactobacillus johnsonii La1 without antioxidants does not decrease bacterial translocation in rats with carbon tetrachloride-induced cirrhosis. *J Hepatol* 2012;57(6):1395-6.



Microbiology and Infectious Diseases

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Main Lines of Research

CLINICAL MICROBIOLOGY UNIT

- Study of resistance mechanisms.
- Tuberculosis, epidemiology and antituberculosis resistance mechanisms.
- Molecular biology applications to infectious disease detection, taxonomy and epidemiology.
- Medical care projects.

HIV AND AIDS UNIT

- Medical care projects.
- Study of pathogenic mechanisms altering body fat distribution.
- Study of metabolic disorders associated with antiretroviral treatment.
- Body composition changes.
- New antiretroviral drugs.

- Cardiovascular risk associated with antiretroviral treatment.
- Comorbid conditions associated with HIV-1 infection.
- Pharmacogenetics (toxicokinetics).
- Bacterial meningitis.

INFECTIOUS PATHOLOGY UNIT

- Restricted-use policies for antibiotic and antimicrobial agents and suitable use of antimicrobial agents.
- Study of infections associated with foreign bodies (joint prostheses, catheters, cardiac prostheses and pacemakers).
- Study of infections due to multiresistant microorganisms or requiring isolation.
- Tuberculosis.

Challenges

CLINICAL MICROBIOLOGY UNIT

Resistance mechanisms:

- Study of increased resistance as a result of gene carrier-vector spread.
- Continuity of work in the context of the Spanish Network for Research into Infectious Pathologies (REIPI), heading certain projects (e.g., epidemiology of the class C beta-lactamases in Spain) and cooperating with a project on the epidemiology of resistance to amoxicillin-clavulanic acid among others.
- Advancement of other research lines, both in-house and in cooperation with other centres, leading to 2 doctoral theses.

Tuberculosis, epidemiology and resistance mechanisms:

- Prospective monitoring of primary and acquired Mycobacterium tuberculosis re-

sistance to first-second-line drugs.

- Molecular detection of resistance using a molecular antibiogram.
- Study of the epidemiology and spread of resistant strains and assessment of the impact of immigration and the contribution of new Mycobacterium tuberculosis families (Beijing, EAI, CAS).

Molecular biology applications to infectious disease detection, taxonomy and epidemiology:

- Study of the usefulness of the 16S RNA gene for microbiological diagnosis and molecular identification.
- Genotype characterization of Cryptosporidium spp. oocysts from stool samples collected by the HSCSP microbiology service.

Challenges

Medical care projects:

- Continuing with the government health department agreement regarding the development of epidemiological surveillance support functions for nosocomial infections and flaccid paralysis.
- Study of mycoses in depth, especially invasive fusariosis and aspergillosis and respiratory tract viral infections in patients with onco-haematological diseases.
- Continuing with multicentre studies of HIV.
- Monitoring of congenital infection in pregnant patients with Chagas disease.

HIV AND AIDS UNIT

Medical care projects:

- Continuing with, expanding and, as appropriate, consolidating the care team for HIV-1 infected patients, consisting currently of 3 staff physicians, 4 grant-aided research assistants (including a Río Hortega-funded research assistant) and 2 nurses).
- Continuing with participation in multicentre projects (especially the AIDS network, Gesida, VACH, EuroSIDA and ART collaboration).
- Exploration of possible participation in clinical trials of new antiretroviral drugs.
- Increasing the number of HIV-1 infected patients attended to in our hospital (given current mortality rates, an estimated annual increase of 50 patients is required).
- Continuing with current clinical research and mixed basic research-clinical research lines.

Pathogenic mechanisms altering body fat distribution:

- Study of metabolism in pyrimidines and derivatives in the genesis of lipodystrophy associated with HIV-1 and antiretroviral treatment.
- Development of an animal (mouse) model of lipodystrophy.
- Development of in vitro models (adipocyte cultures) to study the adipose toxicity of antiretroviral drugs.
- Study of new manifestations of the lipodystrophy syndrome.
- Development of measurements for antiretroviral drug concentrations in adipose tissue.
- Exploration of the role of inflammation

in the pathogenesis of lipodystrophy associated with HIV-1 and antiretroviral treatment.

- Metabolism of uridine and its role in the pathogenesis of lipodystrophy.

Metabolic disorders associated with antiretroviral treatment:

- In vivo assessment of metabolic toxicity associated with antiretroviral treatment.
- Development of in vitro models (adipocyte cultures) to study the adipose toxicity of antiretroviral drugs.
- Study of factors contributing to hepatic steatosis in patients receiving antiretroviral treatment.
- Study of the pathogenic role of FGF21 in insulin resistance in HIV-1 – infected patients.
- Study of role of FABP4 in metabolic disorders associated with antiretroviral treatment.

Body composition:

- Definition of normal fat distribution in the general population.
- Establishment of abnormal fat distribution patterns.
- Development of a definition of lipodystrophy associated with HIV-1 and antiretroviral treatment.

New antiretroviral drugs:

- Clinical trials of new antiretroviral drugs (phases 2 and 3).
- Ritonavir and non-ritonavir pharmacokinetic potentiation of antiretroviral drugs.

Cardiovascular risk associated with antiretroviral treatment:

- Establishment of a multicentre cardiovascular risk cohort.
- Study of antiretroviral treatment-dependent and non-treatment-dependent factors in multicentre cohorts.

- Development of in vitro models (adipose cultures) to study adipose toxicity for antiretroviral drugs.

Comorbid conditions associated with HIV-1 infection:

- Study of ageing in different tissues associated with HIV-1 infection and antiretroviral treatment.
- Study of fragility in patients with HIV-1 infection and the role of HAART.
- Evaluation of the neurocognitive function in patients with HIV-1 infection and without antiretroviral treatment.

- Participation in multicentre cohort studies to determine the incidence of specific comorbidities (cancer, HCV, cardiovascular disease, osteogenesis/osteoporosis): EuroSIDA, ART Collaboration, Gesida, VACH, etc.

- Treatment of HCV in patients with HIV-1 and its prognostic significance.

Pharmacogenetics (toxicogenetics):

- Role of enzyme polymorphism of the pyrimidine pathways in the pathogenesis of lipodystrophy.
- Role of enzyme polymorphism of the pyrimidine pathways in the pathogenesis of clinical toxicity (neuropathy, pancreatitis).
- Role of IL28B polymorphism in spontaneous HCV clearance in the response to antiviral treatment based on interferon and ribavirin.

Bacterial meningitis:

- Identification of prognostic factors in adult bacterial meningitis.
- Continuation with a cohort study of adult bacterial meningitis.
- Identification of host-intrinsic factors in the pathogenesis and prognosis of adult bacterial meningitis and meningococcal disease.

INFECTIOUS PATHOLOGY UNIT

Restricted-use antibiotic and antimicrobial agent policies:

Suitable use of antimicrobial agents:

- To minimize resistance.
- To reduce cost.
- To improve compliance with surgical prophylaxis (at the time of administration).

Epidemic outbreaks and infections caused by multiresistant microorganisms and microorganisms requiring isolation:

- To study epidemiology for our hospital.
- To reduce incidence.
- To prevent/contain epidemic outbreaks in the hospital and to work with the microbiology department in epidemiology and molecular studies.

Microbiology and Infectious Diseases

Challenges

Infections associated with foreign bodies (joint prostheses, catheters, cardiac prostheses, pacemakers):

- ▶ To reduce incidence.
- ▶ To develop effective conservative treatment regimes.

Infections in transplant patients (heart, haemopoietic progenitors):

- ▶ To study current epidemiology.
- ▶ To assess the efficacy of prophylaxis and other preventive measures.

Tuberculosis:

- ▶ To cooperate with studies of resistance and with new treatment regimes for tuberculosis.

Other care projects:

To continue with the government health department agreement regarding the development of support functions as follows:

- ▶ Epidemiological surveillance of nosocomial infections (VINCat).
- ▶ Tuberculosis control: Barcelona-Dreta Tuberculosis Operations Committee (Coordinator: Dr. Sambeat).
- ▶ New influenza control: Barcelona-Dreta Epidemiological Surveillance Operations Committee (Coordinator: Dr. López-Contreras).

Active Grants

- ▶ Coll P. Introduction of molecular biology techniques in CFGS Clinical Diagnostic Laboratory. Spanish Ministry of Education, Culture and Sport Grant. October 2011-October 2012.
- ▶ De Benito N. Comparative study of the effectiveness of ‘short’ and ‘long’ doses for the rifampin-levofloxacin combination in the early postoperative staphylococcal infection and haematogenous infection of prosthetic joints. FIS Grant. Carlos III Health Institute. January 2009-April 2013.
- ▶ De Benito N. Multicentre study of the usefulness of monitoring plasma levels of colistin and colistimethate sodium in patients with multiresistant gram-negative infections treated with colistin. FIS Grant. Carlos III Health Institute. January 2012-December 2013.

- ▶ Domingo P. Pilot, prospective, cross-sectional, observational study of the involvement of adipocyte senescence phenomena in the pathogenesis of lipoatrophy associated with HIV-1 and HAART. FIS Grant. January 2012-December 2014.
- ▶ Navarro F. Study of the prevalence and epidemiology of betalactam resistance mediated by AmpC plasmid betalactamases and by carbapenemases in enterobacteria in Spain. FIS Grant. Carlos III Health Institute. January 2010-December 2012.

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ISI Web of Knowledge Indexed Publications with an IF

CLINICAL MICROBIOLOGY UNIT

- 01 Perez-Llarena F.J., Fernandez A., Zamorano L., Kerff F., Beceiro A., Aracil B., Cercenado E., Miro E., Oliver A., Oteo J., Navarro F., Bou G. Characterization of a novel IMP-28 metallo-β-lactamase from a Spanish Klebsiella oxytoca clinical isolate. Antimicrobial Agents and Chemotherapy; 56(8):4540-4543. **IF: 4.565**
- 02 Ortega A., Oteo J., Aranzamendi-Zaldumbide Ma, Bartolome R.Ma, Bou G., Cercenado E., Conejo MaC., Gonzalez-Lopez J.J., Marin Ma, Martinez-Martinez L., Merino Ma, Navarro F., Oliver A., Pascual A., Rivera A., Rodriguez-Bano J., Weber I., Aracil B., Campos J. Spanish multicenter study of the epidemiology and mechanisms of amoxicillin-clavulanate resistance in Escherichia coli. Antimicrobial Agents

- and Chemotherapy; 56(7):3576-3581. **IF: 4.565**
- 03 Canton E., Peman J., Hervás D., Iniguez C., Navarro D., Echeverría J., Martínez-Alarcon J., Fontanals D., Gomila-Sard B., Buendia B., Torroba L., Ayats J., Bratos A., Sanchez-Reus F., Fernandez-Natal I., Alvarez Ma, Alcoba J., Borrell N., Bratos MaA., Camarena J.J., Campos-Herrero I., Esperalba J., Ezpeleta G., Garcia J., Garcia-Garcia I., Garcia-La-Pedrosa E., Garcia-Tapia A.Ma, Guinea J., Guna R., Iglesias I., Linares-Sicilia MaJ., Marco F., Martin-Mazuelos E., Merino P., Miranda C., Pazos C., Perez Del Molino L., Porras A., Ramirez I., Rezusta A., Rosello E.Ma, Royo G., Rubio C., Ruiz-Perez De Pipaon MaT., Suarez A., Velasco D., Yague G. Comparison of three statistical methods for establishing tentative wild-type population and epidemiological cutoff values for echinocandins, amphotericin B, flucytosine, and six Candida species as determined by the colorimetric sensitit

- yeastone method. Journal of Clinical Microbiology; 50(12):3921-3926. **IF: 4.068**
- 04 Espasa Ma, Salvado Ma, Vicente E., Tudo G., Alcaide F., Coll P., Martin-Casabona N., Torra Ma, Fontanals D., Gonzalez-Martin J. Evaluation of the VersaTREK system compared to the bactec MGIT 960 system for first-line drug susceptibility testing of Mycobacterium tuberculosis. Journal of Clinical Microbiology; 50(2):488-491. **IF: 4.068**
- 05 Rodriguez-Bano J., Miro E., Villar Ma, Coelho A., Gozalo Ma, Borrell N., Bou G., Conejo MaC., Pomar V., Aracil B., Larrosa N., Aguero J., Oliver A., Fernandez A., Oteo J., Pascual A., Navarro F. Colonisation and infection due to Enterobacteriaceae producing plasmid-mediated AmpC β-lactamases. Journal of Infection; 64(2):176-183. **IF: 4.073**
- 06 Benito N., Mirelis B., Luz Galvez Ma, Vila Ma, Lopez-Contreras J., Cotura A., Po-

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Scientific Production

- mar V., March F., Navarro F., Coll P., Gurgui Ma Outbreak of Pseudomonas fluorescens bloodstream infection in a coronary care unit. Journal of Hospital Infection; 82(4):286-289. **IF: 2.855**
- 07 Garcia-Bellmunt L., Sibila O., Solanes I., Sanchez-Reus F., Plaza V. Pulmonary Nocardiosis in Patients with COPD: Characteristics and Prognostic Factors [Nocardiosis pulmonar en pacientes con EPOC: características y factores pronósticos]. Archivos de Bronconeumologia; 48(8):280-285. **IF: 1.372**
- 08 Cabrerizo Ma, Rabella N., Torner N., Castellanos T., Bustillo I., Varela C., Colomer J., Trallero G. Molecular identification of an enterovirus 99 strain in Spain. Archives of Virology; 157(3):551-554. **IF: 2.03**
- 09 Peman J., Canton E., Quindos G., Eraso E., Alcoba J., Guinea J., Merino P., Ruiz-Perez-de-Pipaon MaT., Perez-del-Molino L., Linares-Sicilia MaJ., Marco F., Garcia J., Rosello E.Ma, Gomez-G-de-la-Pedrosa E., Borrell N., Porras A., Yague G., Miranda C., Campos-Herrero I., Navarro D., Iglesias I., Rubio C., Gomila B., Suarez A., Garcia-Tapia A.Ma, Velasco D., Garcia I., Torroba L., Sanchez-Reus F., Pazos C., Camarena J.J., Echeverría MaJ., Fernandez-Natal I., Martin-Mazuelos E., Rezusta A., Gomez-Nieto A., Martinez-Alarcon J., Fontanals D., Buendia B., Ayats J., Bratos MaA., Alvarez-Fernandez Ma, Royo G., Ezpeleta G., Ramirez I., Guna R., Esperalba J. Epidemiology, species distribution and in vitro antifungal susceptibility of fungaemia in a Spanish multicentre prospective survey. Journal of Antimicrobial Chemotherapy; 67(5):1181-1187. **IF: 5.338**
- 10 Mata C., Miro E., Alvarado A., Garcilán-Barcia MaP., Toleman Ma, Walsh T.R., de la cruz F., Navarro F. Plasmid typing and genetic context of AmpC β-lactamases in enterobacteriaceae lacking inducible chromosomal ampC genes: Findings from a Spanish hospital 1999-2007. Journal of Antimicrobial Chemotherapy; 67(1):115-122. **IF: 5.338**
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- 73(4):372-373. **IF: 2.26**
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- 13 Esparcia O., Espanol Ma, Garrigo Ma, Moreno C., Montemayor Ma, Navarro F., Coll P. Use of different PCR-based techniques integrated into a non-tuberculous identification algorithm [Utilización de diferentes técnicas de biología molecular integradas en un algoritmo de identificación de micobacterias no tuberculosas]. Enfermedades Infecciosas y Microbiología Clínica; 30(1):3-10. **IF: 1.478**
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HIV AND AIDS UNIT

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Microbiology and Infectious Diseases

*TIF: 175.750 **MIF: 3.739		
Scientific Production	Baiget Ma Association of ITPA gene polymorphisms and the risk of ribavirin-induced anemia in HIV/hepatitis C virus (HCV)-coinfected patients receiving HCV combination therapy. <i>Antimicrobial Agents and Chemotherapy</i> ; 56(6):2987-2993. IF: 4.565	Schapiro J.Ma, Clotet B., Arazo P., Crespo Ma, Mateo G., del Pozo MaA., Puig T., Riera Ma Mutations in the protease gene associated with virological failure to lopinavir/ritonavir-containing regimens. <i>Journal of Antimicrobial Chemotherapy</i> ; 67(6):1462-1469. IF: 5.338
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Scientific Production

*TIF: 175.750 **MIF: 3.739		
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	01 Pena C., Suarez C., Gozalo Ma, Murillas J., Almirante B., Pomar V., Aguilar Ma, Granados A., Calbo E., Rodriguez-Bano J., Rodriguez F., Tubau F., Martinez-Mar-	03 Rodriguez-Bano J., Miro E., Villar Ma, Coelho A., Gozalo Ma, Borrell N., Bou G., Conejo MaC., Pomar V., Aracil B., Larrosa N., Agüero J., Oliver A., Fernan-

INFECTIOUS PATHOLOGY UNIT

Scientific Production

- ## Other Publications

Multi-organ Damage

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Carme Geli HSCSP
Nerea Hernández HSCSP
Ana Laiz HSCSP
Jorge Malouf HSCSP RI
Jordi Mascaró HSCSP
Laia Matas HSCSP
Jaume Monmany HSCSP
Àlex Roca-Cusachs HSCSP
Arturo Rodríguez HSCSP
Domingo Ruiz HSCSP
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Ma Ángeles Izquierdo HSCSP RI
Berta Magallares HSCSP RI
Patricia Moya HSCSP RI
Mireia Parés HSCSP RI
Carme Rius HSCSP RI



Main Lines of Research

Bone metabolism and osteoporosis:

- Analysis of genetic influence on osteoporosis by means of aggregation studies in families of 3 or more generations with a minimum of 15 members.
- Bone structure study with quantitative CT of hip and spine, analysing the contribution of trabecular and cortical components using HRCT.
- Description of fat values and percentages in a normal population (in collaboration with HIV Unit and CETIR Medical Group).
- Analysis of the influence of an intervention (physical exercise) on changes in the muscle compartment of patients with cirrhosis measured by DXA and HRQCT (in collaboration with the Gastroenterology Department).
- Description of bone structure in patients with history of acromegaly assessed by DXA and HRQCT.

Hypertension and vascular risk:

- Hypertension and quality of life.
- Refractory hypertension.
- Use of alirocumab in hypercholesterolaemia.

Clinical management, general internal medicine and geriatrics:

- Health care quality indexes (mortality, readmissions, etc).
- Perioperative medicine.
- Potentially inappropriate prescribing to older patients admitted to hospital.

Rheumatology:

1. Rheumatoid arthritis:

- Immunomodulation due to anti-CD20 (rituximab) treatment and study of polymorphisms.
- Pharmacokinetics of methotrexate.
- Evaluation of baricitinib in patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to methotrexate or antiTNF therapy.
- Evaluation of the JAK-STAT pathway in patients with rheumatoid arthritis treated with tocilizumab.

2. Systemic sclerosis:

- Capillaroscopy patterns and correlation with auto-antibodies and pulmonary function tests.
- Evidence-based detection of pulmonary arterial hypertension in systemic sclerosis: the DETECT study.
- Use of endotelin receptor antagonism to prevent pulmonary arterial hypertension (in collaboration with Hospital Universitari Vall d'Hebron, Barcelona).
- Genetical studies in systemic sclerosis and collaboration with DUO Registry and LAUDES study.

3. Gout:

- Epidemiology of hyperuricaemia and gout.

Challenges

- To strengthen the vascular risk unit in the HSCSP and its ties with the Puigvert Foundation hypertension unit.
- To establish stable work relations between the HSCSP bone metabolism and complex disease genomics units and the bone metabolism unit of Hospital del Mar-Municipal Institute for Medical Research and the Faculty of Biology of the University of Barcelona.
- To strengthen the ties between the HSCSP rheumatology and immunology departments regarding the study of immunological diseases.

Active Grants

- Casademont J. Intermediate phenotypes in the risk of developing osteoporosis. The GAO project (Genetic Analysis of Osteoporosis). FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Torres O. Study of drug misuse in elderly patients hospitalized in internal medicine departments in different Spanish hospitals. Spanish Ministry of Health, Social Services and Equality. January 2011-December 2013.

Awards

- Best Oral communication. Spanish Society for Bone and Mineral Metabolism Research (SEIOMM) 2012 Congress. Hernández de Sosa N, Athanasiadis G, Malouf J, Martin L, Herrera S, Martínez-Pérez A, Laiz A, Ziyatdinov A, Soria JM, Casademont J. Family phenotypic distribution and heritability of densitometric, structural and bone strength properties. 17th National SEIOMM Conference (Cuenca, Spain).
- Best Poster. Spanish Society for Bone and Mineral Metabolism Research (SEIOMM) 2012 Congress. Malouf J, Athanasiadis G, Hernández N, Martin L, Herrera S, Martínez-Pérez A, Laiz A, Ziyatdinov A, Soria JM, Casademont J. Correlation of densitometric, structural and bone strength phenotypic variables in families with extended genealogies. 17th National SEIOMM Conference (Cuenca, Spain).

*TIF: 220.792 **MIF: 7.885

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

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Scientific Production	21	Martin J.-E., Carmona F.D., Broen J.C.A., Simeon C.P., Vonk MaC., Carreira P., Rios-Fernandez R., Espinosa G., Vicente-Rabaneda E., Tolosa C., Garcia-Hernandez F.J., Castellvi I., Fonollosa V., Gonzalez-Gay MaA., Saez-Comet L., Portales R.G., De La Pea P.G., Fernandez-Castro Ma, Diaz B., Martinez-Estupian L., Coenen Ma, Voskuyl A.E., Schuerwegh A.J., Vanthuyne Ma, Houssiau F., Smith V., De Keyser F., De Langhe E., Riemekasten G., Witte T., Hunzelmann N., Kreuter A., Palm O., Chee Ma, Van Laar J.Ma, Denton C., Herrick A., Worthington J., Koeleman B.P.C., Radstake T.R.D.J., Fonseca C., Martin J. The autoimmune disease-associated IL2RA locus is involved in the clinical manifestations of systemic sclerosis. <i>Genes and Immunity</i> ; 13(2):191-196. IF: 3.675
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	23	Teruel Ma, Simeon C.P., Broen J., Vonk MaC., Carreira P., Camps MaT., Garcia-Portales R., Delgado-Frias E., Gallego Ma, Espinosa G., Beretta L., Airo P., Lunardi C., Riemekasten G., Witte T., Krieg T., Kreuter A., Distler J.H.W., Hunzelmann N., Koeleman B.P., Voskuyl A.E., Schuerwegh A.J., Gonzalez-Gay MaT., Radstake T.R.D.J., Martin J., Ortego-Centeno N., Callejas J.L., Rios R., Navarrete N., Garcia A., Fernandez-Nebro A., Gonzalez-Escribano MaF., Sanchez-Roman J., Castillo MaJ., Aguirre MaA., Gomez-Gracia I., Fernandez-Gutierrez B., Rodriguez-Rodriguez L., Vicente E., Castro MaF., Andreu J.L., de la Pena P.G., Lopez-Longo F.J., Martinez-Estupinan L., Pros A., Fonollosa V., Tolosa C., Carballeira MaR., Castellvi I., Narvaez F.J., Blanco-Garcia F.J., Oreiro N., Robles MaA., Egurbide MaV., SaezComet L., Blanco R., Diaz B., Trapiella L., Diaz F., Hernandez V., Beltran E., Roman-Ivorra J.A. Analysis of the association between CD40 and CD40 ligand polymorphisms and systemic sclerosis. <i>Arthritis Research and Therapy</i> ; 14(3). IF: 4.302
Other Publications	24	Bossini-Castillo L., Simeon C.P., Beretta L., Broen J., Vonk MaC., Callejas J.L., Carreira P., Rodriguez-Rodriguez L., Garcia-Portales R., Gonzalez-Gay MaA., Castellvi I., Camps MaT., Tolosa C., Vicente-Rabaneda E., Egurbide MaV., Schuerwegh A.J., Hesselstrand R., Lunardi C., van Laar J.Ma, Shiels P., Herrick A., Worthington J., Denton C., Radstake T.R.D.J., Fonseca C., Martin J. KCNA5 gene is not confirmed as a systemic sclerosis-related pulmonary arterial hypertension genetic susceptibility factor. <i>Arthritis Research and Therapy</i> ; 14(6). IF: 4.302
	25	Lopez S., Buil A., Souto J.C., Casademont J., Blangero J., Martinez-Perez A., Fontcuberta J., Lathrop Ma, Almasly L., Soria J.Ma Sex-specific regulation of mitochondrial DNA levels: Genome-wide linkage analysis to identify quantitative trait loci. <i>PLoS ONE</i> ; 7(8). IF: 3.73
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	28	Giannella Ma, Pinilla B., Capdevila J.A., Martinez Alarcon J., Munoz P., Lopez Alvarez J., Bouza E., de Henares A., Alvarez J.L., Ruiz E.Ma, de Lis Munoz J.Ma, Narrillos C.C., Sanchez P.S., Diaz H.A., Martinez MaP.G., Ruiz-Capilla J.J.J., Lopez D.F., Lechuz J.MaG., Martinez V.C.-Ma, del Campo P.D., Montaud A.R., Vivanco Martinez F.J., Pinedo A.E., Leizaola K., Vidal R.P., El Boutrouki O., San Roman Teran C.Ma, Sepulveda S.F., Pinero E.S., Santos J.S., de Tomas Labat Ma, Olavarrieta J.C., Zaragoza J.Ma, Liano F.P., Prous C.A., Pou J.C., Marcuello J.Ma, Salva J.O., Martinez S.H., Palao J.S., Marco F.D.A.S., Suarez P.C., Alvarez P.L.A., Gaviria A.Z., Medina-Bernal J.H., Fuster P.R., Camacho S. MaB., Fernandez C.S., Ramos L.P., Bejar C.S., Calabuig E., Garau J., Calbo E., Pascual V., Audibert L., Bunsow E., Castano J.G., Esteban E.T., Antunez MaG., Polo N.A., Rubio J.S.F., Berastegui O.L., Rodriguez MaA.A., Gonzalez-Cobos C.L., Acebes E.O., Martin MaJ.G., Hernandez B.Ma, Huerta F.H., Marina G.H., Fernandez F.S., Rodriguez J.J.V., Salomo A.C., Iftimie S., de Casadola G.G., Quero J.L.P., Casanova P.C., Molina J.V., Miranda J.L., Fernandez R.Ma, Perea C.P., Hernandez C.G., Calvet P.L., Pujol R., Losa C.F., O-Callaghan F.C., Babiloni MaA., Company J.B., Igual J.J.G., Otin E.C., Porras MaC., Saiz-Quevedo Garcia J.A., Del Villar Sordo V., Sanchez MaD.V., Rodriguez J.P., Farina S.D., Ugarte C.P., Alabau F.C., Santos P.G., Linares J.L.C., Farre J.B., Salinas MaT., Mendez L. MaS., Torres MaS., Planas J.V., Amoros J.G., Paires J.C., Ferrer C.S., Moreno A.Z., Carrillo L.H., Lopez MaD., Rodriguez R.F., Manuel E.C., Camacho C.A.H., Cruz A.F., Biezma C.G.S., Gonzalez B.O., Navacerrada G.F., Pelaez V.L., Bellver S., Estebanez C.T., Carruez A.J., Munoz L.A.S., Montoro D.B., Ribera MaC., Martinez A.T., Berrocal MaA.S., Moraleja J.G., Terradellas J.B.,

*TIF: 220.792 **MIF: 7.885		
Scientific Production		Sosa E.R., Mora A.A., Gimeno F.P., Cerezo J.F.G., Cantero R.D.C., Aragoneses L.Ma, Cortes E.A., Mariscal MaR., Serrano C.P., Calderon J.L.R., Ruiz P.R., Legarre A.S., Gomez R.C., Asensio A.N., Sanchez F.Ma, Cuerda E.N., Arberas V.E., Lopez R.D.L.P., Sanchez P.R., Serra J.Ma, Martin J.F.Ma, Perez J.L.B., Puig R.Ma, Rosell N.C., Moya MaD.P., Llinares J.R.S., Bohorquez F.J.C. Pneumonia treated in the internal medicine department: Focus on health-care-associated pneumonia. <i>Clinical Microbiology and Infection</i> ; 18(8):786-794. IF: 4.578
Other Publications	ISI Web of Knowledge Indexed Publications without an IF	- Casademont J, Porcel JM, Conthe P, Pinilla B, Pujol R, García-Alegría J. Basic skills in internal medicine. <i>Rev Clin Esp</i> 2012;212(4):213-4. - Almagro P, López F, Cabrera FJ, Portillo J, Fernández-Ruiz M, Zubillaga E, Díez J, Román P, Murcia-Zaragoza J, Boixeda R, Murio C, Soriano JB, Grupos de trabajo de EPOC y Paciente Pluripatólógico y Edad Avanzada de la Sociedad Española de Medicina Interna (Torres O). Comorbidities in patients hospitalized due to chronic obstructive pulmonary disease. A comparative analysis of the ECCO and ESMI studies. <i>Rev Clin Esp</i> 2012;212(6):281-6.
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	Conference Papers	Whitmarsh T, Del Río Barquero LM, Di Gregorio S, Sierra JM, Humbert L, Frangi AF. Age-related changes in vertebral morphometry by statistical shape analysis. <i>Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)</i> 2012;7599 LNCS:30-9.
Scientific Production	Scopus Indexed Publications	- Acosta Pereira A, Rodríguez De La Serna A. Local treatment in knee osteoarthritis. the capsaicin model. <i>DOLOR</i> 2012;27(4):185-6. - Acosta Pereira A, Rodríguez De La Serna A. Capsaicin in the treatment of osteoarthritis pain of the trapeziometacarpal joint. <i>DO-LOR</i> 2012;27(4):183-4. - Córica Albani ME, Moya Alvarado P, Sarmiento Guevara MP, Rodríguez De La Serna A. Mechanisms of pain and inflammation in ankylosing spondylitis. <i>DOLOR</i> 2012;27(3):133-8.

AREA 3

Haematological and Oncological Diseases

112 Clinical Oncology

116 Oncogenes and Antitumour Drugs

118 Haematological Diagnosis

120 Molecular Pathology of Gynaecologic Cancer

122 Ear, Nose and Throat Cancers

124 Oncology/Haematology and Transplantation

128 Breast Cancer

Clinical Oncology

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Main Lines of Research

Clinical research:

- Development of new therapeutic strategies.
- Studies to improve tumour staging.
- Studies to detect residual disease.

Translational research:

- Personalized anticancer therapy.
- Studies of predictive and prognostic molecular markers.

Challenges

- Consolidate clinical research into cancer.
- Foster translational research into cancer in cooperation with other internal and external research groups.
- Consolidate the bank of tumours, DNA and serum for patients with cancer diagnosed and treated in our hospital.
- Develop new early-stage drugs (phase 0/I studies).

Active Grants

- Barnadas A. Development of an algorithm predictor of treatment response in patients with head and neck locally advanced squamous cell. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Barnadas A. Identification of molecular markers predictors of genotoxic response in patients with locally advanced head and neck squamous cell carcinoma. Merck Serono Grant. April 2011-March 2013.
- Escuin D. Mechanisms of action and resistance to taxanes in breast cancer. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Ramón y Cajal T. Mammographic density, genetic susceptibility and breast cancer in women from high-risk families (DM-BRCA project). FIS Grant. Carlos III Health Institute. January 2010-September 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Oncogenesis and Antitumour Drugs.
- Molecular Pathology of Gynaecologic Cancer.
- Breast Cancer.
- Genetic Diseases.

*TIF: 218,284 **MIF: 5,744

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- 02 Gallardo A., Lerma E., Escuin D., Tibau A., Munoz J., Ojeda B., Barnadas A., Adrover E., Sanchez-Tejada L., Giner D., Ortiz-Martinez F., Peiro G. Increased signalling of EGFR and IGF1R, and deregulation of PTEN/PI3K/Akt pathway are related with trastuzumab resistance in HER2 breast carcinomas. *British Journal of Cancer*; 106(8):1367-1373. **IF: 5.082**
- 03 Font R., Espinas J.A., Gil-Gil M., Barnadas A., Ojeda B., Tusquets I., Segui M.A., Margeli M., Arcusa A., Prat A., Garcia M., Borras J.M. Prescription refill, patient self-report and physician report in assessing adherence to oral endocrine therapy in early breast cancer patients: A retrospective cohort study in Catalonia, Spain. *British Journal of Cancer*; 107(8):1249-1256. **IF: 5.082**
- 04 Carbonaro M., Escuin D., O'Brate A., Thadani-Mulero M., Giannakakou P. Microtubules regulate hypoxia-inducible factor-1 α protein trafficking and activity: Implications for taxane therapy. *Journal of Biological Chemistry*; 287(15):11859-11869. **IF: 4.651**
- 05 Castellana B., Escuin D., Perez-Olabarria M., Vazquez T., Munoz J., Peiro G., Barnadas A., Lerma E. Genetic up-regulation and overexpression of PLEKHA7 differentiates invasive lobular carcinomas from invasive ductal carcinomas. *Human Pathology*; 43(11):1902-1909. **IF: 2.843**
- 06 Pavon M.A., Parreno M., Tellez-Gabriel M., Sancho F.J., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Mangues M.A., Quer M., Barnadas A., Leon X., Mangues R. Gene expression signatures and molecular markers associated with clinical outcome in locally advanced head and neck carcinoma. *Carcinogenesis*; 33(9):1707-1716. **IF: 5.635**
- 07 Blanco A., De La Hoya M., Balmana J., Ramon Y Cajal T., Teule A., Miramar M.-D., Esteban E., Infante M., Benitez J., Torres A., Tejada M.-I., Brunet J., Grana B., Balbin M., Perez-Segura P., Osorio A., Velasco E.A., Chirivella I., Calvo M.-T., Feliubadalo L., Lasa A., Diez O., Carracedo A., Caldes T., Vega A. Detection of a large rearrangement in PALB2 in Spanish breast cancer families with male breast cancer. *Breast Cancer Research and Treatment*; 132(1):307-315. **IF: 4.469**
- 08 Massard C., Salazar R., Armand J.P., Majem M., Deutsch E., Garcia M., Oaknin A., Fernandez-Garcia E.M., Soto A., Soria J.C. Phase I dose-escalating study of ES-285 given as a three-hour intravenous infusion every three weeks in patients with advanced malignant solid tumors. *Investigational New Drugs*; 30(6):2318-2326. **IF: 3.498**
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- 11 Cozar J.M., Solsona E., Morote J., Minana B., Maroto J.P., Gonzalez Del Alba A., Climent M.A., Carles J., Alcaraz A., Castellano D. Recommendations on the management of castrate-resistant prostate cancer [Recomendaciones sobre el manejo de controversias en cáncer de próstata avanzado resistente a la castración]. *Actas Urológicas Españolas*; 36(10):569-577. **IF: 1.144**
- 12 Castellano D., Carles J., Esteban E., Trigo J.M., Climent M.A., Maroto J.P., Garcia del Muro X., Font A., Paz-Ares L., Arranz J.A., Bellmunt J. Recommendations for the optimal management of early and advanced urothelial carcinoma. *Cancer Treatment Reviews*; 38(5):431-441. **IF: 6.024**
- 13 Paez D., Labonte M.J., Lenz H.-J. Pancreatic Cancer: Medical Management (Novel Chemotherapeutics). *Gastroenterology Clinics of North America*; 41(1):189-209. **IF: 3**
- 14 Leahy M., Garcia del muro X., Reichardt P., Judson I., Staddon A., Verweij J., Baffoe-Bonnie A., Jonsson L., Musayev A., Justo N., Burke T., Blay J.Y., Reichardt A., Bauer S., Rauhut S., Wendtner C., Pester L., Sebag W., Goldwasser F., Jepiral W., Chaigneau L., Roy L., Bui-Nguyen B., Albert S., Basso U., Roma A., Ferraresi V., Tedeschi M., Marchesi E., Verweij J., Mol M., Juliette Kamphuis, Herraes A.C., Peleteiro H., Laura Jimenez, Maria Gajete, Lopez Pousa A., Sanchez R., Hagberg H., Chu Q., Miller M., Chawla S.P., Chu V., Staddon A., Burns Z., Samuels B., Dobler R., Gustin R., Welby S., Judson I., Petrikova G., Hayward L., Ramage P. Chemotherapy treatment patterns and clinical outcomes in patients with metastatic soft tissue sarcoma. The Sarcoma treatment and Burden of illness in North America and Europe (SABINE) study. *Annals of Oncology*; 23(10):2763-2770. **IF: 7.384**
- 15 De Bono J.S., Molife L.R., Sonpavde G., Maroto J.P., Calvo E., Cartwright T.H.,

Scientific Production

Clinical Oncology

*TIF: 218,284 **MIF: 5,744

Scientific Production

Loesch D.M., Feit K., Das A., Zang E.A., Wanders J., Agoulnik S., Petrylak D.P. Phase II study of eribulin mesylate (E7389) in patients with metastatic castration-resistant prostate cancer stratified by prior taxane therapy. *Annals of Oncology*; 23(5):1241-1249. **IF: 7.384**

16 Majem M., Moreno M.E., Calvo N., Feliu A., Perez J., Mangues M.A., Barnadas A. Perception of healthcare providers versus patient reported incidence of chemotherapy-induced nausea and vomiting after the addition of NK-1 receptor antagonists. *Supportive Care in Cancer*; 19(12):1983-1990. **IF: 2.649**

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Other Publications

Oncogenesis and Antitumour Drugs

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Main Lines of Research

- ▶ Development of novel animal models of disseminated disease in solid tumours and haematological neoplasms.
- ▶ Study of the role of the oncogene K-ras in colorectal cancer metastasis.
- ▶ Development of an inhibitor of focal adhesion as an anticancer agent in acute myeloid leukaemia and non-Hodgkin B lymphoma and study of its mechanism of action.
- ▶ Development of molecular markers predictive of the response to genotoxic therapy in head and neck squamous cell carcinoma.
- ▶ Development of a nanoparticle for targeted drug delivery of antitumour drugs.

Challenges

- ▶ Obtain funding to ensure stable employment of senior researchers and reinforce current collaborations with clinicians.
- ▶ Demonstrate targeted drug delivery and improved therapeutic threshold of antitumour drugs using a nanoparticle vehicle.
- ▶ Develop inhibitors of focal adhesion signalling as novel antitumour drugs.
- ▶ Increase the number of industrial contracts in the preclinical development of antitumour drugs.
- ▶ Develop molecular markers for therapeutic decision-making in head and neck carcinomas.
- ▶ Enhance international collaborations and participation in EU projects.

Active Grants

- ▶ Mangues R. Improved metastasis efficiency in a model of human colorectal cancer and the effect of the K-RAS oncogene in the transition from micro-to macro-metastases. FIS Grant. Carlos III Health Institute. January 2010-June 2013.
- ▶ Mangues R. Minimal residual disease in acute myeloid leukaemia: involvement of the bone marrow microenvironment and evaluation of new nanoparticles for targeted therapy. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Mangues R. Oncogenesis by HTLV-1. Inhibition of focal adhesions as a therapeutic strategy. Spanish Ministry of the Economy and Competitiveness Grant. December 2010-December 2013.
- ▶ Mangues R. Grants to support research groups in Catalonia. Oncogene and Antitumour Group. AGAUR Grant. September 2009-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Oncology/Haematology Transplantation.
- ▶ Pharmacy.
- ▶ General and Digestive Surgery.
- ▶ Ear, Nose and Throat Cancer.
- ▶ Clinical Oncology.
- ▶ Haematological Diagnosis.

External Collaborations

- ▶ Achillea Bittencourt. Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil.
- ▶ Arne Östman. Karolinska Institutet, Stockholm, Sweden.
- ▶ Paolo Michieli. Institute for Research and Treatment of Cancer, Candiolo, Turin, Italy.
- ▶ Eduard Batlle. Biomedical Research Institute, Barcelona, Spain.
- ▶ Alberto Bardelli. Institute for Research and Treatment of Cancer, Candiolo, Turin, Italy.

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- 02 Pavon M.A., Parreno M., Tellez-Gabriel M., Sancho F.J., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Mangues M.A., Quer M., Barnadas A., Leon X., Mangues R. Gene expression signatures and molecular markers associated with clinical outcome in locally advanced head and neck carcinoma. *Carcinogenesis*; 33(9):1707-1716. **IF: 5.635**
- 03 Bosch R., Moreno M.J., Dieguez-Gonzalez R., Cespedes M.V., Gallardo A., Nomdedeu J., Pavon M.A., Espinosa I., Mangues M.A.,

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- 04 Unzueta U., Cespedes M.V., Ferrer-Miralles N., Casanova I., Cedano J., Corchero J.L., Domingo-Espin J., Villaverde A., Mangues R., Vazquez E. Intracellular CXCR4+ cell targeting with T22-empowered protein-only nanoparticles. *International Journal of Nanomedicine*; 7(7):4533-4544. **IF: 3.463**
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Haematological Diagnosis

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Main Lines of Research

Malignant haemopathies:

- ▶ Diagnosis and morphological, immunophenotyping, cytogenetic and molecular characterization of malignant haemopathies, particularly acute leukaemias.
- ▶ Impact of biological characteristics in response to treatment.
- ▶ Studies of new treatments aimed at molecular targets using cell line models.
- ▶ Applications of the genomic platform (microarrays) and proteomic platform to the diagnosis of malignant haemopathies.

Non-neoplastic haemopathies:

- ▶ Diagnosis and characterization of thrombocytopenias, thrombocytopathies and other platelet pathologies, especially complex pathologies (of genetic, mixed or unknown origin) and including unusual presentations of common diseases.
- ▶ Study of the relationship between platelets and thrombotic phenomena, including clinical, diagnostic and therapeutic aspects.
- ▶ In the framework of the GAIT-2 (genetic analysis of idiopathic thrombophilia, phase 2) project, to seek new phenotypes that favour the development of thrombosis, specifically related to the structure and function of platelets and other blood cells.

Challenges

- ▶ Consolidate the functional structure of the group that characterizes haematological tumours and complex, rare and genetic nonneoplastic haematopathologies.
- ▶ Include the results of mass-analysis genomic and proteomic platforms in diagnostic algorithms and establish prognostic factors for haematological disorders, preferably complex or genetic neoplastic and non-neoplastic pathologies.
- ▶ Develop functional models: cell cultures and simple animal models.
- ▶ Consolidate cooperation with the GAIT-2 project, especially regarding platelet and other blood cell participation in the generation of thrombosis.
- ▶ Promote interaction with other hospital groups (clinical haematology, pathology, gastrointestinal, haemostasis and thrombosis, complex disease genomics) and with other centres in Spain and abroad, especially those with complementary technologies and groups with which stable links can be established.

Active Grants

- ▶ Nomdedéu J. New mutations in myeloid neoplasms: application in the diagnosis and prognosis. FIS Grant. Carlos III Health Institute. January 2011-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Oncology/Haematology Transplantation.
- ▶ Oncogenes and Antitumour Drugs.
- ▶ Genetic Diseases.
- ▶ Translational Molecular Oncology.
- ▶ Molecular Bases of Disease.

External Collaborations

- ▶ Dr J. Fitzgibbon. European Consortium on hereditary AML. Barts Cancer Research UK Centre. Queen Mary University of London, UK.
- ▶ Dr. George Vassiliou. Wellcome Trust Senior Clinical Fellow & Group Leader. Haematological Cancer Genetics. Wellcome Trust Sanger Institute. Wellcome Trust Genome Campus, Hinxton, Cambridge, London, UK.
- ▶ Prof. A. Orfao. Flow-cytometry. CIC University of Salamanca, Spain.
- ▶ Prof. G. Gaidano. CLL and ERIC studies. University of Eastern Piedmont, Novara, Italy.
- ▶ Prof G. Saglio. CML and PCR standardization. University of Torino, Orbassano, Italy.

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- 02 Delgado J., Espinet B., Oliveira A.C., Abrisqueta P., de la Serna J., Collado R., Loscertales J., Lopez M., Hernandez-Rivas J.A., Ferra C., Ramirez A., Roncero J.M., Lopez C., Aventin A., Puiggros A., Abella E., Carbonell F., Costa D., Carrio A., Gonzalez M. Chronic lymphocytic leukaemia with 17p deletion: A retrospective analysis of prognostic factors and therapy results. *British Journal of Haematology*; 157(1):67-74.
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- 06 Ferrari A., Bussaglia E., Ubeda J., Facchini L., Aventin A., Sierra J., Nomdedeu J.F. Immunophenotype distinction between acute promyelocytic leukaemia and CD15- CD34- HLA-DR- acute myeloid leukaemia with nucleophosmin mutations. *Hematological Oncology*; 30(3):109-114.
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- 07 Mian M., Scandurra M., Chigrinova E., Shen Y., Inghirami G., Greiner T.C., Chan W.C., Vose J.M., Testoni M., Chiappella A., Baldini L., Ponzoni M., Ferreri A.J.M., Franceschetti S., Gaidano G., Montes-Moreno S., Piris M.A., Facchetti F., Tucci A., Nomdedeu J.F., Lazure T., Uccella S., Tibiletti M.G., Zucca E., Kwee I., Bertoni F. Clinical and molecular characterization of diffuse large b-cell lymphomas with 13q14.3 deletion. *Annals of Oncology*; 23(3):729-735.
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Other Publications

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- ▶ Barba P, Garcia-Cadenas I, Nomdedéu J, Martino R, Gallur L, Valcárcel D. Rituximab treatment may disturb the normal pattern of lymphopoiesis after cord blood SCT. *Bone Marrow Transplant* 2012;47(3):458-60.

Molecular Pathology of Gynaecologic Cancer

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Main Lines of Research

- ▶ Pathogenic mechanisms of endometrial/ovarian cancer.
- ▶ Clinical application of prognostic factors in common cancers (endometrial, ovarian, etc).
- ▶ Clinical application of tumour markers.
- ▶ Molecular biology of uterine and extra-uterine sarcomas.

Challenges

- ▶ Progress as a productive translational gynaecological cancer research group capable of competing with other highly visible groups in Barcelona that publish regular articles in reputable journals and cooperate with other groups at the national and international levels.

Active Grants

- ▶ Prat J. Role of CDC42-macrophages in the development of clear cell carcinoma and endometrioid carcinoma in endometriosis. Mutua Madrileña Foundation. July 2011-July 2013.
- ▶ Prat J. Agreement between the Department of Health and Farmaindustria. Farmaindustria Grant. September 2010-April 2012.
- ▶ Prat J. Cancer Cooperative Research Thematic Network. Retics Grant. January 2007-December 2012.
- ▶ Prat J. Stable Research Groups: Molecular alterations related to progression in endometrial cancer. Spanish Association Against Cancer Grant. September 2011-September 2016.
- ▶ Prat J. Tumour-stroma interaction in endometrial cancer progression: role of miRNAs in myometrial invasion. FIS Grant. Carlos III Health Institute. January 2012-December 2014.

Collaborations

- External Collaborations**
- Spanish Association Against Cancer (AECC). Molecular alterations related to progression in endometrial cancer:**
 - ▶ Dr. Jaume Reventós. Vall d'Hebron Research Institute, Barcelona, Spain.
 - ▶ Dr. Xavier Matias-Guiu. Biomedical Research Institute de Lleida, Spain.
- ▶ Dr. Miguel Abal. Complejo Hospitalario Universitario de Santiago, Spain.
- ▶ Dr. Gema Moreno. MD Anderson Cancer Centre Madrid, Spain.

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- Prat J.. Pathology of cancers of the female genital tract. International Journal of Gynecology and Obstetrics; 119(SUP-PL. 2):S137-S150.
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- Edris B., Espinosa I., Muhlenberg T., Mike-Is A., Lee C.-H., Steigen S.E., Zhu S., Montgomery K.D., Lazar A.J.F., Lev D., Fletcher J.A., Beck A.H., West R.B., Nusse R., Van De Rijn M.. ROR2 is a novel prognostic biomarker and a potential therapeutic target in leiomyosarcoma and gastrointestinal stromal tumour. Journal of Pathology; 227(2):223-233.
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- Canet B., Pons C., Espinosa I., Prat J.. CDC42-positive macrophages may prevent malignant transformation of ovarian endometriosis. Human Pathology; 43(5):720-725.
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- Montserrat N., Mozos A., Llobet D., Dolcet X., Pons C., De Herreros A.G., Matias-Guiu X., Prat J.. Epithelial to mesenchymal transition in early stage endometrioid endometrial carcinoma. Human Pathology; 43(5):632-643.
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- Prat J.. Ovarian carcinomas: Five distinct diseases with different origins, genetic alterations, and clinicopathological features. Virchows Archiv; 460(3):237-249.
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Other Publications

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- ▶ Sirera G, Videla S, Cañadas M, Darwich L, D'Angelo E, Clotet B. A surprising evolution from oral human papillomavirus 16 infection to lymph node metastasis of tonsillar squamous cell carcinoma in an HIV-infected patient. AIDS 2012;26(8):1044-5.

Ear, Nose, Throat Cancer

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Main Lines of Research

- Genetic and molecular predictors of response to head and neck cancer: collaboration with the Oncogenesis and Antitumour Drugs group.
- Molecular mechanisms of inflammation in head and neck cancer: collaboration with the inflammation laboratory.
- Nasosinal endoscopic surgery: innovations in skull base techniques.
- Internal ear: aspects related to severe deafness, cochlear implants and otoneurological surgery of tumours.

Challenges

- Promote clinical and translational research in the field of head and neck cancer with a very large database of head and neck cancers.
- Study relevant clinical issues in depth (second-third neoplasms, staging concerns, prognostic factors, etc) and investigate translational aspects such as genetic and molecular predictors.

Active Grants

- León F. Role of EJE IL-1/NF-κB in head and neck squamous cell carcinomas. January 2012-December 2014.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Angiology, Vascular Biology and Inflammation.
- Oncogenesis and Antitumour Drugs.

*TIF: 16.772 **MIF: 2.795

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- Esteller E., Leon X., De Juan M., Quer M. Delayed carotid blow-out syndrome: A new complication of chemoradiotherapy treatment in pharyngolaryngeal carcinoma. *Journal of Laryngology and Otology*; 126(11):1189-1191. **IF: 0.681**
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- Leon X., Martinez V., Lopez M., Garcia J., Venegas M.D.P., Esteller E., Quer M. Second, third, and fourth head and neck tumors. A progressive decrease in survival. *Head and Neck*; 34(12):1716-1719. **IF: 2.833**

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Main Lines of Research

- Study of the molecular and cellular pathophysiology of haematological cancers.
- Study of the prognostic value of clinical and biological parameters in haematological malignancies.
- Design of new modalities of chemotherapy, biotherapy and drug treatment addressed to targeting molecular mechanisms.
- Biological diagnosis and innovation in infectious complications related to immunodepression.
- Innovative modalities of haematopoietic stem-cell transplantation and cell therapy.
- Psychological intervention and quality of life in patients with haematological malignancies.

Challenges

- Identification of new prognostic parameters for risk and therapeutic stratification.
- Evaluation of targeted therapy in cell lines and animal models (in cooperation with the Oncogenesis and Antitumour Drugs group).
- Reduction in the toxicity of allogeneic transplants.
- Cell immunotherapy to prevent and treat infectious complications.
- Dissection of graft versus tumour effect from graft versus host disease.
- Molecular characterization of acute myeloid leukaemia. Determination of the prognostic value of known genes and other genes of uncertain significance (in cooperation with the haematology laboratory).
- Animal modelling of leukaemia and lymphoma (in cooperation with the Oncogenesis and Antitumour Drugs group) so as to better understand the cell pathophysiology of these diseases and to test new drugs (in cooperation with the Oncogenesis and Antitumour Drugs group).
- Cell pathophysiology and immunotherapy for lymphoproliferative diseases. Molecular characterization and prognostic significance. Evaluation of antitumour immunotherapy in animals and humans.
- Genomic, proteomic and animal models of transplantation. Exploration of predictive indicators of complications, particularly in graft versus host disease and infections. Early therapeutic intervention.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Oncogenesis and Antitumour Drugs.
- Haematological Diagnosis.
- Microbiology and Infectious Diseases.
- Inflammatory Diseases.

Active Grants

- Sierra J. Evaluation of focal adhesions as a new therapeutic target in acute myeloid leukaemia. La Marató de TV3 Foundation. March 2011-March 2014.
- Sierra J. Minimal residual disease in acute myeloid leukaemia: involvement of bone marrow microenvironment and evaluation of a new nanoparticle for targeted therapy. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Moreno C. Immunophenotypic and molecular characterization of residual leukemic cells post-treatment in patients with chronic lymphatic leukaemia. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Brunet S. Treatment of de novo acute myeloid leukaemia with the combination of increasing doses of idarubicin, cytarabine and priming with G-CSF. Prospective phase I/II study of toxicity and efficacy. Spanish Ministry of Health, Social Services and Equality Grant. January 2012-December 2014.
- Sierra J. Grants to support research groups in Catalonia. Oncohaematology and Transplantation. Group for the diagnosis and treatment of haematology malignancies. AGAUR Grant. January 2009-December 2013.
- Sierra J. Cooperative research network in cancer (RTICC) ISCIII: Haematology and Transplantation Group. FIS Grant. Carlos III Health Institute. January 2013-December 2016.
- Briones J. Stimulation of the immune response against lymphoma B using recombinant adenovirus with the survivin gene and immunostimulatory genes: preclinical study. Cellex Foundation. May 2012-May 2014.

*TIF: 162.582 **MIF: 6.021

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- Sureda A., Canals C., Arranz R., Caballero D., Ribera J.M., Brune M., Passweg J., Martino R., Valcarcel D., Besalduch J., Duarte R., Leon A., Pascual M.J., Garcia-Noblejas A., Corral L.L., Xicoy B., Sierra J., Schmitz N. Allogeneic stem cell transplantation after reduced intensity conditioning in patients with relapsed or refractory Hodgkin's lymphoma. Results of the HDR-ALLO study - a prospective clinical trial by the Grupo Español de Linfomas/ Trasplante de Médula Osea (GEL/TAMO) and the Lymphoma Working Party of the European Group for Blood and Marrow Transplantation. *Haematologica*; 97(2):310-317. **IF: 5.935**
- Jantunen E., Canals C., Attal M., Thomson K., Milpied N., Buzyn A., Ferrant A., Biron P., Crawley C., Schattenberg A., Luan J.J., Tilly H., Rio B., Wijermans P.W., Dreger P., Sureda A. Autologous stem-cell transplantation in patients with mantle cell lymphoma beyond 65 years of age: A study from the European Group for Blood and Marrow Transplantation (EBMT). *Annals of Oncology*; 23(1):166-171. **IF: 7.384**
- Rosinol L., Garcia-Sanz R., Lahuerta J.J., Hernandez-Garcia M., Granell M., de la Rubia J., Oriol A., Hernandez-Ruiz B., Rayon C., Navarro I., Garcia-Ruiz J.C., Besalduch J., Gardella S., Jimenez J.L., Diaz-Mediavilla J., Alegre A., San Miguel J., Blade J. Benefit from autologous stem cell transplantation in primary refractory myeloma? Different outcomes in progressive versus stable disease. *Haematologica*; 97(4):616-621. **IF: 5.935**
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- Facchini L., Martino R., Ferrari A., Pinana J.L., Valcarcel D., Barba P., Granell M., Delgado J., Briones J., Sureda A., Brunet S., Sierra J. Degree of mucositis and duration of neutropenia are the major risk factors for early post-transplant febrile neutropenia and severe bacterial infections after reduced-intensity conditioning. *European Journal of Haematology*; 88(1):46-51. **IF: 2.548**
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- Alegre A., Oriol-Rocafiguera A., Garcia-Larana J., Mateos M.V., Sureda A., Martinez-Chamorro C., Cibeira M.T., Aguado B., Knight R., Rosettani B. Efficacy, safety and quality-of-life associated with lenalidomide plus dexametha-

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*TIF: 162.582 **MIF: 6.021

Scientific Production

do-Casado J., Valcarcel D., Sureda A., Briones J., Brunet S., Rodriguez-Arias J.M., Casan P., Sierra J. Pulmonary function testing prior to reduced intensity conditioning allogeneic stem cell transplantation in an unselected patient cohort predicts posttransplantation pulmonary complications and outcome. *American Journal of Hematology*; 87(1):9-14.
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Other Publications

Letters

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Breast Cancer

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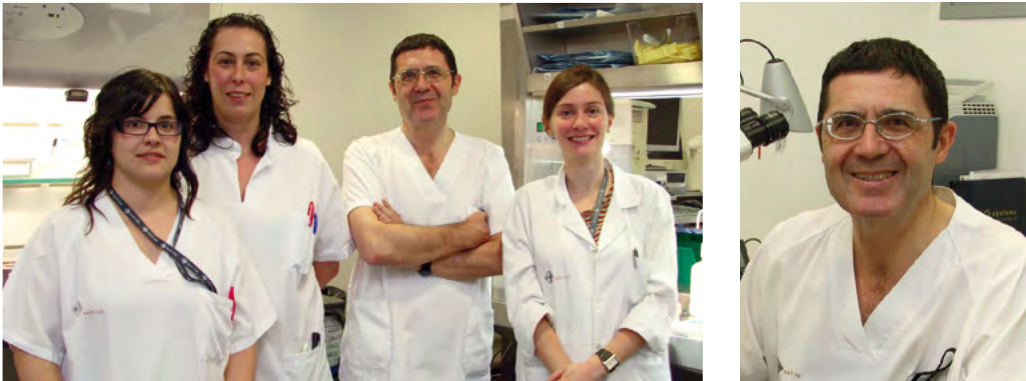
Technicians
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Main Lines of Research

- ▶ Pathogenic mechanisms of breast cancer.
- ▶ Identification and validation of therapeutic targets derived from previous studies.
- ▶ Mechanisms of response to chemotherapy treatment.

Challenges

- ▶ Progress as a breast cancer research group publishing regular articles and cooperating with other groups in our centre and at the national and international levels.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Clinical Oncology.
- ▶ Molecular Pathology of Gynaecologic Cancer.

External Collaboration

- ▶ Gloria Peiró. Hospital Universitario de Alicante Research Institute, Spain.

Scientific Production

*TIF: 11.854 **MIF: 3.951

ISI Web of Knowledge Indexed Publications with an IF

- 01 Gallardo A., Lerma E., Escuin D., Tibau A., Munoz J., Ojeda B., Barnadas A., Adrover E., Sanchez-Tejada L., Giner D., Ortiz-Martinez F., Peiro G. Increased signalling of EGFR and IGF1R, and de-regulation of PTEN/PI3K/Akt pathway are related with trastuzumab resistance in HER2 breast carcinomas. British Journal of Cancer; 106(8):1367-1373.
IF: 5.082
- 02 Castellana B., Escuin D., Perez-Olabarria M., Vazquez T., Munoz J., Peiro G., Barnadas A., Lerma E. Genetic up-regulation and over-expression of PLEKHA7 differentiates invasive lobular carcinomas from invasive ductal carcinomas. Human Pathology; 43(11):1902-1909.
IF: 2.843
- 03 Alemany L., Perez C., Tous S., Llombart-Bosch A., Lloveras B., Lerma E., Guarch R., Andujar M., Pelayo A., Alejo M., Ordi J., Klaustermeier J., Velasco J., Guimera N., Clavero O., Castellsague X., Quint W., Munoz N., Bosch F.X., De Sanjose S. Human papillomavirus genotype distribution in cervical cancer cases in Spain. Implications for prevention. Gynecologic Oncology; 124(3):512-517.
IF: 3.929

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Castellana B, Escuin D, Peiró G, Garcia-Valdecasas B, Vázquez T, Pons C, Pérez-Olabarria M, Barnadas A, Lerma E. ASPN and GJB2 are implicated in the mechanisms of invasion of ductal breast carcinomas. Journal of Cancer 2012;3(1):175-83.

AREA 4

Neurological, Mental Disorders and Ageing

132 Cerebrovascular Diseases

135 Dementias

136 Neuromuscular Diseases

138 Parkinson Disease and Movement Disorders

142 Molecular Neuropharmacology

144 Pharmacological Research in Humans

146 Clinical Psychiatry

150 Genetics in Neurodegenerative Diseases

152 Human Experimental Neuropsychopharmacology

154 Neurobiology of Dementia

156 Neuroradiology

158 Ageing Institute

160 Addictive Behaviours

Cerebrovascular Diseases

Coordinator

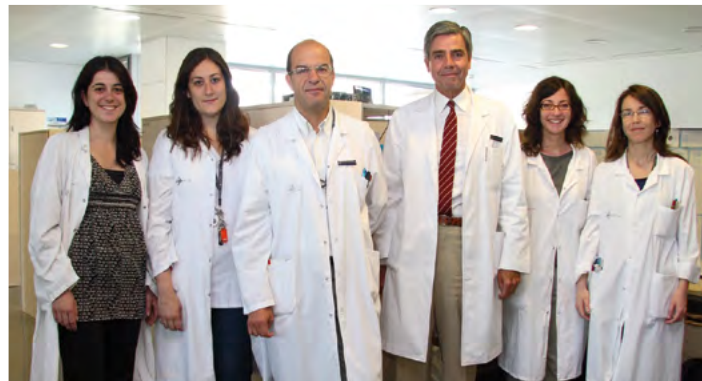
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Elena Jiménez HSCSP RI
Josep Lluís Martí HSCSP

Nursing Researchers

Rebeca Marín HSCSP RI



Main Lines of Research

- ▶ Neurogenesis and neurorepair after ischaemic stroke.
- ▶ Growth of haematoma in the acute phase of spontaneous brain haemorrhage.
- ▶ Endothelial progenitor cells in ischaemic stroke.
- ▶ Monitoring the effect of thrombolysis in acute ischaemic stroke.
- ▶ Benefit and risk of thrombolysis in acute ischaemic stroke.
- ▶ Beta-amyloid and cerebral haemorrhage: diagnostic and prognostic studies.
- ▶ Risk of cerebral hemorrhage in patients receiving oral anticoagulant therapy.
- ▶ Sonothrombolysis.

Challenges

- ▶ Enhance cooperation with other groups in the framework of Spanish stroke research.
- ▶ Network (RETICS/INVICTUS) and also intrahospital cooperation (the Catalan Institute of Cardiovascular Sciences and the Haemostasis-Thrombosis group) and extra-hospital cooperation (with groups managed by Dr. García-Verdugo in Valencia, Dr. Arús at the Autonomous University of Barcelona, Dr. Anna Planas at Clinic Hospital, Dr. Turgut Durduran at ICFO). To obtain funding from FIS, regional authorities and private companies.
- ▶ Increase the number of contracted and grant-aided researchers and professionally develop existing researchers.

Active Grants

- ▶ Delgado R. Development of multiscale and multiparameter optical monitoring for the study of acute cerebral ischaemia: from animal model to the patient. FIS Grant. Carlos III Health Institute. January 2010-March 2013.
- ▶ Martí J. Sonotrombolysis enhanced with microbubbles as a new treatment for acute ischemic stroke: a pilot study, prospective and randomized. La Marató de TV3 Foundation. June 2012-June 2015.
- ▶ Martí J. Cerebral hemorrhage with anti-coagulant therapy in the secondary prevention of stroke: predictive value of leukoaraiosis and microbleedings detected by MRI. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Martí J. Diffuse-Optical monitor of cerebral hemodynamics after rtPA administration in acute ischemic stroke. Marie Curie Grant. European Union. 2008-2012.
- ▶ Martí J. Neurovascular Network (Invictus). Thematic Cooperative Research Networks (RETICS). FIS Grant. Carlos III Health Institute. January 2013-December 2016.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Neuroradiology.
- ▶ Thrombosis and Haemostasis.
- ▶ Cardiovascular Biochemistry.
- ▶ Neurobiology of Dementia.
- ▶ Molecular Pathology and Therapeutics of Ischaemic and Atherothrombotic Diseases.

External Collaborations

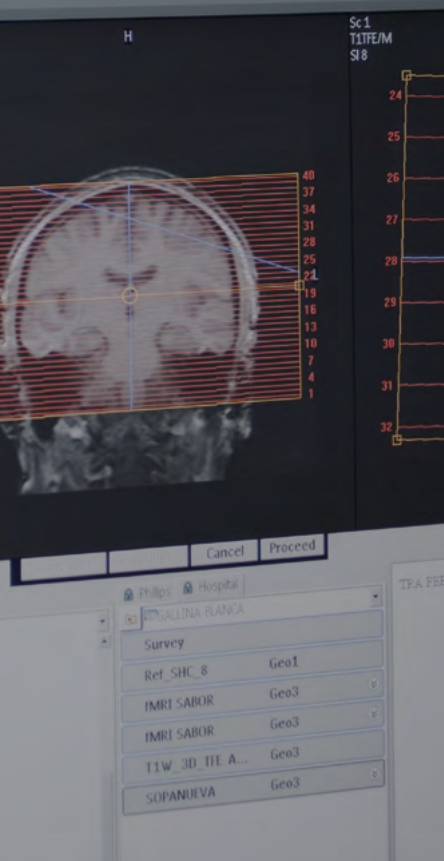
- ▶ Dr. García-Verdugo. University of Valencia, Spain.
- ▶ Dr. Carles Arús. Faculty of Sciences, Autonomous University of Barcelona, Spain.

- ▶ Dr. Anna Planas. Hospital Clínic, Barcelona, Spain.
- ▶ Dr. Turgut Durduran. Catalan Photonic Institute, Castelldefels, Barcelona, Spain
- ▶ Dr. Tomás Sobrino. Hospital General Universitario Santiago de Compostela, Spain.
- ▶ Dr. Israel Fernández, Dr. Joan Montaner. Hospital Vall d'Hebron (Barcelona, Spain).
- ▶ Dr. Blanca Fuentes. Hospital La Paz, Madrid, Spain.
- ▶ Dr. Antonio Gil. Hospital Gregorio Marañón, Madrid, Spain.
- ▶ Dr. Ángel Chamorro. Hospital Clínic, Barcelona, Spain.
- ▶ Dr. Antonio Dávalos. Hospital Germans Trias i Pujol, Badalona, Spain.
- ▶ Dr. Francesc Purroy. Hospital Arnau de Vilanova, Lleida, Spain.

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ISI Web of Knowledge Indexed Publications with an IF

- Fernandez-Cadenas I., Del Rio-Espino-la A., Giralte D., Domingues-Montanari S., Quiroga A., Mendioroz M., Ruiz A., Ribo M., Serena J., Obach V., Freijo M.M., Martí-Fabregas J., Delgado P., Montaner J. IL1B and VWF variants are associated with fibrinolytic early recanalization in patients with ischemic stroke. *Stroke*; 43(10):2659-2665. **IF: 6.158**
- Fernandez-Cadenas I., Del Rio-Espino-la A., Carrera C., Domingues-Montanari S., Mendioroz M., Delgado P., Rosell A., Ribo M., Giralte D., Quintana M., Castellanos M., Obach V., Martinez S., Freijo M.M., Jimenez-Conde J., Roquer J., Martí-Fabregas J., Molina C.A., Alvarez-Sabin J., Montaner J. Role of the MMP9 gene in hemorrhagic transformations after tissue-type plasminogen activator treatment in stroke patients. *Stroke*; 43(5):1398-1400. **IF: 6.158**
- Dávalos A., Alvarez-Sabin J., Castillo J., Díez-Tejedor E., Ferro J., Martínez-Vila E., Serena J., Segura T., Cruz V.T., Masjuan J., Cobo E., Secades J.J., International Citicoline Trial on acute Stroke (ICTUS) trial investigators (col. Martí J.) Citicoline in the treatment of acute ischaemic stroke: An international, randomised, multicentre, placebo-controlled study (ICTUS trial). *The Lancet*; 380(9839):349-357. **IF: 39.06**
- Blanco M., Vivancos-Mora J., Castillo J., registro EPICES (col. Martí-Fabregas J.) Compliance with the measures for preventing vascular risk factors in hospitalised patients with acute stroke. Analysis of a national multi-centre registry: Epices registry (III) [Cumplimiento de las medidas de prevención de factores de riesgo vascular en pacientes ingresados con ictus agudo. análisis de un registro multicéntrico: Registro epices (III)]. *Revista de Neurología*; 54(9):523-529. **IF: 1.179**
- Castillo J., Vivancos-Mora J., investigadores del registro EPICES (col. Martí-Fabregas J.) Hospital arrival times and delay before acute stroke patients receive neurological care. Analysis of a national multi-centre registry: EPICES registry (II) [Tiempos de llegada al hospital y hasta la atención neurológica de pacientes con ictus agudo. Análisis de un registro multicéntrico nacional: Registro epices (II)]. *Revista de Neurología*; 54(8):461-467. **IF: 1.179**
- Arias-Rivas S., Vivancos-Mora J., Castillo J., investigadores del registro EPICES (col. Martí-Fabregas J.) Epidemiology of the subtypes of stroke in hospitalised patients attended by neurologists: Results of the EPICES registry (I) [Epidemiología de los subtipos de ictus en pacientes hospitalizados atendidos por neurólogos: Resultados del registro EPICES (I)]. *Revista de Neurología*; 54(7):385-393. **IF: 1.179**
- Vidal-Jordana A., Barroeta-Espar I., Sainz Pelayo M.P., Mateo J., Delgado-Mederos R., Martí-Fabregas J. Intracerebral hemorrhage in anticoagulated patients: What do we do afterwards? [Hemorragias intracerebrales en pacientes anticoagulados, ¿qué hacemos después?]. *Neurología*; 27(3):136-142. **IF: 1.322**
- Martí-Fabregas J., Delgado-Mederos R., Mateo J. Limitations of anticoagulant therapy [Limitaciones del tratamiento anticoagulante]. *Neurología*; 27(SUPPL. 1):27-32. **IF: 1.322**
- Fuentes B., Gallego J., Gil-Nunez A., Morales A., Purroy F., Roquer J., Segura T., Tejada J., Lago A., Díez-Tejedor E., Alonso de Lecinana M., Alvarez-Sabin J., Arenillas J., Calleja S., Casado I., Castellanos M., Castillo J., Dávalos A., Díaz-Otero F., Egido J.A., Lopez-Fernandez J.C., Freijo M., García Pastor A., Giló F., Irimia P., Maestre J., Masjuan J., Martí-Fabregas J., Martínez-Sánchez P., Martínez-Vila E., Molina C., Nombela F., Ribo M., Rodríguez-Yanez M., Rubio F., Serena J., Simal P., Vivancos J. Guidelines for the preventive treatment of ischaemic stroke and TIA (I). Update on risk factors and life style [Guía para el tratamiento preventivo del ictus isquémico y AIT (I). Actuación sobre los factores de riesgo y estilo de vida]. *Neurología*; 27(9):560-574. **IF: 1.322**
- Martínez-Ramírez S., Delgado-Mederos R., Marín R., Suárez-Calvet M., Sainz M.P., Alejaldre A., Vidal-Jordana A., Martí-Vilalta J.L., Martí-Fabregas J. Statin pretreatment may increase the risk of symptomatic intracranial haemorrhage in thrombolysis for ischemic stroke: Results from a case-control study and a meta-analysis. *Journal of*



Cerebrovascular Diseases

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Scientific Production

- Neurology; 259(1):111-118.
IF: 3.578
- 11 Del Rio-Espinola A., Fernandez-Cadenas I., Giralt D., Quiroga A., Gutierrez-Agullo M., Quintana M., Fernandez-Alvarez P., Domingues-Montanari S., Mendioroz M., Delgado P., Turck N., Ruiz A., Ribo M., Castellanos M., Obach V., Martinez S., Freijo M.M., Jimenez-Conde J., Cuadrado-Godia E., Roquer J., Chacon P., Marti-Fabregas J., Sanchez J.C., Montaner J. A predictive clinical-genetic model of tissue plasminogen activator response in acute ischemic stroke. *Annals of Neurology*; 72(5):716-729.
IF: 11.193
- 12 Purroy F., Caballero P.E.J., Gorospe A., Torres M.J., Alvarez-Sabin J., Santamarina E., Martinez-Sanchez P., Canovas D., Freijo M.M., Egido J.A., Giron J.M., Ramirez-Moreno J.M., Alonso A., Rodriguez-Campello A., Casado I., Delgado-Medeiros R., Marti-Fabregas J., Fuentes B., Silva Y., Quesada H., Cardona P., Morales A., De La Ossa N., Garcia-Pastor A., Arenillas J.F., Segura T., Jimenez C., Masjuan J. Prediction of early stroke recurrence in transient ischemic attack patients from the PROMAPA study: A comparison of prognostic risk scores. *Cerebrovascular Diseases*; 33(2):182-189.
IF: 2.814
- 13 Morrow D.A., Braunwald E., Bonaca M.P., Ameriso S.F., Dalby A.J., Fish M.P., Fox K.A.A., Lipka L.J., Liu X., Nicolau J.C., Ophuis A.J.O., Paolasso E., Scirica B.M., Spinar J., Theroux P., Wiviott S.D., Strony J., Murphy S.A., TRA 2P-TIMI 50 Steering Committee and Investigators (col. Martí-Vilalta J.) Vorapaxar in the secondary prevention of atherothrombotic events. *New England Journal of Medicine*; 366(15):1404-1413.
IF: 51.658

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Martí-Vilalta J.L., Martí-Fàbregas J. Nomenclatura de las enfermedades vasculares cerebrales, pp. 37-44. In: *Enfermedades Vasculares Cerebrales*. Ediciones Mayo, 2012.
- ▶ Martí-Fàbregas J., Martí-Vilalta J.L. Hemorragia intracerebral, pp. 373-384. In: *Enfermedades Vasculares Cerebrales*. Ediciones Mayo, 2012.
- ▶ Martí-Vilalta J.L., Martí-Fàbregas J. Líneas generales de tratamiento, pp. 453-458. In: *Enfermedades Vasculares Cerebrales*. Ediciones Mayo, 2012.
- ▶ Martí-Fàbregas J., Delgado Mederos R. Tratamiento del ictus lacunar en fase aguda, pp. 141-152. In: *Ictus lacunar*. Barcelona, 2012.

Dementias

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NOTE:

In 2012, Dr. Gomez-Isla developed only around 5% of her work in the HSCSP. Most of the content reflected in her publications has been developed at the Massachusetts General Hospital (Boston, USA) where she currently works.



Main Lines of Research

- ▶ Development and characterization of new in vitro models of Alzheimer disease.
- ▶ Development and characterization of new in vivo models of Alzheimer and other neurodegenerative diseases.
- ▶ Identification of signalling pathways and molecular mechanisms involved in neurotoxicity mediated by beta amyloid.
- ▶ Study of mechanisms involved in neuron and synapsis resistance in the Alzheimer pathology in human brains.
- ▶ Testing of new therapeutic strategies in Alzheimer disease.

Challenges

- ▶ Development of new in vitro, mouse and human disease models recapitulating the main aberrant features of Alzheimer disease, investigating the usefulness of these models for understanding the pathophysiology of the disease and for testing new neuroprotective strategies and evaluating individual susceptibility to the disease.
- ▶ Development and characterization of new mouse disease models for the testing of new therapeutic strategies in Alzheimer disease and for molecular imaging in vivo.
- ▶ Study of the brains of individuals who meet Alzheimer histopathology criteria but who never developed symptoms in life, designed to identify the molecular pathways responsible for disease resistance and new potentially useful therapeutic targets for Alzheimer and other neurodegenerative diseases.
- ▶ Exchange and training of basic and clinical research personnel and collaborative projects between the HSCSP and Massachusetts General Hospital attached to Harvard University (Boston, USA).

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Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 DaRocha-Souto B., Coma M., Perez-Nievas B.G., Scotton T.C., Siao M., Sanchez-Ferrer P., Hashimoto T., Fan Z., Hudry E., Barroeta I., Sereno L., Rodriguez M., Sanchez M.B., Hyman B.T., Gomez-Isla T. Activation of glycogen synthase kinase-3 beta mediates β -amyloid induced neuritic damage in Alzheimer's disease. *Neurobiology of Disease*; 45(1):425-437.
IF: 5.624
- 02 Sala I., Marquie M., Sanchez-Saudinos Ma.B., Sanchez-Valle R., Alcolea D., Gomez-Anson B., Gomez-Isla T., Blesa R., Lleó A. Rapidly progressive dementia: Experience in a tertiary care medical center. *Alzheimer Disease and Associated Disorders*; 26(3):267-271.
IF: 2.728
- 03 Serrano-Pozo A., Mielke M.L., Muzitansky A., Gomez-Isla T., Growdon J.H., Bacskai B.J., Betensky R.A., Frosch M.P., Hyman B.T. Stable size distribution of amyloid plaques over the course of alzheimer disease. *Journal of Neuropathology and Experimental Neurology*; 71(8):694-701.
IF: 4.345

Neuromuscular Diseases

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Esther Ortiz HSCSP RI
Anna Pastoret Jain Foundation
Xavier Suárez HSCSP RI-FIS



Main Lines of Research

Immune-mediated neuromuscular diseases:

- Immunopathogenesis studies with characterization of new targets and innate immunity studies in immune-mediated neuromuscular diseases (myasthenia gravis, immune neuropathies, CIDP, GBS, MMN).
- Analysis of the impact of new immuno-modulating therapies on functional aspects of immune system cells (response to ligands, production of antibodies, etc).

Muscular dystrophy, dysferlinopathy and distal myopathies:

- Clinical characterization, new diagnostic tests for dysferlinopathy and distal myopathies, and study of molecular pathways involved in differentiation and molecular and functional interactions of dysferlin.

pathies, and study of molecular pathways involved in differentiation and molecular and functional interactions of dysferlin.

- Functional analysis of truncated forms of dysferlin with possible therapeutic implications.

New therapies in genetic diseases:

- Allogeneic transplantation in mitochondrial neurogastrointestinal encephalopathy.
- Bone marrow transplant in dysferlinopathy (animal model).
- Advanced therapy with stem cells and mesoangioblasts in muscular dystrophies.

Challenges

- Advance knowledge of the immunological mechanisms involved in the pathogenesis of immune-mediated neuromuscular diseases (CIDP, MMN) and inflammatory myopathies (DM, PM).
- Search for new antigens and develop diagnostic tests with new biomarkers in CIDP and myasthenia.
- Implement new diagnostic methods for muscular dystrophies resulting from dysferlinopathy and other myopathies (biomarkers, MRI, etc).
- Advance knowledge of the pathogenetic mechanisms involved in muscular dystrophy resulting from dysferlin deficiency.

- Implement cell therapy in mouse models of muscular dystrophy using mesoangioblasts and bone marrow to study possible applications in humans and to study immune system response to cell therapy in mouse models of human disease.
- Cleanroom access to manipulate cells for use in humans.
- Evaluate the effects of treatment with vitamin D in carriers of a DYSF gene mutation.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Inflammatory Diseases.
- Genetics in Neurodegenerative Diseases.

External Collaborations

- Dr. Andreu, Dr. Martí. Mitochondrial Dis-

eases. Hospital Vall d'Hebron, Barcelona, Spain.

- Dr. Van der Maarel, Dr. Jan Veermuler. Leyden University, Netherlands.
- Dr. Cossu. Hospital San Raffaele, Milan, Italy.
- Dr. Al-Chalabi, London, UK.

Active Grants

- Gallardo E. Grants to support research groups in Catalonia. Neuromuscular Disease Group. AGAUR Grant. September 2009-December 2013.
- Gallardo E. Study of the physical pathogenesis of muscular dystrophies caused by mutations in the DYSF gene by analysing interactome and the signalling pathways involving dysferlin. FIS Grant. Carlos III Health Institute. January 2010-December 2012.
- Gallardo E. Combined cell transplantation as a therapeutic approach for dysferlinopathies and transversal study to evaluate the frequency of carriers of dysferlinopathy in a Caucasian population using a monocyte test to detect dysferlin expression. JAIN Foundation. January 2012-December 2013.
- Gallardo E. Search for biomarkers of muscular dystrophies with waist weakness. FIS Grant. Carlos III Health Institute. January 2013-December 2015.
- Illa I. Immunology studies relevant to the development of therapeutic strategies in neuromuscular diseases. FIS Grant. Carlos III Health Institute. January 2010-December 2013.
- Illa I. Consortium to generate a common Spanish database for basic and clinical research in neuromuscular disease. CIBERNED-ISCIII. 2010-2013.
- Illa I. Advanced therapies research for muscular dystrophy: medullar transplantation and mesoangioblasts in murine models. Isabel Gemio Foundation (research into muscular dystrophy and other rare diseases). 2010-2013.

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ISI Web of Knowledge Indexed Publications with an IF

- Roche J.C., Rojas-Garcia R., Scott K.M., Scotton W., Ellis C.E., Burman R., Wijesekera L., Turner M.R., Leigh P.N., Shaw C.E., Al-Chalabi A. A proposed staging system for amyotrophic lateral sclerosis. *Brain*; 135(3):847-852. **IF: 9.915**
- Nogales-Gadea G., Pinos T., Lucia A., Arenas J., Camara Y., Brull A., De Luna N., Martin M.A., Garcia-Arumi E., Marti R., Andreu A.L. Knock-in mice for the R50X mutation in the PYGM gene present with McArdle disease. *Brain*; 135(7):2048-2057. **IF: 9.915**
- Lucia A., Ruiz J.R., Santalla A., Nogales-Gadea G., Rubio J.C., Garcia-Consuegra I., Cabello A., Perez M., Teixeira S., Vieitez I., Navarro C., Arenas J., Martin M.A., Andreu A.L. Genotypic and phenotypic features of McArdle disease: Insights from the Spanish national registry. *Journal of Neurology, Neurosurgery and Psychiatry*; 83(3):322-328. **IF: 4.924**
- Diaz-Manera J., Gallardo E., De Luna N., Navas M., Soria L., Garibaldi M., Rojas-Garcia R., Tonlorenzi R., Cossu G., Illa I. The increase of pericyte population in human neuromuscular disorders supports their role in muscle regeneration in vivo. *Journal of Pathology*; 228(4):544-553. **IF: 7.585**
- Diaz-Manera J., Martinez-Hernandez E., Querol L., Klooster R., Rojas-Garcia R., Suarez-Calvet X., Munoz-Blanco J.L., Mazia C., Straasheijm K.R., Gallardo E., Juarez C., Verschuuren J.J., Illa I. Long-lasting treatment effect of rituximab in MuSK myasthenia. *Neurology*; 78(3):189-193. **IF: 8.249**
- Barba-Romero M.A., Barrot E., Bautista-Lorite J., Gutierrez-Rivas E., Illa I., Jimenez L.M., Ley-Martos M., de Munain A.L., Pardo J., Pascual-Pascual S.I., Perez-Lopez J., Solera J., Vilchez-Padilla J.J. Clinical guidelines for late-onset pompe disease [Guía clínica de la enfermedad de pompe de inicio tardío]. *Revista de Neurologia*; 54(8):497-507. **IF: 1.179**
- Berciano J., Sevilla T., Casasnovas C., Sivera R., Vilchez J.J., Infante J., Ramon C., Pelayo-Negro A.L., Illa I. Guidelines for molecular diagnosis of Charcot-Marie-Tooth disease [Guía diagnóstica en el paciente con enfermedad de Charcot-Marie-Tooth]. *Neurologia*; 27(3):169-178. **IF: 1.322**
- Alejandre A., Diaz-Manera J., Ravaglia S., Tibaldi E.C., D'Amore F., Moris G., Muelas N., Vilchez J.J., Garcia-Medina A., Uson M., Martinez Garcia F.A., Illa I., Pichiechio A. Trunk muscle involvement in late-onset Pompe disease: Study of thirty patients. *Neuromuscular Disorders*; 22(SUPPL. 2):S148-S154. **IF: 3.464**
- Labrador-Horrillo M., Martinez-Valle F., Gallardo E., Rojas-Garcia R., Ordi-Ros J., Vilardell M. Anti-ganglioside antibodies in patients with systemic lupus erythematosus and neurological manifestations. *Lupus*; 21(6):611-615. **IF: 2.783**
- Rojas-Garcia R., Querol L., Gallardo E., Salva N.D.L., Juarez C., Garces M., Fages E., Casasnovas C., Illa I. Clinical and serological features of acute sensory ataxic neuropathy with antiganglioside antibodies. *Journal of the Peripheral Nervous System*; 17(2):158-168. **IF: 2.57**
- Diaz-Manera J., Rojas Garcia R., Illa I. Treatment strategies for myasthenia gravis: An update. *Expert Opinion on Pharmacotherapy*; 13(13):1873-1883. **IF: 2.86**
- Luna N.D., Diaz-Manera J., Paradas C., Iturriaga C., Rojas-Garcia R., Araque J., Genebriera M., Gich I., Illa I., Gallardo E. 1α,25(OH)2-vitamin D3 increases dysferlin expression in vitro and in a human clinical trial. *Molecular Therapy*; 20(10):1988-1997. **IF: 7.041**
- Pinos T., Nogales-Gadea G., Ruiz J.R., Rodriguez-Romo G., Santiago-Dorrego C., Fiuza-Luces C., Gomez-Gallego F., Cano-Nieto A., Garatachea N., Moran M., Angel Martin M., Arenas J., Andreu A.L., Lucia A. Are mitochondrial haplogroups associated with extreme longevity? A study on a Spanish cohort. *Age (Dordrecht, Netherlands)*; 34(1):227-233. **IF: 4.084**
- Rojas-Garcia R., Scott K.M., Roche J.C., Scotton W., Martin N., Janssen A., Goldstein L.H., Nigel Leigh P., Ellis C.M., Shaw C.E., Al-Chalabi A. No evidence for a large difference in ALS frequency in populations of African and European origin: A population based study in inner city London. *Amyotrophic Lateral Sclerosis*; 13(1):66-68. **IF: 2.369**
- Nogales-Gadea G., Consuegra-Garcia I., Rubio J.C., Arenas J., Cuadros M., Camara Y., Torres-Torronteras J., Fiuza-Luces C., Lucia A., Martin M.A., Garcia-Arumi E., Andreu A.L. A transcriptomic approach to search for novel phenotypic regulators in McArdle disease. *PLoS ONE*; 7(2). **IF: 3.73**

Parkinson Disease and Movement Disorders

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Jesús Pérez HSCSP RI
Roser Ribosa HSCSP RI
Victoria Sosti HSCSP RI

Nursing Researchers

Antonia Campolongo HSCSP RI
Cristina Serrano HSCSP RI



Main Lines of Research

Cognitive impairment and behavioural dysfunctions in Parkinson disease:

- Knowledge and detection of the neural correlates of cognitive performance in Parkinson disease using neurophysiological techniques (event-related brain cognitive potentials) and structural and functional neuroimaging (voxel-based morphometry, cortical thickness and spectroscopy).
- Development of more sensitive tools for cognitive and functional assessment in Parkinson disease to detect subtle changes in cognitive performance and treatment response.
- Prospective follow-up analysis of cognition and mood in patients with deep-brain stimulation of the subthalamic nucleus.
- Physiological correlates and pharmacological approach to apathy in Parkinson disease and other movement disorders.
- Surgery and treatments of continuous infusion in Parkinson disease.
- Follow-up and etiologic study of weight loss in patients treated with continuous infusion of intraduodenal levodopa.
- Follow-up and etiologic study of weight loss in patients treated with continuous infusion of intraduodenal levodopa.

Essential tremor and other movement disorders:

- Molecular neuroimaging in essential tremor.
- Clinical, neurophysiological and neuroimaging assessment of patients with FXTAS (fragile X-associated tremor/ataxia syndrome).

Translational research - Parkinsonian animal models:

- Assessment of behavioural and cognitive modulations exerted by distinct antiparkinsonian drugs in murine models of Parkinson disease with lesions in particular neurotransmitter systems (dopaminergic and noradrenergic lesions).

Huntington disease:

- Development of the specialized unit oriented to the diagnosis, monitoring and comprehensive treatment of patients with Huntington disease and their families. The team consists of an interdisciplinary group of neurologists, neuropsychologists and nurses working in synergy with the dietary, rehabilitation and psychiatry services of the HSPSC. Current research lines are:
 - Active participation in the registry study of the European Huntington Disease Network (EHDN) with the inclusion, to date, of 51 new participants.
 - Participation in two EHDN multicentre subprojects in Spain: 1) study on nutrition in Huntington disease (PI: Ester Cubo, Burgos, Spain), 2) validation study of the PBA-S scale for the Spanish population (PI: Jesús Idiago, Barcelona, Spain).
 - Development of instruments to evaluate the cognitive state of patients: 1) development of a neuropsychological rating scale specific to pre-symptomatic patients (preHD-CRS), 2) validation of the PD-CRS scale for diagnosing mild cognitive impairment and dementia in Huntington disease.
 - Prevalence of hallucinations in Huntington disease.

Active Grants

- Arenas F. Juan de la Cierva Contract. Ministry of the Economy and Competitiveness. December 2011-December 2014.
- García C. Early implementation of music therapy in the rehabilitation of aphasic patients after acute acquired brain injury. La Marató de TV3 Foundation. May 2012-May 2015.
- Kulisevsky J. Prepared Food Agreement SA (Henufood). CENIT. October 2010- December 2013.
- Pagonabarraga J. Definition and longitudinal study of mild cognitive impairment in Parkinson disease: operational clinical criteria definition and progression to dementia. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Ribosa R. AGAUR Grant. January 2011-January 2014.

Challenges

Cognitive and behavioural dysfunctions in Parkinson disease:

- Study and understanding of the neural substrates of cognitive impairment in Parkinson disease so as to improve diagnostic and therapeutic approaches.
- Development of specific tools to assess and track cognitive changes in Parkinson disease.

Essential tremor and other movement disorders:

- Genetic studies and genotype-phenotype correlations in essential tremor.
- Development of new therapeutic interventions in essential tremor.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Genetics in Neurodegenerative Diseases.
- Neurobiology of Dementia.
- Digestive Diseases.
- Molecular Bases of Disease.
- Neuroradiology.

External Collaborations

- Miquel Vila. Neurodegenerative Diseases Research Group. Vall d'Hebron Research Institute, Barcelona, Spain.
- Montserrat Milà, Laia Rodríguez-Revenga. Department of Biochemistry and Molecular Genetics, Hospital Clínic, Barcelona, Spain.

Awards

- Pagonabarraga J. Communication selected within the top 20 communications in cognitive impairment in Parkinson disease. 16th International Congress of Parkinson Disease and Movement Disorders, Dublin, Ireland.
- Pagonabarraga J. Radiological Society of North America Trainee Research Prize. MRI detection of selective cortical thinning and neuropsychological correlations: a comparison from normal cognition to dementia in Parkinson disease.
- Pagonabarraga J. Spanish Neurology Society. Award for Best Oral Communication in Movement Disorders. Hallucinations in patients with de novo Parkinson disease without dopaminergic treatment.
- Kulisevsky J. Spanish Neurology Society. Novartis Award for Published Article on Movement Disorders. Dementia risk in Parkinson disease: disentangling the role of MAPT haplotypes.

Parkinson Disease and Movement Disorders

*TIF: 95.495 **MIF: 7.958

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

01 Kulisevsky J., Poyurovsky M. Adenosine A 2A-receptor antagonism and pathophysiology of Parkinson's disease and drug-induced movement disorders. *European Neurology*; 67(1):4-11. **IF: 1.5**

02 Filippi M., Kulisevsky J. Advances with mri in parkinson disease: From freezing to festination. *Neurology*; 79(23):2222-2223. **IF: 8.249**

03 Ribosa-Nogue R., Gironell A., Pagonabarraga J., Villa-Bonomo C., Pascual-Sedano B., Kulisevsky J. Descriptive analysis of the activity in a movement disorder unit in a tertiary hospital in Catalonia [Análisis descriptivo de la actividad de una unidad de trastornos del movimiento en un hospital terciario de Cataluña]. *Revista de Neurologia*; 55(6):330-336. **IF: 1.179**

04 Litvan I., Goldman J.G., Troster A.I., Schmand B.A., Weintraub D., Petersen R.C., Mollenhauer B., Adler C.H., Marder K., Williams-Gray C.H., Aarsland D., Kulisevsky J., Rodriguez-Oroz M.C., Burn D.J., Barker R.A., Emre M. Diagnostic criteria for mild cognitive impairment in Parkinson's disease: Movement Disorder Society Task Force guidelines. *Movement Disorders*; 27(3):349-356. **IF: 4.558**

05 Seto-Salvia N., Pagonabarraga J., Houlden H., Pascual-Sedano B., Dols-Icardo O., Tucci A., Paisan-Ruiz C., Campolongo A., Anton-Aguirre S., Martin I., Munoz L., Bufill E., Vilageliu L., Grinberg D., Cozar M., Blesa R., Lleo A., Hardy J., Kulisevsky J., Clarimon J. Glucocerebrosidase mutations confer a greater risk of dementia during Parkinson's disease course. *Movement Disorders*; 27(3):393-399. **IF: 4.558**

06 Benito-Leon J., Cubo E., Coronell C., Rodriguez-Fernandez R., Pego-Reigosa R., Paz-Gonzalez J.M., Cebrian-Perez E., Suarez-Gil P., Marey-Lopez J., Corredera-Garcia E., Lopez-Gonzalez F.J., Rodriguez-Osorio X., Arias-Rivas S., Lema M., Pena J., Suarez E., MaSolar-Sanchez D., Vidal-Sanchez J.A., Bergareche A., Ruiz J., Gomez-Esteban J.C., Losada J.M., Fernandez-Gar-

cia J.M., Alvaro-Gonzalez L.C., Sanchez-Menoyo J.L., Ruiz-Oseda J., Soriano G.J., Martin-Bujanda M., Fernandez-Diaz A., Mazabel-Flores M.A., de La Fuente O.L., Maria Dolores Sevillano, Arcaya J., Caminero A.B., Bowakim W., Vega-Lopez O., Catalan M., del Val J., Garcia-Ramos R., Francisco-Pena E., Bermejo P.E., Lara M., Losada M., Lopez-Manzanares L., Esquivel A., Posada I.J., Molina-Arjona J.A., Almajano J., Lopez M.L., Mata M., Sanchez-Alonso P., Perez D.A., Ballesteros, Puertas I., Balseiro J.J., Alonso-Frech F., del Mar Morin M., Velazquez-Perez J.M., Fernandez-Carriol J.M., Recio-Bermejo M., Artal J., Lopez-Garcia E., Segarra D., Gonzalez-Mera L., Hernandez-Vara J., Jaen-Peraire A.M., Ispuerto-Gonzalez L., Dorado-Bovix L., Soler J.M., Moral A., Franquet-Gomez E., Bernal T., Delgado T., Calopa M., Bello-Lopez J., Oliveras-Ley C., Garcia-Gil V.J., Palasi A., de Fabregues O., Callen A., Pascual-Sedano B., Plarrumani A.L., Blanco Y., Malagelada A., Castejon C., Luna-Rodriguez A., Martinez-Fernandez R., Carmona O., Marquez F., Olive Plana J.M., Purroy-Garcia F., Baiges-Octavio J.J., Vega J., Gonzalez V., Sanchez-Ortiz C., Sanchez-Lopez F., Campos V.M., Perez F., Vazquez F., Rodriguez J.J., Villalobos F., Carballo M., Garcia-Moreno J.M., Morales-Martinez M.D., Patrignani-Ochoa J., Terriza F., Asencio J.J., Garcia C., Delgado-Lopez F., Rodriguez-Fernandez N., Escamilla F., Perez-Navarro M.J., Castellanos F., Cueli B., Gomez M., Ramirez-Moreno J.M., Gomez-Espuch J., Salmeron M.P., Rodriguez J.M., Morsi-Hassan O., Meca-Lallana J.M., Martin-Balbuena S., Fages-Caravaca E., Candeliere-Merlicco A., Gonzalez-Hernandez A., Suarez-Munoz J.A., Motias-Arbelo J., Carrillo-Padilla F.J., Lorenzo-Brito J.N., Callejo-Dominguez J.M., Saenz M.J., Medrano-Martinez V., Dolores Castano Perez V.M., Mas-Sese G., Monzon-Minguillod M.J., Salvador-Aliaga A., Salvador D.A., Peset-Mancebo V., Perla-Muedra C., Valero-Merino C., Taberner-Andres P., Meneu-Garcia E., Pajaron E., Clausell B.C., Nobbe F., Elices-Palomar J.E., Trujillo A.G. Impact of apathy on health-related quality of life in recently diagnosed Parkinson's disease: The ANIMO study. *Movement Disorders*; 27(2):211-218. **IF: 4.558**

07 Rodriguez-Diehl R., Rey M.J., Gironell A., Martinez-Saez E., Ferrer I., Sanchez-Valle R., Jague J., Nos C., Gelpi E. "Preclinical" MSA in definite Creutzfeldt-Jakob disease. *Neuropathology*; 32(2):158-163. **IF: 1.909**

08 Pagonabarraga J., Kulisevsky J. Cognitive impairment and dementia in Parkinson's disease. *Neurobiology of Disease*; 46(3):590-596. **IF: 5.624**

09 Gironell A., Figueiras F.P., Pagonabarraga J., Herance J.R., Pascual-Sedano B., Trampal C., Gispert J.D. Gaba and serotonin molecular neuroimaging in essential tremor: A clinical correlation study. *Parkinsonism and Related Disorders*; 18(7):876-880. **IF: 3.274**

10 Puigdemont D., Perez-Egea R., Portella M.J., Molet J., De Diego-Adelino J., Gironell A., Radua J., Gomez-Anson B., Rodriguez R., Serra M., De Quintana C., Artigas F., Alvarez E., Perez V. Deep brain stimulation of the subcallosal cingulate gyrus: Further evidence in treatment-resistant major depression. *International Journal of Neuropsychopharmacology*; 15(1):121-133. **IF: 5.641**

11 Morrow DA, Braunwald E, Bonaca MP, Ameriso SF, Dalby AJ, Fish MP, Fox KA, Lipka LJ, Liu X, Nicolau JC, Ophuis AJ, Paolasso E, Scirica BM, Spinar J, Theroux P, Wiviott SD, Strony J, Murphy SA; TRA 2P-TIMI 50 Steering Committee and Investigators. Vorapaxar in the secondary prevention of atherothrombotic events. *New England Journal of Medicine*. 366(15):1404-13. **IF: 51.658**

12 Javier Pagonabarraga, Beatriz Gómez-Ansón, Ramon Rotger, Gisela Llebaria, Carmen García-Sánchez, Berta Pascual-Sedano, Alexandre Gironell, Manuel Delfino, Jaume Rusalleda, Jaime Kulisevsky. Spectroscopic Changes Associated with Mild Cognitive Impairment and Dementia in Parkinson's Disease. *Dementia and Geriatric Cognitive Disorders*. 34(5-6):312-318. **IF: 2.787**

Other Publications

Letters

► Gironell A, Ribosa-Nogué R, Pagonabarraga J. Withdrawal of visual feedback in essential tremor. *Parkinsonism and Related Disorders* 2012;18(4):402-3.

► Ribosa-Nogué R, Pagonabarraga J, Kulisevsky J. Efficacy of trazodone in antipsychotic-induced akathisia resistant to conventional treatment. *Parkinsonism and Related Disorders* 2012;18(7):902-3.

Scopus Indexed Publications

► Gironell A, Liutsko L, Muiños R, Tous JM. Differences based on fine motor behaviour in Parkinson patients compared to an age matched control group in proprioceptive and visuo-proprioceptive test conditions. *Anuario de Psicología* 2012;42(2):183-97.

Molecular Neuropharmacology

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Main Lines of Research

- ▶ The role of nitric oxide and carbon monoxide in the development and expression of acute and chronic pain.
- ▶ The involvement of the nitric oxide-carbon monoxide/CG/PKG signalling pathway in the antinociceptive effects and expression of opioid and cannabinoid receptors during acute and chronic pain.
- ▶ Molecular and behavioural characterization of opioid and cannabinoid receptors during acute and chronic pain.
- ▶ The prevention/reversal of opioid tolerance in several chronic pain models.

Challenges

- ▶ Identify new therapeutic strategies for the treatment of chronic pain.
- ▶ Determine the main genes involved in the regulation of inflammatory and neuropathic pain.
- ▶ Study the mechanisms implicated in the regulation of opioid and cannabinoid receptor gene expression in different pain models.
- ▶ Evaluate possible interactions between nitric oxide and carbon monoxide during acute and chronic pain.

Active Grants

- ▶ Pol O. New strategies in the treatment of chronic inflammatory and neuropathic pain. La Marató de TV3 Foundation. February 2008-February 2012.
- ▶ Pol O. Study of new therapeutic targets in the treatment of chronic pain. FIS Grant. Carlos III Health Institute. January 2010-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Metabolic Bases of Cardiovascular Risk.

*TIF: 6.322 **MIF: 3.161

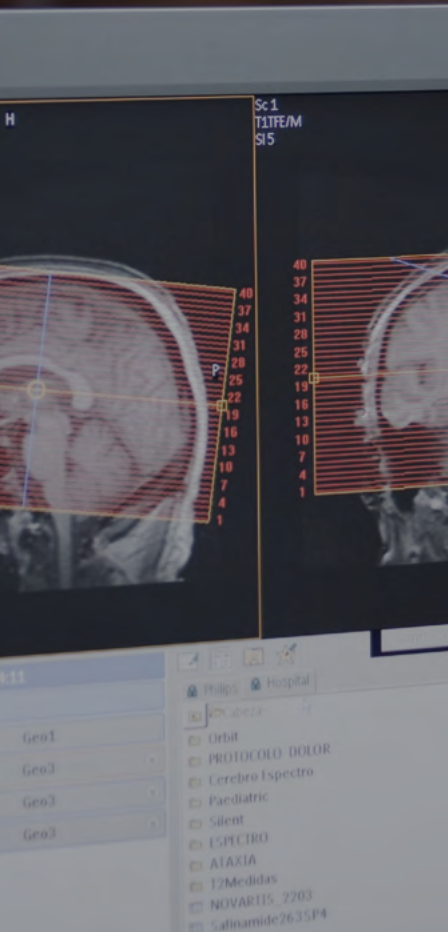
Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Hervera A, Leanez S, Negrete R, Motterlini R, Pol O. Carbon monoxide reduces neuropathic pain and spinal microglial activation by inhibiting nitric oxide synthesis in mice. PLoS ONE; 7(8).
IF: 3.73
- 02 Hervera A, Leanez S, Pol O. The inhibition of the nitric oxide-cGMP-PKG-JNK signaling pathway avoids the development of tolerance to the local antiallodynic effects produced by morphine during neuropathic pain. European Journal of Pharmacology; 685(41334):42-51.
IF: 2.592

Other Publications

- ▶ Pol O. La biotecnologia, crucial en la recerca de nous tractaments per al dolor crònic. Biocat. La Veu dels Experts, No. 34, 2012.



Pharmacological Research in Humans

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Main Lines of Research

Clinical trials that offer no therapeutic benefits to volunteer participants:

- Phase I clinical trials (healthy volunteers) whose main objectives include: first-time-in-humans, safety and tolerability (local and systemic – dermatological, ophthalmological, vaginal), pharmacokinetics, bioavailability and bioequivalence (generic drugs), pharmacodynamics, interactions (drug-drug, drug-food), evaluation and characterization of biomarkers, proofs of concept, acceptability and preference studies.
- Follow-up studies in populations with same or different characteristics: the elderly, obese volunteers, postmenopausal volunteers, patients with liver or kidney failure.
- Collaboration with clinical services to conduct phase II or phase III studies.

Neuro-physio-pharmacology of sleep/wake states:

- Investigate human brain activity in sleep and wakefulness, mechanisms involved in these two states, problems derived from sleep disturbances and possible interventions to treat these.
- Approach the phenomenon as a continuum, that is, that appropriate interpretation of the impact of a certain intervention, whether pharmacological or not, should take into account the complementarity of evaluations performed during sleep and during wakefulness. The phenomenon under study cannot be evaluated without taking this interactivity into account: develop studies that consider the 24-hour day/night cycle.
- Psychomotor performance tests, subjective evaluation scales, neurophysiological recordings (quantitative EEG, evoked-sensorial potentials and polysomnography), psychophysiological tests and pupillometric tests.

Challenges

- Consolidate and strengthen leadership in this field in Spain, conserve relationships with the pharmaceutical industry on a national level and strengthen and extend relations abroad with multinational enterprises and industries from other sectors.
- Broaden the range of questions to address in research projects along the lines of neuro-physio-pharmacology of sleep/wake states, not focusing only on pharmacotherapeutic objectives but also on physiopathologic objectives in related fields, such as dreams.
- Develop the performance of neurophysiologic recordings in ambulatory conditions, simplifying participation of volunteers but not lowering the quality of data obtained (non-negotiable element of their application as a research variable).
- Promote dissemination of our activity with a double objective: to return the knowledge generated to the society and to demystify research in humans, bringing it closer to the community so as to foster participation in clinical trials (particularly in specific sectors of the populations, such as the elderly).
- Set up educational activities related to the two main research lines, i.e., the application of good clinical practices (GCPs) in clinical research sleep medicine and its medical (pathology and treatment) and social (quality of life, prevention of accident risk) consequences.

Active Grants

- Antonijoan R. Collaboration agreement for the creation of the consortium to support biomedical research network (CAIB) Subprogram of revitalization actions of the research and technological environment of the SNS. FIS Grant. Carlos III Health Institute. January 2009-December 2012.

*TIF: 59.367 **MIF: 4.240

ISI Web of Knowledge Indexed Publications with an IF

- 01 Luna N.D., Diaz-Manera J., Paradas C., Iturriaga C., Rojas-Garcia R., Araque J., Genebriera M., Gich I., Illa I., Gallardo E. 1 α ,25(OH) $_2$ -vitamin D3 increases dysferlin expression in vitro and in a human clinical trial. *Molecular Therapy*; 20(10):1988-1997. **IF: 7.041**
- 02 Valassi E., Crespo I., Gich I., Rodriguez J., Webb S.M. A reappraisal of the medical therapy with steroidogenesis inhibitors in Cushing's syndrome. *Clinical Endocrinology*; 77(5):735-742. **IF: 3.396**
- 03 Soriano G., Roman E., Cordoba J., Torrens M., Poca M., Torras X., Villanueva C., Gich I.J., Vargas V., Guarner C. Cognitive dysfunction in cirrhosis is associated with falls: A prospective study. *Hepatology*; 55(6):1922-1930. **IF: 12.003**
- 04 Aguilera X., Videla S., Almenara M., Fernandez J.A., Gich I., Celaya F. Effectiveness of Tranexamic Acid in revision total knee arthroplasty. *Acta Orthopaedica Belgica*; 78(1):68-74. **IF: 0.629**
- 05 Vera P., Zapata L., Gich I., Mancebo J., Betbese A.J. Hemodynamic and antipyretic effects of paracetamol, metamizol and dexametopofen in critical patients [Efectos hemodinámicos y antipiréticos del paracetamol, metamizol y dexametopofeno en pacientes críticos]. *Medicina Intensiva*; 36(9):619-625. **IF: 1.323**
- 06 Bonet Beltran M., Allal A.S., Gich I., Sole J.M., Carrio I. Is adjuvant radiotherapy needed after curative resection of extrahepatic biliary tract cancers? A systematic review with a meta-analysis of observational studies. *Cancer Treatment Reviews*; 38(2):111-119. **IF: 6.024**
- 07 Calvo R., Martinez-Zapata M.J., Urrutia G., Gich I., Jordan M., Del Arco A., Aguilera F.J., Celaya F., Sarasquete J., Majo J., Bonfill X. Low- vs. high-pressure suction drainage after total knee arthroplasty: A double-blind randomized controlled trial. *Journal of Advanced Nursing*; 68(4):758-766. **IF: 1.527**
- 08 Balsells M., Garcia-Patterson A., Gich I., Corcoy R. Major congenital malformations in women with gestational diabetes mellitus: A systematic review and meta-analysis. *Diabetes/Metabolism Research and Reviews*; 28(3):252-257. **IF: 2.968**
- 09 Dos Santos R.G., Grasa E., Valle M., Ballester M.R., Bouso J.C., Nomdedeu J.F., Homs R., Barbanj M.J., Riba J. Pharmacology of ayahuasca administered in two repeated doses. *Psychopharmacology*; 219(4):1039-1053. **IF: 4.061**
- 10 Estevez J.A., Molto J., Tuneu L., Cedeno S., Antonijoan R.M., Mangues M.A., Clotet B., Domingo P., Punes M., Barbanj M.J., Valle M. Ritonavir boosting dose reduction from 100 to 50 mg does not change the atazanavir steady-state exposure in healthy volunteers. *Journal of Antimicrobial Chemotherapy*; 67(8):2013-2019. **IF: 5.338**

- 11 Poca M., Concepcion M., Casas M., Alvarez-Urturi C., Gordillo J., Hernandez-Gea V., Roman E., Guarner-Argente C., Gich I., Soriano G., Guarner C. Role of Albumin Treatment in Patients With Spontaneous Bacterial Peritonitis. *Clinical Gastroenterology and Hepatology*; 10(3):309-315. **IF: 6.648**
- 12 Garin N., De Pourcq J.T., Cardona D., Martin-Venegas R., Gich I., Cardenete J., Mangues M.A. Viscosity changes in thickened water due to the addition of highly rescribbed drugs in geriatrics [Cambios en la viscosidad del agua con espesantes por la adición de fármacos altamente prescritos en geriatría]. *Nutrition Hospitalaria*; 27(4):1298-1303. **IF: 1.305**
- 13 Bouso J.C., Gonzalez D., Fondevila S., Cutchet M., Fernandez X., Ribeiro Barbosa P.C., Alcazar-Corcoles M.A., Araujo W.S., Barbanj M.J., Fabregas J.M., Riba J. Personality, psychopathology, life attitudes and neuropsychological performance among ritual users of ayahuasca: A longitudinal study. *PLoS ONE*; 7(8). **IF: 3.73**
- 14 Caudevilla-Galligo F., Riba J., Ventura M., Gonzalez D., Farre M., Barbanj M.J., Bouso J.C. 4-Bromo-2,5-dimethoxyphenethylamine (2C-B): Presence in the recreational drug market in Spain, pattern of use and subjective effects. *Journal of Psychopharmacology*; 26(7):1026-1035. **IF: 3.374**

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Pérez De Los Cobos J, Valderrama JC, Valero S, Sánchez N, Gich I, Trujols J. A survey about the satisfaction of heroin-dependent patients from valencia region (spain) with methadone treatment centres. *Trastornos Adictivos* 2012;14(3):66-72.

Others

- Peñacoba P, Fortuna A, Giménez S, Mayos M. Paciente de 33 años con excesiva somnolencia diurna. *Vigilia-sueño* 2012;24(2).

Clinical Psychiatry

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Main Lines of Research

- ▶ Psychotic disorders (first episodes).
- ▶ Affective disorders (major depression).
- ▶ Borderline personality disorder.
- ▶ Mental health therapy.

Challenges

- ▶ Foster research that reduces the healthcare, social and personal costs of mental illness by exploring areas such as epidemiology, etiopathogenesis, physiopathology, prevention and treatment.
- ▶ Foster research into mental health therapies.
- ▶ Foster research to improve quality of life of patients with mental disorders.

Research into psychotic disorders:

- ▶ Neuroimaging studies in early psychotic episodes.
- ▶ Study of environmental, biological and genetic factors in psychosis.
- ▶ Efficacy and effectiveness studies of anti-psychotic drugs.
- ▶ Efficacy and effectiveness study of psychotherapy for hallucinations.

Research into affective disorders:

- ▶ Identification and evaluation of new therapeutic targets in depression.
- ▶ Neuroimaging studies in early psychotic episodes.
- ▶ Biological and genetic markers in affective disorders.
- ▶ Implementation of new therapeutic programmes, depression evaluation and social aspects of depression.

Research into personality disorders:

- ▶ Clinical trials regarding the usefulness of mixed treatment in patients with borderline personality disorder (BPD) and validation of diagnostic instruments.
- ▶ Genetic-neuroimaging studies of borderline personality disorder.
- ▶ Efficacy and effectiveness studies of psychotherapy for treating BPD.

Mental health therapy research:

- ▶ Efficacy and treatment resistance.
- ▶ Systematic reviews.
- ▶ Validation of diagnostic and assessment scales.

Active Grants

- ▶ Álvarez E. Grants to support research groups. Clinical Psychiatry Group. AGAUR Grant. September 2009-December 2013.
- ▶ Pascual J. Study of genetic sensitivity to the environment in patients with borderline personality disorder: case-control study of gene-environment interaction. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- ▶ Pérez V. Deep brain stimulation: functional neuroimaging studies, optimization of stimulation parameters and new indications in affective disorders. FIS Grant. Carlos III Health Institute. January 2010-June 2013.
- ▶ Portella M. Study of structural and functional brain changes after deep brain stimulation of treatment resistant depression: Biomarkers of deep brain stimulation antidepressant effects and optimization of parameters. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- ▶ Corripio I. Clinical and neurobiological determinants of second-episode schizophrenia. Longitudinal study of first psychotic episodes. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Corripio I. Expression of glycine transporter type 1 in patients diagnosed with schizophrenia: a study with [11C] GSK931145 PET. La Marató de TV3 Foundation. March 2010-March 2013.
- ▶ Corripio I. Genotype-phenotype interaction with the environment. Application to a predictive model in first psychotic episodes. FIS Grant. Carlos III Health Institute. January 2009-December 2012.
- ▶ Pérez V. PREDI-NU: Preventing depression and improving awareness through networking in the EU. European Union Grant. September 2011-August 2014.
- ▶ Pérez V. Immediate-release methylphenidate for symptomatic improvement of acute mania. Spanish Ministry of Health, Social Services and Equality Grant. January 2011-December 2013.

CIBERSAM Grants

- ▶ Alvarez E. Spanish validation of films to induce emotions. CIBERSAM, Instruments Bank. 2011-2012.
- ▶ Pérez V. Factor structure, reliability, convergent validity, discriminatory power and sensitivity to change of the Spanish version of the Remission from Depression Questionnaire (RDQ). CIBERSAM, Instruments Bank. 2011-2013.
- ▶ Portella M. Neurotoxicity of depressive illness. Longitudinal study of neuroimaging, neurocognitive and biological markers. FIS Grant. Carlos III Health Institute. 2011-2013.
- ▶ Soler J. Psychometric properties of the Spanish version of the Clinically Useful Depression Outcome Scale (CUDOS). CIBERSAM, Instruments Bank. 2010-2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Addictive Behaviours.
- ▶ Neuroradiology.
- ▶ Pituitary Gland Disorders.

Clinical Psychiatry

*TIF: 70.877 **MIF: 3.375

- ISI Web of Knowledge Indexed Publications with an IF**
- Soler J., Valdeperez A., Feliu-Soler A., Pascual J.C., Portella M.J., Martin-Blanco A., Alvarez E., Perez V. Effects of the dialectical behavioral therapy-mindfulness module on attention in patients with borderline personality disorder. *Behaviour Research and Therapy*; 50(2):150-157. **IF: 3.471**
 - Scorza M., Llado-Pelfort L., Oller S., Cortes R., Puigdemont D., Portella M.J., Perez-Egea R., Alvarez E., Celada P., Perez V., Artigas F. Preclinical and clinical characterization of the selective 5-HT 1A receptor antagonist DU-125530 for antidepressant treatment. *British Journal of Pharmacology*; 167(5):1021-1034. **IF: 5.067**
 - Novick D., Haro J.M., Hong J., Brugnoli R., Lepine J.P., Bertsch J., Karagianis J., Dossenbach M., Alvarez E. Regional differences in treatment response and three year course of schizophrenia across the world. *Journal of Psychiatric Research*; 46(7):856-864. **IF: 4.066**
 - Vieta A., Badia X., Alvarez E., Sacristan J.A. Which Nontraditional Outcomes Should Be Measured in Healthcare Decision-Making in Schizophrenia? A Systematic Review. *Perspectives in Psychiatric Care*; 48(4):198-207. **IF: 1.038**
 - Dos Santos R.G., Grasa E., Valle M., Ballesster M.R., Bouso J.C., Nomdedeu J.F., Homs R., Barbanoj M.J., Riba J. Pharmacology of ayahuasca administered in two repeated doses. *Psychopharmacology*; 219(4):1039-1053. **IF: 4.061**
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Scientific Production

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- Psiquiatria y Salud Mental**; 5(1):8-23. **IF: 0.667**
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Scientific Production

ISI Web of Knowledge Indexed Publications without an IF

- De Salas-Cansado M, Olivares JM, Álvarez E, Carrasco JL, Barrieta A, Rejas J. Pregabalin versus SSRIs and SNRIs in benzodiazepine-refractory outpatients with generalized anxiety disorder: A post hoc cost-effectiveness analysis in usual medical practice in Spain. *ClinicoEconomics and Outcomes Research* 2012;4(1):157-68.
- Álvarez E, Carrasco JL, Olivares JM, López-Gómez V, Vilardaga I, Perez M. Broadening of generalized anxiety disorders definition does not affect the response to psychiatric care: Findings from the observational ADAN study. *Clinical Practice and Epidemiology in Mental Health* 2012;8:158-68.
- Alvarez E, Bernardo M, Casares JRG, Montejó AL. Ziprasidone versus olanzapine in the weight gain associated with the treatment of schizophrenia: A six-month double-blind randomized parallel group study. *European Journal of Psychiatry* 2012;26(4):248-59.

Other Publications

Scopus Indexed Publications

- Farré A, Arranz MJ, Pérez Blanco J, Catalán R, Pérez V. Pharmacogenetics of antipsychotic adverse effects in patients with schizophrenia. *Psiquiatria Biologica* 2012;19(SUPPL.1):15-20.
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Genetics in Neurodegenerative Diseases

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Maite Sampedro URV



Main Lines of Research

- ▶ Study of genetic risk factors related to neurodegenerative disorders.
- ▶ Cloning and evaluation of novel genes associated with neurodegenerative disorders.

Challenges

Genetic architecture of complex diseases caused by neurodegenerative processes:

- ▶ Research into familial aggregation for specific diseases to determine genetic links and clone new genes.
- ▶ Genetic association studies to establish genetic and genomic risk factors for different diseases.
- ▶ Study of the prevalence of genetic mutations in the Spanish population.
- ▶ Expand of the genetic library already consisting of over 1,500 DNA samples.
- ▶ Continue to expand the DNA bank to achieve a numerous, well-characterized, homogenous sample of patients and their relatives. This will provide invaluable potential for high-level genetic research into diseases of this nature.

Active Grants

- ▶ Clarimon J. Genetics of alpha-synucleinopathies: the continuum approach to Parkinson disease-Parkinson disease with dementia-dementia with Lewy bodies. FIS Grant. Carlos III Health Institute. January 2010-December 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Neurobiology of Dementia.
- ▶ Parkinson Disease and Movement Disorders.
- ▶ Neuromuscular Diseases.

External Collaborations

- ▶ Dr. John Hardy. Institute of Neurology, University College London, UK.
- ▶ Dr. Ekaterina Rogaeva. Tanz Centre for Research in Neurodegenerative Diseases, Toronto, Canada.
- ▶ Dr. Coro Paisán-Ruiz. Mount Sinai School of Medicine, New York, USA.
- ▶ Dr. Liana Fidani. Medical School, Aristotle University of Thessaloniki, Greece.

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Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Kalinderi K., Bostantjopoulou S., Katsarou Z., Clarimon J., Fidani L. Lack of association of the PICALM rs3851179 polymorphism with Parkinson's disease in the Greek population. *International Journal of Neuroscience*; 122(10):602-605. **IF: 1.216**
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- 03 Seto-Salvia N., Pagonabarraga J., Houlden H., Pascual-Sedano B., Dols-Icardo O., Tucci A., Paisan-Ruiz C., Campolongo A., Anton-Aguirre S., Martin I., Munoz L., Buñill E., Vilageliu L., Grinberg D., Cozar M., Blesa R., Lleo A., Hardy J., Kulisevsky J., Clarimon J. Glucocerebrosidase mutations confer a greater risk of dementia during Parkinson's disease course. *Movement Disorders*; 27(3):393-399. **IF: 4.558**
- 04 Dols-Icardo O., Suarez-Calvet M., Hernandez I., Amer G., Anton-Aguirre S., Alcolea D., Fortea J., Boada M., Tarraga L., Blesa R., Lleo A., Clarimon J. Expansion mutation in C9ORF72 does not influence plasma progranulin levels in frontotemporal dementia. *Neurobiology of aging*; 33(8):1851.e17-19. **IF: 6.166**
- 05 Calero O., Bullido M.J., Clarimon J., Frank-Garcia A., Martinez-Martin P., Lleo A., Rey M.J., Sastre I., Rabano A., de Pedro-Cuesta J., Ferrer I., Calero M. A Common BACE1 Polymorphism Is a Risk Factor for Sporadic Creutzfeldt-Jakob Disease. *PLoS ONE*; 7(8):- . **IF: 3.73**
- 06 Calero O., Bullido M.J., Clarimon J., Horiguela R., Frank-Garcia A., Martinez-Martin P., Lleo A., Rey M.J., Sastre I., Rabano A., De Pedro-Cuesta J., Ferrer I., Calero M. Genetic variability of the gene cluster CALHM1-3 in sporadic Creutzfeldt-Jakob disease. *Prion*; 6(4):407-412. **IF: 2.133**
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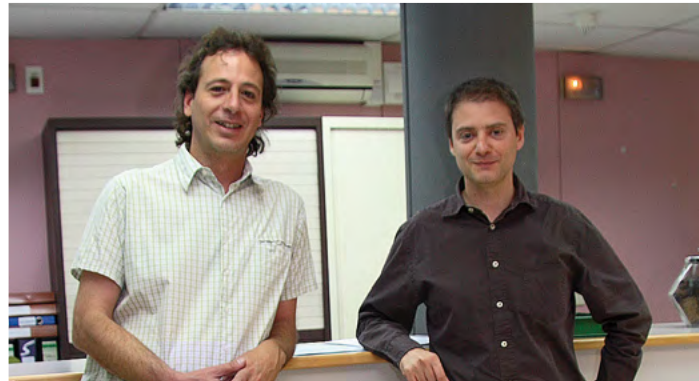
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Human Experimental Neuropsychopharmacology

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Main Lines of Research

General neuropsychopharmacology:

- Pharmacological modulation of the different neurotransmission systems so as to study the role of these systems in advanced cognitive functions (executive control) and emotion.

Neuropsychopharmacology of abused substances:

- Study of the effects on the central nervous system of psychodysleptic drugs such as ayahuasca, salvinorin A, dimethyltryptamine and THC.
- Assessment of the impact of long-term drug use on brain function (fMRI) and structure (VBM, DTI).

Challenges

- Consolidate existing research lines and extend them through possible cooperation agreements with other groups and according to the growth of the group itself.
- Obtain emerging-group recognition for the group.
- Obtain stable funding for the group and support in terms of technical staff.
- Communicate our activities.
- Maintain existing external cooperation agreements.
- Establish new cooperation agreements within the HSCSP Research Institute.

Active Grants

- Riba J. Functional magnetic resonance evaluation of reward processing and executive functions in cocaine-dependent subjects. FIS Grant. Carlos III Health Institute. January 2008-June 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Pharmacokinetic/Pharmacodynamic Modelling and Simulation.
- Parkinson Disease and Movement Disorders.
- Clinical Psychiatry.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Alonso J.F., Mananas M.A., Romero S., Rojas-Martinez M., Riba J. Cross-conditional entropy and coherence analysis of pharmaco-EEG changes induced by alprazolam. *Psychopharmacology*; 221(3):397-406. **IF: 4.061**
- 02 Dos Santos R.G., Grasa E., Valle M., Bal-lester M.R., Bouso J.C., Nomdedeu J.F., Homs R., Barbanoj M.J., Riba J. Pharmacology of ayahuasca administered in two repeated doses. *Psychopharmacology*; 219(4):1039-1053. **IF: 4.061**
- 03 McIlhenny E.H., Riba J., Barbanoj M.J., Strassman R., Barker S.A. Methodology

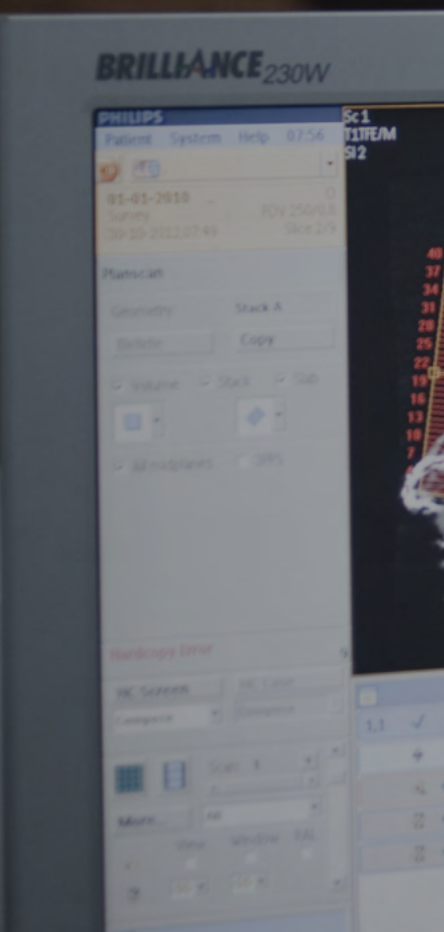
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- 04 Caudevilla-Galligo F., Riba J., Ventura M., Gonzalez D., Farre M., Barbanoj M.J., Bouso J.C. 4-Bromo-2,5-dimethoxyphenethylamine (2C-B): Presence in the recreational drug market in Spain, pattern of use and subjective effects. *Journal of Psychopharmacology*; 26(7):1026-1035. **IF: 3.374**
- 05 Bouso J.C., Gonzalez D., Fondevila S., Cutchet M., Fernandez X., Ribeiro Barbosa P.C., Alcazar-Corcoles M.A., Araujo W.S., Barbanoj M.J., Fabregas J.M., Riba J. Personality, psychopathology,

life attitudes and neuropsychological performance among ritual users of ayahuasca: A longitudinal study. *PLoS ONE*; 7(8):- **IF: 3.73**

- 06 Riba J., McIlhenny E.H., Valle M., Bouso J.C., Barker S.A. Metabolism and disposition of N,N-dimethyltryptamine and harmala alkaloids after oral administration of ayahuasca. Drug testing and analysis; 4(41493):610-616. **IF: 3.167**



Neurobiology of Dementia

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Sofia Antón HSCSP RI
Laia Muñoz HSCSP RI



Main Lines of Research

Identification of new biochemical markers in cerebrospinal fluid (CSF) in Alzheimer disease and other neurodegenerative dementias:

- CSF biomarkers in Alzheimer disease and frontotemporal dementia.
- Amyloid imaging in neurodegenerative de-

mentias.

- Novel MRI markers in preclinical Alzheimer disease.

- Integral molecular characterization of the gamma-secretase complex in Alzheimer disease.
- Imaging and CSF biomarkers in Lewy body disease.
- Role of progranulin and TDP-43 in frontotemporal dementia.

Challenges

- Maintain and increase scientific production and funding in the next 5 years.
- Develop a training plan for researchers entering the group while maintaining its translational nature.
- Establish new cooperation agreements

that support applications for European and international projects.

- Establish links with technological innovation groups and companies to foster patent applications and set up contracts.

Active Grants

- Blesa R. Cerebral amyloid deposits in Alzheimer disease: role of genetic risk factors and genes involved in neuroplasticity and synaptogenesis. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Lleó A. Gamma-secretase complex: effect of genetic mutations and role as a therapeutic target in Alzheimer disease. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Fortea J. Multimodal studies of cerebrospinal fluid and MRI in preclinical Alzheimer

disease. FIS Grant. Carlos III Health Institute. January 2012-December 2014.

- Lleó A. Multicentre study of CSF biomarkers and neuroimaging in the continuum of preclinical and prodromal Alzheimer disease (SIGNAL study). CIBERNED Grant. October 2011-September 2013.

- Lleó A. Biomarkers for Alzheimer disease and Parkinson disease (BIOMARKAPD). FIS Grant. Carlos III Health Institute. January 2012-December 2014.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Genetics in Neurodegenerative Diseases.
- Neuroradiology.
- Molecular Physiology of the Synapse.

External Collaborations

- Martin Ingelsson. Uppsala University, Sweden.
- Pieter J. Visser. Amsterdam, Netherlands.
- Tiago F. Outeiro. University of Gottingen, Germany.
- Jordi Magrané. Cornell University, New York, USA.

Awards

- Fortea J. I Neuron BioPharma Award.
- Fortea J. Best doctoral thesis award. University of Barcelona, Spain.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Costa A., Calabria M., Marne P., Hernandez M., Juncadella M., Gascon-Bayarri J., Lleó A., Ortiz-Gil J., Ugas L., Blesa R., Rene R. On the parallel deterioration of lexico-semantic processes in the bilinguals' two languages: Evidence from Alzheimer's disease. *Neuropsychologia*; 50(5):740-753. **IF: 3.477**
- Dols-Icardo O., Suarez-Calvet M., Hernandez I., Amer G., Anton-Aguirre S., Alcolea D., Fortea J., Boada M., Tarraga L., Blesa R., Lleó A., Clarimon J. Expansion mutation in C9ORF72 does not influence plasma progranulin levels in frontotemporal dementia. *Neurobiology of aging*; 33(8):1851.e17-19. **IF: 6.166**
- Martinez-Ramirez S., Delgado-Mederos R., Marin R., Suarez-Calvet M., Sainz M.P., Alejandre A., Vidal-Jordana A., Marti-Vilalta J.L., Marti-Fabregas J. Statin pretreatment may increase the risk of symptomatic intracranial haemorrhage in thrombolysis for ischemic stroke: Results from a case-control study and a meta-analysis. *Journal of Neurology*; 259(1):111-118. **IF: 3.578**
- Seto-Salvia N., Pagonabarraga J., Houlden H., Pascual-Sedano B., Dols-Icardo O., Tucci A., Paisan-Ruiz C., Campolongo A., Anton-Aguirre S., Martin I., Munoz L., Bufill E., Vilageliu L., Grinberg D., Cozar M., Blesa R., Lleó A., Hardy J., Kulisevsky J., Clarimon J. Glucocerebrosidase mutations confer a greater risk of dementia during Parkinson's disease course. *Movement Disorders*; 27(3):393-399. **IF: 4.558**
- Rami L., Sole-Padulles C., Fortea J., Bosch B., Llado A., Antonell A., Olives J., Castellvi M., Bartres-Faz D., Sanchez-Valle R., Molinuevo J.L. Applying the new research diagnostic criteria: MRI findings and neuro-psychological correlations of prodromal AD. *International Journal of Geriatric Psychiatry*; 27(2):127-134. **IF: 2.977**
- Sala I., Marquie M., Sanchez-Saudinos Ma.B., Sanchez-Valle R., Alcolea D., Gomez-Anson B., Gomez-Isla T., Blesa R., Lleó A. Rapidly progressive dementia: Experience in a tertiary care medical center. *Alzheimer Disease and Associated Disorders*; 26(3):267-271. **IF: 2.728**
- De Calignon A., Polydoro M., Suarez-Calvet M., William C., Adamowicz D., Kopeikina K., Pitstick R., Sahara N., Ashe K., Carlson G., Spires-Jones T., Hyman B. Propagation of Tau Pathology in a Model of Early Alzheimer's Disease. *Neuron*; 73(4):685-697. **IF: 15.766**
- Quintana M., Guradia J., Sanchez-Benavides G., Aguilar M., Molinuevo J.L., Robles A., Barquero M.S., Antunez C., Martinez-Parra C., Frank-Garcia A., Fernandez M., Blesa R., Pena-Casanova J. Using artificial neural networks in clinical neuropsychology: High performance in mild cognitive impairment and Alzheimer's disease. *Journal of Clinical and Experimental Neuropsychology*; 34(2):195-208. **IF: 1.862**
- Rami L., Sala-Llloch R., Sole-Padulles C., Fortea J., Olives J., Llado A., Pea-Gomez C., Balasa M., Bosch B., Antonell A., Sanchez-Valle R., Bartres-Faz D., Molinuevo J.L. Distinct functional activity of the precuneus and posterior cingulate cortex during encoding in the preclinical stage of Alzheimer's disease. *Journal of Alzheimer's Disease*; 31(3):517-526. **IF: 4.174**
- Scheltens P., Twisk J.W.R., Blesa R., Scarpini E., Von Arnim C.A.F., Bongers A., Harrison J., Swinkels S.H.N., Stam C.J., De Waal H., Wurtman R.J., Wieggers R.L., Vellas B., Kamphuis P.J.G.H. Efficacy of suvenavid in mild Alzheimer's disease: Results from a ran-

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- Molinuevo J.L., Sanchez-Valle R., Llado A., Fortea J., Bartres-Faz D., Rami L. Identifying earlier Alzheimer's disease: Insights from the preclinical and prodromal phases. *Neurodegenerative Diseases*; 10(41365):158-160. **IF: 3.41**

- Guix F.X., Wahle T., Vennekens K., Snellinx A., Chavez-Gutierrez L., Ill-Raga G., Ramos-Fernandez E., Guardia-Laguarta C., Lleó A., Arimon M., Berezovska O., Munoz F.J., Dotti C.G., De Strooper B. Modification of γ -secretase by nitrosative stress links neuronal ageing to sporadic Alzheimer's disease. *EMBO Molecular Medicine*; 4(7):660-673. **IF: 7.795**

- Portelius E., Fortea J., Molinuevo J.L., Gustavsson M.K., Andreasson U., Sanchez-Valle R. The amyloid- β isoform pattern in cerebrospinal fluid in familial PSEN1 M139T- and L286P-associated Alzheimer's disease. *Molecular Medicine Reports*; 5(4):1111-1115. **IF: 1.17**

- Calero O., Bullido M.J., Clarimon J., Frank-Garcia A., Martinez-Martin P., Lleó A., Rey M.J., Sastre I., Rabano A., de Pedro-Cuesta J., Ferrer I., Calero M. A Common BACE1 Polymorphism Is a Risk Factor for Sporadic Creutzfeldt-Jakob Disease. *PLoS ONE*; 7(8). **IF: 3.73**

- Calero O., Bullido M.J., Clarimon J., Horiguela R., Frank-Garcia A., Martinez-Martin P., Lleó A., Rey M.J., Sastre I., Rabano A., De Pedro-Cuesta J., Ferrer I., Calero M. Genetic variability of the gene cluster CALHM1-3 in sporadic Creutzfeldt-Jakob disease. *Prión*; 6(4):407-412. **IF: 2.133**

Letter

- Vilas D, Marti MJ, Botta-Orfila T, Colom-Cadena M, Gelpi E. Pick's pathology in Parkinson's disease with dementia. *Neuropathol Appl Neurobiol* 2012;38(7):737-43.

Others

- Fortea J, Santos M, Lleó A. Deterioro cognitivo vascular. In: *Enfermedades vasculares cerebrales*. Ediciones Mayo (2012).

Neuroradiology

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Gonzalo Sánchez-Benavides IMIM
Maria Serra PIC-UAB



Main Lines of Research

- Ours is a multidisciplinary research group, which has the added value of combining neuroimaging skills of the members of the neuroradiology clinical unit at HSPSC with technological knowledge from PIC/ IFAE investigators at the Autonomous University of Barcelona (Spain).
- Our main focus is the search for neuroimaging biomarkers in diseases involving the central nervous system, including neurodegenerative and neuropsychiatric conditions.
- A secondary focus is the implementation of automatic procedures and software tools to improve neuroradiological practice.

Challenges

- Achieve visibility for our research group and for neuroradiology -often considered by clinicians more a technical tool rather than a discipline in itself- as a defined field of knowledge.

Active Grants

- De Juan M. Presenile dementia characterization using high-field MRI (3T) (structural and diffusion-tensor imaging). SERAM Grant. November 2009-October 2012.
- Gómez Ansón B. Predicting response to cognitive behaviour therapy in schizophrenic patients with persistent auditory hallucination using fMRI. La Marató de TV3 Foundation. May 2010-May 2013.
- Gómez Ansón B. Creation of an integrated digital atlas of human brain connectivity using MRI. María Angustias Giménez Foundation for Research and Teaching.
- De Juan M. Correspondence between structural and functional changes in patients with schizophrenia studied using MRI. FIS Grant. January 2009-December 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Pituitary Gland Disorders.
- Clinical Psychiatry.
- Digestive Diseases.
- Parkinson Disease and Movement Disorders.
- Cerebrovascular Diseases.

External Collaborations

- PIC (Information Science Port)/IFAE (Institute for High Energy Physics), Autonomous University of Barcelona, Barcelona, Spain.
- COST-Action in ASL (European project), National Hospital for Neurology and Neurosurgery, London, UK.

Awards

- Corcuera I. Radiological Society of North America Trainee Award. Corcuera I, Pagonabarraga J, Vives-Gilabert Y, Gómez-Ansón B. MRI detection of selective cortical thinning and neuropsychological correlations: a comparison from normal cognition to dementia in Parkinson disease.
- Gómez-Ansón B, De Juan M, Granell E. Cum Laude. European Congress of Radiology 2012. MR findings in Creutzfeldt-Jakob disease.

*TIF: 23.720 **MIF: 3.388

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Esteller E, Leon X, De Juan M, Quer M. Delayed carotid blow-out syndrome: A new complication of chemoradiotherapy treatment in pharyngolaryngeal carcinoma. *Journal of Laryngology and Otology*; 126(11):1189-1191. **IF: 0.681**
- 02 Sala I, Marquie M, Sanchez-Saudinos Ma.B., Sanchez-Valle R, Alcolea D, Gomez-Anson B, Gomez-Isla T, Blesa R, Lleo A. Rapidly progressive dementia: Experience in a tertiary care medical center. *Alzheimer Disease and Associated Disorders*; 26(3):267-271. **IF: 2.728**
- 03 Alonso-Solis A, Corripio I, de Castro-Manglano P, Duran-Sindreu S, Garcia-Garcia M, Proal E, Nunez-Marin F, Soutullo C, Alvarez E, Gomez-Anson B, Kelly C, Castellanos FX. Altered default network resting state functional connectivity in patients with a first episode of psychosis. *Schizophrenia Research*; 139(41334):13-18. **IF: 4.59**
- 04 Puigdemont D, Perez-Egea R, Portella M.J., Molet J, De Diego-Adelino J, Gironell A, Radua J, Gomez-Anson B, Rodriguez R, Serra M, De Quintana C, Artigas F, Alvarez E, Perez V. Deep brain stimulation of the subcallosal cingulate gyrus: Further evidence in treatment-resistant major depression. *International Journal of Neuropsychopharmacology*; 15(1):121-133. **IF: 5.641**
- 05 Resmini E, Santos A, Gomez-Anson B, Vives Y, Pires P, Crespo I, Portella M.J., De Juan-Delago M, Barahona M.J., Webb S.M. Verbal and visual memory performance and hippocampal volumes, measured by 3-tesla magnetic resonance imaging, in patients with Cushing's syndrome. *Journal of Clinical Endocrinology and Metabolism*; 97(2):663-671. **IF: 6.43**
- 06 Achury C, Camacho V, Fernandez A, Gomez-Anson B, Jaller R, Carrio I. Findings in the Gerstmann-Sträussler-Scheinker syndrome in an 18F-FDG PET-CT study [Hallazgos en el síndrome de Gerstmann-Sträussler-Scheinker en un estudio de PET-TC con 18F-FDG]. *Revista Espanola de Medicina Nuclear e Imagen Molecular*; 31(6):352-353. **IF: 0.863**
- 07 Javier Pagonabarraga, Beatriz Gómez-Ansón, Ramon Rotger, Gisela Llebaria, Carmen García-Sánchez, Berta Pascual-Sedano, Alexandre Gironell, Manuel Delfino, Jaume Rusalleda, Jaime Kulisevsky. Spectroscopic Changes Associated with Mild Cognitive Impairment and Dementia in Parkinson's Disease. *Dementia and Geriatric Cognitive Disorders*. 34(5-6):312-318. **IF: 2.787**

Ageing Institute

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Main Lines of Research

- Health research into ageing:
 - Healthy ageing: physical activity, nutrition and cognition.
 - Frequent health problems among older adults: falls, frailty and sarcopenia, functional loss, Alzheimer and other dementias, malnutrition and other geriatric syndromes.
 - Epidemiological studies.
- Health and social services research.
 - Research into caregivers of older adults.
 - Promotion of active ageing among older people.
 - ICT applications to health and social services and active ageing.

Challenges

- Health research area:**
- Area mainly focused on health promotion and disability prevention to improve quality of life among older people.
 - Clinical and epidemiological research undertaken includes both observational and intervention studies, with the main lines of research referring to mobility, nutrition and cognition.
- Health and social services research:**
- Social care and healthcare as key for the maintenance of autonomy, with a focus on the following topics:
 - Models of social and health care.
 - The organization of health and social services.
 - Comprehensive needs assessment.
 - Quality of care.
 - Good caregiving practices.
 - Assessment of dependence.
 - Home care services.
 - Analysis of economic costs.
- Research into ICT applications to health, social services and active ageing:**
- ICTs are capable of offering new resources that are useful and easy to use for the elderly, their families, caregivers and professionals. The group works with technology companies to develop systems aimed at monitoring health, facilitating participation and ensuring safety.
 - Interest in this area mainly focuses on the following topics:
 - Social appropriation of ICTs.
 - E-Health development.
 - Development of new technological products to promote active aging.

Collaborations

- Collaborations with other IIB Sant Pau Groups**
- Primary Care Research.
 - Evaluation of Public Health Policies and Programmes.

Active Grants

- Salvà A. Prevention of Falls Network for Dissemination (PRO-FOUND). European Union. 2012-2015.
- Salvà A. Frailty screening in the elderly according to cognitive status (FRAPEM). FIS Grant. Carlos III Health Institute. 2012-2014.
- Salvà A. Prevalence of sarcopenia among the elderly (ELLI). Spanish Geriatrics and Gerontology Society. 2012-2013.
- Salvà A. Randomized clinical trial to evaluate the efficacy of memory training workshops in elderly people aged 65 to 80. FIS Grant. Carlos III Health Institute. 2012-2013
- Salvà A. Active ageing, citizenship and participation. CSIC Foundation. 2012-2014.
- Salvà A. Study measuring the risk of falls and aimed at interventions in residences (EMERCOI-R). FIS Grant. Carlos III Health Institute. 2008-2012.
- Salvà A. Study of the prescription of enteral nutritional support in residences (PRESNER). Nestle. 2010-2012.
- Salvà A. Expert integrated teleassistance and telemedicine e-system for the prevention of dependency and the promotion of personal autonomy for elderly people at home. e-Health Platform for Healthy Ageing. Plan AVANZA. Spanish Ministry of Industry, Energy and Tourism. 2010-2012.
- Salvà A. Clinical leading environment for the assessment and validation of rehabilitation protocols for home care (CLEAR). European Union Grant. 2008-2012.
- Salvà A. Secure active aging: participation and health for the old (SAAPHO). European Union Grant. 2011-2014.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Vellas B., Hausner L., Frolich L., Cantet C., Gardette V., Reynish E., Gillette S., Aguera-Morales E., Auriacombe S., Boada M., Bullock R., Byrne J., Camus V., Cherubini A., Eriksdotter-Jonhagen M., Frisoni G.B., Hasselbalch S., Jones R.W., Martinez-Lage P., Rikkert M.O., Tsolaki M., Ousset P.-J., Pasquier F., Ribera-Casado J.M., Rigaud A.S., Robert P., Rodriguez G., Salmon E., Salva A., Scheltens P., Schneider A., Sinclair A., Spuru L., Touchon J., Zekry D., Winblad B., Andrieu S. Progression of Alzheimer disease in Europe: Data from the European ICTUS

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study. Current Alzheimer Research; 9(8):902-912.
IF: 3.676

- 02 Roque I Figuls M., Salva A., Bolibar I., Rivero T. Trends in self-perceived health and chronic disability in the elderly Spanish population: Evolution between years 1993 and 2006 [Tendencias en salud percibida y dependencia de la población mayor española: evolución entre los años 1993 y 2006]. Medicina Clinica; 139(7):284-289.
IF: 1.399

- 03 Salva A., Roque M., Rojano X., Inzitari M., Andrieu S., Schiffrin E.J., Guigoz Y., Vellas B. Falls and risk factors for falls in com-

munity-dwelling adults with dementia (NutriAlz Trial). Alzheimer Disease and Associated Disorders; 26(1):74-80.
IF: 2.728

Other Publications

- Salvà A. El Mini Nutritional Assessment. 20 años de desarrollo ayudando a la valoración nutricional. Revista Española de Geriatria y Gerontología 2012; 47(6):245-246.
- Salvà A, Coll L, Rojano X. La fragilitat en les persones grans. Aloma 2012;12(1):27-33.
- Salvà A. Los programas para enfermos crónicos: una nueva oportunidad para las personas mayores. Año Gerontológico 2012, Vol. 24.
- Wilson N, Salvà A. Uso seguro del medicamento en residencias. Año Gerontológico 2012, Vol. 24.

Addictive Behaviours

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Main Lines of Research

Alcohol:

- ▶ Study of the usefulness of the EMCA, IRISA and SPECT scales with IBZM as possible predictors of outcomes in alcohol-dependent patients during the first 12 weeks of recovery.
- ▶ Clinical study with escitalopram for treatment of depression and anxiety associated with alcoholism.
- ▶ Randomized, double-blind, parallel, placebo-controlled study on the efficacy of nalmefene in alcohol-dependent patients.

Cocaine:

- ▶ Evaluation of cocaine craving during hospitalization conditions.

Smoking:

- ▶ Multicentre, open, randomized clinical trial to measure the efficacy of proactive telephonic follow up as an aid to smoking cessation in comparison with in situ methods.
- ▶ Multicentre interventional project on smoking in psychiatric patients. Treatment of tobacco smoking with varenicline in psychiatric patients.

Opiates:

- ▶ Patient satisfaction concerning maintenance treatment with opioid agonists.
- ▶ Satisfaction of the heroin-dependent patient regarding methadone and methadone pharmacogenetics.

Challenges

- ▶ Establish bidirectional links between clinical practice and investigation both to suggest hypotheses and to incorporate recent advances.
- ▶ Participate in controlled clinical trials on the treatment of addictive disorders.
- ▶ Develop clinical research studies into the perspective of patients with addictions.
- ▶ Integrate clinical research in routine medical practice to assess the effectiveness of procedures.
- ▶ Evaluate the validity and reliability of frequently used clinical evaluation procedures.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Clinical Psychiatry.
- ▶ Genetics in Neurodegenerative Diseases.

Active Grants

- ▶ Pérez de los Cobos J. Case-control study to assess the association between heroin-dependent patient satisfaction with methadone maintenance treatment and methadone pharmacogenetics. FIS Grant. January 2010-December 2012.
- ▶ Pinet C. Phase 4, randomized, double-blind, active drug and placebo controlled, multicentre study to evaluate the safety and neuropsychiatric efficacy of twice daily 1 mg varenicline tartrate and twice daily 150 mg bupropion hydrochloride for 12 weeks to treat smoking addiction in subjects with and without a history of psychiatric disorders. Pfizer. 2012-2013.
- ▶ Trujols J. The perspective of patients with schizophrenia in the identification, prioritization and measurement of pragmatic outcome variables: meta-synthesis and systematic review of studies evaluating preferences. FIS Grant. January 2010-June 2012.

*TIF: 18.416 **MIF: 3.069

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Soler J., Valdeperez A., Feliu-Soler A., Pascual J.C., Portella M.J., Martin-Blanco A., Alvarez E., Perez V. Effects of the dialectical behavioral therapy-mindfulness module on attention in patients with borderline personality disorder. Behaviour Research and Therapy; 50(2):150-157. **IF: 3.471**
- 02 Trujols J., Iraurgi I., Sinol N., Portella M.J., Perez V., Perez De Los Cobos J. Satisfaction with methadone as a medication: Psychometric properties of the Spanish version of the treatment satisfaction questionnaire for medication. Journal of Clinical Psychopharmacology; 32(1):69-74. **IF: 3.513**
- 03 Trujols J., Garijo I., Sinol N., del Pozo J., Portella M.J., Perez de los Cobos J. Patient satisfaction with methadone maintenance treatment: The relevance of participation in treatment and social functioning. Drug and Alcohol Dependence; 123(1-3):41-47. **IF: 3.141**
- 04 Ballbe M., Nieva G., Mondon S., Pinet C., Bruguera E., Salto E., Fernandez E., Gual A. Smoke-free policies in psychiatric services: Identification of unmet needs. Tobacco Control; 21(6):549-554. **IF: 4.111**
- 05 Colom Farran J., Casas M., Perez de los Cobos J., del Rio M., Roncero C., Castells X., Valero S., Eiroa-Orosa F.J., Batlle F., Trujols J. Feasibility of Double-Blind Clinical Trials with Oral Diacetylmorphine: A Randomized Controlled Phase II Study in an Inpatient Setting.

European Addiction Research; 18(6):279-287.

IF: 2.356

- 06 Martinez C., Martinez-Sanchez J.M., Ballbe M., Nieva G., Fu M., Puig M., Carabasa E., Sanchez-Garcia J.M., Salto E., Fernandez E. (col. Pinet C.). Smoking cessation in hospital workers: Effectiveness of a coordinated program in 33 hospitals in catalonia (Spain). Cancer Nursing; 35(5):327-336. **IF: 1.824**

Other Publications

Scopus Indexed Publications

- ▶ Pérez De Los Cobos J, Valderrama JC, Valero S, Sánchez N, Gich I, Trujols J. A survey about the satisfaction of heroin-dependent patients from Valencia region (Spain) with methadone treatment centres. Trastornos Adictivos 2012;14(3):66-72.

AREA 5

Uronephrology and Experimental Surgery

164 General and Digestive Surgery

167 Neurosurgery

169 Nephrology

General and Digestive Surgery

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Main Lines of Research

Gastrointestinal surgery:

- ▶ Application of laparoscopic surgery in diseases of the spleen.
- ▶ Application of laparoscopic surgery in disorders of the oesophagogastric junction.
- ▶ Advanced application of colorectal laparoscopy.
- ▶ New stratification and treatment options in colorectal cancer.

Oncological and hepatobiliopancreatic surgery:

- ▶ Surgery for liver metastasis in colorectal cancer.
- ▶ Development of diagnostic and therapeutic techniques in the global context of treatment for liver metastasis in colorectal carcinoma.

- ▶ Surgery for primary hepatic tumours: determination of efficient prognostic parameters for surgical resection of hepatocarcinoma and likelihood of tumour recurrence after resection.

- ▶ Introduction of the laparoscopic methodology in biliary lithiasis.

- ▶ Surgery for sarcomas: participation in GIST research through GEIS (Spanish Sarcoma Research Group) and other entities.

- ▶ Surgery for sarcomas: participation in the development and results of surgery for retroperitoneal tumours.

Emergency care:

- ▶ Collaborative project on clinical safety for the introduction of safe practices in polytraumatized patients.

Active Grants

- ▶ Martínez C. Study of stress response following colon surgery comparing conventional treatment and the fast-track method in open and laparoscopic surgery. The fast-track preparation method reveals no advantage of laparoscopy. FIS Grant. January 2009-December 2012.

- ▶ Targarona E. Prediction of pathological features of the mesorectum after laparoscopic resection of low rectal cancer, based on preoperative pelvimetry and volume analysis after 3D reconstruction of the pelvis and its contents. FIS Grant. January 2010-December 2012.

- ▶ Targarona E. Design of a 3D model to evaluate 2 volumetric variables (sleeve diameter and antrum size) after sleeve gastrectomy and its influence on weight loss. European Project Union Grant. July 2012-June 2015.

- ▶ Trias M. Development of nanomedicines for substitute enzymatic replacement therapy in Fabry disease. La Marató de TV3 Foundation. March 2011-March 2014.

Challenges

Gastrointestinal surgery:

- ▶ Design, develop and manage a dry laboratory for endoscopic surgery, creating a multifunctional research and teaching space to conduct applied technological research in minimally invasive surgery.

Hepatobiliopancreatic surgery for cancer:

- ▶ Development of techniques to study liver volume and function.
- ▶ Development of experimental studies on the function and healing of bilio-intestinal sutures.
- ▶ Studies of the value of nutrition in patients undergoing aggressive surgery for highly debilitating cancer.
- ▶ Suitable stratification of GIST tumours in accordance with an anatomopathological classification.
- ▶ Viability of surgical interventions considering the likelihood of disease recurrence.

Emergency surgery:

- ▶ Consolidation of a multidisciplinary group for polytraumatized patient care.

Breast surgery:

- ▶ Technological innovations in surgery.
- ▶ Possible role of genetic studies in diagnosis and follow-up.

Endocrinal and cervical surgery:

- ▶ Technical innovations in surgery.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Buti M., Garcia-Samaniego J., Prieto M., Rodriguez M., Sanchez-Tapias J.M., Suarez E., Esteban R. Consensus document of the spanish association for the study of the liver on the treatment of Hepatitis B infection (2012) [Documento de consenso de la AEEH sobre el tratamiento de la infección por el virus de la hepatitis B (2012)]. Gastroenterología y Hepatología; 35(7):512-528.
IF: 0.567

- 02 Eikermann M., Siegel R., Broeders I., Dziri C., Fingerhut A., Gutt C., Jaschinski T., Nassar A., Paganini A.M., Pieper D., Targarona E., Schrewe M., Shamiyeh A., Strik M., Neugebauer E.A.M. Prevention and treatment of bile duct injuries during laparoscopic cholecystectomy: The clinical practice guidelines of the European Association for Endoscopic Surgery (EAES). Surgical Endoscopy and Other Interventional Techniques; 26(11):3003-3039.
IF: 3.427

- 03 Mocanu S.N., Rodriguez Blanco M., Palmer Sancho J., Artigas Raventos V. Hepatic subcapsular biloma secondary to laparoscopic cholecystectomy [Biloma subcapsular hepático secundario a colecistectomía laparoscópica]. Cirugia Espanola; 90(10).
IF: 0.871

- 04 Carrasquer A., Targarona E.M., Marinello F., Batlle X., Trias M. Laparoscopic fundoplication results in the treatment of the non-gastrointestinal symptoms of gastroesophageal reflux [Resultados de la funduplicatura laparoscópica en el tratamiento de los síntomas extradigestivos del reflujo gastroesofágico]. Cirugia Espanola; 90(4):238-242.
IF: 0.871

- 05 Targarona E.M. N.O.T.E.S. ¿What have learned? [N.O.T.E.S: ¿qué hemos aprendido?]. Cirugia Espanola; 90(1):1-3.
IF: 0.871

- 06 Abellan Lucas M., Balague Ponz C., Pallares Segura J.L., Carrasquer Puyal A., Hernandez Casanovas P., Martinez Sanchez M.C., Targarona Soler E., Trias Folch M. Postoperative morbidity and mortality factors after laparoscopic resection for colon cancer in octogenarians [Factores de morbimortalidad postoperatoria tras cirugía laparoscópica por cáncer de colon en pacientes octogenarios]. Cirugia Espanola; 90(9):589-594.
IF: 0.871

- 07 Prenafeta Claramunt N., Artigas Raventos V., Gomez Sebastian G., Martinez Tellez E., Belda Sanchis J. Prognostic factors of colorectal cancer lung metastases [Factores pronóstico de las metástasis pulmonares de cáncer colorrectal]. Cirugia Espanola;

90(3):169-175.
IF: 0.871

- 08 Moreno-Sanz C., Morandeira-Rivas A., Morales-Conde S., Targarona Soler E.M., Salvador-Sanchis J.L. Single incision laparoscopic surgery: Analysis of the national register [Cirugía laparoscópica a través de incisión única. Análisis del registro nacional]. Cirugia Espanola; 90(5):298-309.
IF: 0.871

- 09 Buti M., Morillas R.M., Prieto M., Diago M., Perez J., Sola R., Bonet L., Palau A., Testillano M., Garcia-Samaniego J., Rodriguez M. Efficacy and safety of entecavir in clinical practice in treatment-naive Caucasian chronic hepatitis B patients. European Journal of Gastroenterology and Hepatology; 24(5):535-542.
IF: 1.915

General and Digestive Surgery

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Martínez Carnovale L, Artigas Raventós V, Llagostera Pujol S, Dilmé Muñoz J, Bellmunt Montoya S, Escudero Rodríguez JR. Importance of prior or simultaneous aortoiliac surgery in the outcome of renal transplant. *Angiologia* 2012;64(3):115-8.

Letters

- ▶ Estalella L, Marinello F, González JA, Rodríguez M, Artigas V. Spontaneous drainage of a pancreatic pseudocyst into the colon. *Cirugía Española* 2012;90(9):602-3.
- ▶ Targarona EM, Morales Conde S, Salvador Sanchis JL. Technology, technophilia... or technophobia? *Cirugía Española* 2012;90(6):409-13.
- ▶ Fernández-Ananín S, Targarona EM, Balagué C, Martínez C, Hernández P, Trias M. Reply to: Doi:10.1007/s00464-010-1485-0: Evaluation of factors affecting the difficulty of laparoscopic anterior resection for rectal cancer: Narrow pelvis is not a contradiction. *Surgical Endoscopy and Other Interventional Techniques* 2012;26(9):2698-9.

Book Chapters

- ▶ Targarona EM. Isquemia intestinal (Vol 1, pp. 133-137). In: *Tratado de Medicina Interna*. Ed. Rozman C, Cardellach F, Elsevier Spain, 2012.
- ▶ Targarona EM, Balagué C, Trias M. Patología quirúrgica del bazo y esplenectomía (Ch. 32, pp. 427-439). In: *Gutierrez-Arrubarrena. Fisiopatología Quirúrgica del Aparato Digestivo. Manual Moderno, Mexico*, 2012.
- ▶ Targarona EM, Balagué C, Martínez C, Hernández P, Trias M. Ch. 6, pp. 95-108. In: *Targarona EM, Trias M. Cirugía laparoscópica de incisión única*. Marge Medica, 2012.

Others

- ▶ Prenafita N, Artigas V, Gomez G, Martinez E, Belda J. Surgery of pulmonary metastases: series of 85 patients. *Cell Dev Biol* 2012;1(5).

Neurosurgery

Coordinator

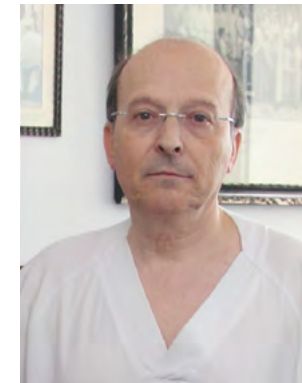
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Main Lines of Research

- ▶ Study of biomaterials.
- ▶ Tumour biology: gliomas, hypophysis adenomas.
- ▶ Anatomy of the skull base.
- ▶ Clinical evaluation of neurostimulation techniques in different neurological entities (treatment-resistant depression and neuropathic pain).

Challenges

- ▶ Monitor, jointly with the psychiatric department, the clinical trial on treatment for treatment-resistant depression using deep brain stimulation techniques.
- ▶ Evaluate neurostimulation for other disorders: cluster headache.

Cooperation with research into gliomas:

- ▶ Oncogenesis and Antitumour Group (GOA-HSCSP. PI: Dr. R. Mangués) in cooperation with the HSCSP Neurosurgery Department.
- ▶ Cooperation with the Cardiovascular Research Institute (managed by Drs. J. Blanco and N. Rubio) investigating the development of antitumour cell therapy strategies for the treatment of malignant gliomas.
- ▶ Cooperation with the endocrinology group regarding hypophyseal tumour biology.
- ▶ Cooperation with CREAL in a multicentre study on incidence of intracranial gliomas and use of mobile phones. European

Study ENV 2008. Risk of brain cancer from exposure to radiofrequency fields in childhood and adolescence.

- ▶ Anatomical studies to develop new surgical approaches to skull base tumours in cooperation with the University of Barcelona Hospital Clinic anatomy professor.

Cerebrovascular disease multicentre clinical trial project (jointly with the HSCSP Neurology Department):

- ▶ Clear III study of intraventricular fibrinolysis to treat cerebral intraventricular haemorrhaging.

Neurosurgery

*TIF: 14.396 **MIF: 2.879

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01

De Quintana-Schmidt C., Nieves M.V., Catala-Antunez I., Asencio-Cortes C., Roig A.J.B., Molet-Teixido J. Decompressive craniectomy treatment of hypertension intracranial meningoencephalitis acute [Craniectomía descompresiva como tratamiento de la hipertensión intracraneal en una meningoencefalitis aguda]. Revista de Neurologia; 54(5):317-318.
IF: 1.179
- 02

Montes-Graciano G., de Quintana-Schmidt C., Clavel-Laria P., Bartumeus-Jene F., Molet-Teixido J. Primary ewing sarcoma of cervical epidural guillermo montes-graciano [Sarcoma de ew-
- 03

Puigdemont D., Perez-Egea R., Portella M.J., Molet J., De Diego-Adelino J., Giromell A., Radua J., Gomez-Anson B., Rodriguez R., Serra M., De Quintana C., Artigas F., Alvarez E., Perez V. Deep brain stimulation of the subcallosal cingulate gyrus: Further evidence in treatment-resistant major depression. International Journal of Neuropsychopharmacology; 15(1):121-133.
IF: 5.641
- 04

Alieva M., Bago J.R., Aguilar E., Soler-Botija C., Vila O.F., Molet J., Gambhir S.S., Rubio N., Blanco J. Glioblastoma therapy with cytotoxic mesenchymal stromal cells optimized by bioluminescence imaging primario epidural cervical]. Revista de Neurologia; 54(3):187.
IF: 1.179
- 05

Aulinas A., Colom C., Ybarra J., Munoz F., Tresserras P., Resmini E., Webb S.M. Immediate and delayed postoperative morbidity in functional and non-functioning pituitary adenomas. Pituitary; 15(3):380-385.
IF: 2.667

Nephrology

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Elena Guillén	Puigvert Foundation
Lluís Guirado	Puigvert Foundation
Irene Silva	Puigvert Foundation
Roser Torra	Puigvert Foundation



Main Lines of Research

- Proteomics applied to nephrology and hypertension induced by anti-calcieneurin agents.
- Hereditary kidney diseases: genetic and clinical studies in disorders such as polycystic kidneys, Alport disorder, corticoid-resistant nephrotic syndrome.
- Fabry disease and treatment of angioliopomas with rapamycin.
- Glomerular disorders: molecular and clinical studies in disorders such as Sjögren syndrome, membranous glomerulopathy and vasculitis with renal involvement.
- Kidney transplant: cardiovascular risk factors, chronic nephropathy of renal graft, pharmacogenetic and genomic studies.
- Chronic kidney disease (CKD) and cardiovascular risk: early diagnosis, studies of genetic damage in patients with chronic renal insufficiency, epidemiological studies, clinical studies of chronic renal insufficiency, hyperparathyroidism, renal anaemia, renal osteodystrophy and haemodialysis techniques.
- Mechanisms of epythelial mesenchymal transition and renal fibrosis.

Challenges

- Maintain the level of national and international publications.
- Continue with both clinical and basic research in all previously described areas.
- Participate in the elaboration of clinical nephrology guidelines.
- Continue with active collection of research samples from CKD and transplant patients.

Active Grants

- Ars E. Biobanks Network. Carlos III Health Institute. January 2010-December 2012.
- Ballarín J. Consolidated Nephrology Research Group. AGAUR Grant. January 2010-December 2014.
- Ballarín J. RedinRen. Carlos III Health Institute. January 2007-December 2011.
- Díaz JM. Optimal immunosuppression in patients at high risk of de novo diabetes after kidney transplantation: a prospective, multicentre controlled trial. Carlos III Health Institute. January 2009-December 2011.
- Fernández-Llama P. Carlos III Health Institute. January 2011-December 2013.
- Torra R. Implication of genetic variants and podocyte damage in primary nephrotic syndrome. Carlos III Health Institute. January 2010-December 2012.
- Torra R. Clinical trial to evaluate the efficacy and safety of rapamycin in angiomyoliopomas in patients with tuberous sclerosis. Carlos III Health Institute. January 2010-December 2011.

Nephrology

*TIF: 72.061 **MIF: 3.792

ISI Web of Knowledge Indexed Publications with an IF

01 Sanchez-Fructuoso A.I., Ruiz J.C., Torregrosa J.V., Gonzalez E., Gomez E., Gallego R.J., Troya M.I., Jimenez C., Llamas F., Romero R., Bernis C., Crespo J.F., Guirado L., AnemiaTrans Study Group. Anemia control in renal transplant recipients receiving continuous erythropoietin receptor activator (C.E.R.A.) treatment: the AnemiaTrans Study. *Advances in therapy*; 29(11):979-991.
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Other Publications

Letter

► Caballero F, Puig M, Santos JA, Deulofeu R, Ballarín J, Charco R, Leal J. Successful transplantation of organs from a donor with postneurosurgical meningitis caused by Escherichia coli. *Transplantation* 2012;93(3):e11-3.

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► Rivera-Zambrano L, Reyes J, Calero F, Ballarín J, Fernández-Llama P. The use of new techniques for diagnosis of relapse of pheochromocytoma. *Hipertension y Riesgo Vascular* 2012;29(4):156-8.

► Torra R, Ortiz A. Fabry disease: The many faces of a single disorder. *Clinical Kidney Journal* 2012;5(5):379-82.

Book Chapters

► •Bosch RJ, Arenas MI, Romero M, Olea N, Izquierdo A, Ortega A, Vélez E, Bover J, Ardura JC, Esbrit P. Parathyroid hormone-related protein as a mediator of renal damage: new evidence from experimental as well as human nephropathies (pp. 31-46). In: *Chronic Kidney Disease and Renal Transplantation*. Ed. Manisha Sahay.

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Guideline

► Bover J (ed.). *Guías Latinoamericanas de Práctica Clínica Sobre la Prevención, Diagnóstico y Tratamiento de los Estadios 1-5 de la Enfermedad Renal Crónica*. Fundación Mexicana del Riñón.

Others

► Cofan F, Alonso A, Díaz JM, Errasti P, Fijo J, Fraile P, Gutiérrez A, Jimeno L, López MO, Rama I, Romero R, Sanahuja MJ, Sánchez R, Hernández A. Cytomegalovirus disease: direct and indirect effects, (Special Supplement) *Nefrología* 2012;3(1):4-13.



AREA T1

Epidemiology, Public Health and Healthcare Services

174 Clinical Epidemiology and Healthcare Services

180 Transport and Health: Injuries and Mobility

182 Transmissible Diseases

186 Health Inequalities

190 Epidemiology of Addictions

193 Primary Care Research

195 Evaluation of Public Health Policies and Programmes

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Main Lines of Research

- Clinical epidemiology.
- Systematic reviews.
- Clinical practice guidelines.
- Health service evaluations.
- Clinical trials (phase 3/4).
- Methodological research.

Areas of interest:

- Evidence-based medicine.
- Cancer.
- Perioperative medicine.
- Cardiovascular medicine.
- Public health.
- Appropriateness.

Challenges

- Become a reference group in Spain and Latin America regarding the preparation of systematic reviews on the effects of healthcare interventions, enhancing the group's capacity to provide technical and methodological support and increasing its scientific production in the framework of the Iberoamerican Cochrane Network.
- Promote greater use of scientific evidence and evidence-based medicine tools in clinical and healthcare decision making by means of stable agreements with governmental, academic and scientific entities and institutions, thereby ensuring the ongoing development and dissemination of these tools and the implementation of training in their use.
- Become a reference group for independent applied clinical research that fosters relevant and scientifically sound studies aimed at meeting the real needs of the national healthcare system, whether on the group's own initiative or through networked relationships with similar groups.
- The group is currently setting up clinical and epidemiological studies (phase 3/4 trials with non-commercial interests, research into healthcare services and results and studies of research methodologies) and applying for additional public funding for new projects aimed at consolidating these research lines.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Locomotor System Research.
- Evaluation of Public Health Policies and Programmes.
- Nephrology.
- Palliative Care.

External Collaborations

- Blood and Tissue Bank.
- Ageing Institute.
- Public Health Agency of Barcelona.

Awards

- Lilly Foundation. MEDES Awards-MEDicina en Español 2012. Prize for the best institution: Iberoamerican Cochrane Centre.

Active Grants

- Alonso P. Evaluation of validity and updating strategies for clinical practice guidelines: analysis of the national programme for the National Health System. FIS Grant. January 2011-December 2013.
- Alonso P. Developing and evaluating communication strategies to support informed decisions and practice based on evidence. DECIDE. European Union Grant. January 2011-December 2015.
- Alonso P. Vascular events in patients undergoing non-cardiac surgery: prospective cohort study (VISION). La Marató de TV3 Foundation. March 2009-June 2013.
- Alonso P. Vascular events in patients undergoing surgery for non-cardiac surgery. The VISION study. FIS Grant. February 2010-June 2014.
- Alonso P. Clinical trial evaluating the delayed prescription of antibiotics in uncomplicated acute respiratory infections in children. Spanish Ministry of Health, Social Services and Equality Grant. January 2012-December 2013.
- Bonfill X. Grants to support research groups in Catalonia. Clinical Epidemiology and Health Services Group. AGAUR Grant. September 2009-December 2013.
- Bonfill X. Multicentre coordinated study of care processes and the results observed for a cohort of patients with urological cancer (bladder and prostate). FIS Grant. January 2010-June 2013.
- Bonfill X. OPEN-Overcome Failure to Publish Negative Findings. European Union Grant. November 2011-October 2013.
- Bonfill X. Multicentre, controlled, randomized clinical trial to assess the efficacy and cost-effectiveness of urinary catheters with silver alloy coating versus conventional catheters in spinal cord injured patients. La Marató de TV3 Foundation. April 2012-April 2015.

- Martínez M. Randomized, multicentre, parallel, single blind clinical trial, masked for the unevaluated treatment, to evaluate the effectiveness of platelet-rich plasma (PRP) treatment of autologous muscle tears in tennis leg. FIS Grant. January 2009-December 2012.
- Martínez M. Preventing postoperative bleeding: multicenter, randomized, controlled, parallel clinical trial to evaluate the effectiveness of tranexamic acid and fibrin glue in subcapital femoral fractures. Spanish Ministry of Health, Social Services and Equality. January 2012-December 2013.
- Urrútia G. Factorial clinical trial of clonidine and aspirin in patients about to undergo non-cardiac surgery and at moderate or high risk of experiencing perioperative cardiac events. Spanish Ministry of Health, Social Services and Equality. January 2010-December 2012.

*TIF: 297.996 **MIF: 5.959

ISI Web of Knowledge Indexed Publications with an IF

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- Lansberg M.G., O'Donnell M.J., Khatri P., Lang E.S., Nguyen-Huynh M.N., Schwartz N.E., Sonnenberg F.A., Schulman S., Vandvik P.O., Spencer F.A., Alonso-Coello P., Guyatt G.H., Akl E.A. Antithrombotic and thrombolytic therapy for ischemic stroke: Antithrombotic therapy and prevention of thrombosis, 9th ed: American college of chest physicians evidence-based clinical practice guidelines. *Chest*; 141(2 SUPPL.):e601S-e636S. **IF: 5.703**
- Hsu J., Santesso N., Mustafa R., Brozek J., Chen Y.L., Hopkins J.P., Cheung A., Hovhannisyan G., Ivanova L., Flottorp S.A., Saeterdal I., Wong A.D., Tian J., Uyeki T.M., Akl E.A., Alonso-Coello P., Smaill F., Schunemann H.J. Antivirals for treatment of influenza: A systematic review and meta-analysis of observational studies. *Annals of Internal Medicine*; 156(7):512-524. **IF: 13.976**
- Devereaux P.J., Chan M.T.V., Alonso-Coello P., Walsh M., Berwanger O., Villar J.C., Wang C.Y., Garutti R.I., Jacka M.J., Sigamani A., Srinathan S., Biccari B.M., Chow C.K., Abraham V., Tiboni M., Pettit S., Szczeklik W., Buse G.L., Botto F., Guyatt G., Heels-Ansdell D., Sessler D.I., Thorlund K., Garg A.X., Mrkobrada M., Thomas S., Rodseth R.N., Pearse R.M., Thabane L., McQueen M.J., Van-Helder T., Bhandari M., Bosch J., Kurz A., Polanczyk C., Malaga G., Nagele P.,

IF: 5.854

- Alonso-Coello P., Bellmunt S., McGorrian C., Anand S.S., Guzman R., Criqui M.H., Akl E.A., Vandvik P.O., Lansberg M.G., Guyatt G.H., Spencer F.A. Antithrombotic therapy in peripheral artery disease - Antithrombotic therapy and prevention of thrombosis, 9th ed: American College of Chest Physicians evidence-based clinical practice guidelines. *Chest*; 141(2 SUPPL.):e669S-e690S. **IF: 5.854**

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Clinical Epidemiolgy and Healthcare Services

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Scientific Production

ment of patients with dyspepsia. Update 2012 [Guía de práctica clínica sobre el manejo del paciente con dispepsia. Actualización 2012]. *Gastroenterología y Hepatología*; 35(10):725.e1-725.e38.
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la M., Blanquer J., Morales M., Carriedo D., Diez F., Fernandez I., Fernandez S., Sanz M.P., Castrodeza J.J., Perez A., Ortiz de Lejarazu R., Ortiz J., Pueyo A., Viejo J.L., Redondo P., Molina A., Agusti A., Torres A., Trilla A., Vilella A., Barbe F., Blanch L., Navarro G., Bonfill X., Lopez-Contreras J., Pomar V., Puig M.T., Borrás E., Martínez A., Torner N., Bravo C., Moraga F., Calafell F., Cayla J., Tortajada C., García I., Ruiz J., García J.J., Garin O., Gea J., Horcajada J.P., Hayes N., Rosell A., Alvarez C., Enriquez M., Pozo F., Baquero F., Galan J.C., Robustillo A., Valdeon M., Cordoba E., Dominguez F., Garcia J., Genova R., Gil E., Jimenez S., Lopaz M.A., Lopez J., Martin F., Martinez M.L., Ordobas M., Rodriguez E., Sanchez S., Valdes C., Pano J.R., Romero M., Martinez A., Martinez L., Ruiz M., Fanlo P., Gil F., Martinez-Artola V., Ursua M.E., Sota M., Virto M.T., Gamboa J., Perez-Afonso F., Aguirre U., Caspelaestegui A., Espana P.P., Garcia S., Antonana J.M., Astigarraga I., Pijoan J.I., Pocheville I., Santiago M., Villate J.I., Aristegui J., Escobar A., Garrote M.I., Bilbao A., Garaizar C., Cilla G., Korta J., Perez Trallero E., Sarasqueta C., Esteban F., Salado C., Lobo J.L., Alustizac J. Effectiveness of hand hygiene and provision of information in preventing influenza cases requiring hospitalization. *Preventive Medicine*; 54(6):434-439.
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21 Alonso-Coello P., Ebrahim S., Guyatt G.H., Tikkinen K.A.O., Eckman M.H., Neumann I., McDonald S.D., Akl E.A., Bates S.M. Evaluating patient values and preferences for thromboprophylaxis decision making during pregnancy: a study protocol. *BMC Pregnancy and Childbirth*; 12.
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Transport and Health: Injuries and Mobility

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Main Lines of Research

- Public health injury surveillance.
- Evaluation of road safety strategies at the urban level.
- Evaluation of road safety strategies in Spain.
- Indicators of mobility exposure and risk of traffic injuries.
- Determinants of walking as a mode of transport.
- Social inequalities in fatality injuries.

Participation in international projects:

- Road safety data collection, transfer and analysis.
- Joint action on monitoring injuries in Europe.
- Social and spatial inequalities in terms of traffic safety.

Research projects in the planning and design phase:

- Record linkage of health and police registers to study road traffic injury determinants.

Challenges

- Study of the nature of injuries and their severity according to the characteristics of the collision and the vehicles involved, particularly in urban settings.
- Evaluate road safety policies and interventions.

- Develop exposure denominators for the calculation of risk indicators.
- Study motorized and non-motorized mobility and its impact on health.

Active Grants

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Transmissible Diseases

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Main Lines of Research

Application of the new technologies to TB control:

- Produce scientific knowledge of relevance on the control, diagnosis, treatment and prevention of Tuberculosis (TB). From website visits and discussion forum comments, it is clear that this group continues to play a key role in Spain and in Latin America.

Clinical trials for the prevention and treatment of TB:

- Fix the bases for shortening treatment times for TB infection and, by extension, ensure compliance and control over the disease.

Community health workers' role in the control of communicable diseases:

- The inclusion of community health workers has led to important changes in TB programme teams and has led to the creation of new TB consensus protocols.

Challenges

- Investigate the transmission of hepatitis B in autochthonous and immigrant populations.
- Evaluate HIV screening programmes in gay saunas.
- Improve detection and research into causes of hepatitis C.
- Study legionella and TB outbreaks.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Microbiology and Infectious Diseases.

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22 Hoyos J., De la Fuente L., Fernandez S., Gutierrez J., Rosales M.E., Garcia de Olalla P., Ruiz M., Belza M.J. Street outreach rapid HIV testing in university settings: A priority strategy? [La oferta de la prueba rápida del VIH en la calle dentro del ámbito universitario: ¿una estrategia prioritaria?]. *Gaceta Sanitaria*; 26(2):131-137. **IF: 1.116**

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Scientific Production

*TIF: 88.306 **MIF: 3.270

Other Publications

Trials Consortium (Cayla J.A.). Substitution of rifapentine for rifampin during intensive phase treatment of pulmonary tuberculosis: Study 29 of the tuberculosis trials consortium. *Journal of Infectious Diseases*; 206(7):1030-1040. **IF: 5.848**

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▶ Rodrigo T, Caylà JA, Casals M, García-García JM, Caminero JA, Ruiz-Manzano J, Blanquer R, Vidal R, Altet N, Calpe JL, Penas A, Anibarro L, Álvarez F, Barrón M, Bustamante A, Cañas F, Cases E, De Souza ML, Gallardo J, Gallego M, García FJ, Gullón JA, Jiménez MA, Lloret T, Marín M, Martínez A, Medina JF, Melero C, Milà C, Mir I, Moreno V, Valencia E, Muñoz C, Pascual T, Sánchez P, Sande D, Vargas A. A predictive scoring instrument for tuberculosis lost to follow-up outcome. *Respiratory Research* 2012;13.

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Health Inequalities

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Main Lines of Research

- In-depth health inequalities according to social class in Spain and worldwide.
- Exploitation of information at the census section level as the maximum disaggregation unit and at higher geographic aggregation levels such as the neighbourhood, town and region.

Social and political determinants of health and their impact on policy building and interventions:

- Evidence of the macroeconomic determinants of health inequalities between countries.
- The impact of the political context on the health of the population and the conclusion that countries with better developed welfare states have better levels of health.

Gender inequalities in health:

- Sexual division between productive and reproductive work (gender roles) and differences in male and female identities as the 2 main structural factors that generate gender inequalities in health.

Challenges

Health inequalities according to different inequality axes:

- Separate studies of social determinants of health in terms of social class and gender, with the purpose of integrating these 2 axes and analysing inequalities among immigrants.
- Research into the impact of area of residence, especially smaller urbanized areas, on the health of the population.

Social and political determinants of health and impact on policy building and interventions:

- Study the influence of policies on the health of populations and on social inequalities in health.

Sex and reproductive inequalities in health:

- Establish a line of research to investigate different aspects of sexual and reproductive health (sexuality, contraception, pregnancy, birth, miscarriage, abortion, birth rates, etc).

Gender inequalities in health:

- Further explore the theoretical framework and explanatory charts developed to guide comprehension of the gender determinants that affect health.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Primary Care Research.

Active Grants

- Borrell C. INEQ-cities (Socioeconomic inequalities in mortality: evidence and policies in cities of Europe). European Union Grant. 2009-2012.
- Borrell C. Evaluating the impact of structural policies on health inequalities and their social determinants and fostering change-SO-PHIE. European Union Grant. 2011-2015.
- Pérez G. The role of sexuality in active and healthy ageing: evidence and effective interventions. RecerCaixa. 2011-2013.
- Borrell C. Trends in socioeconomic inequalities in mortality in small areas of cities in Spain-MEDEA. Carlos III Health Institute. 2009-2012.
- Díez E. Health impact assessment of a comprehensive urban renewal project (Llei de Barris) in the Barceloneta area of Barcelona. Carlos III Health Institute. 2010-2012.

Awards

- Garcia G, Artazcoz L, Díez E. Prize awarded under the Comprehensive Healthy Food and Physical Activity Plan of the Catalan Public Health Agency for "Activa't als parcs de Barcelona". 2012.
- Ariza C, Sánchez F, Valmayor S, Serral G, Pasarín MI, Juárez O, Cortina C, Sagarra N, Roca D, Lorenzo C, Díez S. Prize awarded under the Comprehensive Healthy Food and Physical Activity Plan of the Catalan Public Health Agency for the Childhood Obesity Prevention Project for Barcelona. 2012.
- Malmusi D. Award for the top 10 submissions by presenters under 35 years old. 28th Scientific Meeting of the Spanish Epidemiology Society (SEE). Gender and chronic disorders perspective: achievements and drawbacks of health surveys in Spain.
- Marí-Dell'Olmo M. 19th award of the Spanish Epidemiology Society for the best original epidemiology article published in 2011. Bayesian factor analysis to calculate a deprivation index and its uncertainty.

*TIF: 68.589 **MIF: 2.286

ISI Web of Knowledge Indexed Publications with an IF

- Borrell C., Malmusi D., Artazcoz L., Díez E., Rodríguez-Sanz I.P.Y.M., Campos P., Merino B., Ramirez R., Benach J., Escolar A., Esnaola S., Gandarillas A., Gomez A., La Parra D., Peiro R., Segura J., Solanillas J.R. A proposal of policies and interventions to reduce social inequalities in health in Spain [Propuesta de políticas e intervenciones para reducir las desigualdades sociales en salud en España]. Gaceta Sanitaria; 26(2):182-189. IF: 1.116
- Rocha K.B., Rodríguez-Sanz M., Pasarín M.I., Berra S., Gotsens M., Borrell C. Assessment of primary care in health surveys: A population perspective. European Journal of Public Health; 22(1):14-19. IF: 2.516
- Barbaglia G., Vilagut G., Artazcoz L., Haro J.M., Ferrer M., Forero C.G., Alonso J. Association between annual earnings and mental disorders in Spain: Individual and societal-level estimates. Social Psychiatry and Psychiatric Epidemiology; 47(11):1717-1725. IF: 2.861
- Pons-Vigues M., Puigpinos-Riera R., Rodríguez D., de Sanmamed M.J.F., Pasarín M.I., Pérez G., Borrell C., Casamitjana M., Benet J. Country of origin and prevention of breast cancer: Beliefs, knowledge and barriers. Health & Place; 18(6):1270-1281. IF: 2.419
- Porta M., Lopez T., Gasull M., Rodríguez-Sanz M., Gari M., Pumarega J., Borrell C., Grimalt J.O. Distribution of blood concentrations of persistent organic pollutants in a representative sample of the population of Barcelona in 2006, and comparison with levels in 2002. Science of the Total Environment; 423(3):151-161. IF: 3.258
- Best K.E., Tennant P.W.G., Addor M.-C., Bianchi F., Boyd P., Calzolari E., Dias C.M., Doray B., Draper E., Garne E., Gatt M., Greenlees R., Haeusler M., Khoshnood B., McDonnell B., Mullaney C., Nelen V., Randrianaivo H., Rissmann A., Salvador J., Tucker D., Wellesley D., Rankin J. Epidemiology of small intestinal atresia in Europe: A register-based study. Archives of Disease in Childhood: Fetal and Neonatal Edition; 97(5):F353-F358. IF: 3.451
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- Borrell C., Dominguez-Berjon M.F., Alvarez-Dardet C., Bermudez-Tamayo C., Godoy P., Jose Lopez M., Angel Negrin M., Perez G., Perez-Farinos N., Rodriguez M., Ruano A., Vives Cases C. Gaceta Sanitaria in 2011 [Gaceta Sanitaria en 2011]. Gaceta Sanitaria; 26(1):4-6. IF: 1.116
- Campos-Serna J., Ronda-Perez E., Artazcoz L., Benavides F.G. Gender inequalities in occupational health in Spain [Desigualdades de género en salud laboral en España]. Gaceta Sanitaria; 26(4):343-351. IF: 1.116
- Tortajada C., de Olalla P.G., Díez E., Pinto R.M., Bosch A., Perez U., Sanz M., Cayla J.A. Hepatitis a among men who have sex with men in Barcelona, 1989-2010: Insufficient control and need for new approaches. BMC Infectious Diseases; 12. IF: 3.025
- Villaruel N., Artazcoz L. Heterogeneous patterns of health status among immigrants in Spain. Health & Place; 18(6):1282-1291. IF: 2.419
- Cofino R., Pasarín M.I., Segura A. How should population health be approached? SESPAS Report 2012 [¿Cómo abordar la dimensión colectiva de la salud de las personas? Informe SESPAS 2012]. Gaceta Sanitaria; 26(SUPPL.1):88-93. IF: 1.116
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Health Inequalities

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	14 Perez K., Novoa A.M., Santamarina-Rubio E., Narvaez Y., Arrufat V., Borrell C., Cabeza E., Cirera E., Ferrando J., Garcia-Altes A., Gonzalez-Luque J.C., Lizarbe V., Martin-Cantera C., Segui-Gomez M., Suelves J.M. Incidence trends of traumatic spinal cord injury and traumatic brain injury in Spain, 2000-2009. <i>Accident Analysis and Prevention</i> ; 46():37-44. IF: 1.964	R., Borrell C. Twenty years of socio-economic inequalities in type 2 diabetes mellitus prevalence in Spain, 1987-2006. <i>European Journal of Public Health</i> ; 22(6):765-771. IF: 2.516
	15 Martin U., Malmusi D., Bacigalupe A., Esnaola S. Internal migration in Spain in the 20th century: A new focus for the study of social inequalities in health [Migraciones internas en Espana durante el siglo xx: Un nuevo eje para el estudio de las desigualdades sociales en salud]. <i>Gaceta Sanitaria</i> ; 26(1):9-15. IF: 1.116	30 Espelt A., Goday A., Franch J., Borrell C. Validity of self-reported diabetes in health interview surveys for measuring social inequalities in the prevalence of diabetes. <i>Journal of Epidemiology and Community Health</i> ; 66(7). IF: 3.392
	16 Pons-Vigues M., Puigpinos-Riera R., Serral G., Pasarin M.I., Rodriguez D., Perez G., Benet J., Casamitjana M., Borrell C. Knowledge, attitude and perceptions of breast cancer screening among native and immigrant women in Barcelona, Spain. <i>Psycho-Oncology</i> ; 21(6):618-629. IF: 3.506	22 Ruiz-Munoz D., Perez G., Gotsens M., Rodriguez-Sanz M. Regional inequalities in the use of contraception in Spain: A multilevel approach. <i>Health & Place</i> ; 18(2):408-414. IF: 2.419
	17 Hollander A.-C., Bruce D., Ekberg J., Burstrom B., Borrell C., Ekblad S. Longitudinal study of mortality among refugees in Sweden. <i>International Journal of Epidemiology</i> ; 41(4):1153-1161. IF: 6.982	23 Muntaner C., Rocha K.B., Borrell C., Vallebuona C., Ibanez C., Benach J., Sollar O. Social class and health in Latin America [Clase social y salud en América Latina]. <i>Revista Panamericana de Salud Publica/Pan American Journal of Public Health</i> ; 31(2):166-175. IF: 0.619
	18 Irene G.-S., Perez G., Maica R.-S., Munoz D.R., Salvador J. Neighborhood inequalities in adverse pregnancy outcomes in an urban setting in Spain: A multilevel approach. <i>Journal of Urban Health</i> ; 89(3):447-463. IF: 1.887	24 Gil-Gonzalez D., Vives-Cases C., Borrell C., Agudelo-Suarez A.A., Alvarez-Dardet C. Social determinants of self-perceived discrimination in Spain. <i>Public Health</i> ; 127(3):223-230. IF: 1.35
	19 Rocha K., Perez K., Rodriguez-Sanz M., Obiols J.E., Borrell C. Perception of environmental problems and common mental disorders (CMD). <i>Social Psychiatry and Psychiatric Epidemiology</i> ; 47(10):1675-1684. IF: 2.861	25 Plug I., Hoffmann R., Artnik B., Bopp M., Borrell C., Costa G., Deboosere P., Esnaola S., Kalediene R., Leinsalu M., Lundberg O., Martikainen P., Regidor E., Rychtarikova J., Strand B.H., Wojtyniak B., MacKenbach J.P. Socioeconomic inequalities in mortality from conditions amenable to medical interventions: Do they reflect inequalities in access or quality of health care?. <i>BMC Public Health</i> ; 12(1). IF: 2.076
	20 Malmusi D., Artazcoz L., Benach J., Borrell C. Perception or real illness? How chronic conditions contribute to gender inequalities in self-rated health. <i>European Journal of Public Health</i> ; 22(6):781-786. IF: 2.516	26 Mendivil J., Garcia-Altes A., Perez K., Mari-Dell'Olmo M., Tobias A. Speed cameras in an urban setting: A cost-benefit analysis. <i>Injury Prevention</i> ; 18(2):75-80. IF: 1.755
	21 Wellesley D., Dolk H., Boyd P.A., Greenlees R., Haeusler M., Nelen V., Garne E., Khoshnood B., Doray B., Rissmann A.,	27 Alvarez-Dardet C., Ruano A., Vives Cases C., Borrell C. The ethical standards of GACETA SANITARIA [Las normas éticas de Gaceta Sanitaria]. <i>Gaceta Sanitaria</i> ; 26(2):103-104. IF: 1.116
		28 Fernandez E., Borrell C. The new advisory board of Gaceta Sanitaria is launched [El nuevo consejo asesor de Gaceta Sanitaria se pone en marcha]. <i>Gaceta Sanitaria</i> ; 26(5):395-396. IF: 1.116

Other Publications	Letters	Others
	▶ Álvarez-Dardet C, Ruano A, Godoy P, Angel Negrín M, Borrell C. The number of authors in Gaceta Sanitaria. <i>Gaceta Sanitaria</i> 2012;26(5):492-3.	▶ Borrell C, Díez E, Morrison J, et al. Las desigualdades en salud a nivel urbano y las medidas efectivas para reducirlas (online). Medea-IneqCities Project, 2012.
	▶ Nebot M, Burón A, Pasarin M, Hortal N, Juárez O, Quintana E. Cognitive impairment prevention: Characteristics of memory workshops in Barcelona. <i>Atencion Primaria</i> 2012;44(1):54-6.	▶ Borrell C, Díez E, Morrison J, et al. Las desigualdades en salud en las ciudades europeas (online). Mientras tanto: Observatorio de Salud 8, 2012.
	Scopus Indexed Publications	▶ Borrell C, Malmusi D, Gotsens M, Pons-Vigués M, Marí Dell'Olmo M, Morrison J, Palencia L, Díez E. Health inequality in urban areas and policies to reduce them. In: <i>Rethinking Urban Policies</i> . Ed. Montaner JM, Subirats J. Diputació de Barcelona, 2012.
	▶ Puigpinos-Riera R., Pons-Vigues M., Serral G., Rodriguez-Arjona M.D., Pasarin M.I. I have intention to get a mammogram: Stages of adoption for monitoring mammography in women of different social and cultural background [Tengo intención de hacerme una mamografía: Estadios de adopción para realizar control mamográfico en mujeres de distinto origen cultural y social]. <i>Psicooncologia</i> ; 9(1):7-23.	▶ ATLAS: The IneqCities Project (online). University College London, UK.
		▶ Borrell C, Palència L, Pons-Vigués M, Marí Dell'Olmo M, Gotsens M, Morrison J, Díez E and the IneqCities group. Commissioned chapter on Inequalities in Health. In: <i>European Review of Social Determinants of Health. Interim Second Report on Social Determinants of Health and the Health Divide in the European Region</i> . WHO Report.

Epidemiology of Addictions

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Main Lines of Research

Study of the epidemiology of drug consumption and patterns of use:

- ▶ Estimating the incidence of cocaine use and consumption patterns.
- ▶ Estimating the incidence of heroin use and consumption patterns.
- ▶ Estimating the prevalence of problematic cocaine, heroin and alcohol users.

Health problems associated with drug use:

- ▶ Study of quality of life and psychiatric comorbidity in cocaine users.
- ▶ Analysis of service use in cocaine and alcohol users.
- ▶ Analysis of factors associated with retention in treatment programmes for cocaine addicts and alcoholics.
- ▶ Study of violent behaviour and aggressive attitudes in young cocaine consumers.

- ▶ Analysis of mortality and its determinants in cohorts of people with substance abuse disorders (alcohol, heroin and cocaine).
- ▶ Analysis of factors associated with acute health problems developing after cocaine and heroin use.
- ▶ Analysis of the social and health discrepancies between immigrants and natives drug users.

Evaluation of health policies:

- ▶ Study of social inequalities in the evaluation of results and adherence to treatment centres.
- ▶ Infectious disease related to drug use.
- ▶ Evaluation of the brief motivational intervention programs as an alternative to treatment for teens who use psychoactive substances.
- ▶ Evaluating the role of the workplace in drug consumption.

Active Grants

- ▶ Brugal M. Monitoring of HIV, HCV and other STIs and risk behaviours in IDUs recruited in harm-reduction centres in Catalonia (REDAN). 2009-2012.

Challenges

Study of the epidemiology of drug consumption and patterns of use:

- ▶ Incidence and patterns of cocaine use.
- ▶ Incidence and patterns of heroin use.
- ▶ Prevalence of cocaine, heroin and alcohol use.

Health problems associated with drug use:

- ▶ Aggressive and violent attitudes and behaviour in young cocaine users.
- ▶ Quality of life in users with psychiatric comorbidity.
- ▶ Use of services among young heroin, cocaine and alcohol users.
- ▶ Factors associated with retention in treatment programmes for cocaine and alcohol addiction.
- ▶ Mortality and its determinants in cohorts of alcohol and cocaine-dependent subjects.
- ▶ Factors associated with acute health problems following cocaine use.
- ▶ Analysis of differential social and health determinants among immigrants who use illegal drugs.

Evaluation of health policies:

- ▶ Evaluation of supervised drug consumption rooms and other policies to reduce harm.
- ▶ Study of social inequalities in evaluating results and adherence to treatment.
- ▶ Evaluation of brief motivational intervention programmes as an alternative to disciplinary measures in teens who consume psychoactive substances.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 De la Fuente L., Rosales-Statkus M.E., Hoyos J., Pulido J., Santos S., Bravo M.J., Barrio G., Fernandez-Balbuena S., Belza M.J., Alvarez J., Gutierrez J., Ferreras E., Molist G., Ruiz M., Sanchez R., Segura P., Vallejo F. Are Participants in a Street-Based HIV Testing Program Able to Perform Their Own Rapid Test and Interpret the Results?. PLoS ONE; 7(10).
IF: 3.73
- 02 Santos S., Brugal M.T., Barrio G., Castellano Y., Domingo-Salvany A., Espelt A., Bravo M.J., De La Fuente L., Fernandez F., Gonzalez F., Lacasa D., Ambros M., Mejias E., Molist G., Neira M., Pulido J., Sanchez F., Silva T., Vallejo F., Ballesta R., Vazquez B. Assessing the effect of patterns of cocaine and alcohol use on the risk of adverse acute cocaine intoxication. Drug and Alcohol Review; 31(4):439-446.
IF: 2.017
- 03 Barrio G., Jimenez-Mejias E., Pulido J., Lardelli-Claret P., Bravo M.J., De La Fuente L. Association between cannabis use and non-traffic injuries. Accident Analysis and Prevention; 47:172-176.

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- 04 Folch C., Casabona J., Brugal M.T., Majo X., Merono M., Espelt A., Gonzalez V. Characteristics of intravenous drug users who share injection equipment in Catalonia (Spain) [Perfil de los usuarios de drogas por vía parenteral que mantienen conductas de riesgo relacionadas con la inyección en Cataluña]. Gaceta Sanitaria; 26(1):37-44.
IF: 1.116
- 05 Sordo L., Chahua M., Bravo M.J., Barrio G., Brugal M.T., Domingo-Salvany A., Molist G., De la Fuente L. Depression among regular heroin users: The influence of gender. Addictive Behaviors; 37(1):148-152.
IF: 2.021
- 06 Barrio G., Bravo M.J., Brugal M.T., Diez M., Regidor E., Belza M.J., de la Fuente L., Domingo-Salvany A., Pulido J., Santos S., Vallejo F., Sanchez-Niubo A., Sordo L., Molist G., Castellano Y., Espelt A., Oliva J., de Mateo S. Harm reduction interventions for drug injectors or heroin users in Spain: Expanding coverage as the storm abates. Addiction; 107(6):1111-1122.
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- 07 Bravo M.J., Vallejo F., Barrio G., Brugal M.T., Molist G., Pulido J., Sordo L., de la Fuente L. HCV seroconversion among

- never-injecting heroin users at baseline: No predictors identified other than starting injection. International Journal of Drug Policy; 23(5):415-419.
IF: 2.256
- 08 Guitart A.M., Bartroli M., Villalbi J.R., Guilana E., Castellano Y., Espelt A., Brugal M.T. Indicated prevention of problematic drug consumption in adolescents of barcelona, Spain [Prevención indicada del consumo problemático de drogas en adolescentes de Barcelona]. Revista Española de Salud Pública; 86(2):189-198.
IF: 0.696
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Epidemiology of Addictions

*TIF: 34.420 **MIF: 2.151

Scientific Production

- Domingo-Salvany A. Psychometric properties of the CAST and SDS scales in young adult cannabis users. Addictive Behaviors; 37(6):709-715. **IF: 2.021**
- 12 Molist G., Barrio G., Santos S., Brugal M.T., Rodriguez-Artalejo F., Pulido J., Guitart A., de la Fuente L. Quality deficits in the Spanish National Death Index: Lessons learned from studying the mortality of two cohorts of people admitted to drug abuse treatment [Déficit de calidad del índice Nacional de Defunciones: Lecciones aprendidas al estudiar la mortalidad de dos cohortes de admitidos a tratamiento por drogas]. Gaceta Sanitaria; 26(3):261-266. **IF: 1.116**
- 13 Hoyos J., De la Fuente L., Fernandez S., Gutierrez J., Rosales M.E., Garcia de Olalla P., Ruiz M., Belza M.J. Street outreach rapid HIV testing in university settings: A priority strategy? [La oferta de la prueba rápida del VIH en la calle dentro del ámbito universitario: ¿una estrategia prioritaria?]. Gaceta Sanitaria; 26(2):131-137. **IF: 1.116**
- 14 Belza M.J., Rosales-Statkus M.E., Hoyos J., Segura P., Ferreras E., Sanchez R., Molist G., De La Fuente L. Supervised blood-based self-sample collection and rapid test performance: A valuable alternative to the use of saliva by HIV testing programmes with no medical or nursing staff. Sexually Transmitted Infections; 88(3):218-221. **IF: 2.611**
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Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- De la Fuente L, Bravo MJ, Jiménez-Mejías E, Sordo L, Pulido J, Barrio G. Evolution of the need and coverage of opioid substitution treatments and needle exchange programmes in spanish prisons, 1992-2009. Revista Española De Sanidad Penitenciaria 2012;14(2):67-77.
- Brugal MT. The role of prison health care in preventing and treating the consumption of illegal drugs. Revista Española De Sanidad Penitenciaria 2012;14(1):1-2.

Primary Care Research

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Main Lines of Research

- Cardiovascular prevention in primary care settings.
- Health promotion in primary care settings.
- Ageing.
- Hypertension.
- Diabetes.
- Bone metabolism.
- Mouth breathing in children.
- Paediatric immunization.

Challenges

- Enlarge the research team by linking up with other primary care centres associated with the ACEBA Family Medicine Teaching Unit.
- Cooperate with other research teams in IIB Sant Pau.
- Cooperate with other European institutions in implementing projects on risk prevention and health promotion in primary care settings.
- Encourage research into medical ethics in family medicine training.

Active Grants

- Soriano N, Monteserin R. Randomized clinical trial to assess the effectiveness of memory training workshops in people aged 65 to 80 years. FIS Grant. Carlos III Health Institute. December 2011-December 2014.
- Monteserin R, Ichazo B. Screening fragility in the elderly according to cognitive status. FIS Grant. Carlos III Health Institute.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Ageing Institute.
- Nephrology.
- Clinical Epidemiology and Healthcare Services.

- Evaluation of Public Health Policies and Programmes.
- Pharmacological Research in Humans.

*TIF: 84.843 **MIF: 7.070

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Brotons C., Bulc M., Sammut M.R., Sheehan M., da Silva Martins C.M., Bjorklund C., Drenthen A.J.M., Duhot D., Gorpelioglui S., Jurgova E., Keinanen-Kiukkanniemi S., Kotanyi P., Markou V., Moral I., Mortsiefer A., Pas L., Pichler I., Sghedoni D., Tataradze R., Thireos E., Valius L., Vuchak J., Collins C., Cornelis E., Ciurana R., Kloppe P., Mierzecki A., Nadaraia K., Godycki-Cwirko M. Attitudes toward preventive services and lifestyle: The views of primary care patients in Europe. the EUROPREVIEW patient study. Family Practice; 29(SUPPL. 1):i168-i176. **IF: 1.828**
- 02 Brotons C., Drenthen A.J.M., Durrer D., Moral I. Beliefs and attitudes to lifestyle, nutri-

Primary Care Research

*TIF: 84.843 **MIF: 7.070

Scientific Production

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IF: 3.204

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IF: 0.957

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IF: 1.399

07 Anguita M., Wornor F., Domenech P., Marin F., Ortigosa J., Perez-Villacastin J., Fernandez-Ortiz A., Alonso A., Cequier A., Comin J., Heras M., Pan M., Alzueta J., Arenal A., Baron G., Borrás X., Bover R., De La Figuera M., Escobar C., Fiol M., Herreros B., Merino J.L., Mont L., Murga N., Pedrote A., Quesada A., Ripoll T., Rodriguez J., Ruiz M., Ruiz R. New evidence, new controversies: A critical review of the European society of cardiology 2010 clinical practice guidelines on atrial fibrillation [Nuevas evidencias, nuevas controversias: análisis crítico de la guía de práctica clínica sobre fibrilación auricular 2010 de la Sociedad Europea de Cardiología]. *Revista Espanola de Cardiología*; 65(1):7-13.
IF: 3.204

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IF: 1.116

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IF: 0.957

11 Vinyoles E., Rodriguez-Blanco T., De La Figuera M., Colome J.M., Tafalla M., Calbet N., Fernandez-San Martin M.I., Garcia-Alonso J., Murillo C., Agudo J. Variability and concordance of Cornell and Sokolow-Lyon electrocardiographic criteria in hypertensive patients. *Blood Pressure*; 21(6):352-359.
IF: 1.391

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► De la Figuera M. Methods of measuring therapeutic adherence in diabetes mellitus type 2. *Hipertension y Riesgo Vascular* 2012;29(SUPPL.1):14-9.

► Eddy Ives LS, Moral Peláez I, Brotons Cuixart C, de Frutos Gallego E, Calvo Terrades M, Curell Aguilà N. Life style habits of overweight and obese adolescents (OBESCAT study). *Pediatría De Atención Primaria* 2012;14(54):127-37.

► Cuixart CB. The new markers of cardiovascular risk: Where did we come from, where are we, where are we going? *Clínica e Investigación en Arteriosclerosis* 2012;24(2):89-91.

► Brotons C, Delgado B, Comellas MJ. Usefulness of a blood glucose meter device reader in the management of patients with diabetes mellitus type 2 in primary care settings: The TRANSFER study. *Avances en Diabetología* 2012;28(3):70-6.

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Others

► Groene AO, Bolívar I, Brotons C. Impact, barriers and facilitators of the "Ask Me 3" Patient Communication Intervention in a primary care center in Barcelona, Spain: a mixed-methods analysis. *International Journal of Person Centered Medicine* 2012;2:853-861.

Evaluation of Public Health Policies and Programmes

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Main Lines of Research

- Prevention and control of passive smoking.
- Studies evaluating the impact of lifestyle interventions.
- Evaluation of public health programmes and services, including management, organization, results and impact.
- Evaluation of the effectiveness and impact of policies and programmes.

Challenges

- Promote research into the evaluation of policies and programmes.
- Support the debate on conceptual and methodological aspects of results evaluation in prevention and health promotion.
- Consolidate the group's research, fostering less developed aspects such as financial assessment and the evaluation of health protection interventions.
- Develop a theoretical corpus of concepts, principles, methods and examples that contribute to filling the gap in under- and post-graduate teaching regarding the design and evaluation of risk prevention and health promotion interventions.

Active Grants

- Ariza C. Design and evaluation of the effectiveness of an intervention to prevent childhood obesity in school children. FIS Grant. Carlos III Health Institute. January 2010-December 2012.
- Ariza C. Evaluation of the effectiveness of early treatment intervention for cigarette and cannabis smoking cessation in young people. National Drug Plan. Spanish Ministry of Health, Social Services and Equality. November 2009-October 2012.
- López MJ. Research group for evaluation of public health policies and programmes. AGAUR Grant. September 2009-December 2013.
- Nebot M. Evaluation of the impact of preventive recommendations regarding influenza A(H1B1)v in the population at risk and the adoption of non-pharmacological measures in the general population, school community and risk group. FIS Grant. Carlos III Health Institute. September 2009-March 2012.
- López MJ. Measuring exposure to environmental smoke and estimate of its impact on mortality in Spain. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- Pérez A. Factors associated with alcohol consumption in young people by place of origin and family migratory path. National Drug Plan. Spanish Ministry of Health, Social Services and Equality. November 2011-November 2013.
- Pérez A. Randomized clinical trial to evaluate the effectiveness of memory training workshops for people aged 65 to 80 years. Carlos III Health Institute. January 2012-December 2014.



Evaluation of Public Health Policies and Programmes

*TIF: 56.344 **MIF: 2.449

ISI Web of Knowledge Indexed Publications with an IF

01 Perez K., Novoa A.M., Santamarina-Rubio E., Narvaez Y., Arrufat V., Borrell C., Cabeza E., Cirera E., Ferrando J., Garcia-Altes A., Gonzalez-Luque J.C., Lizarbe V., Martin-Cantera C., Segui-Gomez M., Suelves J.M. Incidence trends of traumatic spinal cord injury and traumatic brain injury in Spain, 2000-2009. *Accident Analysis and Prevention*; 46(0):37-44.
IF: 1.964

02 Ibanez M., Portoles T., Rubies A., Munoz E., Munoz G., Pineda L., Serrahima E., Sancho J.V., Centrich F., Hernandez F. The power of hyphenated chromatography/time-of-flight mass spectrometry in public health laboratories. *Journal of Agricultural and Food Chemistry*; 60(21):5311-5323.
IF: 2.906

03 Llorente-Mirandes T., Calderon J., Lopez-Sanchez J.F., Centrich F., Rubio R. A fully validated method for the determination of arsenic species in rice and infant cereal products. *Pure and Applied Chemistry*; 84(2):225-238.
IF: 3.386

04 Villalbi J.R., Suelves J.M., Garcia-Contenente X., Salto E., Ariza C., Cabezas C. Changes in smoking prevalence among adolescents in Spain [Cambios en la prevalencia del tabaquismo en los adolescentes en España]. *Atencion Primaria*; 44(1):36-42.
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IF: 1.116

06 Villalbi J.R., Ballestin M., Casas C., Subirana T. Quality management in a public health agency [Gestión de calidad en una organización de salud pública]. *Gaceta Sanitaria*; 26(4):379-382.
IF: 1.116

07 Martinez-Sanchez J.M., Fu M., Schiaffino A., Sureda X., Salto E., Moncada A., Ariza C., Nebot M., Pascual J.A., Fernandez E. Secondhand smoke exposure at home and leisure time according to the day of the week (working and non-working day) in Barcelona [Exposición al humo ambiental del tabaco en el hogar y el tiempo libre según el día de la semana (laborable y no laborable) en Barcelona].

Adicciones; 24(2):173-177.
IF: 1.015

08 Garcia-Altes A., Perez K., Novoa A., Suelves J.M., Bernabeu M., Vidal J., Arrufat V., Santamarina-Rubio E., Ferrando J., Cogollos M., Cantera C.M., Luque J.C.G. Spinal cord injury and traumatic brain injury: A cost-of-illness study. *Neuroepidemiology*; 39(2):103-108.
IF: 2.37

09 Fu M., Martinez-Sanchez J.M., Agudo A., Pascual J.A., Ariza C., Moncada A., Fernandez E. Nicotine dependence and salivary cotinine concentration in daily smokers. *European Journal of Cancer Prevention*; 21(1):96-102.
IF: 2.974

10 Sureda X., Martinez-Sanchez J.M., Lopez M.J., Fu M., Agüero F., Salto E., Nebot M., Fernandez E. Secondhand smoke levels in public building main entrances: Outdoor and indoor PM2.5 assessment. *Tobacco Control*; 21(6):543-548.
IF: 4.111

11 Lopez M.J., Nebot M., Schiaffino A., Perez-Rios M., Fu M., Ariza C., Munoz G., Fernandez E. Two-year impact of the Spanish smoking law on exposure to secondhand smoke: Evidence of the failure of the 'Spanish model'. *Tobacco Control*; 21(4):407-411.
IF: 4.111

12 Pons-Vigues M., Puigpinós-Riera R., Serral G., Pasarin M.I., Rodríguez D., Pérez G., Benet J., Casamitjana M., Borrell C. Knowledge, attitude and perceptions of breast cancer screening among native and immigrant women in Barcelona, Spain. *Psycho-Oncology*; 21(6):618-629.
IF: 3.506

13 Munoz E., Munoz G., Pineda L., Serrahima E., Centrich F. Multiresidue method for pesticide residue analysis in food of animal and plant origin based on GC or LC and MS or MS/MS. *Journal of AOAC International*; 95(6):1777-1796.
IF: 1.233

14 Guitart A.M., Bartoli M., Villalbi J.R., Guilana E., Castellano Y., Espelt A., Brugal M.T. Indicated prevention of problematic drug consumption in adolescents of Barcelona, Spain [Prevención indicada del consumo problemático de drogas en adolescentes de Barcelona]. *Revista Española de Salud Pública*; 86(2):189-198.
IF: 0.696

15 Mendivil J., Garcia-Altes A., Perez K., Mari-Dell'Olmo M., Tobias A. Speed cameras in an urban setting: A cost-benefit analysis. *Injury Prevention*; 18(2):75-80.

IF: 1.755

16 Pons-Vigués M, Puigpinós-Riera R, Rodríguez D, Fernández de Sanmamed MJ, Pasarin MI, Pérez G, Borrell C, Casamitjana M, Benet J. Country of origin and prevention of breast cancer: beliefs, knowledge and barriers. *Health & Place*; 18(6):1270-1281.
IF: 2.419

17 Kunzli N., Villalbi J.R. Will Switzerland follow Spain? Maybe, if you raise your voice!. *Swiss Medical Weekly*; 142.
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18 Puig C., Vall O., Garcia-Algar O., Papaseit E., Pichini S., Salto E., Villalbi J.R. Assessment of prenatal exposure to tobacco smoke by cotinine in cord blood for the evaluation of smoking control policies in Spain. *BMC Pregnancy and Childbirth*; 12.
IF: 2.516

19 Kumar P., Rubies A., Companyo R., Centrich F. Determination of aminoglycoside residues in kidney and honey samples by hydrophilic interaction chromatography-tandem mass spectrometry. *Journal of Separation Science*; 35(20):2710-2717.
IF: 2.591

20 Kumar P., Rubies A., Companyo R., Centrich F. Hydrophilic interaction chromatography for the analysis of aminoglycosides. *Journal of Separation Science*; 35(4):498-504.
IF: 2.591

21 Catala-Lopez F., Alonso-Arroyo A., Aleixandre-Benavent R., Ridao M., Bolanos M., Garcia-Altes A., Sanfelix-Gimeno G., Peiro S. Coauthorship and institutional collaborations on cost-effectiveness analyses: a systematic network analysis. *PLoS one*; 7(5).
IF: 3.73

22 Lopez M.J., Fernandez E., Gorini G., Moshammer H., Polanska K., Clancy L., Dautzenberg B., Delrieu A., Invernizzi G., Munoz G., Precioso J., Ruprecht A., Stansty P., Hanke W., Nebot M. Exposure to secondhand smoke in terraces and other outdoor areas of hospitality venues in eight European Countries. *PLoS ONE*; 7(8).
IF: 3.73

23 Galante M., Garin O., Sicuri E., Cots F., Garcia-Altes A., Ferrer M., Dominguez A., Alonso J. Health services utilization, work absenteeism and costs of pandemic influenza A (H1N1) 2009 in Spain: A multicenter-longitudinal study. *PLoS ONE*; 7(2).
IF: 3.73

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

► Catalá-López F, García-Altés A, Álvarez-Martín E, Gènova-Maleras R, Morant-Ginestar C, Arana E. Economic evaluation of interventions for malignant neoplasms in Spain: Systematic review and comparative analysis. *Farmacia Hospitalaria* 2012;36(3):141-7.

Letters

► Nebot M, Burón A, Pasarin M, Hortal N, Juárez O, Quintana E. Cognitive impairment prevention: Characteristics of memory workshops in Barcelona. *Atencion Primaria* 2012;44(1):54-6.

► Villalbí JR, Suelves JM, García-Contenente X, Saltó E, Ariza C, Cabezas C. Author's reply. *Atencion Primaria* 2012;44(8):509-10.

► Catalá-López F, Gènova-Maleras R, García-Altés A. Evaluating new health technologies and disease burden in developed countries. *Value Health* 2012;15(6):987-8.

► Catalá-López F, García-Altés A, Álvarez-Martín E, Gènova-Maleras

R, Morant-Ginestar C, Fernández De Larrea-Baz N. A review of the economic evaluation of interventions for cardiovascular diseases in Spain. *Farmacia Hospitalaria* 2012;36(3):163-5.

Scopus Indexed Publications

► Puigpinós-Riera R, Pons-Vigués M, Serral G, Rodríguez-Arjona MD, Pasarin MI. I have intention to get a mammogram: Stages of adoption for monitoring mammography in women of different social and cultural background. *Psicooncologia* 2012;9(1):7-23.

Others

► Dauvrin M, Lorient V, Sandhu S, Devillé W, Dia H, Dias S, Gaddini A, Ioannidis E, Jensen NK, Kluge U, Mertaniemi R, Puigpinás I, Riera R, Sárváry A, Stramayr C, Stankunas M, Soares JFF, Welbel M, Priebe S. Health care for irregular migrants: Pragmatism across Europe. A qualitative study. *BMC Res Notes* 2012;5.

Awards

► Juárez O, Ariza C, Sánchez F, Ramos P. Special prize for the best oral communication at the 3rd Conference of the National Smoking Prevention Committee. Evaluation of the effectiveness of the "Paso de fumar" programme for indicated prevention of cigarette and cannabis use in young people. 2012.

► Ariza C, Sánchez F, Valmayor S, Serral G, Pasarin MI, Juárez O, Cortina C, Sagarra N, Roca D, Lorenzo C, Díez S. Prize awarded under the Comprehensive Healthy Food and Physical Activity Plan of the Catalan Public Health Agency for the Childhood Obesity Prevention Project for Barcelona. 2012.



AREA T2

Molecular, Genomic, Cellular and Kinetic-Dynamic Bases for Diseases and their Treatment

200 Genomics of Complex Diseases

202 Molecular Bases of Disease

204 Pharmacokinetic/Pharmacodynamic Modelling and Simulation

206 Generation of Advanced Therapy Medicines

Genomics of Complex Diseases

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Main Lines of Research

- Genetic epidemiology and bioinformatics.

Genomics of complex diseases:

- Genetic analysis of idiopathic thrombophilia (GAIT).
- Genetic analysis of osteoporosis (GAO).
- Genetics of chronic venous insufficiency.
- Genetics of abdominal aortic aneurysms (TAGA).
- Genetics of abdominal aortic aneurysms (TAGA).

Pharmacogenomics:

- Markers of genetic susceptibility and pharmacogenomics of cardiovascular diseases.

Challenges

- Consolidate the genetic epidemiology and bioinformatics research lines.
- Increase human and material resources to achieve goals defined for different projects.
- Coordinate an international cardiovascular genomic project.
- Establish pharmacogenomic agreements with biopharmaceutical companies.

Awards

- Award for Excellence in Knowledge Transfer. Open Science and Innovation Forum. Autonomous University of Barcelona, Spain.

Active Grants

- Athanasiadis G. Juan de la Cierva Research Contract. Spanish Ministry of Economy and Competitiveness. January 2010-December 2013.
- López S. Sara Borrell Postdoctoral Research Contract. FIS Grant. Carlos III Health Institute. January 2009-April 2013.
- Soria JM. Support Funds to Catalan Research Groups. Unit of Genomics of Complex Diseases. AGAUR Grant. September 2009-December 2013.
- Soria JM. Red Cardiovascular RECAVA. FIS Grant. Carlos III Health Institute. January 2010-December 2013.
- Soria JM. Identification of the genetic determinants of the intrinsic coagulation pathway and its involvement in thromboembolic disease. FIS Grant. Carlos III Health Institute. January 2012-December 2014.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Thrombosis and Haemostasis.
- Angiology, Vascular Biology and Inflammation.
- Haematological Diagnosis.
- Metabolic Bases of Cardiovascular Risk.
- Multi-organ Damage.
- Clinical Oncology.

External Collaborations

- Laura Almas, John Blangero. Texas Research Institute, San Antonio, Texas, USA.
- Anders Hamsten, Centre of Molecular Medicine, Karolinska Institutet, Stockholm, Sweden.
- Javier Corral, Regional Blood Donation Centre, University of Murcia, Spain.
- David Tregouet, INSERM U937, Paris, France.
- Pierre Morange, INSERM U626, Marseilles, France.

*TIF: 37.814 **MIF: 6.302

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Garcia-Dabrio M.C., Pujol-Moix N., Martinez-Perez A., Fontcuberta J., Souto J.C., Soria J.M., Nomdedeu J.F. Influence of age, gender and lifestyle in lymphocyte subsets: Report from the Spanish gait-2 study. *Acta Haematologica*; 127(4):244-249.
IF: 0.894
- 02 Souto J.C., Soria J.M. Predicting individual risk of venous. *Blood*; 120(3):500-501.
IF: 9.06
- 03 Camacho M., Martinez-Perez A., Buil A., Sigüero L., Alcolea S., Lopez S., Fontcuberta J., Souto J.C., Vila L., Soria J.M. Genetic determinants of 5-lipoxygenase pathway in a Spanish population and their relationship with cardiovascular risk. *Atherosclerosis*; 224(1):129-135.
IF: 3.706
- 04 Sabater-Lleal M., Martinez-Perez A., Buil A., Folkersen L., Souto J.C., Bruzelius M., Borrell M., Odeberg J., Silveira A., Eriksson P., Almasy L., Hamsten A., Soria J.M.
- 05 Lopez S., Buil A., Souto J.C., Casademont J., Blangero J., Martinez-Perez A., Fontcuberta J., Lathrop M., Almasy L., Soria J.M. Sex-specific regulation of mitochondrial DNA levels: Genome-wide linkage analysis to identify quantitative trait loci. *PLoS ONE*; 7(8).
IF: 3.73
- 06 Helgadóttir A., Gretarsdóttir S., Thorleifsson G., Holm H., Patel R.S., Gudnason T., Jones G.T., Van Rij A.M., Eapen D.J., Baas A.F., Tregouet D.-A., Morange P.-E., Emmerich J., Lindblad B., Gottster A., Kiemieny L.A., Lindholt J.S., Sakalihasan N., Ferrell R.E., Carey D.J., Elmore J.R., Tsao P.S., Grarup N., Jorgensen T., Witte D.R., Hansen T., Pedersen O., Pola R., Gaetani E., Magnadóttir H.B., Wijmenga C., Tromp G., Ronkainen A., Ruigrok Y.M.,

A genome-wide association study identifies KNG1 as a genetic determinant of plasma factor XI level and activated partial thromboplastin time. *Arteriosclerosis, Thrombosis, and Vascular Biology*; 32(8):2008-2016.
IF: 6.338

Blankensteijn J.D., Mueller T., Wells P.S., Corral J., Soria J.M., Souto J.C., Peden J.F., Jalilzadeh S., Mayosi B.M., Keavney B., Strawbridge R.J., Sabater-Lleal M., Ger-tow K., Baldassarre D., Nyssnen K., Rauramaa R., Smit A.J., Mannarino E., Giral P., Tremoli E., De Faire U., Humphries S.E., Hamsten A., Haraldsdóttir V., Olafsson I., Magnusson M.K., Samani N.J., Levey A.I., Markus H.S., Kostulas K., Dichgans M., Berger K., Kuhlensbumer G., Ringelstein E.B., Stoll M., Seedorf U., Rothwell P.M., Powell J.T., Kuivaniemi H., Onundarson P.T., Valdimarsson E., Matthiasson S.E., Gudbjartsson D.F., Thorgeirsson G., Quyyumi A.A., Watkins H., Farrall M., Thorsteinsdóttir U., Stefansson K. Apolipoprotein(a) genetic sequence variants associated with systemic atherosclerosis and coronary atherosclerotic burden but not with venous thromboembolism. *Journal of the American College of Cardiology*; 60(8):722-729.
IF: 14.086

Molecular Bases of Disease

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Technicians

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Collaborators

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Main Lines of Research

Thrombosis and haemostasis:

- Structural and functional investigations of blood coagulation factors, with emphasis on thrombin generation by the prothrombinase complex and on thrombin interactions with both physiological substrates (factor V, factor VIII and protease-activated receptors) and with exogenous inhibitors from haematophagous animals (e.g. anophelin from Anopheles mosquitoes).

Lipid metabolism and dyslipidemias:

- Structural and functional analysis of mutant apoA-V proteins identified in individuals with hypertriglyceridaemia.

Neurodegenerative diseases:

- Analysis of mutations that affect the SMN genes, whose deficiency results in spinal muscular atrophy.
- Structural and functional investigations of proteins associated with inherited forms of Parkinson disease (PINK1, DJ-1 and Parkin).

Cancer and innate immune responses:

- Structural and functional analysis of innate immune responses mediated by toll-like receptors (TLRs) and, in particular, the role of the major adaptor MyD88.
- Analysis of mutations and SNPs that affect the TET2 gene and implications for acute myeloid leukaemia.
- Structural and functional analysis of the microsomal prostaglandin E synthase (mPGES-1) as a target for the generation of novel anti-inflammatory drugs with fewer side effects.

Challenges

- Consolidate and extend research within the HSCSP Research Institute and the rest of the IIB Sant Pau in a context of limited access to financial support. To this end, the group needs to participate in at least one financed structure-and-function project in each of three major research areas (cardiovascular diseases, neurodegenerative diseases and cancer and innate immune responses).

Active Grants

- Fuentes-Prior P. Thrombus stabilization as a therapeutic target: in vitro studies and animal models. La Marató de TV3 Foundation. March 2009-December 2012.
- Fuentes-Prior P. Structural basis of the generation, inhibition and activity of thrombin. Spanish Ministry of Economy and Competitiveness. January 2011-December 2013.
- Hernández E. Aid for the realization of the PhD dissertation. Spanish Ministry of External Affairs and Cooperation. September 2009- September 2012.
- De Mendoza E. Aid for the realization of the PhD dissertation. Spanish Ministry of Economy and Competitiveness. January 2009-December 2012.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Metabolic Bases of Cardiovascular Risk.
- Parkinson Disease and Movement Disorders.
- Haematological Diagnosis.
- Genetic Diseases.
- Angiology, Vascular Biology and Inflammation.

External Collaborations

- Dr. Pereira. Institute of Molecular and Cellular Biology, Porto, Portugal.
- Dr. Paul E. Bock. Vanderbilt University, Nashville, Tennessee, USA.
- Dr. Ricardo Gutiérrez-Gallego. IMIM-UPF, Barcelona, Spain.

*TIF: 9.737 **MIF: 9.737

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Figueiredo A.C., De Sanctis D., Gutierrez-Gallego R., Cereija T.B., Macedo-Ribeiro S., Fuentes-Prior P., Pereira P.J.B. Unique thrombin inhibition mechanism by anophelin, an anticoagulant from the malaria vector. Proceedings of the National Academy of Sciences of the United States of America; 109(52):E3649-E3658. **IF: 9.737**

Pharmacokinetic/Pharmacodynamic Modelling and Simulation

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Main Lines of Research

- Populational pharmacokinetic analysis aimed at establishing the pharmacokinetic characteristics of medical products and at differentiating and quantifying the degree of intra- and inter-individual variability.
- Continuous response analysis aimed at the analysis of effects (in the presence or absence of drugs) where the variable being evaluated changes values gradually.
- Non-continuous response analysis for responses most frequently observed in clinical practice and including categorical responses and categorical survival, frequency and censored responses.
- Simulation of clinical trials and therapy applications, aimed at assisting with the planning of clinical trials from the perspectives of developing new drugs and maximizing data yield and also aimed at studying the therapeutic application of narrow therapeutic-margin drugs.

Challenges

- Obtain recognition as an emerging group.
- Maintain existing external cooperation agreements.
- Establish new cooperation agreements within the HSCSP Research Institute.
- Generate sufficient financial resources to maintain and expand group staffing.
- Communicate the group's activities.

Active Grants

- Valle M. Quantification of the side effects following the administration of delta-9 tetrahydrocannabinol and cannabidiol: populatioin pharmacokinetic/pharmacodynamic approach to evaluating their interaction and determining the risk/benefit ratio. FIS Grant. Carlos III Health Institute. January 2009-December 2012.
- Valle M. Clinical trial to evaluate the efficacy, safety and economic impact of the reduction of darunavir doses in HIV-infected patients treated with once-daily darunavir/ritonavir. Spanish Ministry of Health, Social Services and Equality Grant. January 2012-December 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- Human Experimental Neuropsychopharmacology.
- Pharmacological Research in Humans.
- Pharmacy.

External Collaborations

- Collaboration with the Fight AIDS Foundation (Lluita contra la SIDA). Germans Trias i Pujol Hospital, Badalona, Spain.
- Collaboration with Pharmacy Service. Hospital del Mar, Barcelona, Spain.
- Collaboration with Department of Pharmacology. Liverpool University, UK.

*TIF: 23.095 **MIF: 3.849

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Molto J., Miranda C., Malo S., Valle M., Andreu A., Bonafont X., Clotet B. Use of herbal remedies among HIV-infected patients: Patterns and correlates [Consumo de plantas medicinales en los pacientes infectados por el virus de la inmunodeficiencia humana. Patrones de uso y factores relacionados]. Medicina Clinica; 138(3):93-98.
IF: 1.399
- 02 Dos Santos R.G., Grasa E., Valle M., Ballester M.R., Bouso J.C., Nomdedeu J.F., Homs R., Barbanoj M.J., Riba J. Pharmacology of ayahuasca administered in two repeated doses. Psychopharmacology; 219(4):1039-1053.
IF: 4.061
- 03 Molto J., Valle M., Miranda C., Cedeno S., Negredo E., Clotet B. Effect of milk thistle on the pharmacokinetics of darunavir-ritonavir in HIV-infected patients. Antimicrobial Agents and Chemotherapy; 56(6):2837-2841.

IF: 4.565

- 04 Molto J., Valle M., Miranda C., Cedeno S., Negredo E., Clotet B. Herb-drug interaction between Echinacea purpurea and etravirine in HIV-infected patients. Antimicrobial Agents and Chemotherapy; 56(10):5328-5331.
IF: 4.565

- 05 Estevez J.A., Molto J., Tuneu L., Cedeno S., Antonijoan R.M., Mangues M.A., Clotet B., Domingo P., Puntos M., Barbanoj M.J., Valle M. Ritonavir boosting dose reduction from 100 to 50 mg does not change the atazanavir steady-state exposure in healthy volunteers. Journal of Antimicrobial Chemotherapy; 67(8):2013-2019.
IF: 5.338

- 06 Riba J., McIlhenny E.H., Valle M., Bouso J.C., Barker S.A. Metabolism and disposition of N,N-dimethyltryptamine and harmala alkaloids after oral administration of ayahuasca. Drug testing and analysis; 4(41493):610-616.
IF: 3.167

Generation of Advanced Therapy Medicines

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Isabel González BST
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Silvia Marín BST
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Laura Reales BST
Miriam Requena BST
Beatriz Sánchez BST



Main Lines of Research

- ▶ Bio processing for cell and tissue production.
- ▶ Regeneration of locomotor systems.
- ▶ Stem cell therapy for the lymphohaematopoietic system.
- ▶ Stem cell therapy for multiple sclerosis.

Challenges

- ▶ Create a section within the Blood and Tissue Bank with the structure of a pharmaceutical enterprise, capable of developing, trialling, registering and commercializing advanced therapeutic drugs.

Active Grants

- ▶ Codinach M. Uniportal fetoscopic repair of myelomeningocele using amniotic stem cells in sheep. Carlos III Health Institute. 2011-2013.
- ▶ Garcia J. REDONTAP. Continuous proliferation and simultaneous maturation of haematopoietic stem cells into blood cell lineages. European Union Grant. 2010-2014.
- ▶ Garcia J. MEDAVAN. Advanced medical therapies: cellular and tissue engineering products. Spanish Ministry of Economy and Competitiveness. 2010-2013.
- ▶ Garcia J. Prospective, randomized study comparing spinal fusion in patients with degenerative disease of the lumbar spine, using immobilized autologous mesenchymal cells in human bone particles, regarding the iliac crest grafts from the patient. Spanish Ministry of Health, Social Services and Equality. 2012-2013.
- ▶ Garcia J. Transplant of autologous mesenchymal stem cells derived from bone marrow as potential therapeutic strategy for the treatment of multiple sclerosis. Spanish Ministry of Health, Social Services and Equality. 2012-2013.
- ▶ Garcia J. Autologous Cell therapy with adult stem cells in the osteonecrosis of the femoral head. Spanish Ministry of Health, Social Services and Equality. 2012-2013.
- ▶ Garcia J. FACTOCEL-Enlargement of the production facilities of a factory for producing cell drugs for regenerative medicine. Spanish Ministry of Economy and Competitiveness. 2009-2013.
- ▶ Garcia J. Production of 100 doses of human cardiac stem cells all derived from a single human cardiac stem cells clone, or derived from a reduced number of clones, all from the same master cell stock. Stem Cells OpCo. 2012-2013
- ▶ Vives J. Experimental cell therapy study for the treatment of critical size defect with ex vivo expanded adult mesenchymal stem cells. Carlos III Health Institute. 2012-2014.

*TIF: 1.358 **MIF: 1.358

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Velez R., Hernandez-Fernandez A., Caminal M., Vives J., Soldado F., Fernandez A., Pla A., Aguirre M. Treatment of femoral head osteonecrosis with advanced cell therapy in sheep. Archives of Orthopaedic and Trauma Surgery; 132(11):1611-1618.
IF: 1.358

Associated Groups

210 Emerging Processes in Prevalent Diseases

213 Radiophysics and Radioprotection

214 Ophthalmology

216 Paediatrics

218 Chronic Respiratory Diseases

221 Palliative Care

222 Nuclear Medicine

224 Intensive Medicine

226 Anaesthesiology

230 Pharmacy

232 Dermatology

234 Plastic Surgery

236 Andrology

238 Urology

241 Multiple Sclerosis and Epilepsy Research

242 Radiation Oncology

244 Locomotor System Research

246 Reproductive Health

249 Nursing Care Research

250 Translational Molecular Oncology

252 Molecular Physiology of the Synapse

Emerging Processes in Prevalent Diseases

Coordinator

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Researchers

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Aitor Alquézar HSCSP
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Andrés Ceresuela HSCSP
Iván Díaz HSCSP
Verónica Díez HSCSP
J.M. Guardiola HSCSP
Héctor Hernández HSCSP
Sergio Herrera HSCSP
Leopoldo Higa HSCSP
Laura Lozano HSCSP
Miriam Mateo HSCSP
Albert Mauri HSCSP
J.A. Montiel HSCSP
Rosa Moreno HSCSP
Miguel Alberto Rizzi HSCSP
Natalia Rodríguez HSCSP
Sílvia Ruiz HSCSP
Miquel Santaló HSCSP
Montserrat Seres HSCSP
Sonia Serradell HSCSP
Olga Trejo HSCSP
Miquel Turbau HSCSP
Esther Vendrell HSCSP



Main Lines of Research

Emerging processes in prevalent diseases:

- ▶ The study and analysis of processes frequently observed in emergency departments so as to transfer the results to clinical practice and provide better care to patients.

Clinical organization and management:

- ▶ Mireia Puig and Josep Ris.
- ▶ Patient safety and emergency service quality. PI: Maite Álvarez.
- ▶ Nosocomial infection. PI: Albert Mauri.

Organ donation and coordination:

Francisco Caballero and Jesús Leal.

Respiratory system disorders:

- ▶ Salvador Benito.
- ▶ Respiratory pattern analysis in the return to spontaneous breathing. PI: Iván Díaz.
- ▶ Ventilatory pattern analysis in heart failure. PI: Sergio Herrera.

- ▶ Pneumonia in the emergency department. PI: Míriam Mateo.
- ▶ Noninvasive ventilation. PI: Miquel Turbau.
- ▶ Pulmonary embolism. PI: Laura Lozano.

Cardiovascular system:

- ▶ Miquel Santaló.
- ▶ Acute coronary syndrome in elderly patients. PI: Josep Antoni Montiel.
- ▶ Acute coronary syndrome in women. PI: Marta Blázquez.
- ▶ Ultrasensitive markers in acute coronary syndrome. PI: Leopoldo Higa.
- ▶ Complications in patients implanted with an ICD. PI: Olga Trejo.
- ▶ Cardiac failure. PI: Aitor Alquézar.
- ▶ Supraventricular arrhythmias. PI: Aitor Alquézar.

Drug abuse-HIV:

- ▶ HCV in patients with HIV. PI: Josep Ma Guardiola.
- ▶ Acute intoxication. PI: Hector Hernández.

Active Grants

- ▶ Guardiola JM. Safety and Efficacy of 240 mg BI 201335 once daily in combination with pegylated interferon alpha 2a and ribavirin for treatment of chronic Hepatitis C (HCV) genotype 1 infection in HIV/HCV-co-infected patients. A multinational, randomised, parallel group, open-label trial.

Awards

- ▶ Vendrell E. First prize for the best oral communication. 13th Conference of the Spanish Society for Mountain Medicine and Assistance (SEMAM), Chia, Benasque, Spain. Evolution of serum immunoglobulin during a mountain snowsleigh race.
- ▶ Guardiola JM, Gine R, Coco A, Esteve V, Mauri A, Puig M. Prize for best poster. 24th National Medical Emergencies Conference, Oviedo, Spain. Independent predictive factors associated with hospital readmission in a short-stay ward.

*TIF: 52.343 **MIF: 10.468

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Devereaux P.J., Chan M.T.V., Alonso-Coello P., Walsh M., Berwanger O., Villar J.C., Wang C.Y., Garutti R.J., Jacka M.J., Sigamani A., Srinathan S., Bickard B.M., Chow C.K., Abraham V., Tiboni M., Pettit S., Szczeklik W., Buse G.L., Botto F., Guyatt G., Heels-Ansdell D., Sessler D.I., Thorlund K., Garg A.X., Mrkobra M., Thomas S., Rodseth R.N., Pearse R.M., Thabane L., McQueen M.J., Van-Helder T., Bhandari M., Bosch J., Kurz A., Polanczyk C., Malaga G., Nagele P., Le Manach Y., Leuwer M., Yusuf S., Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (Santaló M.) Association between postoperative troponin levels and 30-day mortality among patients undergoing noncardiac surgery. JAMA - Journal of the American Medical Association; 307(21):2295-2304.
IF: 29.978

- 02 Domingo P., Guardiola J.M., Salazar J., Torres F., Mateo M.G., Pacho C., Del Mar Gutierrez M., Lamarca K., Fontanet A., Martin J., Munoz J., Vidal F., Baiget M. Association of ITPA gene polymorphisms and the risk of ribavirin-induced anemia in HIV/hepatitis C virus (HCV)-coinfected patients receiving HCV combination therapy. Antimicrobial Agents and Chemotherapy; 56(6):2987-2993.
IF: 4.565
- 03 Labarga P., Barreiro P., Da Silva A., Guardiola J.M., Rubio R., Aguirrebengoa K., Miralles P., Portu J., Tellez M.J., Morano L., Castro A., Pineda J.A., Terron A., Hernandez-Quero J., Marino A., Rios M.J., Echeverria S., Asensi V., Vispo E., Soriano V. Comparison of high ribavirin induction versus standard ribavirin dosing, plus peginterferon for the treatment of chronic hepatitis C in HIV-infected patients: The PERICO trial. Journal of Infectious Diseases; 206(6):961-968.
IF: 5.848

- 04 Rizzi M.A., Torres Bonafonte O.H., Lopez Sanchez G., Puig Campmany M., Benito S., Ruiz Hidalgo D. Delirium in emergency patients with decompensated heart failure: Clinical characteristics and course [Delirium en pacientes atendidos por insuficiencia cardiaca descompensada en urgencias: Características clínicas y evolución]. Emergencias; 24(4):283-288.
IF: 2.578
- 05 Berenguer J., Rodriguez E., Miralles P., Von Wichmann M.A., Lopez-Aldeguer J., Mallolas J., Galindo M.J., Van Den Eynde E., Tellez M.J., Quereda C., Jou A., Sanz J., Barros C., Santos I., Pulido F., Guardiola J.M., Ortega E., Rubio R., Jusdado J.J., Montes M.L., Gaspar G., Esteban H., Bellon J.M., Gonzalez-Garcia J. Sustained virological response to interferon plus ribavirin reduces non-liver-related mortality in patients coinfected with hiv and hepatitis c virus. Clinical Infectious Diseases; 55(5):728-736.
IF: 9.374

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Rodríguez-Valero N, Esquivias M, Plans E, Tesfamariam A, Reyes-Rabell F, Ramos-Rincón JM. Anthrax outbreak in a rural area of Ethiopia. Rev Clin Esp 2012;212(9):e73-5.
- ▶ Giraldo BF, Gaspar BW, Caminal Pb, Benito S. Analysis of roots in ARMA model for the classification of patients on weaning trials. Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS); 2012. 698 p.

Books

- ▶ Ramos Luis A, Benito S. Fundamentos de la Ventilación Mecánica. Marge Médica Books, Barcelona, 2012.
- ▶ Guardiola JM, Soriano V. (eds.), Tratamiento de la infección por VIH-SIDA. Fármacos y combinaciones, Permanyer, Barcelona, 2005.

Book Chapters

- ▶ In: Gonzalez del Castillo J, Julián Jiménez A, Candel González F, Manual de Infecciones en Urgencias. INFURG-SEMES, 2012:
 - Pacho C, Martín J, Guardiola J. Infecciones de los párpados: blefaritis (pp. 193-198).
 - Martín J, Pacho J, Guardiola J. Infecciones de la conjuntiva (pp. 199-201).
 - Guardiola J, Arroyo J, Puig M. Infecciones de la córnea: queratitis (pp. 203-206).
 - Martín, Pacho P, Guardiola J. Infecciones de la retina y coroides (pp. 207-211).
 - Guardiola J, Higa P, Blázquez M. Infecciones del aparato lagrimal (pp. 213-217).
 - Pacho C, Martín J, Guardiola J. Endoftamitis aguda (pp. 219-223).
 - Guardiola J, Mauri A, Montiel J. Celulitis orbitaria (pp. 225-229).
- ▶ In: Guardiola JM, Soriano V (eds.), Tratamiento de la infección por VIH-SIDA. Fármacos y combinaciones, Permanyer, Barcelona, 2005:
 - Soriano V, Guardiola J. Terapia ARV en el año 2012 (pp.1-10).
 - Domingo P, Guardiola J. Atazanavir, fosamprenavir, lopinavir, saquinavir y tipranavir (pp. 83-96).
 - Gutierrez M, Gracia M, Cadafalch J, Domingo P, Guardiola J. Etravirina (pp. 53-62).

Emerging Processes in Prevalent Diseases

Subgroup: Organ Donation and Coordination

Coordinator
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Collaborators
Jesús Leal HSCSP
Mireia Puig HSCSP
Josep Ris HSCSP



Main Lines of Research

- Kidney preservation with pulsatile perfusion machine RM3: assessment and recovery of kidneys for transplantation from expanded criteria brain dead donors. PI: Francisco Caballero.
- Pathways to consent for organ donation for transplantation (research workshop in collaboration with the University of Leeds and Leeds General Infirmary, UK). PI: Francisco Caballero.

Awards

- Caballero F, Leal J, Puig M, Huayhualla C. Premio de la Organización Nacional de Trasplantes (ONT). Ministerio de Sanidad a la mejor Tesina del Máster Internacional Alianza 2012 en Donación y Trasplante de Órganos, Tejidos y Células. Título: Guía de entrevista familiar de solicitud de consentimiento a la donación de órganos para trasplante y evaluación con el instrumento AGREE II (Appraisal of Guidelines Research & Evaluation).

Collaborations

Collaboration with other IIB Sant Pau Groups

- Clinical and Translational Cardiology.

Other Publications

- Caballero F, Puig M, Leal J, Huayhualla C, Manzano A, Ris J, Benito S. Family interview guide for requesting organ donation for transplantation and evaluation using the Appraisal of Guidelines Research and Evaluation (AGREE II) instrument. *Organs, Tissues & Cells* 2012; 15: 163-169.
- Letter**
- Caballero F, Puig M, Santos JA, Deulofeu R, Ballarín J, Charco R, Leal J. Successful transplantation of organs from a donor with postneurosurgical meningitis caused by escherichia coli. *Transplantation* 2012;93(3):e11-3.

Radiophysics and Radioprotection

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Agustín Ruiz HSCSP



Main Lines of Research

External beam radiotherapy:

- Characterization of various in vivo dose measurement detectors for radiation therapy treatments with intensity modulation (IMRT).
- Validation of dose calculation algorithms for external beam radiotherapy planning systems.
- Optimization of QA procedures for IMRT, stereotactic body radiation therapy (SBRT) and gating respiratory treatments.

Computed tomography dosimetry:

- Index dose assessment for multislice CT.

Biological dosimetry:

- Cytogenetic evaluation of the relative biological efficacy of low-energy X-rays (in cooperation with the Autonomous University of Barcelona team led by Dr. María Rosa Caballín).

*TIF: 7.431 **MIF: 3.715

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Carrasco P, Jornet N, Latorre A, Eudaldo T, Ruiz A, Ribas M. 3D DVH-based metric analysis versus per-beam planar analysis in IMRT pretreatment verification. *Medical Physics*; 39(8):5040-5049. **IF: 2.911**
- 02 Eriksen J.G., Beavis A.W., Coffey M.A., Leer J.W.H., Magrini S.M., Benstead K., Boelling T., Hjalm-Eriksson M., Kantor G., Maciejewski B., Mezeckis M., Oliveira A., Thirion P., Vitek P., Olsen D.R., Eudaldo T., Enghardt W., Francois P., Garibaldi C., Heijmen B., Josipovic M., Major T., Nikolettopoulos S., Rijnders A., Waligorski M., Wasilewska-Radwanska M., Mullaney L., Boejen A., Vaandering A., Vandeveld G., Verfaillie C., Potter R. The updated ESTRO core curriculum 2011 for clinicians, medical physicists and RTTs in radiotherapy/radiation oncology. *Radiotherapy and Oncology*; 103(1):103-108. **IF: 4.52**

ski B., Mezeckis M., Oliveira A., Thirion P., Vitek P., Olsen D.R., Eudaldo T., Enghardt W., Francois P., Garibaldi C., Heijmen B., Josipovic M., Major T., Nikolettopoulos S., Rijnders A., Waligorski M., Wasilewska-Radwanska M., Mullaney L., Boejen A., Vaandering A., Vandeveld G., Verfaillie C., Potter R. The updated ESTRO core curriculum 2011 for clinicians, medical physicists and RTTs in radiotherapy/radiation oncology. *Radiotherapy and Oncology*; 103(1):103-108. **IF: 4.52**

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Geleijns J, Breatnach É, Cantera AC, Damiakis J, Dendy P, Evans A, Faulkner K, Padovani R, van der Putten W, Schad L, Wirestam R, Eudaldo T. Core curriculum for medical physicists in radiology. Recommendations from an EFOMP/ESR working group. *Insights into Imaging* 2012;3(3):197-200.

Scopus Indexed Publications

- Ribas Morales M. Advances in radiotherapy with external beam X-rays: From 3D to 4D. *Europhys News* 2012;43(6):32-5.

Ophthalmology

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Main Lines of Research

- Optimization of the functional rehabilitation of patients after cataract surgery using multifocal intraocular lens.
- Evaluation of vision quality in terms of parameters such as visual acuity, sensitivity to contrast and aberrometry.
- Ocular repercussions of allogeneic medullary transplants and evaluation of the different clinical manifestations and response to treatment in graft-versus-host disease.
- Comparison of the efficacy and safety of intravitreal ranibizumab versus laser photocoagulation in patients with visual impairment secondary to diabetic macular oedema.

Active Grants

- Buil J. Development of a new thulium laser with 1.98 micron emission for medical and surgical applications. FIS Grant. Carlos III Health Institute. October 2010-December 2012.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Neurobiology of Dementia.

External Collaborations

- José Vicente Pérez Moreiras.
- Hospital de Bellvitge, L'Hospitalet de Llobregat, Spain.
- Institute of Applied Ophthalmology and Biology (IOBA), Valladolid, Spain.
- Hospital Universitario Cruces, Barakaldo, Spain.
- Clínica Universitaria de Navarra, Pamplona, Spain.
- Hospital Universitario de Canarias, Canary Islands, Spain.

- Hospital Universitario de Gran Canaria Dr. Negrín, Canary Islands, Spain.
- Hospital Universitario Virgen de la Victoria, Málaga, Spain.
- Hospital La Paz, Madrid, Spain.
- Complejo Hospitalario Torrecárdenas, Almería, Spain.
- Vissum, Madrid, Spain.
- Hospital Universitario de La Princesa, Madrid, Spain.
- Hospital Universitari La Fe, València, Spain.
- Hospital Son Llàtzer, Palma de Mallorca, Spain.
- Clínica Oftalmológica Barraquer, Barcelona, Spain.

*TIF: 0.912 **MIF: 0.912

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Gil M.A., Varon C., Rosello N., Cardona G., Buil J.A. Visual acuity, contrast sensitivity, subjective quality of vision, and quality of life with 4 different multifocal IOLs. *European Journal of Ophthalmology*; 22(2):175-187.
IF: 0.912

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Vela JI, Crespi J, Andreu D. Repositioning of dexamethasone intravitreal implant (ozurdex) migrated into the anterior chamber. *Int Ophthalmol* 2012;32(6):583-4.
- Romero-Aroca P, Sararols L, Arias L, Casaroli-Marano RP, Bassaganyas F. Topical azithromycin or ofloxacin for endophthalmitis prophylaxis after intravitreal injection. *Clinical Ophthalmology* 2012;6(1):1595-9.
- Bausili M, Abreu S, Unzueta MC, Álvarez MG, Crespi J, Moral MV. Postoperative cortical blindness after right upper lung lobectomy. *Rev Esp Anestesiol Reanim* 2012;59(3):157-61.

Letter

- López G, Torres OH, Vela I, Pomar V. Ocular disease as an onset form of disseminated nocardiosis by *Nocardia brasiliensis*. *Med Clin* 2012;139(9):415-6.

Others

- Marchino T, Vela JI, Rodríguez F, Sanchez S, Buil JA. Endoftalmitis endógena por streptococcus agalactiae. Evolución a panoftalmia y enucleación. *Anal. d'Oftalmologia*, Vol. 20, No.3 July-September 2012.

Paediatrics

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Collaborators
Marta García
(Enriqueta Villavechia Foundation)



Main Lines of Research

- Erythropoietin as an alternative to transfusion in paediatrics.
- Clinical application of peritoneal drainage in the treatment of enterocolitis in infants.
- Chronic functional constipation: treatment with PEG.
- Creation of a Catalan network for diagnosis and clinical monitoring of rare anaemias due to major haemoglobinopathies.
- Implementation of the study of minimal residual disease in risk assessment in the treatment of children acute lymphoblastic leukaemia in the SHOP protocol (in collaboration with the HSCSP Haematology Department).

Challenges

- Transplant haematopoietic progenitor cells from alternative donors.
- Make pre-implant genetic diagnoses.
- Transplant haematopoietic progenitor cells in congenital immunodeficiencies.
- Transplant haematopoietic progenitor cells in congenital metabolic pathologies.
- Research congenital immunodeficiencies.
- Research Fanconi anaemia (group recognized by the Autonomous University of Barcelona, Spain).
- Apply adaptive cell immunotherapy for tumours.
- Intervention in post-asphyxia neuronal damage in asphyctic infants by applying therapeutic hypothermia (in the context of a Catalan network).
- Polytraumatized patient care programme. PPT implementation code in HSCSP and in CatSalut central register.
- Implementation of a multidisciplinary institutional massive transfusion protocol in the HSCSP.

Active Grants

- Badell I. Creation of a Catalan network for the diagnosis and clinical management of rare anaemias due to major haemoglobinopathies. La Marató de TV3 Foundation. January 2011-January 2014.

*TIF: 44.164 **MIF: 4.014

ISI Web of Knowledge Indexed Publications with an IF

- Rio P, Agirre X, Garate L, Banos R, Alvarez L, San Jose-Eneriz E, Badell I, Casado J.A., Garin M., Prosper F., Bueren J.A. Down-regulated expression of hsa-miR-181c in Fanconi anemia patients: Implications in TNF α regulation and proliferation of hematopoietic progenitor cells. *Blood*; 119(13):3042-3049. **IF: 9.06**
- Styczynski J, Balduzzi A, Gil L, Labopin M, Hamladji R.-M., Marktel S, Yesilipek M.A., Fagioli F, Ehlert K, Matulova M., Dalle J.H., Wachowiak J, Miano M., Messina C., Diaz M.A., Vermeylen C., Matthias E., Badell I, Dreger P, Gozdzik J, Hutt D., Rascon J., Dini G., Peters C. Risk of complications during hematopoietic stem cell collection in pediatric sibling donors: A prospective European Group for Blood and Marrow Transplantation Pediatric Diseases Working Party study. *Blood*; 119(12):2935-2942. **IF: 9.06**
- Scheibl A., Calderon E.M., Garcia Borau M.J., Prieto R.M., Gonzalez P.F., Galiana G.G. Epidural hematoma. *Journal of Pediatric Surgery*; 47(2):E19-E21. **IF: 1.383**
- Rives S., Estella J., Camos M., Garcia-Miguel P, Verdeguez A, Couselo J.M., Tasso M., Molina J., Gomez P, Fernandez-Delgado R., Navajas A., Badell I. T-cell pediatric acute lymphoblastic leukemia: Analysis of survival and prognostic factors in 4 consecutive protocols of the Spanish cooperative study group SHOP [Leucemia linfoblástica aguda T pediátrica: análisis de supervivencia y factores pronósticos en 4 protocolos consecutivos del grupo cooperativo multicéntrico SHOP]. *Medicina Clinica*; 139(4):141-149. **IF: 1.399**
- Martinez-Martinez L., Gonzalez-Santesteban C., Badell I., de la Calle-Martin O. The polymorphism p.G219R of CD40L does not cause immunological alterations in vivo: Conclusions from a X-linked hyper IgM syndrome kindred. *Molecular Immunology*; 52(41367):237-241. **IF: 2.645**
- De La Fuente-Gonzalo F., Baiget M., Badell I., Ricard P, Vinuesa L., Martinez-Nieto J., Ropero P, Villegas A., Gonzalez F.A., Diaz-Mediavilla J. Study of three families with Hb agrinios [a29(B10) Leu -Pro, CTG>CCG (a2)] in the spanish population: Three homozygous cases. *Hemoglobin*; 36(6):526-532. **IF: 0.894**
- Martinez-Martinez L., Vazquez-Ortiz M., Gonzalez-Santesteban C., Martin-Nalda A., Vicente A., Plaza A.M., Badell I., Alsina L., de la Calle-Martin O. From Severe Combined Immunodeficiency to Omenn syndrome after hematopoietic stem cell transplantation in a RAG1 deficient family. *Pediatric Allergy and Immunology*; 23(7):660-666. **IF: 3.376**

- Parra J., Amenedo M., Muniz-Diaz E., Ormo F., Simo M., Vega C., Fernandez J.G., Senosiain R., Moliner E., Guinovart G. A new successful therapy for fetal chylothorax by intrapleural injection of maternal blood. *Ultrasound in Obstetrics and Gynecology*; 22(3):290-294. **IF: 3.557**
- Verd S., Lopez E. Management of chickenpox with frozen mother's milk. *Journal of Alternative and Complementary Medicine*; 18(8):808-810. **IF: 1.464**
- Badell I.R., Thompson P.W., Turner A.P., Russell M.C., Avila J.G., Cano J.A., Robertson J.M., Leopardi F.V., Strobert E.A., Iwakoshi N.N., Reimann K.A., Ford M.L., Kirk A.D., Larsen C.P. Nondepleting anti-CD40-based therapy prolongs allograft survival in nonhuman primates. *American Journal of Transplantation*; 12(1):126-135. **IF: 6.192**
- Salazar J., Altes A., Del Rio E., Estella J., Rives S., Tasso M., Navajas A., Molina J., Villa M., Vivanco J.L., Torrent M., Baiget M., Badell I. Methotrexate consolidation treatment according to pharmacogenetics of MTHFR ameliorates event-free survival in childhood acute lymphoblastic leukaemia. *Pharmacogenomics Journal*; 12(5):379-385. **IF: 5.134**

Scientific Production

Scopus Indexed Publications

- Fraga Rodríguez GM, Alonso Melgar A. Determining plasma cystatin C levels as a method of assessing kidney function in children. *Anales de Pediatría Continuada* 2012;10(2):95-100.

Letters

- Carreras-González E, Brió-Sanagustín S, Guimerá I, Crespo C. Complication of the intraosseous route in a newborn infant. *Medicina Intensiva* 2012;36(3):233-42.
- García MB, Domínguez O, Juan M, Aróstegui JJ, Badell I, Chapman E, Martín-Mateos MA. Type I leucocyte adhesion deficiency (LAD I). Report of a case. *Allergol Immunopathol* 2012;40(4):254-8.

- Rives S, Camós M, Estella J, Gómez P, López-Duarte M, Navajas A, Badell I. Validation of the French acute lymphoblastic leukaemia study group FRALLE prognostic index for paediatric Philadelphia-chromosome acute lymphoblastic leukaemia. *Br J Haematol* 2012;156(2):284-6.
- Verd S, Fraga G. Markers of low-grade inflammation, breastfeeding and uric acid concentration. *Acta Paediatrica, International Journal of Paediatrics* 2012;101(5).
- Verd S, Escobar A, Díez R. Women, breastfeeding, and cholesterol levels. *J Pediatr* 2012;160(1):179.

Other Publications

Chronic Respiratory Diseases

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Main Lines of Research

Asthma:

- ▶ Asthma exacerbations.
- ▶ Severe asthma.
- ▶ Good clinical practice guidelines for asthma.
- ▶ Bronchial inflammation.
- ▶ Experimental asthma and pathogenic mechanisms.
- ▶ Multicentre biobank specializing in bronchial biopsies for research into asthma.
- ▶ Bronchial thermoplasty.
- ▶ Clinical trials.

COPD and respiratory failure:

- ▶ Non-invasive mechanical ventilation.
- ▶ Respiratory rehabilitation.
- ▶ Pathophysiology.
- ▶ Exacerbation.

Obstructive sleep apnoea (OSA):

- ▶ Physiology and clinical, diagnostic and treatment consequences of sleep disorders.
- ▶ Obesity-hypoventilation syndrome.
- ▶ Analysis of airway inflammation in patients with OSA.

Challenges

- ▶ Consolidate a leading clinical trial unit in respiratory diseases.
- ▶ Capture pre-clinical development contracts from the pharmaceutical and biotech industry, using the capabilities of our basic research lab and experimental animal models.
- ▶ Recruit research trainees seeking a doctoral degree.
- ▶ Support the development of multidisciplinary research networks such as the Barcelona Respiratory Network and the Programme for Integrated Research for Asthma of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR), and collaborate with or become involved in existing networks such as the Respiratory CIBER (CIBERES).

Active Grants

- ▶ Castillo D. Performance of a case study programme for COPD by spirometry in pharmacy users. SEPAR Grant. June 2008-May 2012.
- ▶ Fortuna A. Impact of sleep apnea-hypopnea syndrome on metabolic syndrome in severe obesity. SOCAP Grant. January 2010-December 2012.
- ▶ Giner J. Effectiveness of quality control methods for primary care spirometry. FIS Grant. Carlos III Health Institute. January 2010-December 2013.
- ▶ Güell R. Effects of training after resection surgery in patients with lung cancer. SOCAP. Boehringer Grant. August 2012-Juliol 2015.
- ▶ Mayos M. Systemic effects of sleep apnoea syndrome: analysis using animal models and human studies. FIS Grant. Carlos III Health Institute. January 2009-June 2012.
- ▶ Mola A. Study of cerebral haemodynamic and metabolic changes in patients with OSA using transcranial optical spectroscopy techniques. SOCAP Grant. January 2011-December 2013.
- ▶ Peiró M. Effectiveness of a minimal intervention educational programme for asthma management and exacerbation prevention (PROMETEO). COIB Grant. January 2011-December 2013.
- ▶ Plaza V. Toll-like receptor expression in cells in induced sputum from asthmatic patients. Relationship to phenotype, severity and level of asthma control. FUCAP Grant. January 2012-December 2014.
- ▶ Ramos D. Interaction between immune regulation and airway remodelling mechanisms in asthma: pathogenic outcomes versus therapeutic potential. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- ▶ Ramos D. Role of regulatory and effector cells in the recruitment and differentiation of mesenchymal stem cells as a mechanism for airway remodelling in asthma. FIS Grant. Carlos III Health Institute. January 2009-September 2012.
- ▶ Ramos D. Development of a subspecialty bronchial biopsy biobank for asthma research. SEPAR Grant. June 2010-May 2013.
- ▶ Sibila O. Study of lung defence mechanisms in severe COPD and their relationship to airway infection. FIS Grant. Carlos III Health Institute. January 2010-December 2013.
- ▶ Sibila O. New diagnostic methods for bacterial colonization in COPD; electronic nose, microarrays and high-resolution CT. SEPAR Grant. June 2012-May 2015.
- ▶ Sibila O. Early discrimination of the inflammatory bronchial phenotype in asthmatic patients using the electronic nose. SEPAR Grant. June 2011-June 2013.
- ▶ Torrego A. Randomized trial of diagnostic yield and safety of transbronchial lung biopsy with cryoprobes versus conventional forceps in the diagnosis of diffuse lung diseases. FIS Grant. Carlos III Health Institute. January 2011-December 2013.
- ▶ Torrego A. Randomized trial of diagnostic yield and safety of transbronchial lung biopsy with cryoprobes versus conventional forceps in the diagnosis of diffuse lung diseases. FUCAP Grant. March 2010-March 2013.

*TIF: 68.025 **MIF: 4.535

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Laserna E., Sibila O., Aguilar P.R., Mortensen E.M., Anzueto A., Blanquer J.M., Sanz F., Rello J., Marcos P.J., Velez M.I., Aziz N., Restrepo M.I. Hypocapnia and hypercapnia are predictors for ICU admission and mortality in hospitalized patients with community-acquired pneumonia. *Chest*; 142(5):1193-1199. **IF: 5.854**
- Solanes I., Bolibar I., Llauger M.A., Medrano C., Peiro M., Fraga M., Pou M.A., Giner J., Freixas M., Plaza V. Characteristics of stable chronic obstructive pulmonary disease related to systemic inflammation [Características de la enfermedad pulmonar obstructiva crónica en fase estable relacionadas con la inflamación sistémica]. *Medicina Clinica*; 139(10):430-436. **IF: 1.399**
- Barbe F., Duran-Cantolla J., Sanchez-De-La-Torre M., Martinez-Alonso M., Carmona C., Barcelo A., Chiner E., Masa J.F., Gonzalez M., Marin J.M., Garcia-Rio F., Diaz De Aatari J., Teran J., Mayos M., De La Pena M., Monasterio C., Del Campo F., Montserrat J.M. Effect of continuous positive airway pressure on the incidence of hypertension and cardiovascular events in nonsleepy patients with obstructive sleep apnea: A randomized controlled trial. *JAMA - Journal of the American Medical Association*; 307(20):2161-2168. **IF: 29.978**
- Vidal S., Bellido-Casado J., Granel C., Crespo A., Plaza V., Juarez C. Flow cytometry analysis of leukocytes in induced sputum from asthmatic patients. *Immunobiology*; 217(7):692-697. **IF: 2.814**
- Torrego Fernandez A. Flexible bronchoscopy in critical care units [Broncoscopia flexible en unidades de críticos]. *Medicina Intensiva*; 36(6):385-386. **IF: 1.323**
- Plaza V., Calle M., Molina J., Quirce S., Sanchis J., Viejo J.L., Caballero F. External Validation of the Recommendations of the Multidisciplinary Consensus About Inhaled Therapies [Validación externa de las recomendaciones del Consenso multidisciplinar sobre Terapia Inhalada]. *Archivos de Bronconeumología*; 48(6):189-196. **IF: 1.372**
- Plaza V., Bellido-Casado J., Diaz C., Perez de Llano L., Sanchis J., Villasante C., Lopez Vina A. Involvement of Spanish Pulmonology Centers in Patient Care, Postgraduate Education and Research in Asthma: The Results of the ATENEA Survey [Implicación de los servicios de neumología españoles en la asistencia, docencia e investigación en asma. Resultados de la encuesta ATENEA]. *Archivos de Bronconeumología*; 48(4):114-119. **IF: 1.372**
- García-Bellmunt L., Sibila O., Solanes I., Sanchez-Reus F., Plaza V. Pulmonary Nocardiosis in Patients with COPD: Characteristics and Prognostic Factors [Nocardiosis pulmonar en pacientes con EPOC: características y factores pronósticos]. *Archivos de Bronconeumología*; 48(8):280-285. **IF: 1.372**
- Güell M.R., Cejudo P., Rodriguez-Trigo G., Galdiz J.B., Casolive V., Regueiro M., Soler-Cataluna J.J. Standards for Quality Care in Respiratory Rehabilitation

Chronic Respiratory Diseases

Scientific Production

TIF: 68.025

MIF: 4.535

in Patients With Chronic Pulmonary Disease [Estándares de calidad asistencial en rehabilitación respiratoria en pacientes con enfermedad pulmonar crónica]. Archivos de Bronconeumología; 48(11):396-404.
IF: 1.372

10 Pena E., Dennie C., Franquet T., Milroy C. Nonthrombotic Pulmonary Embolism: A Radiological Perspective. Seminars in Ultrasound, CT and MRI; 33(6):522-534.
IF: 1.289

11 De Batlle J., Mendez M., Romieu I., Balcells E., Benet M., Donaire-Gonzalez D., Ferrer J.J., Orozco-Levi M., Anto J.M., Garcia-Aymerich J., Serra I., Guerra S., Gea J., Gayete A., Vollmer I., Barbera J.A., Gomez F.P., Pare C., Roca J., Rodriguez-Roisin R., Agusti A., Freixa X., Rodriguez D.A., Gimeno-Santos E., Portillo K., Ferrer J., Andreu J., Pallissa E., Rodriguez E., Casan P., Guell R., Gimenez A., Monso E., Marin A., More-

ra J., Ferrero E., Escarrabill J., Ferrer A., Sauleda J., Togores B., Bautista Galdiz J., Lopez L., Belda J. Cured meat consumption increases risk of readmission in COPD patients. European Respiratory Journal; 40(3):555-560.
IF: 6.355

12 De La Roque E.D., Bellance N., Rossignol R., Begueret H., Billaud M., Dos Santos P., Ducret T., Marthan R., Dahan D., Ramos-Barbon D., Amor-Carro O., Savineau J.-P., Fayon M. Dehydroepiandrosterone reverses chronic hypoxia/reoxygenation-induced right ventricular dysfunction in rats. European Respiratory Journal; 40(6):1420-1429.
IF: 6.355

13 Rodrigo G.J., Plaza V., Castro-Rodriguez J.A. Comparison of three combined pharmacological approaches with tiotropium monotherapy in stable moderate to severe COPD: A systematic review. Pulmonary Pharma-

cology and Therapeutics; 25(1):40-47.
IF: 2.543

14 Valdiguiesias V., Kilic G., Costa C., Amor-Carro O., Marinas-Pardo L., Ramos-Barbon D., Mendez J., Pasaro E., Laffon B. In vivo genotoxicity assessment in rats exposed to prestige-like oil by inhalation. Journal of Toxicology and Environmental Health - Part A: Current Issues; 75(13-15):756-764.
IF: 1.733

15 Plaza V., Sanchis J., Roura P., Molina J., Calle M., Quirce S., Viejo J.L., Caballero F., Murio C. Physicians' knowledge of inhaler devices and inhalation techniques remains poor in Spain. Journal of Aerosol Medicine and Pulmonary Drug Delivery; 25(1):16-22.
IF: 2.894

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

► Millares L, Marin A, Garcia-Aymerich J, Sauleda J, Belda J, Monso E, Antó JM, Benet M, de Batlle J, Serra I, Donaire-Gonzalez D, Guerra S, Gea J, Balcells E, Gayete A, Orozco-Levi M, Vollmer I, Barberà JA, Gómez FP, Paré C, Roca J, Rodriguez-Roisin R, Freixa X, Rodriguez DA, Gimeno E, Portillo K, Ferrer J, Andreu J, Pallissa E, Rodriguez E, Casan P, Güell R, Giménez A, Marin A, Barea S, Morera J, Ferrero E, Escarrabill J, Ferrer A, Agustí AG, Togores B, Gáldiz JB, López L. Specific IgA and metalloproteinase activity in bronchial secretions from stable chronic obstructive pulmonary disease patients colonized by haemophilus influenzae. Respiratory Research 2012;13.

► Fernandez JF, Sibila O, Restrepo MI. Predicting ICU admission in community-acquired pneumonia: Clinical scores and biomarkers. Expert Review of Clinical Pharmacology 2012;5(4):445-58.

► Malave A, Laserna E, Sibila O, Mortensen EM, Anzueto A, Restrepo MI. Impact of prior systemic corticosteroid use in patients admitted with community-acquired pneumonia. Therapeutic Advances in Respiratory Disease 2012;6(6):323-30.

► Olaguibel JM, Quirce S, Juliá B, Fernández C, Fortuna AM, Molina J, Plaza V, Aguar M, Agüero R, Aicart D, Almela T, Almonacid C, Alonso A, Álvarez F, Álvarez J, Álvarez M, Álvarez P, Amiama J, Antepara I, Armisen M, Arnedillo A, Azpiazu M, Barrio J, Bazús T, Bello D, Bentabol M, Beristain A, Blanco C, Blanco R, Borderías L, Bustamante A, Caballero P, Cabrera P, Calero F, Calvo E, Cantó G, Cañete C, Carballada F, Cárdenas R, Carpintero M, Carretero P, Carrillo T, Casado M, Casas F, Cebollero P, Cisneros C, Clemente L, Colas C, Compaired J, Compte L, Cordobés C, Dávila I, De Diego A, De Higes E, De la Hoz B, De León J, Del Moral A, Delgado J, Díaz C, Diego C, Domínguez C, Domínguez J, Domínguez L, Entrenas L, Escobar M, Espigares M, Espinosa M, Félix R, Feo F, Fernández A, Fernández C, Fernández E, Fernández F, Fernández M, Figueroa J, Flor X, García J, García J, García J, García M, García R, García-Cosío, García-Salmónes, Gómez E, González D, González F, González R, Gutiérrez V, Henríquez A, Hernández A, Hernández D, Hernández E, Hernández F, Hidalgo E, Ibañez P, Iglesias F, Iglesias J, Ignacio J, Irizar M, Izquierdo J, Jiménez J, Jorro G, Labarta N, Lamban M, Larnia A, León M, Levy A, López A, Lumbreras G, Malek T, Marcos C, Martín J, Martínez A, Martínez C, Martínez D, Martínez E, Martínez J, Medina J, Melero C, Méndez J, Minguez A, Molero I, Moreno A, Moreno C, Moreno J, Muñoz J, Muñoz R, Mur P, Navarro A, Navarro J, Negro J, Nieto A, Nualart M, Oheling A, Ojeda P, Padilla A, Parra A, Pedrosa M, Peiron M, Peláez A, Penela P, Peñas J, Pereira A, de Llano P, Pérez A, Pérez G, Ramos J, Rivera M, Robledo T, Rodríguez C, Rodríguez F, Rodríguez G, Rodríguez P, Rubio M, Sánchez A, Sánchez A, Sánchez I, Sánchez J, Sánchez-Guerrero I, Senent C, Serra J, Serrano J, Simonet P, Soto J, Subiza J, Tabar A, Timiraos R, Trillo C, Urrutia I, Valdés L, Valldeperas J, Vargas R, Vega A, Vega J, Vereha H, Vicente J, Vidal C, Vigil L, Vila C, Villafañila R, Villasante C, Zubeldia J. Measurement of asthma control according to global initiative for asthma guidelines: A comparison with the asthma control questionnaire. Respiratory Research 2012;13.

Scopus Indexed Publications

► Escarrabill J, Roger N, Burgos F, Giner J, Molins A, Tresserras R. Design of a basic training program to get quality spirometry. Educacion Medica 2012;15(2):103-7.

Palliative Care

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Main Lines of Research

► Symptom evaluation and control: pain, dyspnoea, cognitive failure, complex situations.

► End-of-life ethical issues: sedation, expression of a desire for death and euthanasia.

► Psychosocial care for patients and families: adaptation to the terminal situation, grief, spiritual needs.

► Training in palliative care: training needs and outcomes.

► Art therapy.

Challenges

► Psychosocial care for patients and families.

► Counselling and hospital sensitization.

► Quality evaluation and control.

► Symptom evaluation and control.

► Integrated care: analysis and care of end-of-life emotional, social and spiritual dimensions and adequate ethical reflection in decision making.

Active Grants

► Pascual A. Chemotherapeutic treatment vs an integrated support programme for patients with advanced cancer previously treated with chemotherapy: multicentre randomized clinical trial. FIS Grant. January 2012-December 2014.

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

► Tuca A, Guell E, Martinez-Losada E, Codorniu N. Malignant bowel obstruction in advanced cancer patients: Epidemiology, management, and factors influencing spontaneous resolution. Cancer Management and Research 2012;4(1):159-69.

Others

► Centeno C, Sanz A, Cuervo MA, Ramos D, Hernansanz S, Gonzalez J, Almaraz MJ, Lama M, Vara F, Pascual A. Multicentre, double-blind, randomized placebo-controlled clinical trial on the efficacy of methylphenidate for depressive symptoms in advanced cancer patients. BMJ Support Palliat Care 2012;2:328-333.

Intensive Medicine

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Main Lines of Research

- ▶ Acute respiratory failure and artificial ventilation.
- ▶ Non-invasive ventilation.
- ▶ New ventilation modes: proportional-assist ventilation and NAVA.
- ▶ Prone decubitus in acute respiratory dysfunction syndrome.
- ▶ Artificial ventilation withdrawal.
- ▶ Expert ventilation systems.
- ▶ Sleep and artificial ventilation.
- ▶ Early and active mobilization of the critical patient.

Study of the usefulness of new biomarkers in critically ill patients:

- ▶ BNP in weaning from mechanical ventilation.
- ▶ Use of the NGAL protein in the renal prognosis of critically ill patients.
- ▶ Strict control of blood glucose in critically ill patients.
- ▶ Prophylaxis of acute gastric mucosal injury in critically ill patients.
- ▶ Study of the haemodynamic effects of different antipyretic drugs in critically ill patients.
- ▶ Influence of position change to supine decubitus position in intraabdominal pressure.

Challenges

- ▶ Consolidate clinical and physiological research into ventilation in critically ill patients through multicentre and multinational networking.
- ▶ Create a stable and well-trained group of researchers in this discipline.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Pharmacological Research in Humans.

*TIF: 118.139 **MIF: 8.438

ISI Web of Knowledge Indexed Publications with an IF

- Ranieri V.M., Thompson B.T., Barie P.S., Dhainaut J.-F., Douglas I.S., Finfer S., Garland B., Marshall J.C., Rhodes A., Artigas A., Payen D., Tenhunen J., Al-Khalidi H.R., Thompson V., Janes J., Macias W.L., Vangerow B., Williams M.D., PROWESS-SHOCK Study Group (col. Betsebe A.). Drotrecogin alfa (activated) in adults with septic shock. *New England Journal of Medicine*; 366(22):2055-2064. **IF: 51.658**
- de Quintana-Schmidt C., Nieves M.V., Catala-Antunez I., Asencio-Cortes C., Roig A.J.B., Molet-Teixido J. Decompressive craniectomy treatment of hyper-tension intracranial meningoencephalitis acute [Craniectomía descompresiva como tratamiento de la hipertensión intracranial en una meningoencefalitis aguda]. *Revista de Neurologia*; 54(5):317-318. **IF: 1.179**
- Ochagavia A., Zapata L., Carrillo A., Rodriguez A., Guerrero M., Ayuela J.M. Evaluation of contractility and postloading in the intensive care unit [Evaluación de la contractilidad y la poscarga en la unidad de cuidados intensivos]. *Medicina Intensiva*; 36(5):365-374. **IF: 1.323**
- Vera P., Zapata L., Gich I., Mancebo J., Betbesé A.J. Hemodynamic and antipyretic effects of paracetamol, metamizol and dextetopofen in critical patients [Efectos hemodinámicos y antipiréticos del paracetamol, metamizol y dextetopofeno en pacientes críticos]. *Medicina Intensiva*; 36(9):619-625. **IF: 1.323**
- Alvarez-Lerma F., Soriano M.C., Rodriguez M., Catalan M., Llorente A.M., Vidart N., Garitacelaya M., Maravi E., Fernandez E., Alvarado F., Lopez M., Alvarez-Sanchez B., Espinosa J., Quintana E. Impact of liposomal amphotericin B on renal function in critically ill patients with renal function impairment [Impacto de anfotericina B liposomal en la función renal en pacientes críticos con la función renal deteriorada]. *Revista Española de Quimioterapia*; 25(3):206-215. **IF: 0.836**
- Antonelli M., Bonten M., Chastre J., Citerio G., Conti G., Curtis J.R., De Backer D., Hedenstierna G., Joannidis M., MacRae D., Mancebo J., Maggiore S.M., Mebazaa A., Preiser J.-C., Rocco P., Timsit J.-F., Wernerman J., Zhang H. Year in review in Intensive Care Medicine 2011. II. Cardiovascular, infections, pneumonia and sepsis, critical care organization and outcome, education, ultrasonography, metabolism and coagulation. *Intensive Care Medicine*; 38(3):345-358. **IF: 5.258**
- Antonelli M., Bonten M., Chastre J., Citerio G., Conti G., Curtis J.R., De Backer D., Hedenstierna G., Joannidis M., MacRae D., Mancebo J., Maggiore S.M., Mebazaa A., Preiser J.-C., Rocco P., Timsit J.-F., Wernerman J., Zhang H. Year in review in intensive care medicine 2011: I. Nephrology, epidemiology, nutrition and therapeutics, neurology, ethical and legal issues, experimental. *Intensive Care Medicine*; 38(2):192-209. **IF: 5.258**
- Antonelli M., Bonten M., Chastre J., Citerio G., Conti G., Curtis J.R., De Backer D., Hedenstierna G., Joannidis M., MacRae D., Mancebo J., Maggiore S.M., Mebazaa A., Preiser J.-C., Rocco P., Fois Timsit J.-F., Wernerman J., Zhang H. Year in review in Intensive Care Medicine 2011: III. ARDS and ECMO, weaning, mechanical ventilation, noninvasive ventilation, pediatrics and miscellanea. *Intensive Care Medicine*; 38(4):542-556. **IF: 5.258**
- Brochard L., Martin G.S., Blanch L., Pelosi P., Belda F.J., Jubran A., Gattinoni L., Mancebo J., Ranieri V.M., Richard J.-C.M., Gommers D., Vieillard-Baron A., Pesenti

function in critically ill patients with renal function impairment [Impacto de anfotericina B liposomal en la función renal en pacientes críticos con la función renal deteriorada]. *Revista Española de Quimioterapia*; 25(3):206-215. **IF: 0.836**

A., Jaber S., Stenqvist O., Vincent J.-L. Clinical review: Respiratory monitoring in the ICU - a consensus of 16. *Critical Care*; 16(2). **IF: 4.718**

10 Drouot X., Roche-Campo F., Thille A.W., Cabello B., Galia F., Margarit L., d'Ortho M.-P., Brochard L. A new classification for sleep analysis in critically ill patients. *Sleep Medicine*; 13(1):7-14. **IF: 3.487**

11 Tonelli M.R., Curtis J.R., Guntupalli K.K., Rubenfeld G.D., Arroliga A.C., Brochard L., Douglas I.S., Gutterman D.D., Hall J.R., Kavanagh B.P., Mancebo J., Misak C.J., Simpson S.Q., Slutsky A.S., Suffredini A.F., Thompson B.T., Ware L.B., Wheeler A.P., Levy M.M. An Official Multi-Society Statement: The role of clinical research results in the practice of critical care medicine. *American Journal of Respiratory and Critical Care Medicine*; 185(10):1117-1124. **IF: 11.041**

12 Mancebo J., Hall J. Is the doctor in? Views on the deployment of intensivists from both sides of the Atlantic. *American Journal of Respiratory and Critical Care Medicine*; 185(7):696-697. **IF: 11.041**

13 Dessap A.M., Roche-Campo F., Kouatchet A., Tomicic V., Beduneau G., Sonnevill R., Cabello B., Jaber S., Azoulay E., Castanares-Zapatero D., Devaquet J., Lellouche F., Katsahian S., Brochard L. Natriuretic peptide-driven fluid management during ventilator weaning: A randomized controlled trial. *American Journal of Respiratory and Critical Care Medicine*; 186(12):1256-1263. **IF: 11.041**

14 Terzi N., Piquilloud L., Rozé H., Mercat A., Lofaso F., Delisle S., Joliet P., Sottiaux T., Tassaux D., Roesler J., Domoule A., Jaber S., Mancebo J., Brochard L., Richard J.C.M. . *Critical Care*; 16(3):225. **IF: 4.718**

Scientific Production

Letter

- ▶ Zapata L., Ordonez-Llanos J., Betbesé A.J. Increases in B-type natriuretic peptide for detecting weaning-induced heart failure: Reply to liu et al. *Intensive Care Med* 2012;38(1):174.

Results of noninvasive ventilation in very old patients. *Annals of Intensive Care* 2012;2(1):1-9.

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Schortgen F., Follin A., Piccari L., Roche-Campo F., Carteaux G., Talandier-Herich E., Krypciak S., Thille AW, Paillaud E, Brochard L.

Scopus Indexed Publications

- ▶ Roche-Campo F., Aguirre-Bermeo H., Mancebo J. Glucocorticoids in the treatment of acute respiratory distress syndrome. *Reanimation* 2012;21(SUPPL.2):S391-8.

Other Publications

Anaesthesiology

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Main Lines of Research

Critical analysis of new clinical technologies:

- ▶ Anaconda-inhaled sedation in patients undergoing postoperative mechanical ventilation.
- ▶ New monitoring systems for anaesthesia depth and cerebral oxygen status.

Rationalization of perioperative fluid therapy and blood products:

- ▶ Institutional protocolization of massive transfusions.
- ▶ Monitoring of coagulopathy due to massive bleeding from thromboelastography.
- ▶ Identification and recovery from preoperative anaemia in surgery with extensive bleeding.
- ▶ Prevalence of perioperative transfusions.
- ▶ Monitoring of perioperative fluid therapy.

Perioperative medicine:

- ▶ Institutional protocolization of care in clinical cases of cardiorespiratory arrest.

- ▶ Clinical pathways for patients for senile femoral neck fracture, total knee replacement, total hip replacement and fast-track colorectal surgery.

- ▶ Epidemiological study of perioperative morbidity and mortality in collaboration with the epidemiology department of the HSCSP (Iberoamerican Cochrane Centre) and the European Society of Anaesthesiology.

New health service delivery systems:

- ▶ Professional team preoperative evaluations.
- ▶ Zero preoperative stay.

Physiology, pharmacology and anaesthetic techniques:

- ▶ Intraoperative respiratory physiology.
- ▶ Efficacy and safety of levosimendan in postoperative refractory heart failure.

Challenges

- ▶ Critical analysis of new clinical technologies.
- ▶ Rationalization of perioperative transfusions.
- ▶ Perioperative medicine.
- ▶ Development of new health service systems.
- ▶ Clinical and preclinical research into physiology, pharmacology and anaesthetic/analgesic techniques.

*TIF: 73.275 **MIF: 24.425

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Unzueta C., Tusman G., Suarez-Sipmann F., Bhm S., Moral V. Alveolar recruitment improves ventilation during thoracic surgery: A randomized controlled trial. *British Journal of Anaesthesia*; 108(3):517-524.
IF: 4.237
- 02 Devereaux P.J., Chan M.T.V., Alonso-Coello P., Walsh M., Berwanger O., Villar J.C., Wang C.Y., Garutti R.I., Jacka M.J., Sigamani A., Srinathan S., Bickard B.M., Chow C.K., Abraham V., Tiboni M., Pettit S., Szczlik W., Buse G.L., Botto F., Guyatt G., Heels-Ansdell D., Sessler D.I., Thorlund K., Garg A.X., Mrkobrada M., Thomas S., Rodseth R.N., Pearse R.M., Thabane L., McQueen M.J., VanHelder T., Bhandari M., Bosch J., Kurz A., Polanczyk C., Malaga G., Nagele P., Le Manach Y., Leuwer M., Yusuf S., Vascular Events In Noncardiac Surgery Patients Cohort Evaluation (VISION) Study Investigators (Paniagua P.) Association between postoperative troponin levels and 30-day mortality among patients undergoing noncardiac surgery. *JAMA - Journal of the American Medical Association*; 307(21):2295-2304.

IF: 29.978

- 03 Pearse R.M., Moreno R.P., Bauer P., Pelosi P., Metnitz P., Spies C., Vallet B., Vincent J.-L., Hoeft A., Rhodes A., European Surgical Outcomes Study (EuSOS) group for the Trials groups of the European Society of Intensive Care Medicine and the European Society of Anaesthesiology (col. Moral V.) Mortality after surgery in Europe: A 7 day cohort study. *The Lancet*; 380(9847):1059-1065.
IF: 39.06

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Bausili M, Abreu S, Unzueta MC, Álvarez MG, Crespi J, Moral MV. Postoperative cortical blindness after right upper lung lobectomy. *Rev Esp Anestesiología y Reanimación* 2012;59(3):157-61.

Anaesthesiology

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Main Lines of Research	▶ Involvement of brain areas and release of substances in acute and chronic neuropathic pain (in conjunction with HSCSP neuroradiology unit and the Autonomous University of Barcelona). ▶ Sleep disturbance on initiating systemic opioid treatment in patients with severe chronic pain and altered sleep patterns.	▶ Influence of herniated lumbar disc anatomy on the effectiveness of epidural corticosteroids by the interlaminar, paramedial, transforaminal and caudal routes. ▶ Profile in terms of demographics, comorbidities, kind of pain, physical and mental status and disability of patients.
	▶ Establish the possible differences in brain area involvement between acute and chronic pain. ▶ Establish the different brain substances expressed in patients affected by acute and chronic neuropathic pain. ▶ Determine the extent of chronic pain according to the involvement of different brain areas.	▶ Determine whether the intensity of chronic neuropathic pain assessed by the patient is correlated with the patient's psychopathology, essentially anxiety, depression and catastrophizing. ▶ Determine the profile of patients who would benefit from treatment with major systemic opioids in relation to night rest and establish the recommendable opioid.
Active Grants	▶ Català E. Application of high-field MRI and its analysis tools to evaluating brain alterations in patients with chronic pain compared to acute pain and a control group. FIS Grant. Carlos III Health Institute. January 2009-December 2012. ▶ Català E. Observational and longitudinal prospective study regarding the use of analgesic treatments in Catalan Pain Units. Catalan Society of Pain. January 2011-October 2013.	▶ Català E. Evaluation of the effectiveness and tolerability of tapentadol PR versus a combination of tapentadol PR with pregabalin in subjects with severe chronic low back pain with a neuropathic pain component. Grunenthal. May 2011-Juny 2012.

Collaborations	Collaborations with other IIB Sant Pau Groups ▶ Neuroradiology.
Other Publications	▶ Ferrándiz M, Català E, Genové M, Santeularia MT, Castillo C, Serrano I. Stimulable Racz catheter technique in refractory lumbar radicular pain. Pain Practice 2012;12,Supl 1:151. ▶ Revuelta M, Genové M, Santeularia MT. Actualizaciones en analgesia regional en el paciente de edad avanzada (pp. 149-154). In: Castillo J, Escolano F, Gallart Ll, Montes A, Samsó E. Medicina perioperatoria en el paciente de edad avanzada. Ed. Ergon, 2012. ▶ Català E, Ribera MV. Pain and Image. Dolor: Investigación, Clínica y Terapéutica 2012;4:53-55.

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Main Lines of Research

- ▶ Pharmaceutical care.
- ▶ Artificial nutrition.
- ▶ Oncohaematology.
- ▶ Independent clinical trials.

Challenges

- ▶ Evaluate the impact on effectiveness and safety of pharmacological treatments in different pharmaceutical care programmes: clinical pharmacokinetics, health education for outpatients, medicine reconciliation and identification and prevention of medication-related problems.
- ▶ Evaluate the impact of artificial nutrition on the clinical evolution of patients.
- ▶ Study the stability of cytostatics in different conditions of use.
- ▶ Predict response to anti-tumour treatment in a number of tumoural processes.
- ▶ Develop focal adhesion inhibitors, e.g. antitumour agents.
- ▶ Actively cooperate in independent clinical trials performed in the HSCSP.

Active Grants

- ▶ Juanes A. Pharmaceutical care programme for patients with heart failure and/or COPD users of emergency department versus conventional monitoring. Catalan Society of Clinical Pharmacy. Joaquim Bonal Scholarship. April 2011-April 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Oncogenes and Antitumour Drugs.
- ▶ Haematological Diagnosis.
- ▶ Dermatology.
- ▶ Neuromuscular Diseases.
- ▶ Digestive Diseases.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Pavon M.A., Parreno M., Tellez-Gabriel M., Sancho F.J., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Manges M.A., Quer M., Barnadas A., Leon X., Manges R. Gene expression signatures and molecular markers associated with clinical outcome in locally advanced head and neck carcinoma. Carcinogenesis; 33(9):1707-1716.
IF: 5.635
- 02 Garin N., De Pourcq J.T., Cardona D., Martin-Venegas R., Gich I., Cardenete J., Manges M.A. Viscosity changes in thickened water due to the addition of highly rescribed drugs in geriatrics

*TIF: 19.678 **MIF: 3.935

[Cambios en la viscosidad del agua con espesantes por la adición de fármacos altamente prescritos en geriatría]. Nutricion Hospitalaria; 27(4):1298-1303.

IF: 1.305

- 03 Bosch R., Moreno M.J., Dieguez-Gonzalez R., Cespedes M.V., Gallardo A., Nomdedeu J., Pavon M.A., Espinosa I., Manges M.A., Sierra J., Casanova I., Manges R. Subcutaneous passage increases cell aggressiveness in a xenograft model of diffuse large B cell lymphoma. Clinical and Experimental Metastasis; 29(4):339-347.
IF: 3.46
- 04 Estevez J.A., Molto J., Tuneu L., Cedeno S., Antonijoan R.M., Manges M.A., Clotet B., Domingo P., Puntos M., Barbanj

M.J., Valle M. Ritonavir boosting dose reduction from 100 to 50 mg does not change the atazanavir steady-state exposure in healthy volunteers. Journal of Antimicrobial Chemotherapy; 67(8):2013-2019.
IF: 5.338

- 05 Garcia-Cadenas I., Valcarcel D., Martino R., Pinana J.L., Novelli S., Esquirol A., Garrido A., Moreno M.E., Granell M., Moreno C., Saavedra S., Briones J., Brunet S., Sierra J. Updated Experience with Inolimomab as Treatment for Corticosteroid-Refractory Acute Graft-versus-Host Disease. Biology of Blood and Marrow Transplantation; 19(3):435-439.
IF: 3.94

Awards

- ▶ Best Health Idea of 2012 (Research and Pharmacology). Diario Médico.

Other Publications

- ▶ González J, González M, Machi JJ, Sánchez A, Ramió M, Ferrández D, Martín MT, Planas A, Zapata A, Serrano D, Recha R. Estudio Multicéntrico de satisfacción de los pacientes en dispensación ambulatoria. Aten Farm 2012;14(3):152-9.
- ▶ Manges MA. Monitorización de niveles de fármacos. MEDIMECUM. Guía de Terapia Farmacológica. Ed. Adis 2012.
- ▶ Manges MA (member of working group). Líneas estratégicas y objetivos 2020. Sociedad Española de Farmacia Hospitalaria 2012.

Dermatology

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Main Lines of Research

- ▶ Biologic therapy in dermatology.
- ▶ Genome-wide association studies in psoriasis
- ▶ Medical and physical treatment options for vascular tumours.
- ▶ Psychopathological studies of patients with chronic dermatological disorders.

Challenges

- ▶ Ensure a stable clinical research infrastructure and staff.
- ▶ Foster interdepartmental collaborative research.

Active Grants

- ▶ García MP. Pharmaceutical care programme for patients with heart failure and / or COPD users of emergency department versus conventional monitoring. Spanish Ministry of Health, Social Services and Equality. January 2011-September 2012.
- ▶ García MP. Double-blind study of prophylactic treatment with 3% allopurinol cream versus placebo of palmoplantar erythrodysesthesia secondary to treatment with capecitabine. Spanish Ministry of Health, Social Services and Equality. January 2011-September 2013.

Collaborations

- Collaborations with other IIB Sant Pau Groups**
- ▶ Parkinson Disease and Movement Disorders.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Hafner C., Toll A., Gantner S., Mauere A., Lurkin I., Acquadro F., Fernandez-Casado A., Zwarthoff E.C., Dietmaier W., Baselga E., Parera E., Vicente A., Casanova A., Cigudosa J., Mentzel T., Pujol R.M., Landthaler M., Real F.X. Keratinocytic epidermal nevi are associated with mosaic RAS mutations. *Journal of Medical Genetics*; 49(4):249-253.
IF: 5.703
- Hernandez-Martin A., Garcia-Doval I., Aranegui B., De Unamuno P., Rodriguez-Pazos L., Gonzalez-Ensenat M.-A., Vicente A., Martin-Santiago A., Garcia-Bravo B., Feito M., Baselga E., Ciria S., De Lucas R., Ginarte M., Gonzalez-Sarmiento R., Torrelo A. Prevalence of autosomal recessive congenital ichthyosis: A population-based study using the capture-recapture method in Spain. *Journal of the American Academy of Dermatology*; 67(2):240-244.
IF: 4.906
- Muniesa C., Pujol R.M., Estrach M.T., Gallardo F., Garcia-Muret M.P., Climent J., Salar A., Servitje O. Primary cutaneous diffuse large B-cell lymphoma, leg type and secondary cutaneous involvement by testicular B-cell lymphoma share identical clinicopathological and immunophenotypical features. *Journal of the American Academy of Dermatology*; 66(4):650-654.
IF: 4.906
- Baselga E., Wassef M., Lopez S., Hoffman W., Cordisco M., Frieden I.J. Agminated, eruptive pyogenic granuloma-like lesions developing over congenital vascular stains. *Pediatric Dermatology*; 29(2):186-190.
IF: 1.041
- Puig L. Treatment of severe psoriasis. *Journal of the European Academy of Dermatology and Venereology*; 26(SUPPL. 5):17-18.
IF: 2.694
- Ruiz Salas V., Puig L., Alomar A. Ustekinumab in clinical practice: Response depends on dose and previous treatment. *Journal of the European Academy of Dermatology and Venereology*; 26(4):508-513.
IF: 2.694

*TIF: 27.480 **MIF: 3.053

- Puig L., Morales-Munera C.E., Lopez-Ferrer A., Geli C. Ustekinumab treatment of TNF antagonist-induced paradoxical psoriasis flare in a patient with psoriatic arthritis: Case report and review. *Dermatology*; 225(1):14-17.
IF: 2.024
- Torrelo A., Ortiz J., Alomar A., Ros S., Prieto M., Cuervo J. Atopic dermatitis: Impact on quality of life and patients' attitudes toward its management. *European Journal of Dermatology*; 22(1):97-105.
IF: 1.756
- Paul C., Van De Kerkhof P., Puig L., Unnebrink K., Goldblum O., Thaci D. Influence of psoriatic arthritis on the efficacy of adalimumab and on the treatment response of other markers of psoriasis burden: Subanalysis of the BELIEVE study. *European Journal of Dermatology*; 22(6):762-769.
IF: 1.756

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Daudén E, Castañeda S, Suárez C, García-Campayo J, Blasco AJ, Aguilar MD, Ferrándiz C, Puig L, Sánchez-Carazo JL. Integrated approach to comorbidity in patients with psoriasis. *Actas Dermo-Sifiliogr* 2012;103(SUPPL. 1):1-64.
- ▶ Puig L. Cardiovascular risk and psoriasis: The role of biologic therapy. *Actas Dermo-Sifiliogr* 2012;103(10):853-62.
- ▶ Puig L. Response to: On cardiovascular risk estimation in patients with psoriasis: The REGICOR and SCORE scales. *Actas Dermo-Sifiliogr* 2012;103(10):943-4.
- ▶ López-Ferrer A, Barnadas MA, Rodríguez-Arias JM, Geli C, Alomar A. Systemic sclerosis with sarcoidosis and skin manifestations: a case report. *Actas Dermo-Sifiliogr* 2012;103(4):337-8.

Plastic Surgery

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Main Lines of Research

Perforator microsurgery:

- ▶ Application of imaging techniques to preoperative studies of perforators using MRI without contrast (in collaboration with Clínica Creu Blanca Radiology Department).
- ▶ Anatomical studies of the variability of perforators in the following regions: internal mammary artery, descending genicular artery, deep and superficial inferior epigastric system and superficial circumflex inferior system (in collaboration with the University of Barcelona Human Anatomy Department).
- ▶ Locating new donor anatomical areas for morphological and functional reconstruction of oncology post-surgery defects.
- ▶ Radiological, anatomical and clinical study to characterize the internal mammary perforator flap.

Lymphoedema:

- ▶ Study and characterization of the anatomy and pathophysiology of the superficial and deep lymphatic system.
- ▶ Preoperative magnetic resonance study of the lymphatic system in order to define surgical indication patterns.
- ▶ Preoperative magnetic resonance study to plan lymphatic-venous anastomosis for lymphoedema treatment.
- ▶ Pre-operative planning and post-operative assessment of lymphaticovenous anastomosis for lymphoedema treatment by ICG-lymphangiograph.
- ▶ Validation of the second sentinel node after lymph node transfer in post-mastectomy patients.

- ▶ Lymphogenesis study in experimental animals (sheep) after vascularized lymph node tissue transplantation (popliteal lymph nodes).
- ▶ Validation of protocol for lymphoedema evaluation results obtained by members of the International Framework for Surgical Treatment of Lymphoedema.

Regenerative surgery:

- ▶ Development of regenerative lymphatic system surgery in the context of primary lymphoedema through specific lymphatic system vascular endothelial growth factors (VEGF-C and VEGF-D).

Breast cancer surgery:

- ▶ Industry-funded clinical trial (Allergan Medical, USA). SeriScaffoldTM use in reconstruction post-market study for tissue support and repair in direct-to-implant breast reconstruction surgery.
- ▶ Viability assessment of autologous fat grafting in breast conservation surgery.
- ▶ Multicentre clinical study of quality of life after breast conservation surgery and radiotherapy versus mastectomy and immediate breast reconstruction.

General plastic surgery:

- ▶ Phase III multicentre, open-label, prospective, controlled, randomized, blinded clinical trial to intra-individually compare the efficacy and tolerability of Oleogel-S10 with the reference treatment to accelerate healing of the donor site in partial thickness skin grafts.

Active Grants

- ▶ Juanes A. Pharmaceutical care programme for patients with heart failure and/or COPD users of emergency department versus conventional monitoring. Catalan Society of Clinical Pharmacy. Joaquim Bonal Scholarship. April 2011-April 2013.

Challenges

- ▶ Consolidate and optimize preoperative management techniques for locating perforating vessels suitable for each microsurgical flap.
- ▶ Develop research into the surgical treatment of both primary and secondary lymphoedema.
- ▶ Develop research into preventive surgery of secondary lymphoedema in breast cancer by total breast anatomy restoration.
- ▶ Develop research into regenerative surgery using specific growth factors.
- ▶ Consolidate facial paralysis functional surgical reconstruction by microsurgical transfer of innervated flaps.
- ▶ Develop multidisciplinary protocols for the treatment of vascular malformations.
- ▶ Collaborate with other research groups both in the HSCSP and internationally to establish a multidisciplinary research network.

Collaborations

External Collaborations

- ▶ Multicentre clinical study to validate secondary lymph nodes as a predictor of axillary lymph node status in positive sentinel lymph node. HSCSP-Germans Trias i Pujol Hospital.
- ▶ International Framework for Surgical Treatment of Lymphoedema.
- ▶ Puigvert Foundation Andrology Unit.
- ▶ RECOSEX: Genitourinary Reconstruction Unit. HSCSP Plastic Surgery Department and Puigvert Foundation Andrology Unit.

*TIF: 1.041 **MIF: 1.041

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Baselga E., Wassef M., Lopez S., Hoffman W., Cordisco M., Frieden I.J. Agminated, eruptive pyogenic granuloma-like lesions developing over congenital vascular stains. *Pediatric Dermatology*; 29(2):186-190.
IF: 1.041

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Andree C, Farhadi J, Goossens D, Masià J, Sarfati I, Germann G, Macmillan RD, Scheffan M, Van Not HP, Catanuto G, Nava MB. A position statement on optimizing the role of oncoplastic surgery. *Eplasty* 2012;12:e40.

Others

- ▶ Pons G, Masià J. Linfedema braquial relacionado con el cancer de mama. *Manual de Práctica Clínica en Senología* 2012. Sociedad Española de Senología y Patología Mamaria. Ch. 31, pp.135-141.

Andrology

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Main Lines of Research

Infertility and preimplantation genetic diagnosis:

- Development of a project on the genetic causes of cryptorchidism in humans.
- Collaboration in externally financed Carlos III Health Institute projects (University of Barcelona, Hospital Vall d'Hebron) studying genetic anomalies, spermatogenesis and preimplantation genetic diagnosis.

Male sexual dysfunction:

- Extension of investigation into the mechanisms that trigger endothelial damage and erectile dysfunction so as to develop new treatment strategies.
- Development of an animal model of erectile dysfunction (cavernous nerve injury in rats), enabling research into the mechanisms of endothelial damage and erectile dysfunction in different situations, substances and/or surgeries, with a focus on identifying preventive strategies and transferring results to research in humans.

Other Publications

Letter

- Muratori M, Tamburrino L, Tocci V, Marchiani S, Giachini C, Krausz C, Forti G, Baldi E, Laface I, Costantino A, Meriggiola MC. Response. J Androl 2012;33(1):2.

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Krausz C. An encore for the repeats: New insights into an old genetic variant. Journal of Clinical Endocrinology and Metabolism; 97(3):764-767. **IF: 6.43**
- 02 McLachlan R.I., Krausz C. Clinical evaluation of the infertile male: New options, new challenges. Asian Journal of Andrology; 14(1):3-5. **IF: 2.14**
- 03 Heyn H., Ferreira H.J., Bassas L., Bonache S., Sayols S., Sandoval J., Esteller M., Larrriba S. Epigenetic Disruption of the PIWI Pathway in Human Spermatogenic Disorders. PLoS ONE; 7(10). **IF: 3.73**
- 04 Jungwirth A., Giwercman A., Tournaye H., Diemer T., Kopa Z., Dohle G., Krausz C. European association of urology guidelines on male infertility: The 2012 update. European Urology; 62(2):324-332.

*TIF: 48.717 **MIF: 4.428

IF: 10.476

- 05 Dohle G.R., Diemer T., Kopa Z., Krausz C., Giwercman A., Jungwirth A. European association of urology guidelines on vasectomy. European Urology; 61(1):159-163. **IF: 10.476**
- 06 Dohle G.R., Diemer T., Kopa Z., Krausz C., Giwercman A., Jungwirth A. European association of urology guidelines on vasectomy [Guía clínica de la Asociación Europea de Urología sobre la vasectomía]. Actas Urológicas Españolas; 36(5):276-281. **IF: 1.144**
- 07 Krausz C., Giachini C., Lo Giacco D., Daquin F., Chianese C., Ars E., Ruiz-Castane E., Forti G., Rossi E. High Resolution X Chromosome-Specific Array-CGH Detects New CNVs in Infertile Males. PLoS ONE; 7(10). **IF: 3.73**
- 08 Krausz C., Sandoval J., Sayols S., Chianese C., Giachini C., Heyn H., Esteller M. Novel

Insights into DNA Methylation Features in Spermatozoa: Stability and Peculiarities. PLoS ONE; 7(10).

IF: 3.73

- 09 Cajal T.R., Polo A., Martinez O., Gimenez C., Arjona C., Lloret G., Bassas L., Viscasillas P., Calaf J. Preimplantation genetic diagnosis for inherited breast cancer: First clinical application and live birth in Spain. Familial Cancer; 11(2):175-179. **IF: 1.935**
- 10 Bonache S., Mata A., Ramos M.D., Bassas L., Larrriba S. Sperm gene expression profile is related to pregnancy rate after insemination and is predictive of low fecundity in normozoospermic men. Human Reproduction; 27(6):1556-1567. **IF: 4.67**
- 11 Gutierrez Hernandez P.R. Inauguration of the Master of Clinical Andrology [Inauguración del Máster de Andrología Clínica]. Revista Internacional de Andrología; 10(2):79-80. **IF: 0.256**

Urology

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Sheila Fernández Puigvert Foundation
Fèlix Millán Puigvert Foundation
Joan Palou Puigvert Foundation
Óscar Rodríguez Puigvert Foundation



Main Lines of Research

Tissue engineering:

- Application to urological oncology and congenital urogenital malformations, focusing on vesicular reconstruction (since 2002). The endpoints have high clinical translational potential as the objective is organ procurement for genitourinary reconstruction, especially in urology paediatrics.

New techniques (surgical techniques and healthcare products):

- Application to urological oncology and benign urogenital pathology (e.g. incontinence, benign hyperplasia of the prostate, lithiasis).
- As a referral centre for treatment of uro-

gical disorders, the Puigvert Foundation performs studies, particularly at a clinical level, aimed at determining the best techniques for disorder diagnosis and treatment.

Genetics (diagnostic and prognostic markers):

- Application to urological oncology to identify diagnostic and prognostic markers of urological cancers (this line of study has led to a patent related to bladder cancer).
- Development of studies of the prostate and collaboration with other centres, universities and biotechnology labs (Progenika, Oryzon, Neocodex) to develop new diagnostic and prognostic markers in blood, urine and tissues that will optimize patient management in oncology.

Active Grants

- Rodríguez O. Relationship between phenotype of chronic inflammatory cells and stromal fibroblasts, and development of tumour recurrence and progression of bladder urothelial carcinoma. Pedro Cifuentes Díaz Research Grant. 2010-2012.

Collaborations

External Collaborations

- Spanish Association of Urology (AEU). Three national tumour registries (prostate, bladder and kidney).

Awards

- Breda A. Urological Challenge Award. European Association of Urology. 21st European Forum of Urology. Davos, Switzerland.
- Peña JA, López JM, Pardo P, Ramos E, Palou J, Villavicencio H. Best Urology Video Award. 11th Conference of the Spanish Society of Laparoscopic Surgery and Robotics. Retroperitoneal approach to vascular microdissection in partial nephrectomy without ischaemia. Madrid, Spain.
- Jiménez R, Bujons A, Caffaratti J, Garat JM, Villavicencio H. Best Communication Award. Treatment of children with urolithiasis using extracorporeal shock wave lithotripsy. Paediatric Urology Group Meeting, Vigo, Spain.
- Emiliani E, Pardo P, Rodríguez Faba O, Palou J, Breda A, Algaba F, Villamizar JM, Esquena S, Villavicencio H. Third Julián Gutiérrez de Toledo prize for the best oral communication. Predictive factors for a frozen biopsy indication for distal ureter during radical cystectomy. 76th National Urology Conference, Vigo, Spain.
- Best in Class Award to the Urology Department, Madrid, Spain.
- López JM, Peña JA, Oliveira M, Augusto Skrobot S, Lucarelli G, Breda A, Palou J, Villavicencio H. Joan Figuls Award for the Best Surgical Technique presented on video. 18th Institutional Symposium of the Catalan Urology Society. Retroperitoneal approach to vascular microdissection in partial nephrectomy without ischaemia. Girona, Spain.
- Palou J. Urology Award for the Best Scientific Publication (any medium). 18th Institutional Symposium of the Catalan Urology Society. Female gender and carcinoma in situ in the prostatic urethra are prognostic factors for recurrence, progression, and disease-specific mortality in T1G3 bladder cancer patients treated with bacillus Calmette-Guérin. Girona, Spain.

*TIF: 67.068 **MIF: 3.193

ISI Web of Knowledge Indexed Publications with an IF

- Gaya J.M., Palou J., Cosentino M., Patino D., Rodríguez-Faba O., Villavicencio H. A second transurethral resection could be not necessary in all high grade non-muscle-invasive bladder tumors [La re-resección transuretral puede no ser necesaria en todos los tumores vesicales no músculo-invasivos de alto grado]. Actas Urológicas Españolas; 36(9):539-544.
IF: 1.144
- Cosentino M., Gaya J.M., Breda A., Palou J., Villavicencio H. Alloplastic bladder substitution: Are we making progress? International Urology and Nephrology; 44(5):1295-1303.
IF: 1.325
- Fristrup N., Ulhøi B.P., Birkenkamp-Demtrøder K., Mansilla F., Sanchez-Carbayo M., Segersten U., Malmström P.-U., Hartmann A., Palou J., Alvarez-Mgica M., Zieger K., Borre M., Orntoft T.F., Dyrskjot L. Cathepsin E, Maspin, Plk1, and survivin are promising prognostic protein markers for progression in non-muscle invasive bladder cancer. American Journal of Pathology; 180(5):1824-1834.
IF: 4.522
- Katz A., Ferrer M., Suarez J.F., Alonso J., Becerra A.V., Cunillera O., Garin O., Pardo Y., Pont A., Boladeras A., Ferrer F., Guedea F., Martinez E., Padin V.E., Pera J., Ventura M., Aguilo F., Pastor S., Prats J.M., de Leon J.P., Villavicencio H., Batista J.E., Craven-Bratle J., Sancho G., Ayala A., de Paula B., Fernandez P., Guix B., Herruzo I., Hernandez H., Munoz V., Hervas A., Ramos A., Macias V., Sole J., Bonet M., Marcos P., Marino A., Ortiz M.J., Prada P.J. Comparison of quality of life after stereotactic body radiotherapy and surgery for early-stage prostate cancer. Radiation Oncology; 7(1):194-203.
IF: 2.107
- Babjuk M., Oosterlinck W., Sylvester R., Kaasinen E., Böhle A., Palou-Redorta J., Roupret M. EAU guidelines on non-muscle-invasive urothelial carcinoma of the bladder, the 2011 update [Guía clínica del carcinoma urotelial de vejiga no músculo-invasivo de la Asociación Europea de Urología. Actualización de 2011]. Actas Urológicas Españolas; 36(7):389-402.
IF: 1.144
- Albers P., Albrecht W., Algaba F., Bokemeyer C., Cohn-Cedermark G., Fizazi K., Horwich A., Laguna M.P. EAU guidelines on testicular cancer: 2011 update [Guía clínica sobre el cáncer de testículo de la EAU: actualización de 2011]. Actas Urológicas Españolas; 36(3):127-145.
IF: 1.144
- Ochoa C., Breda A., Martí J., De La Torre P., Villavicencio H. Endovascular treatment of stenosis of the renal artery in transplanted kidney [Tratamiento endovascular de la estenosis de la arteria renal en el riñón trasplantado]. Actas Urológicas Españolas; 36(5):325-329.
IF: 1.144
- Roupret M., Zigeuner R., Palou J., Böhle A., Kaasinen E., Sylvester R., Babjuk M., Oosterlinck W. European guidelines for the diagnosis and management of upper urinary tract urothelial cell carcinomas: 2011 Update [Guía clínica para el diagnóstico y tratamiento de los carcinomas de las células uroteliales de las vías urinarias superiores: actualización de 2011]. Actas Urológicas Españolas; 36(1):2-14.
IF: 1.144
- Palou J., Sylvester R.J., Faba O.R., Parada R., Pena J.A., Algaba F., Villavicencio H. Female gender and carcinoma in situ in the prostatic urethra are prognostic factors for recurrence, progression, and disease-specific mortality in T1G3 bladder cancer patients treated with bacillus Calmette-Guérin. European Urology; 62(1):118-125.
IF: 10.476
- Algaba F., Delahunt B., Berney D.M., Camparo P., Comperat E., Griffiths D., Kristiansen G., Lopez-Beltran A., Martignoni G., Moch H., Montironi R., Varga M., Egevad L. Handling and reporting of nephrectomy specimens for adult renal tumours: A survey by the European Network of Uropathology. Journal of Clinical Pathology; 65(2):106-113.
IF: 2.439
- Faba O.R., Palou J., Breda A., Villavicencio H. High-risk non-muscle-invasive bladder cancer: Update for a better identification and treatment. World Journal of Urology; 30(6):833-840.
IF: 2.888
- Breda A., Villamizar J.M., Faba O.R., Calicó C., De Gracia A., Gausa L., Ponce De Leon J., Villavicencio H. Laparoscopic live donor nephrectomy with the use of 3-mm instruments and laparoscope: Initial experience at a tertiary center. European Urology; 61(4):840-844.
IF: 10.476
- Xue W., Pacik D., Boellaard W., Breda A., Botoca M., Rassweiler J., Van Cleynenbreugel B., De La Rosette J. Manage-

Urology

*TIF: 67.068 **MIF: 3.193

Scientific Production

- ment of single large nonstaghorn renal stones in the CROES PCNL global study. Journal of Urology; 187(4):1293-1297. **IF: 3.696**
- 14 Rodriguez Faba O., Palou J. Predictive factors for recurrence progression and cancer specific survival in high-risk bladder cancer. Current Opinion in Urology; 22(5):415-420. **IF: 2.195**
- 15 Colecchia M., Mikuz G., Algaba F. Rare tumors of the testis and mesothelial proliferation in the tunica vaginalis. Tumori; 98(2):270-273. **IF: 0.922**
- 16 Pardo P., Rodriguez-Faba O., Palou J., Algaba F., Breda A., Esquena S., Villavicencio H. Relevance of the clinical-pathological predictive factors in force in chromophobe renal cell cancer [Relevancia de los factores predictivos clínico-patológicos vigentes en el carcinoma renal de células cromóforas]. Actas Urológicas Espanolas; 36(9):527-531. **IF: 1.144**
- 17 Yates D.R., Brausi M.A., Catto J.W.F., Dalbagni G., Roupert M., Shariat S.F., Sylvester R.J., Witjes J.A., Zlotta A.R., Palou-Re-dorta J. Treatment options available for bacillus Calmette-Guérin failure in non-muscle-invasive bladder cancer. European Urology; 62(6):1088-1096. **IF: 10.476**
- 18 Marin-Aguilera M., Mengual L., Ribal M.J., Ars E., Rios J., Gazquez C., Villavicencio H., Alcaraz A. Utility of urothelial mRNA markers in blood for staging and monitoring bladder cancer. Urology; 79(1):240.e9-240.e15. **IF: 2.424**
- 19 Camparo P., Egevad L., Algaba F., Berney D.M., Boccon-Gibod L., Comperat E., Evans A.J., Grobholz R., Kristiansen G., Langner C., Lopez-Beltran A., Montironi R., Oliveira P., Vainer B., Varma M. Utility of whole slide imaging and virtual microscopy in prostate pathology. APMIS; 120(4):298-304. **IF: 2.068**
- 20 Nunez C., Angulo J., Sanchez-Chapado M., Alonso S., Portillo J.A., Villavicencio H. Variability of the urological clinical practice in prostate cancer in Spain [Variabilidad de la práctica clínica urológica en cáncer de próstata en España]. Actas Urológicas Espanolas; 36(6):333-339. **IF: 1.144**
- 21 Lopez-Beltran A., Kirkali Z., Montironi R., Blanca A., Algaba F., Scarpelli M., Yorukoglu K., Hartmann A., Cheng L. Unclassified renal cell carcinoma: A report of 56 cases. BJU International; 110(6):786-793. **IF: 3.046**

ISI Web of Knowledge Indexed Publications without an IF

- Rodríguez Faba O, Palou J, Fernández-Gómez JM, Algaba F, Eiro N, Villavicencio H, Vizoso FJ. Matrix metalloproteinases and bladder cancer: what is new? ISRN Urology 2012;581539.

Others

- Cosentino M, Palou J, Gaya JM, Breda A, Rodríguez Faba O, Villavicencio H. Carcinoma de cèl·lules urotelials del tracte urinari superior: localització com a factor predictiu de carcinoma vesical concomitant. Annals Urol 2012;38(1):17-19.
- Palou J, Sylvester R, Rodríguez Faba O, Parada R, Peña A, Algaba F, Villavicencio H. Ser femella i tenir carcinoma in situ d'uretra prostàtica són factors pronòstics de recurrència, pregressió i mortalitat càncer específica en pacients amb T1G3 tractats amb BCG. Annals Urol 2012;38(1):28-30.
- López JM, Rodríguez Faba O, Rosales A, Palou A, Algaba F, Maroto P, Villavicencio H. Tratamiento del cáncer renal metastático. Neoadyuvancia y perspectivas de futuro en base a un caso. Annals Urol 2012;38(1):7-9.

Scopus Indexed Publications

- Caffarati Sfulcini J., Perez-Carral J.R., Cosentino M., Bujons Tur A., Garat Barredo J.M., Villavicencio Mavric H. Update in the management of pediatric lithiasis [Actualización en el manejo de la litiasis pediátrica]. Revista Espanola de Pediatria; 68(4):295-301.

Other Publications

Multiple Sclerosis and Epilepsy Research

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Main Lines of Research

- Neuropsychological impairment in patients with multiple sclerosis.
- Pharmacogenetics in epilepsy.
- Neuropsychological impairment in juvenile myoclonic epilepsy.

Challenges

- Study of the validity of cognitive evoked potentials in early detection of cognitive impairment in patients with radiologically isolated syndrome, clinically isolated syndrome and newly diagnosed multiple sclerosis.
- Study of the effects of immunomodulatory and immunosuppressive treatments on the cognitive functions of patients with multiple sclerosis.
- Determination of the pharmacogenetic variations involving different responses to antiepileptic treatment.
- Study of neuropsychological alterations in patients diagnosed with juvenile myoclonic epilepsy.

Collaborations

External Collaborations

- Participation in the European registry of pregnant women with epilepsy (EURAP).
- Epidemiological study to determine diagnosis and follow-up in patients with a first demyelinating episode suggestive of multiple sclerosis (EPI-CIS study).
- Registration of new cases of multiple sclerosis in Catalonia (Epidemcat register).

*TIF: 10.819 **MIF: 5.409

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Rojas-Garcia R., Querol L., Gallardo E., Salva N.D.L., Juarez C., Garces M., Fages E., Casasnovas C., Illa I. Clinical and serological features of acute sensory ataxic neuropathy with anti-ganglioside antibodies. Journal of the Peripheral Nervous System; 17(2):158-168. **IF: 2.57**
- 02 Diaz-Manera J., Martinez-Hernandez E., Querol L., Klooster R., Rojas-Garcia R., Suarez-Calvet X., Munoz-Blanco J.L., Mazia C., Straasheijm K.R., Gallardo E., Juarez C., Verschuuren J.J., Illa I. Long-lasting treatment effect of rituximab in MuSK myasthenia. Neurology; 78(3):189-193. **IF: 8.249**

Radiation Oncology



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Main Lines of Research

► The group's research is partially conducted on the premises of the Translational Research Laboratory of the Catalan Oncology Institute (ICO)-Bellvitge Biomedical Research Institute (IDIBELL) under a framework agreement between the HSCSP and the ICO. The main lines of research are:

- Modulation of radiosensitivity by SRC protein inhibitors in combination with anti-EGFR.
- Modulation of radiosensitivity by HMG-CoA reductase inhibitors in combination with anti-EGFR.

SBRT for patients with lung cancer and with oligometastases:

► Launch in 2012 of stereotactic body radiotherapy techniques in radical treatment of patients with early-stage non-surgical lung cancer and for selected patients with non-surgical oligometastases.

Planning of radiation therapy based on PET/CT functional imaging for lung and HNSCC:

- Implementation of planning techniques for radiotherapy treatment with PET-CT for chest locations and head and neck tumours.
- Image-guided radiotherapy (IGRT) and respiratory movement control.
- Salvage brachytherapy for local recurrence after external beam radiotherapy in prostate cancer.
- Hypofractionated IGRT in prostate cancer.

Challenges

► Establishment of relatively radioresistant cell lines compared with the parental cells from which they derive (by clonal selection).

► Determination of the resistant phenotype in cultures and xenografts.

► Determination of molecular radioresistance.

► Evaluation of the effect on carcinomas of SRC and HMG-CoA reductase inhibitors in combination with anti-EGFR.

► Exploration of signal transduction changes in the EGFR-MAPK pathway and SRC-EGFR/SRC-STAT3 cooperation induced by SRC and HMG-CoA reductase inhibitors.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Radiophysics and Radioprotection.
- Nuclear Medicine.

External Collaborations

- Pedro C. Lara. Radiation Oncology Service, Hospital Universitario de Gran Canaria Dr. Negrín, Spain.

*TIF: 1.257 **MIF: 1.257

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

01 Baro M., De Llobet I.L., Modolell I., Guede F., Visa J., Balart J. Development and refinement of a technique using a medical radiation therapy facility to irradiate immunodeficient mice bearing xenografted human tumours. Laboratory Animals; 46(4):345-348.
IF: 1.257

Locomotor System Research

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Ana Peiró HSCSP
Ignasi Proubasta HSCSP
Laura Trullols HSCSP
Màrius Valera HSCSP



Main Lines of Research

ANTIRESORPTIVES IN ORTHOPEDIC AND TRAUMA SURGERY:

- ▶ Effect of zoledronic acid (Aclasta) on peri-prosthetic bone mineral density in patients undergoing total knee arthroplasty. Study approved by the HSCSP ethics committee and authorized by the Spanish Medicines and Health Products Agency (AEMPS) for the off-label context indication of Aclasta.

KNEE:

Haemostasis:

- ▶ Blood loss control using tranexamic acid in primary prosthetic and knee revision surgery.
- ▶ Retrospective study of revision knee arthroplasty to compare the effects of intravenous tranexamic acid and normal haemostasis.
- ▶ Clinical trial comparing outcomes for intravenous tranexamic acid with fibrin glue (Tissucol®) and normal haemostasis in primary knee prosthetic surgery.
- ▶ Observational study of blood loss in redon drainage over time in pertrochanteric hip fractures.

Cartilage:

- ▶ Regeneration of cartilage defects using tissue engineering and a matrix seeded with characterized allogeneic chondrocytes.

Meniscus:

- ▶ Effect of normal and growth-factor-enriched cell cultures on the meniscal collagen network and glycosaminoglycan expression.
- ▶ In vitro experimental study of the feasibility of a polyurethane replacement meniscus pre-seeded with stem cells.
- ▶ Evolution of allogeneic meniscal transplants and relationship with extrusion.

HIP:

- ▶ Coxarthrosis in young adults: etiological study of biomechanical factors.
- ▶ Biomechanics of coxarthrosis in young adults: finite element study.
- ▶ Influence of hip anatomy in early development of coxarthrosis: controlled, prospective radiographic study.

UPPER LIMB:

- ▶ Anatomical study of stabilizing ligaments in the trapeziometacarpal joint: the role played by dorsoradial and anterior oblique ligaments in Bennett and Rolando fractures.
- ▶ Surgical treatment of middle-third clavicle fractures in high-energy trauma in young patients.
- ▶ Retrospective study of the use of vascularized bone graft using the 1,2-ICSR artery in the revascularization of proximal pole necrosis in scaphoid pseudarthrosis.

Active Grants

- ▶ Aguilera X. Observational, single-centre study to evaluate bleeding over time by redones for a prospective cohort of patients undergoing surgery for pertrochanteric fracture of the femur. MAPFRE Foundation. February 2011-March 2012.
- ▶ Aguilera X. Prevention of postoperative bleeding in ATR: multicentre, randomized, open, three-arm, parallel clinical trial

evaluating the efficacy of intravenous and topical tranexamic acid versus habitual treatment of haemostasis. Spanish Ministry of Health, Social Services and Equality. January 2011-December 2012.

- ▶ Aguilera X. Prevention of postoperative bleeding: multicentre, randomized, controlled clinical trial evaluating the efficacy of fibrin glue and tranexamic acid in patients

Active Grants

- with subcapital femoral fracture. Spanish Ministry of Health, Social Services and Equality. 2012-2013.
- ▶ Monllau JC. Regeneration of cartilage defects by tissue engineering with a characterized allogeneic chondrocytes seeded matrix. Spanish Ministry of Economy and Competitiveness. January 2011-December 2013.

- ▶ Peiró A. Prevention of postoperative bleeding in massive bone tumour resections: multicentre, randomized, open, three-arm, parallel clinical trial evaluating the efficacy of topical tranexamic acid versus topical Evicel® and habitual haemostasis. Spanish Ministry of Health, Social Services and Equality. January 2012-December 2013.

*TIF: 15.027 **MIF: 2.504

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Aguilera X., Videla S., Almenara M., Fernandez J.A., Gich I., Celaya F. Effectiveness of Tranexamic Acid in revision total knee arthroplasty. Acta Orthopaedica Belgica; 78(1):68-74.
IF: 0.629
- 02 Erquicia J., Gelber P.E., Cardona-Munoz J.I., Pelfort X., Tey M., Monllau J.C. There is no relation between mild malalignment and meniscal extrusion in trauma emergency patients. Injury; 43(SUPPL. 2):S68-S72.
IF: 1.931

- 03 Abat F., Gelber P.E., Erquicia J.I., Pelfort X., Gonzalez-Lucena G., Monllau J.C. Suture-only fixation technique leads to a higher degree of extrusion than bony fixation in meniscal allograft transplantation. American Journal of Sports Medicine; 40(7):1591-1596.
IF: 4.439
- 04 Gelber P.E., Torres R., Garcia-Giralt N., Erquicia J., Abat F., Monllau J.C. Host serum is not indispensable in collagen performance in viable meniscal transplantation at 4-week incubation. Knee Surgery, Sports Traumatology, Arthroscopy; 20(9):1681-1688.
IF: 2.676

- 05 Gomoll A.H., Filardo G., Almqvist F.K., Bugbee W.D., Jelic M., Monllau J.C., Puddu G., Rodkey W.G., Verdonk P., Verdonk R., Zaffagnini S., Marcacci M. Surgical treatment for early osteoarthritis. Part II: Allografts and concurrent procedures. Knee Surgery, Sports Traumatology, Arthroscopy; 20(3):468-486.
IF: 2.676
- 06 Romero S., Szafranska J., Cabrera E., Gonzalez A., Peiro A., Llauger J., Ortega L., Bague S., Canet B., Espinosa I., Prat J. Role of tumor-associated macrophages and angiogenesis in desmoid-type fibromatosis. Virchows Archiv; 461(2):117-122.
IF: 2.676

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- ▶ Natera Cisneros L, Lamas Gómez C, Proubasta Renart I, Moya Gómez E. Fenton syndrome. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(5):369-73.
- ▶ Monllau JC. Levels of scientific evidence. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(1):1-2.
- ▶ González Rodríguez JC, Jordan Sales M, Aguilera Roig X, Monllau García JC, Celaya Ibañez F. Popliteal pseudoaneurysm as a complication in total knee replacement. Presentation of a case and an updated literature review. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(3):205-9.
- ▶ Abat F, Soria L, García-Casas Ó, Carrera I, Gelber P. Occipital condyle fracture: Clinical case and a review of the literature. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(1):67-71.
- ▶ Moya E, Lamas C, Almenara M, Proubasta I. Surgical treatment of diaphyseal and comminuted fractures of the clavicle using a low profile anatomical plate. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(2):127-31.
- ▶ Gracia IA, Proubasta IR, Peiró AI, Trullols LT, Llauger J, Palmer J, Bague S. Epithelioid hemangioendothelioma of the pisiform. Hand 2012;7(2):214-6.
- ▶ Abat F, Álvarez C, Trullols L, Peiró A, Bague S, Gracia I. Elastofibroma dorsi: A 7-year follow-up of 37 cases and a review of the literature. Revista Española de Cirugía Ortopédica y Traumatología 2012;56(4):295-9.

Others

- ▶ Aguilera X, Alvarez C, De Caso J, Pulido MC, Trigo L, Puig MT, Martínez-Zapata MJ. Estudio observacional, unicéntrico para evaluar en el tiempo, el sangrado por los redones de una cohorte prospectiva de pacientes intervenidos de fractura pertrocanterica de fémur. Trauma 2012;23(2):70-76. MAPFRE Foundation.
- ▶ Abat F, Gelber PE, Sarasquete J. Reparación artroscópica de la luxación acromioclavicular aguda con sistema de suspensión coracoclavicular. Técnica isométrica y anatómica. Cuadernos de Artroscopia

2012;19:31-37.

- ▶ Gelber PE, Erquicia JI, Abat F, Sosa G, Pelfort X, Tey M, Monllau JC. Técnicas de reconstrucción del ángulo posterolateral de la rodilla según el grado de lesión. Orientación de los túneles según un modelo cadavérico. Cuadernos de Artroscopia 2012;19:31-37.
- ▶ Proubasta IR, Lamas CG. Artroplastias de resección en muñeca y mano. Estado actual. Traumaonline 2012;2(1):1-19.
- ▶ Proubasta IR, Lamas CG, Alvarez CG. Rotura subcutánea del extensor pollicis longus. Traumaonline 2012;2(1):20-25.
- ▶ Proubasta IR, Almenara MF, Gómez MM, Alvarez CG. Fractura de húmero secundaria a "lucha de brazos". Traumaonline 2012;2(1):26-31.
- ▶ Proubasta IR, Lamas CG, Alvarez CG. Fractura-luxación inveterada de hueso ganchoso. Traumaonline 2012;2(1):32-38.
- ▶ Proubasta IR. Necrosis idiopática de escafoides (Enfermedad de Preiser). Traumaonline 2012;2(1):39-45.
- ▶ Proubasta IR, Lamas CG, Trigo JLL, Sarasquete JR, Besalduch MB, Ibañez NA. Síndrome del latigazo cervical (Wiplash injury). Traumaonline 2012;2(2):1-14.
- ▶ Proubasta IR. Tratamiento de las fracturas conminutas del extremo distal del húmero mediante Artroplastia total de codo. Traumaonline 2012;2(2):15-25.
- ▶ Proubasta IR, Lamas CG, Sarasquete JR, Trigo JLL, Besalduch MB, Ibañez NA. Tratamiento de las patologías de la articulación radiocubital distal mediante técnica de Sauvé-Kapandji. Traumaonline 2012;2(2):26-36.
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- ▶ Gracia IA, Proubasta IR, Trullols L, Peiró AI. Tratamiento de la artrosis radiocarpiana secundaria a injerto osteoarticular homólogo de radio distal postresección de un tumor de células gigantes. Traumaonline 2012;2(2):53-64.
- ▶ Abat F, Gelber PE, Sarasquete J. Reparación artroscópica anatómica de las luxaciones agudas acromio-claviculares. Trauma MAPFRE Foundation 2012;23 Supl 1:14-19.

Reproductive Health

Subgroup: Prenatal Diagnosis and Treatment

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Main Lines of Research

- Qualitative study of foetal motility by means of 2D ultrasound in foetuses with spinal muscular atrophy.
- Value of foetal nuchal translucency as a marker of neuromuscular diseases and other monogenic diseases.
- Usefulness of Doppler ultrasound of the umbilical artery during the second trimester as a discriminator of pregnancies at high risk of poor perinatal outcomes.
- Cutoff point for foetal pyelectasis as a nephrourologic pathology discriminator.
- Value of ultrasound in the control of foetal anaemia.

Challenges

- Consolidate a line of work with the HSCSP genetics department concerning possible early clinical manifestations detectable using 2D and 4D ultrasound in foetuses affected by genetic diseases, particularly neuromuscular disorders, given that the HSCSP is a referral centre for a particular group of rare diseases.
- Screen for chromosomal abnormalities from the ultrasound and biochemistry points of view, investigating the potential usefulness of the markers used either alone or in combination as indicators of populations at risk of placental insufficiency.
- Investigate the usefulness of new technologies such as 3D power Doppler angiography of the placenta in the diagnosis and control of certain foetal diseases.

Collaborations

- Collaborations with other IIB Sant Pau Groups**
- Genetic Diseases.

Reproductive Health

Subgroup: Reproduction Endocrinology

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Main Lines of Research

Hormonal alteration with reproductive and metabolic implications:

- Research into polycystic ovary syndrome and its relation to alterations of the reproductive system and metabolic control of carbohydrates. This relationship determines changes in ovulation, given that insulin acts on the steroidogenic cells of the ovarian theca.

Disorders related to hypo-oestrogenism:

- Physiological hypo-oestrogenism in menopause and its consequences.
- The role of phytotherapy in menopausal symptoms in a multicentre study designed in collaboration with the Iberoamerican Cochrane Centre.

Challenges

Hormonal alterations with reproductive and metabolic implications:

- Assessment of the impact of changes induced by exercise and diet on the results of in vitro fertilization to identify mediators between obesity and fertility control.
- Coordination of a state-wide multicentre study on the impact of lifestyle on fertility, confirming the strength of metabolic-reproductive lifestyles as a key direction for research into reproduction.
- Advancement of research into study methodologies and incentives for patients to adopt healthy lifestyles, using tools developed for external and self-control of physical activity when assessing the degree of compliance of patients advised to include

regular exercise in their weight loss programme.

- Optimization programmes for controlled stimulation and multiple follicular development, preservation of fertility in young cancer patients and application of pre-implantation genetic diagnoses.

Disorders related to hypo-oestrogenism:

- Research into growing survival for oncological diseases in young people and preventive measures in families at risk of hormone-dependent cancers (especially preventive ovariectomy).

Active Grants

- Espinós JJ. Impact of a low-calorie diet and exercise in obese women who undergo an IVF cycle. FIS Grant. Carlos III Health Institute. January 2012-December 2014.
- Espinós JJ. Multicentre study of the influence of diet and different lifestyle habits on the results of IVF-ICSI. Merck Serono-Spanish Society of Fertility. 2012-2014.
- Guinot M. Double-blind, randomized, placebo-controlled trial to evaluate the efficacy and tolerability of the combination of soy isoflavones and extract of red clover (Fitogyn) in the treatment of hot flashes in menopausal women. Fleer Casen Laboratories. 2010-2012.
- Guinot M. Open, randomized study to evaluate the safety and efficacy of monthly Actonel and Denosumab in postmenopausal women after treatment with alendronate weekly or daily. AMGEM Laboratories. 2010-2012.

Reproductive Health

Subgroup: Reproduction Endocrinology

Awards

- Best Short Communication. 2012 National Menopause Conference, Alicante, Spain. Evolution of bone mineral density beyond the hormone replacement therapy: the osteoclast does not have holidays. Guinot M, Gich I, Calaf J.

Collaborations

Collaboration with other IIB Sant Pau Groups

- Thrombosis and Haemostasis.

*TIF: 14.839 **MIF: 2.473

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- Diez A., Carbonell C., Calaf J., Caloto M.T., Nocea G. Observational study of treatment compliance in women initiating antiresorptive therapy with or without calcium and vitamin D supplements in Spain. *Menopause*; 19(1):89-95. **IF: 3.163**
- Checa M.A., Espinos J.J., Requena A. Efficacy and safety of human chorionic gonadotropin for follicular phase stimulation in assisted reproduction: A systematic review and meta-analysis. *Fertility and Sterility*; 97(6):1343-1350. **IF: 4.174**
- Espinos-Gomez J.J., Rodriguez-Espinosa J., Ordonez-Llanos J., Calaf-Alsina J. Metabolic syndrome in Mediterranean women with polycystic ovary syndrome: When and how to predict its onset. *Gynecological Endocrinology*; 28(4):264-268. **IF: 1.303**
- Cano A., Estevez J., Usandizaga R., Gallo J.L., Guinot M., Delgado J.L., Castellanos E., Moral E., Nieto C., Del Prado J.M., Ferrer J. The therapeutic effect of a new ultra low concentration estril gel formulation (0.005% estril vaginal gel) on symptoms and signs of postmenopausal vaginal atrophy: Results from a pivotal phase III study. *Menopause*; 19(10):1130-1139. **IF: 3.163**
- Parra J., Alias L., Also-Rallo E., Martinez-Hernandez R., Senosiain R., Medina C., Alejos O., Rams N., Amenedo M., Ormo F., Jesus Barcelo M., Calaf J., Baiget M., Bernal S., Tizzano E.F. Evaluation of fetal nuchal translucency in 98 pregnancies at risk for severe spinal muscular atrophy: Possible relevance of the SMN2 copy number. *Journal of Maternal-Fetal and Neonatal Medicine*; 25(8):1246-1249. **IF: 1.518**
- Parra J., Tizzano E.F. Raising obstetricians' awareness of spinal muscular atrophy: Towards early detection and reproductive planning. *Journal of Maternal-Fetal and Neonatal Medicine*; 25(12):2555-2558. **IF: 1.518**

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- Vázquez F, Baró F, Palacios S, José Parrilla J, Carmona F, Barri PN, Pellicer A, Machado F, Gilabert J, Martínez F, Vázquez A, Jiménez J, Monleón J, López G, Jesús Cancelo M, Calaf J. Acetato de ulipristal 5 mg en el manejo de los miomas uterinos. *Progresos de Obstetricia y Ginecologia* 2012;56(SUPPL1):2-19.
- Carbonell C, Díez A, Calaf J, Caloto MT, Nocea G, Lara N. Initial treatment trends in patient with osteoporosis: Use of antiresorptive agents and pharmacologic supplements (calcium and vitamin D) in clinical practice. *Reumatologia Clinica* 2012;8(1):3-9.
- Calaf J, Borrego RS, Campos EP, de la Viuda E, Lete I. Multicentre, cross-sectional study about the beliefs and attitudes of Spanish women regarding the new oral contraceptives containing natural oestradiol. *Revista Iberoamericana de Fertilidad y Reproduccion Humana* 2012;29(2).
- Cajal TR, Polo A, Martínez O, Giménez C, Arjona C, Lloret G, Bassas L, Viscasillas P, Calaf J. Preimplantation genetic diagnosis for inherited breast cancer: First clinical application and live birth in Spain. *Familial Cancer* 2012;11(2):175-9.
- Espinós JJ. Hiperprolactinemia. In: Cuadernos de Medicina Reproductiva 2012;18(3):79-90. Garcia-Velasco JA.
- Espinós JJ, Calaf J. Diagnóstico In: Checa MA, Espinós JJ, Matorras R (eds). Síndrome de ovariopoliúístico, Ch 5, pp.57-70. Editorial Panamericana.

Nursing Care Research

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Main Lines of Research

- Fall prevention and analysis of fall-related factors.
- Translation and validation of care evaluation questionnaires.
- Constipation and ageing.
- Quality of life related to nursing care.
- Development and application of health science methods: qualitative and qualitative methods, text analysis and discourse analysis.
- Patient satisfaction with nursing care.
- Attention to the family.
- Pain.
- Technological innovations in nursing care.

Challenges

- Strengthen implemented research lines and disseminate the results of active projects.
- Explore the impact of nursing care for patients, strategies for care improvement and the application of results in cure models.
- Improve the development and understanding of qualitative research in the context of the health sciences and disseminate qualitative methods and analysis of text and discourse as tools in health science research.
- Create the synergies necessary to consolidate the group's activities.

Active Grants

- Juandó C. Economic and cultural inequalities faced by women with breast cancer: Barriers and facilitators in the use of health services. FIS Grant. January 2009-December 2012.
- Ricart M. Anxiety in patients discharged from intensive care units. HSCSP Private Foundation. 2011-12.
- Robleda G. Randomized double-blind placebo-controlled study to evaluate the efficiency and safety of opioid agents administered as preventive treatment for pain associated with nursing care for critically ill mechanically ventilated patients. COIB Grant. January 2011-March 2013.
- Robleda G. Pilot study to evaluate the impact of the implementation of clinical guidelines for sedation and analgesia for critically ill mechanically ventilated patients who cannot communicate. COIB Grant. 2012-13.
- Romero M. Perception of critically ill patients in relation to the nursing care satisfaction. COIB Grant. January 2011-January 2014.
- Romero M. Qualitative- and quantitative-designed research study of the critically ill patient's perception of nursing care: an approach to the concept of satisfaction. FIS Grant. 2011-14.

Translational Molecular Oncology

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Main Lines of Research

- ▶ In vitro and in vivo studies by genetic manipulation of new biomarkers of poor prognosis in squamous cell carcinoma (SCC) in tumour progression and as potential therapeutic targets. The studies are focused on genes involved in development and hypoxia.
- ▶ Preclinical head and neck SCC models to identify resistance subpopulations of tumour-initiating cells and study alternative treatments.

Challenges

- ▶ Evaluate survival pathways, epithelial-mesenchymal transition, enrichment of cancer stem cells and the resistance to chemotherapeutic treatment involving the studied genes.
- ▶ Reinforce and encourage translational research in tumour progression and tumour initiating cells through collaboration with internal and external research groups.
- ▶ Improve a mouse model of head and neck carcinoma, based on implantation of human primary tumour.
- ▶ Become consolidated as a research group.

Active Grants

- ▶ Parreño M. Study of poor prognosis markers in head and neck squamous cell carcinoma and the search for therapeutic alternatives. FIS Grant. January 2010-December 2012.
- ▶ Parreño M. SNS Researcher Stabilization. Department of Health: SNS Spanish National Health System. January 2008-April 2013.

Collaborations

Collaboration with other IIB Sant Pau Groups

- ▶ Haematological Diagnosis.
- ▶ Ear, Nose and Throat Cancer.

External Collaborations

- ▶ Alberto Villanueva. Catalan Oncology Institute (ICO)-Bellvitge Biomedical Research Institute, Barcelona, Spain.

Scientific Production

*TIF: 5.635 **MIF: 5.635

ISI Web of Knowledge Indexed Publications with an IF

01 Pavon M.A., Parreno M., Tellez-Gabriel M., Sancho F.J., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Mangues M.A., Quer M., Barnadas A., Leon X., Mangues R. Gene expression signatures and molecular markers associated with clinical outcome in locally advanced head and neck carcinoma. Carcinogenesis; 33(9):1707-1716.

IF: 5.635

Molecular Physiology of the Synapse

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Grant Holders
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Main Lines of Research

- ▶ Molecular and cellular analyses of the vertebrate synapse.
- ▶ Molecular and cellular dysfunctions underlying intellectual disability and autism.
- ▶ Research into animal models of mental and behavioural disorders.
- ▶ Development of new biochemical methods to study the synapse.

Challenges

- ▶ Characterize the molecular roots of cognition and behaviour.
- ▶ Identify the synaptic molecules and mechanisms involved in mental and behavioural disorders, mainly intellectual disabilities and autism spectrum disorders.
- ▶ Identify drugs which might help treat mental and behavioural disorders.
- ▶ Study the reversibility after birth of neurodevelopmental disorders affecting cognition.

Active Grants

- ▶ Bayés A. Molecular analysis of synaptic dysfunctions underlying human intellectual disabilities. Marie Curie Grant. European Union. May 2012-May 2016.
- ▶ Bayés A. Start-up associated with Ramon y Cajal Career Development Fellowship. FIS Project. Spanish Ministry of Economy and Competitiveness. May 2012-May 2014.

Collaborations

Collaboration with other IIB Sant Pau Groups

- ▶ Neurobiology of Dementia.

External Collaborations

- ▶ Prof. Seth GN Grant. University of Edinburgh, UK.
- ▶ Dr. Noboru Komiyama. University of Edinburgh, UK.

- ▶ Dr. Gavin Rumbaugh. Scripps Research Institute, USA.
- ▶ Dr. Jyoti S Choudhary. Wellcome Trust Sanger Institute, UK.
- ▶ Dr. Richard Emes, University of Nottingham, UK.
- ▶ Prof. Jesus Giraldo. Autonomous University of Barcelona, Spain.
- ▶ Dr. Montserrat Milà. Hospital Clínic de Barcelona, Spain.

*TIF: 3.73 **MIF: 3.73

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Bayes A., Collins M.O., Croning M.D.R., van de Lagemaat L.N., Choudhary J.S., Grant S.G.N. Comparative Study of Human and Mouse Postsynaptic Proteomes Finds High Compositional Conservation and Abundance Differences for Key Synaptic Proteins. PLoS ONE; 7(10). IF: 3.73



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