

# 2013

## Scientific Report



Sant Pau Biomedical Research Institute

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Conrad Casas i Segalà  
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Jaume Kulisevsky Bojarski  
Hospital de la Santa Creu i Sant Pau  
Research Institute

# Summary

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# Presentation



Despite the current economic downturn, 2013 has been a year of consolidation for IIB Sant Pau. Our scientific production has advanced and our research groups have continued to produce new results and publications.

A significant milestone this year has been the organization of a wide range of courses and seminars, the objective of which was to promote awareness and interesting scientific activity at IIB Sant Pau, both inside and outside the Institute. The fruits of these efforts are evident in the new relationships that have been established among research groups, not only within the Institute itself but also externally, widening the scope of our researchers.

We have also managed to attract further private and public investment this year, and this has contributed substantially to safeguarding our independence. The involvement of all concerned, particularly the researchers, has boosted the continuity and growth of our lines of research.

A center like IIB Sant Pau that brings researchers from various institutions together can only be consolidated through the constant effort and commitment of all the professionals, from researchers to support staff, who work together each day. It is this dedication that provides continuity and makes IIB Sant Pau a leader in translational research in Catalonia and in Spain.

Jaume Kulisevsky  
IIB Sant Pau Manager

# 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
- Uronephrology 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.

# 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



Institut de Recerca

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.

# 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.



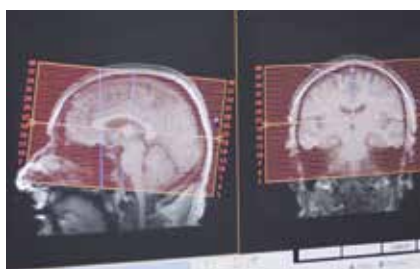
## Genetic, Metabolic and Inflammatory Diseases

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

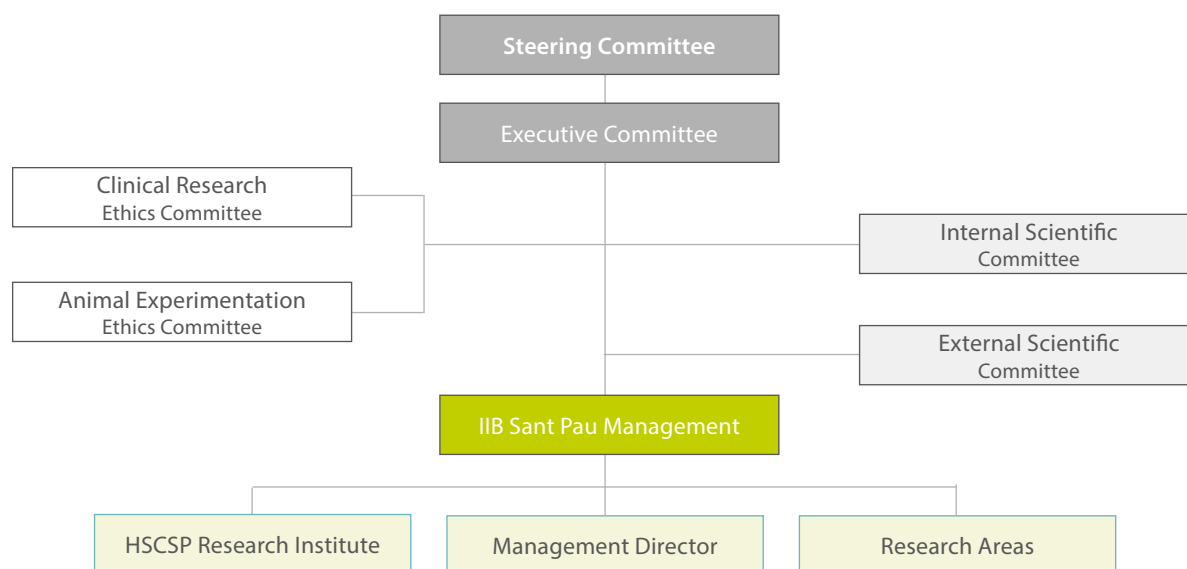
This area focuses on the structure of proteins associated with neurodegenerative diseases and inflammatory processes and on factors linked to the innate immune system. Research is also conducted in the area of osteoporosis, ageing-related macular degeneration and coagulation-cascade factors closely linked 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 Mangues  
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 Guarnier  
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 2005-2013



*In millions of euros*

## Income Statement year ending 31 December 2013

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
<b>OPERATIONAL PROFIT/LOSS</b>	<b>-2,058,010</b>
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
<b>FINANCIAL PROFIT/LOSS</b>	<b>374,434</b>
<b>OVERALL PROFIT/LOSS</b>	<b>-1,683,576</b>

*In euros*

# Scientific Outcomes

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

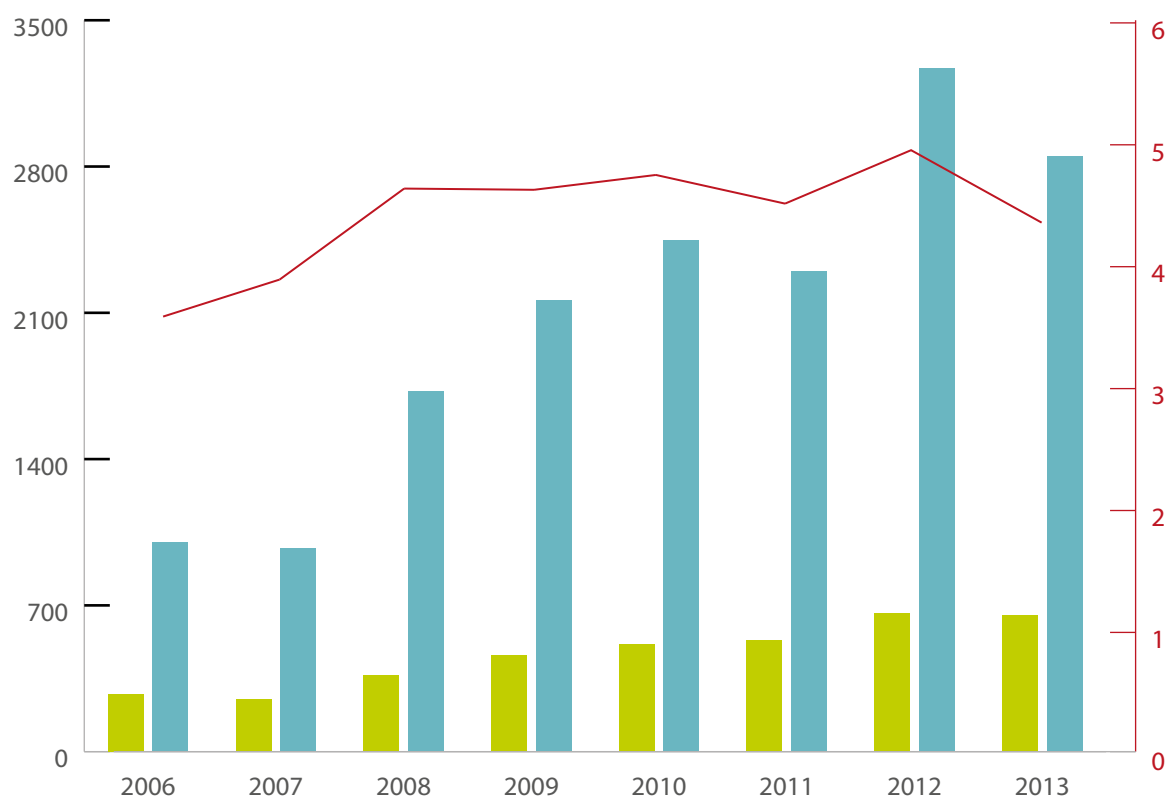
- **Publications with an Impact Factor (IF):** This figure shows IIB Sant Pau publications over the years with an impact factor, one of the most important indicators used to identify the relevance of a science journal in its field and to give an approximate idea of the quality of the publications of 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 2013.
- **Technology Transfer Agreements:** This table reflects agreements signed between 2009 (foundation year) and 2013.





# Publications with an Impact Factor

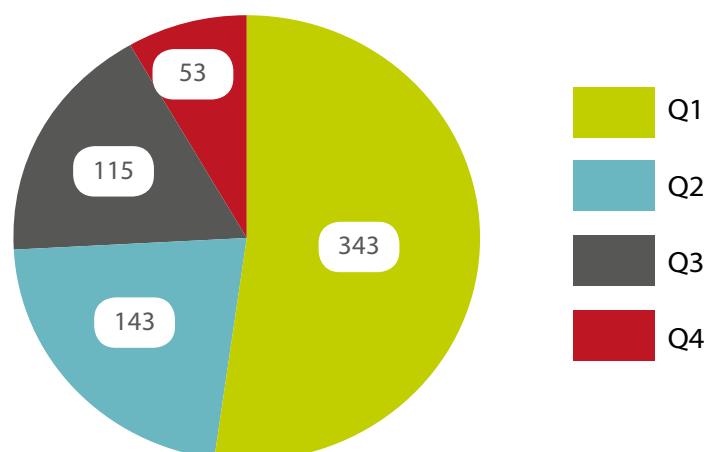
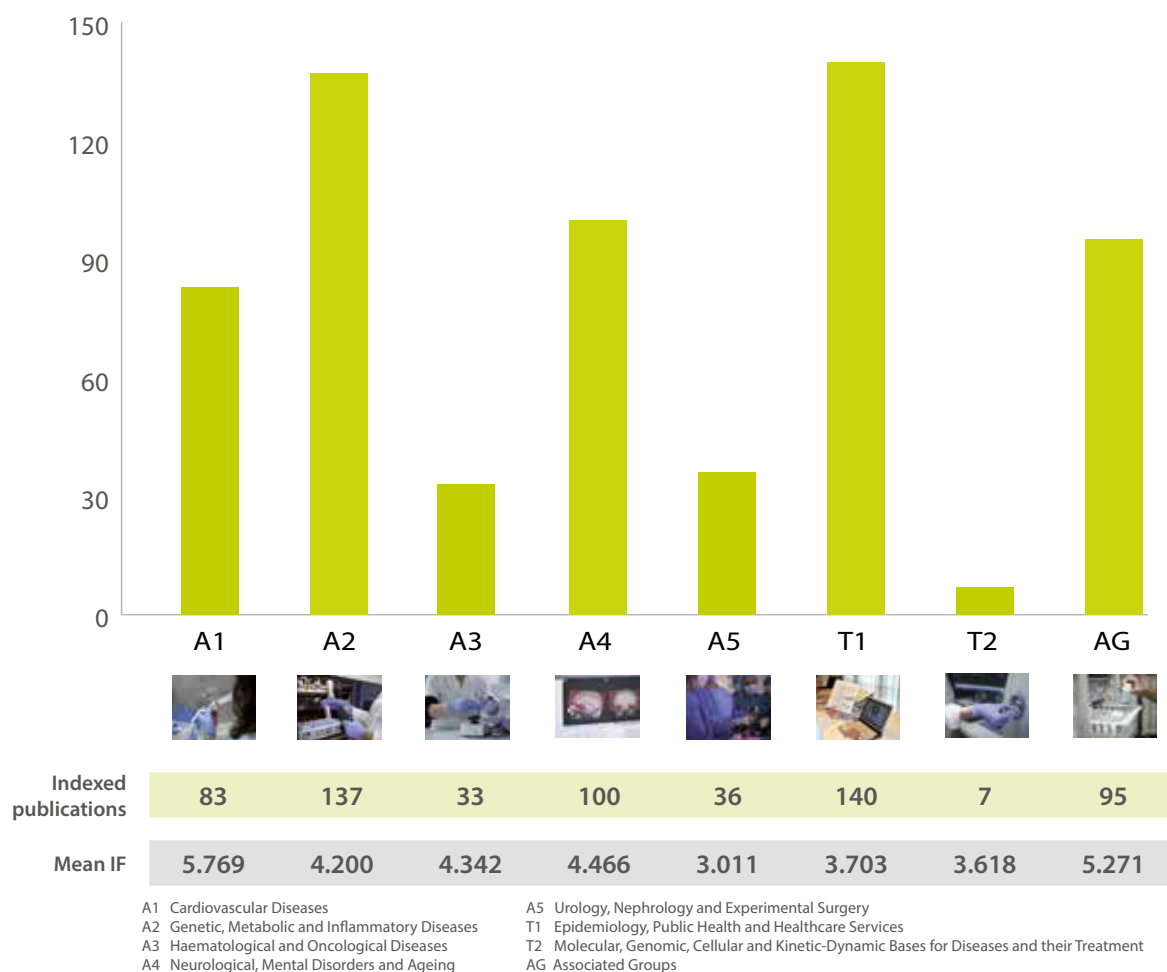
## Production status



Publications	275	250	367	461	514	534	664	654
Total IF	1,001.03	975.36	1,722.76	2,158.53	2,448.88	2,298.44	3,269.47	2,848.27
Mean IF	3.64	3.9	4.69	4.68	4.78	4.30	4.92	4.35

# Publications by Thematic Area and Quartile

## Indexed publications



# Research Resources

Centre	Active		Granted	
	2012	2013	2012	2013
AGAUR (Catalan Agency for University and Research Support Management)	19	19	0	0
EUROPEAN PROJECTS	6	6	1	1
AMERICAN PROJECTS	0	1	1	1
EAES (European Association for Endoscopic Surgery)	0	1	1	0
CAIXA TARRAGONA	0	0	0	0
CNIC (National Cardiovascular Research Centre)	1	0	0	0
COIB (Official College of Nurses of Barcelona)	5	3	0	0
FEA (Spanish Arteriosclerosis Foundation)	0	0	0	0
FIPSE (Foudation for AIDS Research and Prevention in Spain)	0	0	0	0
Spanish Genome Foundation	0	0	1	0
CAIXA NAVARRA	0	0	0	0
LA MARATÓ de TV3 Foundation	16	9	0	2
FMM (Mutua Madrileña Foundation)	1	1	0	2
FARMAINDUSTRIA	2	0	0	0
MAPFRE Foundation	2	1	1	0
Spanish Ministry of Economy and Competitivity 0 ISCIII (Carlos III Health Institute)	109	110	28	23
Spanish Ministry of conomy and Competitivity (Secretariat of Research, Development and Innovation)	7	8	1	1
Spanish Ministry of Health, Social Services and Equality	12	12	0	1
Spanish Ministry of Industry, Energy and Tourism	1	0	0	0
MEC (Ministry of Education and Science)	1	0	0	0
SEOM (Spanish Medical Oncology Society)	0	0	0	0
SEPAR (Spanish Pneumology and Thoracic Surgery Society)	1	1	0	8
SERAM (Spanish Medical Radiology Society)	2	2	0	0
GEIS (Spanish Sarcoma Research Group)	0	0	0	0
AECC (Spanish Association Against Cancer)	1	1	0	2
MERK SERONO	1	2	1	0
Catalan and Balearic Academy of Medical and Health Sciences Foundation	1	1	0	0
SOCAP (Catalan Society of Neumology)	0	1	1	0
ISHLT (The International Society for heart and Lung Transplantation)	0	1	1	0
SED (Spanish Diabetes Society)	0	1	1	1
FUCAP (Catalan Pneumology Foundation)	3	3	0	0

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

SEC (Spanish Society of Cardiology)	3	3	0	0
AEA (Spanish Arthroscopy Association)	1	1	0	0
FAME	0	1	0	0
AFM Telethon	0	0	0	1
SCPSM (Catalan Society of Psychiatry and Mental Health)	0	0	0	1
ALFONSO MARTIN ESCUDERO Foundation	0	0	0	1
CIBERER	0	0	0	1
GILEAD	0	0	0	1
	195	189	38	47

# Research Training

Centre	Active		Granted	
	2012	2013	2012	2013
AGAUR (Catalan Agency for University and Research Support Management)	4	6	3	4
Catalan Department of Health	3	7	4	2
Catalan General Director of Research	0	0	0	0
Spanish Ministry of Economy and Competitiveness (MINECO)	6	6	0	1
ISCIII ( Instituto de Salud Carlos III)	25	25	7	8
FUNDACIÓ GESTIÓ SANITARIA	4	5	5	5
	42	49	20	22

# Doctoral Theses

IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Lipids and Cardiovascular Pathology	ICCC	Roi Cal Perez-Quevedo	Vicenta Llorente-Cortes	Papel del receptor LRP1 en la isquemia y en la fisiopatología cardiovascular	UAB
Lipids and Cardiovascular Pathology	ICCC	Elena Revuelta-Lopez	Vicenta Llorente-Cortes	Papel de LRP1 en la funcionalidad cardiaca y en la tolerancia del cardiomiocito a isquemia-reperfusion	
Lipids and Cardiovascular Pathology	ICCC	Wan Saanan	Vicenta Llorente-Cortes / A.A.M.Thomas	Atherosclerosis and LRP1 in hypoxia	Utrecht University, Netherlands
Lipids and Cardiovascular Pathology	ICCC	Alberto Dellamora	Vicenta Llorente-Cortes / Fulvia Ortolani	Effect of lipoproteins on cholesterol uptake by aortic valve interstitial cells	Università degli Studi di Udine
Clinical and Translational Cardiology	HSCSP	Xavier Viñolas Prat	Josep M Alegret	Lcardioversión en la fibrilación auricular: uso actual e implicaciones clínicas	Universitat Rovira i Virgili
Clinical and Translational Cardiology	HSCSP	Jesús Álvarez García	Juan M <sup>a</sup> Cinca Cuscullola	Oclusion aguda de las arterias auriculares durante la angioplastia coronaria electiva en el ser humano. estudio prospectivo de las consecuencias clinicas, bioquimicas y electro-mecanicas	
Clinical and Translational Cardiology	HSCSP	Gerard Amorós Figueras	Juan M <sup>a</sup> Cinca Cuscullola	Desenvolupament preclínic d'una nova tècnica per a la detecció i caracterització de la cicatriu d'infart de miocardi basada en mesures de bioimpedancia	
Clinical and Translational Cardiology	HSCSP	Miquel Vives Borrás	Juan M <sup>a</sup> Cinca Cuscullola	Caracterización clínica, electrocardiográfica y pronóstica del infarto agudo de miocardio secundario a la oclusión aguda de la arteria coronaria circunfleja	
Clinical and Translational Cardiology	HSCSP	Francisco Javier Noriega Sanz	Juan M <sup>a</sup> Cinca Cuscullola	Caracterización clínica y electrofisiológica de las alteraciones recíprocas del electrocardiograma en el infarto agudo de miocardio	
Clinical and Translational Cardiology	HSCSP	Albert Duran Cambra	Juan M <sup>a</sup> Cinca Cuscullola	Estudi de la seguretat d'una estratègia de diagnòstic ràpid de dolor toràcic de possible origen coronari a urgències	
Clinical and Translational Cardiology	HSCSP	Sònia Mirabet Pérez	Eulàlia Roig Minguell	Detecció precoz de la malaltia vascular de l'empelt al trasplantament cardíac: marcadors en sang perfèrica	
Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases	ICCC	Rodrigo Hernández Vera	Lina Badimon	Determinantes celulares y moleculares del riesgo cardiovascular en la diabetes	UB
Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases	ICCC	Blanca Oñate Hospital	Lina Badimon	Caracterización transcriptómica y funcional de las células madre mesenquimales residentes en tejido adiposo de pacientes obesos	UB
Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases	ICCC	Roberta Lugano	Lina Badimon / Teresa Padro	Low density lipoproteins, vascular smooth muscle cell function and vascular remodeling	Universitat Pompeu Fabra

IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Biomarkers for Cardiovascular Disease	ICCC	Roberta Lugano	Lina Badimon / Teresa Padro	Low density lipoproteins, vascular smooth muscle cell function and vascular remodeling	Universitat Pompeu Fabra
Endocrinology, Diabetes and Nutrition	HSCSP	Inka Miñambres Donaire	Alberto de Leiva / Antonio Pérez	hipovitaminosis D: relación con el síndrome metabólico y sus componentes	UAB
Endocrinology, Diabetes and Nutrition	HSCSP	Gabriela Monroy Rodríguez	Rosa Corcoy / Alberto de Leiva		
Endocrinology, Diabetes and Nutrition	HSCSP	Diana Tundidor Rengel	Rosa Corcoy / Alberto de Leiva		
Endocrinology, Diabetes and Nutrition	HSCSP	Cristina Colom Comí	Antonio Pérez / Alberto de Leiva		
Endocrinology, Diabetes and Nutrition	HSCSP	Ignasi Saigí	Ana Chico / Alberto de Leiva		
Digestive Diseases	HSCSP	Eva Román	Germán Soriano	Falls in patients with cirrosis. Relationship with the cognitive deterioration and quality of life	UAB
Metabolic Bases of Cardiovascular Risk	HSCSP	Jesús Mendez González	Francisco Blanco-Vaca / Joan Carles Escolà Gil	Effects of sterols and stanols on the enterohepatic metabolism of cholesterol and triglycerides	UAB
Genetic Diseases	HSCSP	Jonàs Juan Mateu	Pía Gallano	Caracterización molecular en distrofinopatías, correlación genotipo-fenotipo	UB
Pituitary Gland Disorders	HSCSP	M <sup>a</sup> Antonia Martínez Momblán	I Ubeda, SM Webb & E Resmini	Impact of an educational study for patients with Cushing's syndrome: Multicentre study	UB
Ear, Nose, Throat Cancer	HSCSP	Susana López Fernández		Cirugía reconstructiva con colgajos libres en el tratamiento de los carcinomas de cabeza y cuello. Factores pronósticos clínicos y biológicos relacionados con la aparición de complicaciones	UAB
Ear, Nose, Throat Cancer	HSCSP	Katarzyna Alicja Kolanczak		Patrón electromiográfico global de la laringe humana. Función de las conexiones laríngeas	UAB
Ear, Nose, Throat Cancer	HSCSP	Laura Gañán Albuisch		Resultados de la cirugía de rescate en las recidivas de tumores de cabeza y cuello	UAB
Ear, Nose, Throat Cancer	HSCSP	Gabriel Pedemonte Sarrias		Manejo de las áreas ganglionares CN0 en recidivas locales y segundas neoplasias de cabeza y cuello	UAB
Neuromuscular Diseases	HSCSP	Barbara Flix Ordoñez	Eduard Gallardo Vigo	Estudios funcionales de la disferlina y aproximaciones terapéuticas en un modelo murino de miopatía por déficit de disferlina	UAB
Neuromuscular Diseases	HSCSP	Jordi Díaz Manera	Isabel Illa Sendra	Disferlinopatía: nuevos aspectos diagnósticos y terapéuticos	UAB
Neuromuscular Diseases	HSCSP	Luis Querol Gutiérrez	Isabel Illa Sendra	Nuevas reactividades antigénicas en neuropatías inmunomediadas	UAB
Parkinson Disease and Movement Disorders	HSCSP	María Victoria Sosti	Jaime Kulisevsky / Fabián Arenas	Molecular and cognitive profiles characterization of parkinsonism rat models with 6-OHDA lesion	UAB
Malaltia vascular cerebral	HSCSP	Elena Jiménez Xarrié	Carles Arús / Joan Martí Fàbregas	Caracterización de la proliferación celular en las zonas subventriculares mediante resonancia magnética espectroscópica en un modelo preclínico de isquemia cerebral	UAB
Clinical Psychiatry	HSCSP	Irene Cristina Romera Fernández	Víctor Pérez / Inmaculada Gilaberte	Remisión y funcionalidad en el trastorno depresivo mayor	UAB

IIB Sant Pau Accredited Groups	Institution	Candidate	Director(s)	Thesis title	Defended at
Investigació en nefrologia	FP	Deborah Grazia Lo Giacco	E Ars / C. Krausz	Genetics of male infertility: molecular study of non-syndromic cryptorchidism and spermatogenic impairment	UAB
General and Digestive Surgery	HSCSP	Franco Marinello	EM Targarona / X Rius	Abordaje laparoscópico de la acalasia. Resultados clínicos, de calidad de vida y funcionales a largo plazo	
Evaluation of Public Health Policies and Programmes	ASPB	Xavier Contente Garcia	M <sup>a</sup> José López Medina	Conductas y comportamientos de riesgo en adolescentes: encuesta FRESC	Universitat Pompeu Fabra
Evaluation of Public Health Policies and Programmes	ASPB	Gemma Serral Cano	Rosa Puigpinós	Incidència de càncer de mama: el paper dels programes de cribratge	Universitat Pompeu Fabra
Evaluation of Public Health Policies and Programmes	ASPB	Núria Obradors	Carles Ariza	Desigualtats en salut en les conductes de risc dels joves, segons l'àmbit de residència	Fundació Universitària del Bages
Health Inequalities	ASPB	Dolores Ruiz Muñoz	Glòria Pérez	Socioeconomic inequalities in sexual and reproductive health in Spain	Universitat Pompeu Fabra
Transport and Health: Injuries and Mobility	ASPB	Marta Olabarria	Catherine Pérez	Walking for transportation. Estudio de los factores individuales y contextuales que influyen en el caminar como transporte y de sus implicaciones en salud	Universitat Pompeu Fabra
Transmissible Diseases	ASPB	Ignaci Monedero	Joan A. Caylà / Rafael Vida	Hacia un mejor control de la tuberculosis multidrogoresistente en países en desarrollo	UB
Clinical Epidemiology and Healthcare Services	HSCSP	Leticia Andrea Barajas	Xavier Bonfill Cosp	Evidencia científica sobre seguridad del paciente	UAB
Clinical Epidemiology and Healthcare Services	HSCSP	Maria Ximena Rojas Reyes	Xavier Bonfill Cosp	Manejo respiratorio del recién nacido prematuro y otros factores asociados con la displasia broncopulmonar: una evaluación desde la evidencia existente y la situación actual en algunas unidades de cuidado intensivo neonatal en Colombia	UAB
Palliative Care	HSCSP	Nadia Collette	Pilar Barreto Martin	Arteterapia en el final de la vida	Universitat de Valencia
Andrologia	FP	Deborah Grazia Lo Giacco	E Ars / C. Krausz	Genetics of male infertility: molecular study of non-syndromic cryptorchidism and spermatogenic impairment	UAB
Urology	FP	Marco Cosentino	J Palou	Radical cystectomy and urinary diversion: is there a role for bowel in the future	UAB
Nuclear Medicine	HSCSP	Monica Sabaté Fernández	Ignasi Carrió	Biopsia selectiva del ganglio centinela en el cancer diferenciado de tiroides: rendimiento diagnóstico y validación clínica	
Nuclear Medicine	HSCSP	Fidel Núñez Marín	Ignasi Carrió	Pacientes con enfermedad de alzheimer presenil: estudio en RM de alto campo (3T)	
Intensive Medicine	HSCSP	Indalecio Morán Chorro		Optimización de la mecánica respiratoria en el tratamiento de soporte ventilatorio de pacientes con insuficiencia respiratoria aguda grave	UAB
Nursing Care Research	HSCSP	Carme Jover Sancho	Jose Luis Medina Moya / Lourdes garcia Viñets	Práctica reflexiva y desarrollo profesional en enfermería. Liderazgo de los cuidados	UB
Nursing Care Research	HSCSP	Gemma Robleda Font			UB



# Patents

IIB Sant Pau Group	Researchers	Organizations	Title	Application Number	Year
Reproductive Health	Dr. Ramon Rovira	HSCSP RI	Procedimiento y dispositivo para el aprendizaje y entrenamiento de operaciones de cirugía laparoscópica e intervenciones similares	P201331528	2013
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.
- > Store the supplies until the end of the studies, when they are destroyed or recycled.
- > Oversee and manage documentation of completed trials for the Centre for Drug Research (CIM)
- > Maintain and update the clinical workstation database and manage clinical studies.
- > 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 study monitoring.
- > Provide logistical support to the cold area and the clinical materials store associated with clinical trials in the experimental phase.
- > Ship biological samples to central laboratory services.

### Facilities:

Several areas have been designated to implement these functions:

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

## 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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Administrative-Financial Unit  
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## Human Resources Unit

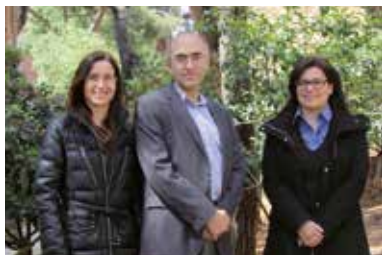
Rafael Fernández

## Projects Unit

Fabiola Fernández  
Eva José  
Eva Rodríguez

## General Secretariat

Rosa M. García  
Amanda García  
Magda Sanz



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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 CO<sub>2</sub> incubator for cell cultures.



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Jorge Pena

## 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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**Coordinators:**

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**Staff:**

Abraham del Moral, Santi Porta

## 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



## Coordinator:

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## Staff:

Claudia E. Delgado, Ma Teresa Garrido, Nàdia Llaveró, Enrique Peña, Romy Rodríguez

## 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.



**Coordinator:**

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**Staff:**

Animal welfare advisor:  
M. Antonia Rubio

Veterinary surgeon:  
Eder Fredy Mateus

Animal care workers:  
Margarita Domingo, Luis Garcia

## 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:**Conventional Animal Facility:

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

Pathogen-free area:

- > Pre-changing room.
- > Changing room.
- > Air shower.
- > Work room.
- > Mice room and changing area.
- > S.A.S.
- > Autoclave and washing area.
- > storage room.

# Research Support Services



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**Coordinator:**

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**Staff:**

Carlos Enrique

## 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.



**President:**

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Xavier León  
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Estela Moreno  
Miguel Ortín  
Ma Virtudes Pacheco

## 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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**Administrative Staff:**  
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Marisol Mogollón  
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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.



**Coordinator:**  
Carolyn Newey  
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## 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.

# Scientific and Technical Service Platforms



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**Coordinator:**  
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**Technical Staff:**  
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Transcriptomics Laboratory:  
Elena Serrano  
eserrano@santpau.cat

## 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.

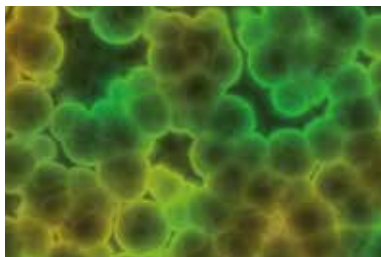
### > TRANSCRIPTOMICS LABORATORY

#### 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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**Technical Staff:**

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Cell Culture Laboratory:

Rosa Antón  
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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.
- > FACS Aria (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 CO<sub>2</sub> incubators.
- > 2 hypoxia incubators (2-21% O<sub>2</sub>).
- > 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



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microscopia@santpau.cat

**Coordinator:**  
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**Coordinators:**  
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Josep M. Colomé (i2Cat Foundation)  
josep.colome@i2cat.net

## 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, trichromic, 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.



PLAN  
AVANZA



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**Coordinator:**

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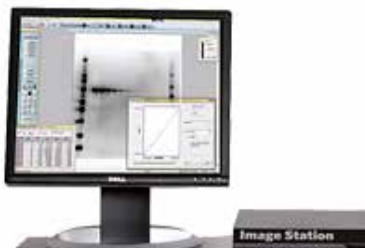
## Biobank

**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.



**Coordinator:**

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**Technical Staff:**

Image Analysis Laboratory:  
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Other Equipment:

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## 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.



# Areas of Research

42



Area 1  
Cardiovascular Diseases

76



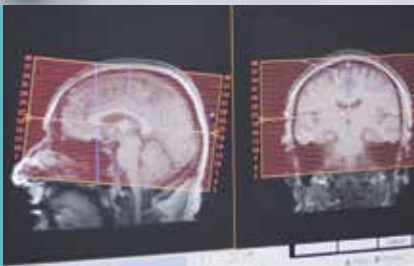
Area 2  
Genetic, Metabolic and  
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Area 3  
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Area 4  
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Area T1

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Area T2

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Associated Groups

## AREA 1

# Cardiovascular Disease

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- 50 Thrombosis and Haemostasis
- 56 Cardiovascular Biochemistry
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- 60 Molecular Pathology and Therapeutics of Ischaemic and Atherothrombotic Diseases
- 64 Inflammation and Vascular Remodelling
- 66 Biomarkers for Disease Status
- 68 Lipids and Cardiovascular Pathology
- 70 Cell Therapy
- 72 Atherosclerosis and Vascular Biology
- 74 Regulation of Cardiac Rhythm and Contraction

# eases



# Clinical and Translational Cardiology

## Coordinator

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Antoni Serra HSCSP  
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## Researchers Students

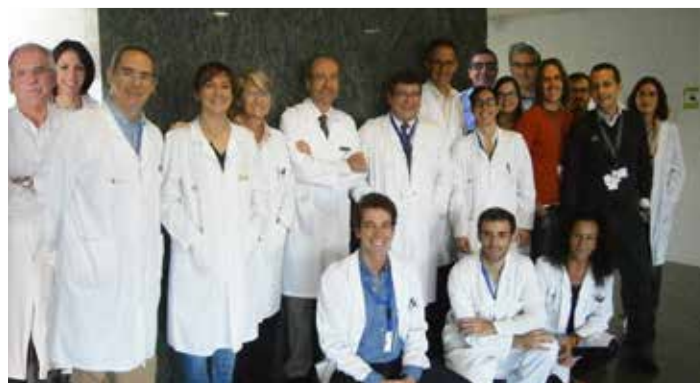
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Miquel Vives HSCSP RI  
Gerard Amorós HSCSP RI  
Andreu Ferrero HSCSP RI

## Technicians

Roser Martínez HSCSP RI  
Ana Fernández HSCSP RI

## Administrative Staff

Laia Anglís HSCSP RI



## Main Lines of Research

- ▶ Cardiac electrophysiology and arrhythmias (clinical and experimental).
- ▶ Heart failure.
- ▶ Ischaemic heart disease.
- ▶ Valvular heart disease.
- ▶ Cardiac imaging.

## Challenges

### Electrophysiology

- ▶ Describe the mechanisms and clinical significance of electrocardiographic alterations in patients with acute myocardial infarction, using translational research in pig heart models.
- ▶ Characterize ECG patterns and prognosis in patients with left circumflex coronary occlusion.
- ▶ Describe the behaviour of myocardial electrical impedance in normal and acute ischaemic models using new bioimpedance methods developed in our laboratory.

### Heart failure

- ▶ Develop new risk scores for ambulatory heart failure patients predicting death and re-hospitalizations.
- ▶ Research new biomarkers in patients with heart failure included in the Spanish registry Redinscor II (RIC), with 1500 patients (our group is the national coordinator).

- ▶ Develop new markers for early detection of cardiac graft rejection in transplanted patients.
- ▶ Develop palliative care programmes for patients with advanced heart failure.

### Ischaemic heart disease

- ▶ Set up a programme for patients with refractory angina.
- ▶ Treat complex atherosclerotic coronary artery lesions using international techniques.

### Valvular heart disease

- ▶ Implement new percutaneous techniques for the treatment of mitral valve regeneration and degenerative aortic stenosis.

### Cardiac imaging

- ▶ Implement new imaging software analysis to detect structural abnormalities of the myocardium (fibrosis, necrosis).
- ▶ Implement new software analysis for fusion imaging in patients undergoing coronary interventions.

## Active Grants

- ▶ José M. Guerra, Comparative study of electro-mechanical effects of epicardial and endocardial biventricular stimulation of the left ventricle in an animal model of heart failure, PI10/01149, FIS Project, Carlos III Health Institute, 2011–2013, €184,101.50.
- ▶ Juan M. Cinca (coordinator) Programme 6: Clinical and Translational Cardiology. RD12/0042–RIC (Cardiovascular Research Network), Thematic Networks for Coopera-

tive Research at the Carlos III Health Institute, 2012–2015.

- ▶ Juan M. Cinca, Preclinical development of a new technique to guide the electrical ablation of ventricular arrhythmias in patients with chronic myocardial infarction based on bioimpedance measurements, PI13/00765, Carlos III Health Institute, 2013–2015, €169,702.50.

Collaborations

**Collaborations with other IIB Sant Pau Groups**

- ▶ Concepción Vicenta Llorente-Cortés, ICCC–CSIC.
- ▶ Leif Hove Madsen, ICCC–CSIC.
- ▶ Jordi Ordoñez Llanos, HSCSP Biochemistry Laboratory.
- ▶ Antoni Capdevila, HSCSP Radiodiagnostics.
- ▶ María Poca Sans, HSCSP Digestive Disorders.
- ▶ Enric Álvarez, HSCS Anaesthesiology.
- ▶ Ricard Serra, HSCSP Psychiatry.

**External Collaborations**

**Juan M. Cinca Cusculloa (HSCSP), Programme 6: Clinical and Translational Cardiology, RD12/0042-RIC (Cardiovascular Research Network):**

- ▶ Alfredo Bardají Ruiz, Hospital Universitari Joan XXIII, Tarragona, Spain.
- ▶ Fernando Worner Diz, Hospital Universitari Arnau de Vilanova, Lleida, Spain.
- ▶ Andrés Grau Sepúlveda, Hospital Son Dureta, Palma de Mallorca, Spain.
- ▶ Xavier Rosell Ferrer, Universitat Politècnica Catalunya (UPC), Barcelona, Spain.
- ▶ Rafael Vázquez García, Hospital Universitario Virgen de Valme, Seville/Hospital Puerta del Mar, Cadiz, Spain.
- ▶ Joaquín Lucena Romero, Instituto Medicina Legal Sevilla, Spain.

- ▶ José M, Cubero Gómez, Hospital Virgen del Rocío, Seville, Spain.
- ▶ Antonio Fernández Romero, CHARE Utrera SAS, Seville, Spain.
- ▶ Josep Brugada Terradellas, Hospital Clínic, Barcelona, Spain.
- ▶ Julián Pérez-Villacastín, Hospital Clínico San Carlos, Madrid, Spain.
- ▶ Juan Francisco Delgado Jiménez, Hospital 12 de Octubre, Madrid, Spain.
- ▶ Jose Luis Zamorano, Hospital Ramón y Cajal, Madrid, Spain.
- ▶ Mariano Valdés Chavarri, Hospital Universitario Virgen de la Arrixaca, Murcia, Spain.
- ▶ José Ramón González, Hospital Clínico Universitario, Santiago de Compostela, Spain.
- ▶ Luis Alonso-Pulpón Rivera, Hospital Puerta del Hierro, Madrid, Spain.
- ▶ Covadonga García González, Hospital Guadarrama, Madrid, Spain.
- ▶ José Miguel Rivera, Hospital La Fe, Valencia, Spain.
- ▶ Alfonso Castro Beiras, Complejo Hospitalario Universitario, A Coruña, Spain.
- ▶ Francisco Fernández Avilés, Hospital Gregorio Marañón, Madrid, Spain.
- ▶ Ignacio Flores Hernández, National Cardiovascular Research Centre–CNIC, Madrid, Spain.

**Antoni Serra Peñaranda (HSCSP), TEAM 2014:**

- ▶ Eulogio García, Hospital Clínico San Carlos, Madrid, Spain.
- ▶ Carlos Macaya Miguel, Hospital Clínico San Carlos, Madrid, Spain.
- ▶ Andrés Iniguez Romo, Complejo Hospitalario de Vigo, Spain.

**Xavier Viñolas Prat (HSCSP), RETAC Group/European Network for the Treatment of Arrhythmias in Cardiology:**

- ▶ Philippe Lagrange, Clinique Saint Pierre, Perpignan, France.
- ▶ Benoît Guy-Moyat, Hospital Universitaire de Limoges, France.
- ▶ Franck Halimi, CMC. Parly II-Le Chesnay, France.
- ▶ Luc De Roy, Clinique Universitaire De Saint Godinne, Yvoir, Belgium.
- ▶ Serge Boveda, Clinique Pasteur, Toulouse, France.
- ▶ Julio Martí, Hospital del Mar, Barcelona, Spain.
- ▶ Pascal Defaye, Hospital Universitaire de Grenoble, France.
- ▶ Antonio Curnis, Spedali Civili, Brescia, Italy.
- ▶ Marc Zimmermann, Hôpital de la Tour, Geneva, Switzerland.
- ▶ Thomas Arentz, Herzzentrum Brad Krozingen, Germany.

Awards

**Doctoral Theses**

- ▶ Xavier Viñolas Prat, Cardioversion in atrial fibrillation: current use and clinical implications, Josep M Alegret (supervisor), November 2013, Universitat Rovira i Virgili (EU). Underway:
- ▶ Jesús Álvarez García, Acute occlusion of the atrial arteries during elective coronary angioplasty in humans: prospective study of the clinical, biochemical and electro-mechanical consequences, Juan M. Cinca Cusculloa (supervisor).
- ▶ Gerard Amorós Figueras, Preclinical development of a new technique for detecting and characterizing myocardial infarction scars based on bioimpedance measures, Juan M. Cinca Cusculloa (supervisor).

- ▶ Miquel Vives Borrás, Clinical, electrocardiographic and prognostic characterization of acute myocardial infarction secondary to acute occlusion of the circumflex coronary artery, Juan M. Cinca Cusculloa (supervisor).
- ▶ Francisco Javier Noriega Sanz, Clinical and electrophysiological characterization of reciprocal changes in the electrocardiogram in acute myocardial infarction, Juan M. Cinca Cusculloa (supervisor).
- ▶ Albert Duran Cambra, Study of the safety of a rapid diagnosis strategy for chest pain of possible coronary origin in emergency rooms, Juan M. Cinca Cusculloa (supervisor).
- ▶ Sònia Mirabet Pérez, Early detection of graft vasculopathy in cardiac transplantation: markers in peripheral blood, Eulàlia Roig Minguell (supervisor).



# Clinical and Translational Cardiology

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## Scientific Production

- 01 Poppe K.K., Squire I.B., Whalley G.A., Kober L., McAlister F.A., McMurray J.J.V., Pocock S., Earle N.J., Berry C., Doughty R.N. Known and missing left ventricular ejection fraction and survival in patients with heart failure: a MAGGIC meta-analysis report. (2013) *Eur. J. Heart Fail.*, 15 (11), 1220-1227.  
**IF: 6.577**
- 02 Pujadas S., Martin V., Rossello X., Carreras F., Barros A., Leta R., Alomar X., Cinca J., Sabate M., Pons-Llado G. Improvement of myocardial function and perfusion after successful percutaneous revascularization in patients with chronic total coronary occlusion. (2013) *Int. J. Cardiol.*, 169 (2), 147-152.  
**IF: 6.175**
- 03 Pascual-Figal D.A., Caballero L., Bayes-Genis A., Gonzalez-Juanatey J.R., Vazquez R., Bayes De Luna A., Cinca J. Spironolactone in mild chronic heart failure: Insights from a propensity-matched analysis of the MUSIC study cohort. (2013) *Int. J. Cardiol.*, 168 (4), 4525-4527.  
**IF: 6.175**
- 04 Alvarez-Garcia J., Vives-Borras M., Ferrero A., Aizpurua D.A., Penaranda A.S., Cinca J. Atrial coronary artery occlusion during elective percutaneous coronary angioplasty. (2013) *PLoS Genet.*, 14 (5), 270-274.  
**IF: 8.167**
- 05 Guerra J.M., Jorge E., Raga S., Galvez-Monton C., Alonso-Martin C., Rodriguez-Font E., Cinca J., Vinolas X. Effects of open-irrigated radiofrequency ablation catheter design on lesion formation and complications: in vitro comparison of 6 different devices. (2013) *J. Cardiovasc. Electrophysiol.*  
**IF: 2.881**
- 06 Dos L., Pujadas S., Estruch M., Mas A., Ferreira-Gonzalez I., Pijuan A., Serra R., Ordonez-Llanos J., Subirana M., Pons-Llado G., Marsal J.R., Garcia-Dorado D., Casaldaliga J. Eplerenone in systemic right ventricle: Double blind randomized clinical trial. The evedes study. (2013) *Int. J. Cardiol.*, 168 (6), 5167-5173.  
**IF: 6.175**
- 07 Cinca J., Mendez A., Puig T., Ferrero A., Roig E., Vazquez R., Gonzalez-Juanatey J.R., Alonso-Pulpon L., Delgado J., Brugada J., Pascual-Figal D., Brugada J., Batlle M., Berrueto A., Hevia S., Mont L., Perez-Villa F., Cinca J., Roig E., Bayes De Luna A., Borras X., Carreras F., Ferrero A., Guerra J.M., Hove-Madsen L., Jorge E., Martinez R., Padro J., Puig T., Ribas N., Vinolas X., Alvarez-Garcia J., Gonzalez-Juanatey J.R., Bandin M., Eiras S., Fernandez-Hernandez L., Garcia-Acuna J., Gomez-Otero I., Grigorian-Shamagian L., Lago F., Manzon P., Moure M., Otero-Ravina F., Otero-Santiago F., Rodino Janeiro B.K., Rubio J., Salgado A., Seoane A., Varela A., Lear P.V., Fernandez-Cruz A., Alvarez De Arcaya Vicente A., Avila M., Bordiu E., Calle L., Fernandez-Pinilla C., Gomez-Garre D., Gonzalez-Rubio L., Marco J., Martell N., Munoz-Pacheco P., Ortega A., Patino R., Pedrajas J., Reinares L., Perez-Villacastin J., Bover R., Cobos M., Garcia-Quintanilla J., Moreno J., Perez-Castellano N., Perez-Serrano M., Vila I., Delgado J.F., Arribas F., Escribano P., Flox A., Jimenez Lopez-Guarch C., Paradina M., Ruiz-Cano J., Saenz De La Calzada C., Salguero R., Sanchez-Sanchez V., Tello De Meneses R., Vicente-Hernandez M., Alonso-Pulpon L., Fernandez -Lozano I., Garcia-Pavia P., Garcia-Touchard A., Gomez-Bueno M., Marquez J., Segovia J., Silva L., Vazquez-Mosquera M., Valdes M., Garcia-Alberola A., Garrido I., Pascual-Figal D.A., Pastor-Perez F.J., Sanchez-Mas J., Tornel P., Rivera M., Almenar L., Cortes R., Martinez-Dolz L., Montero J., Portoles M., Rosello-Lleti E., Salvador A., Vila V., Vazquez R., Cubero J., Fernandez-Palacin A., Garcia-Medina D., Garcia-Rey S., Laguna E., Leal Del Ojo J., Minano F., Pastor-Torres L., Pavon R., Perez-Navarro A., Villagomez D., Vazquez R., Arana R., Bartolome D., Cabeza P., Calle-Perez G., Camacho F., Cano L., Carrillo A., Diaz-Retamino E., Escolar V., Fernandez-Rivero R., Gamaza S., Giraldes A., Hernandez-Vicente N., Lagares M., Lopez-Benitez J., Marante M., Otero E., Pedregal J., Sancho-Jaldon M., Sevillano R., Zayas R., Verdu J.M., Aguilar S., Aizpurua M., Alguacil F., Casacuberta J., Cerain J., Domingo M., Garcia-Lareo M., Herrero-Melechon J., Lopez-Pareja N., Mena A., Perez-Orcero A., Rodriguez- Cristobal J., Rozas M., Sorribes J., Toran P., Worner F., Barta L., Bravo C., Cabau J., Casanova J., Daga B., De La Puerta I., Hernandez-Martin I., Pinol E., Pueo E., Torres G., Troncoso A., Viles D., Bardaji A., Merce J., Sanz-Girgas E., Valdovinos P., Aramburu O., Arias J., Garcia-Gonzalez C., Alonso M., Bischofberger C., Dominguez-De Pablos G., Jimenez-Cervantes D., Urena I., Grau-Sepulveda A., Fiol C., Pericas P., Villalonga M., Orosa P., Agüero J., Planas-Ayma F., Grau-Amoros J., Planas-Comes F., San Vicente L. Differential clinical characteristics and prognosis of intraventricular conduction defects in patients with chronic heart failure. (2013) *Eur. J. Heart Fail.*, 15 (8), 877-884.  
**IF: 6.577**
- 08 Noriega F.J., Jorge E., Arzamendi D., Cinca J. Mechanism and diagnostic potential of reciprocal ECG changes induced by acute coronary artery occlusion in pigs. (2013) *Heart Rhythm*, 10 (6), 883-890.  
**IF: 4.918**
- 09 Barriga M., Cal R., Cabello N., Llach A., Vallmitjana A., Benitez R., Badimon L., Cinca J., Llorente-Cortes V., Hove-Madsen L. Low density lipoproteins promote unstable calcium handling accompanied by reduced SERCA2 and Connexin-40 expression in cardiomyocytes. (2013) *PLoS One*, 8 (3).  
**IF: 3.534**
- 10 Sanchez B., Louarroudi E., Jorge E., Cinca J., Bragos R., Pintelon R. A new measuring and identification approach for time-varying bioimpedance using multisine electrical impedance spectroscopy. (2013) *Physiol. Meas.*, 34 (3), 339-357.  
**IF: 1.617**
- 11 Alvarez-Lacalle E., Cantalapiedra I.R., Penaranda A., Cinca J., Hove-Madsen L., Echebarria B. Dependency of calcium alternans on ryanodine receptor refractoriness. (2013) *PLoS One*, 8 (2).  
**IF: 3.534**
- 12 Descalzo M., Leta R., Rossello X., Alomar X., Carreras F., Pons-Llado G. Subclinical coronary atherosclerosis identified by coronary computed tomography angiography in asymptomatic population by coronary artery disease risk level [Enfermedad coronaria subclínica por tomografía computarizada multidetector en población asintomática estratificada por nivel de riesgo coronario]. (2013) *Rev. Esp. Cardiol.*, 66 (6), 504-505.  
**IF: 3.342**
- 13 Gonzalez-Vilchez F., Vazquez de Prada J.A., Paniagua M.J., Almenar L., Mirabet S., Gomez-Bueno M., Diaz-Molina B., Arizon J.M., Delgado J., Perez-Villa F., Crespo-Leiro M.G., Martinez-Dolz L., Roig E., Segovia J., Lambert J.L., Lopez-Granados A., Escribano P., Farrero M. Rejection after conversion to a proliferation signal

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inhibitor in chronic heart transplantation. (2013) *Clin. Transplant.*, 27 (6), E649-E658.

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- 14 Castel M.A., Roig E., Rios J., Tomas C., Mirabet S., Cardona M., Brossa V., Lopez L., Vargas L., Sionis A., Vallejos I., Perez-Villa F. Long-term prognostic value of elevated heart rate one year after heart transplantation. (2013) *Int. J. Cardiol.*, 168 (3), 2003-2007.

**IF: 6.175**

- 15 Alonso-Martin C., Rodriguez Font E., Guerra J.M., Vinolas Prat X. Pulmonary vein isolation in cases of difficult catheter placement: A new pacing manoeuvre to demonstrate complete isolation of the veins. (2013) *Heart Rhythm*, 10 (9), 1289-1292.

**IF: 4.918**

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**IF: 6.31**

- 19 Arzamendi D., Li C.H., Serra A. Late embolization of a vascular plug III device

after mitral paravalvular leak closure. (2013) *Catheter. Cardiovasc. Interv.*, 82 (6), E831-E834.

**IF: 2.396**

- 20 Marce-Nogue J., Fortuny G., Ballaster-Rodes M., Carreras F., Roure F. Computational modelling of electromechanical propagation in the helical ventricular anatomy of the heart. (2013) *Comput. Biol. Med.*, 43 (11), 1698-1703.

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**IF: 3.758**

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lesions in the rat myocardium. (2013) *J. Interv. Card. Electrophysiol.*, 36 (1), 5-11.

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**IF: 3.342**

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**IF: 3.669**

- 27 Loma-Osorio P., Aboal J., Sanz M., Caballero A., Vila M., Lorente V., Sanchez-Salado J.C., Sionis A., Curos A., Lidon R.-M. Clinical characteristics and vital and functional prognosis of out-of-hospital cardiac arrest survivors admitted to five cardiac intensive care units [Características clínicas, pronóstico vital y funcional de los pacientes supervivientes a una muerte súbita extrahospitalaria ingresados en cinco unidades de cuidados intensivos cardiológicos]. (2013) *Rev. Esp. Cardiol.*, 66 (8), 623-628.

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- 28 Mendez A.B., Colchero T., Garcia-Picart J., Vila M., Subirana M.T., Sionis A. Unusual case of new-onset heart failure due to cor triatriatum sinister. (2013) *Eur. J. Heart Fail.*, 15 (2), 237-239.

**IF: 6.577**

- 29 Ordonez-Llanos J., Sionis A. Predicting future events in patients with stable cardiovascular disease. Will high-sensitivity cardiac troponins be up to the challenge?. (2013) *Clin. Biochem.*, 46 (1-2), 10-11.

**IF: 2.229**

# Thrombosis and Haemostasis

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## Administrative Staff

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M. Jesús Gallego	HSCSP



## 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. VEREMA project.
- ▶ 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 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, body mass index and others).
- ▶ Replicate QTL related to thrombosis in GAIT-1 families by means of the linkage analysis using new GAIT-2 families.
- ▶ Conduct genome-wide association study (GWAS) of phenotypes involved in GAIT-1.
- ▶ GWAS of phenotypes included in GAIT-2.
- ▶ Analyse RNA expression in the GAIT-2 families.
- ▶ Investigate miRNA associated with thromboembolic disease in GAIT-2.
- ▶ Complete recruitment for the RETROVE project.
- ▶ Recruit team for the MIRTO project (Modelling Individual Risk of Thrombosis in Oncology), with the goal of establishing an individual risk score for venous thromboembolism (RETROVO sub-project) and for ischaemic stroke (SINO subproject) in patients with cancer.
- ▶ Research plasma proteins associated with the risk of venous thromboembolism by using high affinity proteomics developed at Karolinska Institutet. VEREMA project, joint collaboration between the European case-control studies VEBIOS (Sweden), RETROVE (from our unit) and MARTHA (France).
- ▶ Continue collaboration with the RCV Spanish cardiovascular patient network and with other European groups, mainly with the goal of applying GAIT project findings to cohorts of patients with venous and arterial thrombosis in Spain and other European countries.
- ▶ Evaluate the effectiveness of an educational programme for patients taking antiplatelet therapy (aspirin and/or clopidogrel) in reducing severe complications: EDUCANT clinical trial.



Active Grants

- ▶ Juan Carlos Souto (PI), Cardiovascular Research Network (RIC), HSCSP, RD12/0042/0032, Carlos III Health Institute, MINECO, 2013-2016, €211,600.
- ▶ Juan Carlos Souto (PI), Search for a clinical algorithm to define individual risk profiles for venous thromboembolic disease (RETROVE), HSCSP, P112/00612, Carlos III Health Institute, MINECO, 2013-2015, €62,315.
- ▶ Joan Martí, Neurology (PI), J. Mateo, UHiT (collaborating researcher), Cerebral haemorrhage from oral anticoagulants in the secondary prevention of stroke: predictive value of leukoaraiosis and microbleeds detected by MRI (HERO), HSCSP, P111/00296, Carlos III Health Institute, MINECO, 2012-2014, €37,741., ,
- ▶ Cándido Villanueva, Digestive Pathology (PI), J. Mateo, M. Carrasco, UHiT (collaborating researchers), Randomized controlled study comparing acenocoumarol versus bempiparina in patients requiring anticoagulation restart after a severe gastrointestinal bleeding episode (HEPACO), HSCSP, EC10-135, Ministry of Health and Social Policy, 2012-2015.

Awards

- ▶ JM Soria, JC Souto, M Carrasco, L Martín-Fernández, A Muñoz, Modelling the Individualized Risk of Thrombosis in Oncology (MIRTO), Award for Basic and Clinical Research Projects (second prize), Spanish Thrombosis and Haemostasis Foundation 2013, 55th National AEHH Congress and 29th National SETH Congress Seville, Spain, 2013.

Collaborations

Collaborations with other IIB Sant Pau Groups

- ▶ Genomics of Complex Diseases (GAIT1, GAIT 2, RETROVE, VEREMA and MIRTO design).
- ▶ Stroke Unit (HERO, EDUCANT and MIRTO design).
- ▶ Clinical and Translational Cardiology (EDUCANT)
- ▶ Vascular Surgery (EDUCANT)
- ▶ Medical Oncology (MIRTO design)
- ▶ Clinical Haematology (MIRTO design)
- ▶ Digestive Diseases (HEPACO).

External Collaborations

- ▶ Cardiovascular Research Network (RIC).
- ▶ Karolinska Institutet, Stockholm, Sweden: GAIT2 and VEREMA.
- ▶ La Timone Hospital, Marseilles, France: GAIT2 and VEREMA.
- ▶ Pierre and Marie Curie University, INSERM, UMR-S 1166, Paris, France: GAIT2 and VEREMA.
- ▶ Université de Genève, Switzerland: GAIT2.
- ▶ Texas Research Institute (formerly Southwest Foundation for Biomedical Research), San Antonio, USA: GAIT1 and GAIT2.
- ▶ Universitat Politècnica de Catalunya, Barcelona, Spain. Centre for Biomedical Engineering Research: RETROVE and MIRTO design.
- ▶ Thrombosis Group of the Spanish Medical Oncology Society (SEOM): ONCOTHROMB and MIRTO.

\*TIF: 68.550 \*\*MIF: 13.710

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Athanasiadis G., Sabater-Lleal M., Buil A., Souto J.C., Borrell M., Lathrop M., Watkins H., Almasy L., Hamsten A., Soria J.M. Genetic determinants of plasma β2-glycoprotein I levels: A genome-wide association study in extended pedigrees from Spain. (2013) *J. Thromb. Haemost.*, 11 (3), 521-528. **IF: 5.55**
- 02 Souto J.C., Ruyra X., Bayes-Genis A. Self-management of vitamin K antagonists is more cost-effective than dabigatran for stroke prevention in non-valvular atrial fibrillation in Spain [El autocontrol de la terapia con cumarínicos es más eficiente que dabigatrán para prevenir ictus en fibrilación auricular no valvular en España]. (2013) *Rev. Esp. Cardiol.*, 66 (6), 510-511. **IF: 3.342**
- 03 De la Morena-Barrio M.E., Buil A., Anton A.I., Martínez-Martínez I., Minano A., Gutiérrez-Gallego R., Navarro-Fernández J., Aguila S., Souto J.C., Vicente V., Soria J.M., Corral J. Identification of Anti-thrombin-Modulating Genes. Role of LARGE, a Gene Encoding a Bifunctional Glycosyltransferase, in the Secretion of Proteins?. (2013) *PLoS One*, 8 (5). **IF: 3.534**
- 04 Santamaria A., Ugarriza A., Munoz C., De Diego I., Lopez-Chulia F., Benet C., Martínez-González J., Gomez N., Pina E., Ortin X., Marco P., Roncales F.J., Fontcuberta J. Bempiparin versus unfractionated heparin as bridging therapy in the perioperative management of patients on vitamin K antagonists: The BERTA study. (2013) *Clin. Drug Invest.*, 33 (12), 921-928. **IF: 1.704**
- 05 Schulman S., Kearon C., Kakkar A.K., Schellong S., Eriksson H., Baanstra D., Kvamme A.M., Friedman J., Mismetti P., Goldhaber S.Z. Extended Use of dabigatran, warfarin, or placebo in venous thromboembolism. (2013) *N. Engl. J. Med.*, 368 (8), 709-718. **IF: 54.42**

\*Total Impact Factor \*\*Mean Impact Factor

# Cardiovascular Biochemistry

## Coordinator

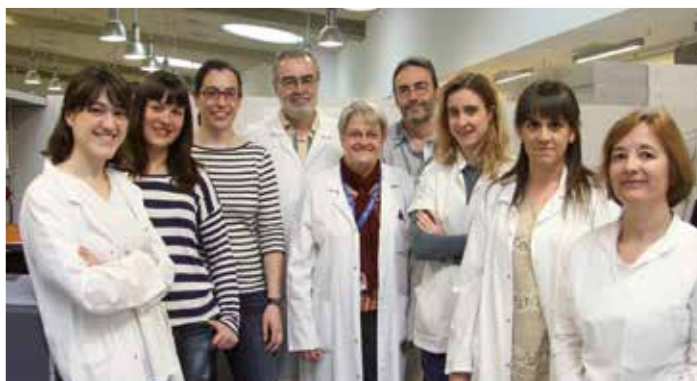
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## Main Lines of Research

### Atherosclerosis mechanisms

- ▶ Analysis of apolipoprotein J (apoJ) as a marker of CVR.
- ▶ Use of mimetic peptides derived from apoJ as therapeutic tools.
- ▶ Involvement of LDL(-) on lipid accumulation in cardiomyocytes and heart failure.

### Inflammatory mechanisms induced by LDL(-) on monocytes from patients with diabetes.

- ▶ Diagnosis of chronic or acute cardiovascular diseases
- ▶ Development of algorithms for ruling-out acute coronary disease.
- ▶ Assessment of new biomarkers of acute cardiovascular disease: cardiac troponins, natriuretic peptides, ST-2.
- ▶ Development of methods for point-of-care biomarker measurement.
- ▶ Vulnerability markers in atheromatous plaque: electronegative LDL, LDL size, HDL function, myeloperoxidase, phospholipase.

## Challenges

- ▶ Determine the intracellular mechanisms involved in the inflammatory response induced by LDL(-) and the components of the particle that entail atherogenicity.
- ▶ Analyse the therapeutic potential of mimetic peptides derived from apo J to delay the development of atherosclerosis in animal models.
- ▶ Demonstrate that electronegative LDL is a marker of vulnerable atheromatous plaque.
- ▶ Find new markers of cardiovascular risk in diseases such as diabetes, HIV or cardiac failure.

## Active Grants

- ▶ Jordi Ordóñez-Llanos, Cardiovascular Biochemistry Group, Funds in support of Catalan research groups, AGAUR, 2009 SGR 1205, August 2009-December 2013, €46,800.
- ▶ Jose Luis Sánchez-Quesada, Molecular strategies to inhibit aggregation and binding to arterial wall proteoglycans of low-density lipoproteins, P110/00265, ISCIII/FIS, 2011-2013, €99,220.
- ▶ Jordi Ordóñez-Llanos, TRAPID (hsTnT for the RAPID rule-out of AMI), Roche Diagnostics, 2012-2013, €90,000.
- ▶ Jordi Ordóñez-Llanos, Cardiovascular Research Network (RIC), ISCIII/FIS, RD12/0042/0043, 2013-2016, €128,000.
- ▶ Sonia Benítez, Effect of modified LDL on the expression and activation of CD14, TLR4 and adhesion molecules in monocytes of patients with type 2 diabetes, ISCIII/FIS, P112/00967, 2013-2015, €45,000.

**Collaborations with other IIB Sant Pau Groups**

- ▶ Metabolic Bases of Cardiovascular Risk (Dr F. Blanco Vaca).
- ▶ Endocrinology, Diabetes and Nutrition (Dr A. Pérez).
- ▶ Angiology, Vascular Biology and Inflammation (Dr L. Vila).
- ▶ Clinical and Translational Cardiology (Dr J. Cinca).
- ▶ Lipids and Cardiovascular Pathology (Dr C. Llorente).

**Research into atherosclerosis mechanisms**

- ▶ Dr Petri Kovanen, Wihuri Research Institute, Helsinki, Finland.
- ▶ Dr Kati Öörni, Wihuri Research Institute, Helsinki, Finland. Pre-doctoral stay by Montserrat Estruch (4 months).
- ▶ Dr Olga Gursky, Boston University School of Medicine, Boston, USA. Post-doctoral stay by Anna Rull (6 months).
- ▶ Dr Sandra Villegas, Biochemistry and Molecular Biology Department, UAB, Barcelona, Spain (ISCIII/FIS coordinated project under PI10/00265).

**Research into diagnosis**

- ▶ Dr Daniel Podzamczar, HIV Unit, Infectious Disease Service, Bellvitge University Hospital, Barcelona, Spain (ATADAR, SPIRAL and BICOMBO clinical trials).
- ▶ Formation and maintenance of a bank of samples within the Cardiovascular Research Network (RIC), Programme 6 (Clinical and Translational Heart Failure).
- ▶ Cardiovascular Research Network (RIC): Dr Francisco Marín, Cardiology, Hospital Virgen de Arrixaca, Murcia, Spain, 3-month stay by Dr Juan Antonio Vilchez (during a Rio Hortega contract) in our collaborative studies laboratory.
- ▶ Dr Mariano Valdés, Hospital Virgen de Arrixaca, Murcia, Spain, 3-week stay by Dr Carmen Puche in our collaborative studies laboratory.

- ▶ Dr Laura Dos (D. Garcia-Dorado), Integrated Adult Congenital Heart Disease Unit of Vall d'Hebron University Hospital, Barcelona, Spain (Evedes study).
- ▶ Dr Domingo Pascual-Figal, Cardiology Department, Virgen de la Arrixaca University Hospital, Murcia, Spain.
- ▶ Dr Rafael Vázquez, Cardiology Service, Puerta del Mar University Hospital, Cadiz, Spain.
- ▶ Dr Antoni Bayes-Genís, Cardiology Department, Germans Trias i Pujol University Hospital, Barcelona, Spain.

**IFCC Task Force on Clinical Applications of Cardiac Biomarkers (Dr Jordi Ordóñez-Llanos, member):**

- ▶ Dr Fred S. Apple, Department of Laboratory Medicine and Pathology, University of Minnesota, USA.
- ▶ Dr Paul O. Collinson, Cardiovascular and Laboratory Departments, St. George's Hospital, London, UK.
- ▶ Dr Alan S. Jaffe, Mayo Clinic, Cardiovascular Division, Rochester, New York, USA.
- ▶ Dr James L. Januzzi, Cardiology Division, Massachusetts General Hospital, Boston, USA.

**Participation in multicentre studies**

- ▶ MUSIC (sudden death in heart failure) Risk Score, Spanish Society of Cardiology.
- ▶ MAGGIC (meta-analysis global group in chronic heart failure), European Society of Cardiology.

\*TIF: 56.060 \*\*MIF: 4.312

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Estruch M., Sanchez-Quesada J.L., Ordóñez Llanos J., Benitez S. Electronegative LDL: A circulating modified LDL with a role in inflammation. (2013) *Mediat. Inflamm.*, 2013. **IF: 2.417**
- 02 Sanchez-Quesada J.L., Vinagre I., De Juan-Franco E., Sanchez-Hernandez J., Bonet-Marques R., Blanco-Vaca F., Ordóñez-Llanos J., Perez A. Impact of the LDL subfraction phenotype on Lp-PLA2 distribution, LDL modification and HDL composition in type 2 diabetes. (2013) *Cardiovasc. Diabetol.*, 12 (1), 112. **IF: 3.706**
- 03 Estruch M., Bancells C., Beloki L., Sanchez-Quesada J.L., Ordóñez-Llanos J., Benitez S. CD14 and TLR4 mediate cytokine release promoted by electronega-

- tive LDL in monocytes. (2013) *Atherosclerosis*, 229 (2), 356-362. **IF: 3.971**
- 04 Jaffe A.S., Ordóñez-Llanos J. High-sensitivity cardiac troponin: From theory to clinical practice [Troponina cardiaca ultrasensible: de la teoría a la práctica clínica]. (2013) *Rev. Esp. Cardiol.*, 66 (9), 687-691. **IF: 3.342**
- 05 Llaverias G., Escola-Gil J.C., Lerma E., Julve J., Pons C., Cabre A., Cofan M., Ros E., Sanchez-Quesada J.L., Blanco-Vaca F. Phytosterols inhibit the tumour growth and lipoprotein oxidizability induced by a high-fat diet in mice with inherited breast cancer. (2013) *J. Nutr. Biochem.*, 24 (1), 39-48. **IF: 4.592**
- 06 Dos L., Pujadas S., Estruch M., Mas A., Ferreira-Gonzalez I., Pijuan A., Serra R., Ordóñez-Llanos J., Subirana M.,

- Pons-Llado G., Marsal J.R., Garcia-Dorado D., Casaldaliga J. Eplerenone in systemic right ventricle: Double blind randomized clinical trial. The evedes study. (2013) *Int. J. Cardiol.*, 168 (6), 5167-5173. **IF: 6.175**
- 07 Ordóñez-Llanos J., Sionis A. Predicting future events in patients with stable cardiovascular disease. Will high-sensitivity cardiac troponins be up to the challenge? (2013) *Clin. Biochem.*, 46, 10-11. **IF: 2.229**
- 08 Santalo M., Martin A., Velilla J., Povar J., Tembours F., Balaguer J., Munoz M., Calmarza P., Ortiz C., Carratala A., Gich I., Merce J., Jaffe A.S., Ordóñez-Llanos J. Using high-sensitivity troponin T: The importance of the proper gold standard. (2013) *Am. J. Med.*, 126 (8), 709-717. **IF: 5.302**
- 09 Poppe K.K., Squire I.B., Whalley G.A., Ko-

# Cardiovascular Biochemistry

\*TIF: 56.060 \*\*MIF: 4.312

## Scientific Production

- ber L., McAlister F.A., McMurray J.J.V., Pocock S., Earle N.J., Berry C., Doughty R.N. Known and missing left ventricular ejection fraction and survival in patients with heart failure: a MAGGIC meta-analysis report. (2013) *Eur. J. Heart Fail.*, 15 (11), 1220-1227.  
**IF: 6.577**
- 10 Estruch M., Sanchez-Quesada J.L., Beloki L., Ordonez-Llanos J., Benitez S. The induction of cytokine release in monocytes by electronegative low-density lipoprotein (LDL) is related to its higher ceramide content than native LDL. (2013) *J. Nutrigenet. Nutrigenomics*, 14 (2), 2601-2616.  
**IF: 2.581**
- 11 Gimenez-Llort L., Rivera-Hernandez G., Marin-Argany M., Sanchez-Quesada J.L., Villegas S. Early intervention in the 3xTg-AD mice with an amyloid  $\beta$ -antibody fragment ameliorates first hallmarks of Alzheimer disease. (2013) *mAbs*, 5 (5), 665-677.  
**IF: 4.726**
- 12 Julve J., Escola-Gil J.C., Rodriguez-Millan E., Martin-Campos J.M., Jauhiainen M., Quesada H., Renteria-Obregon I.M., Osada J., Sanchez-Quesada J.L., Blanco-Vaca F. Methionine-induced hyperhomocysteinemia impairs the antioxidant ability of high-density lipoproteins without reducing in vivo macrophage-specific reverse cholesterol transport. (2013) *Mol. Nutr. Food Res.*, 57 (10), 1814-1824.  
**IF: 4.909**
- 13 Revuelta-Lopez E., Castellano J., Roura S., Galvez-Monton C., Nasarre L., Benitez S., Bayes-Genis A., Badimon L., Llorente-Cortes V. Hypoxia induces metalloproteinase-9 activation and human vascular smooth muscle cell migration through low-density lipoprotein receptor-related protein 1-mediated Pyk2 phosphorylation. (2013) *Arterioscler. Thromb. Vasc. Biol.*, 33 (12), 2877-2887.  
**IF: 5.53**

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Sánchez-Quesada JL, Pérez A., Modified lipoproteins as biomarkers of cardiovascular risk in diabetes mellitus, *Endocrinol Nutr.* 2013 Nov;60(9):518-28.DOI: 10.1016/j.endonu.2012.12.007.
- ▶ Vinagre I, Sánchez-Hernández J,Sánchez-Quesada JL, María MÁ, de Leiva A, Pérez A.,





# Angiology, Vascular Biology and Inflammation

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Laura Siguero HSCSP RI

## Collaborators

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David Solá UAB



## 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

- ▶ 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 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 sources by establishing collaborations with the industrial sector.
- ▶ Improve research quality in terms of standard evaluation indexes.

## Active Grants

- ▶ Luis Vila Navarro (PI), 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, MICINN SAF2010-21392, 2011–2014 (extended), €145,200.
- ▶ Luis Vila Navarro (PI), 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, MICINN SAF2010-21392, 2011–2014 (extended), €145,200.
- ▶ Luis Vila Navarro (PI), Cardiovascular Research Network (RIC), RD12/0042/0051, FIS, Carlos III Health Institute, Jan 2013–Dec 2016, €235,600 (approx).

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Ear, Nose and Throat Cancers (Drs Xavier León, Jacinto Gracia and Miquel Quer).
- ▶ Genomics of Complex Diseases (Dr JM Soria).
- ▶ Thrombosis and Haemostasis (Dr JC Souto).
- ▶ Arteriosclerosis and Vascular Biology (José Martínez, PI).
- ▶ Inflammation and Vascular Remodelling (Cristina Rodríguez, PI).
- ▶ General and Digestive Surgery (Dr Targarona and Carmen Balagué).

**External Collaborations**

- ▶ Dr Mercedes Salaiques Pharmacology Group, Universidad Autónoma de Madrid, Spain.
- ▶ Dr Juan Miguel Redondo, CNIC, Madrid, Spain.
- ▶ Dr Alicia García Arroyo, CNIC, Madrid, Spain.
- ▶ Dr Francesc-Xavier Avilés-Jurado, Otorhinolaryngology Department, Hospital Universitari de Tarragona Joan XXIII, ISPV, Universitat Rovira i Virgili, Tarragona, Spain.

\*TIF: 19.534 \*\*MIF: 3.256

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Uresandi F., Monreal M., Garcia-Bragado F., Domenech P., Lecumberri R., Escibano P., Zamorano J.L., Jimenez S., Ruiz-Artacho P., Lozano F., Romera A., Jimenez D. National consensus on the diagnosis, risk stratification and treatment of patients with pulmonary embolism [Consenso nacional sobre el diagnóstico, estratificación de riesgo y tratamiento de los pacientes con tromboembolia pulmonar]. (2013) Arch. Bronconeumol., 49 (12), 534-547.  
**IF: 1.816**
- 02 Viros D., Camacho M., Zarraonandia I., Garcia J., Quer M., Vila L., Leon X. Prognostic role of MMP-9 expression in head

and neck carcinoma patients treated with radiotherapy or chemoradiotherapy. (2013) Oral Oncol., 49 (4), 322-325.

**IF: 3.029**

- 03 Camacho M., Dilme J., Sola-Villa D., Rodriguez C., Bellmunt S., Siguero L., Alcolea S., Romero J.M., Escudero J.-R., Martinez-Gonzalez J., Vila L. Microvascular cox-2/mpges-1/ep-4 axis in human abdominal aortic aneurysm. (2013) J. Lipid Res., 54 (12), 3506-3515.

**IF: 4.73**

- 04 Quintana A., Aviles F.X., Terra X., Alcolea S., Camacho M., Quer M., Vila L., Leon X. Overexpression of the nuclear factor-kappa B (p65) in association with local failure in patients with head and neck carcinoma undergoing radiotherapy or chemoradiotherapy. (2013) Head

Neck-J. Sci. Spec. Head Neck, 35 (3), 370-375.

**IF: 3.006**

- 05 Lozano Sanchez F.S., Sanchez Nevarez I., Gonzalez-Porras J.R., Marinello Roura J., Escudero Rodriguez J.R., Diaz Sanchez S., Carrasco Carrasco E. Quality of life in patients with chronic venous disease: Influence of the socio-demographical and clinical factors. (2013) Int. Angiol., 32 (4), 433-441.

**IF: 1.014**

- 06 Bellmunt-Montoya S., Escibano J.M., Dilme J., Martinez-Zapata M.J. CHIVA method for the treatment of chronic venous insufficiency.. (2013) Cochrane Database Syst Rev., 7.

**IF: 5.939**

Other Publications

**ISI Web of Knowledge Indexed Publications without an IF**

- ▶ FS Lozano, E. Carrasco, S. Diaz, J R Escudero, J. Marinello, I. Determinantes de la gravedad en la insuficiencia venosa crónica. Estudio C-Vives [Determining severity factors in chronic venous insufficiency. C-VIVES study]. Sánchez. Angiología Vol.65 No. 1. January-February 2013 1-9.

# Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases

## Coordinator

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Raquel de la Torre ICCC  
Rafael Escate FIC  
Sonia Espinosa FIC  
Rodrigo Hernández ICCC  
Carolina Romero SAF-MCINN



## 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.
- ▶ Research into new targets to inhibit the transformation of silent atherosclerosis into ischaemic syndromes: tissue-factor-mediated angiogenic switch.

## Challenges

- ▶ 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.

## Transfer Products

- ▶ Rydén L, Grant PJ, Anker SD, Berne C, Cosentino F, Danchin N, Deaton C, Escaned J, Hammes HP, Huikuri H, Marre M, Marx N, Mellbin L, Ostergren J, Patrono C, Seferovic P, Uva MS, Taskinen MR, Tendera M, Tuomilehto J, Valensi P, Zamorano JL; ESC Committee for Practice Guidelines (CPG), Zamorano JL, Achenbach S, Baumgartner H, Bax JJ, Bueno H, Dean V, Deaton C, Erol C, Fagard R, Ferrari R, Hasdai D, Hoes AW, Kirchhof P, Knuuti J, Kolh P, Lancellotti P, Linhart A, Nihoyannopoulos P, Piepoli MF, Ponikowski P, Sirnes PA, Tamargo JL, Tendera M, Torbicki A, Wijns W, Windecker S; Document Reviewers, De Backer G, Sirnes PA, Ezquerro EA, Avogaro A, Badimon L, Baranova E, Baumgartner H, Betteridge J, Ceirrello A, Fagard R, Funck-Brentano C, Gulba DC, Hasdai D, W Hoes A, Kjekshus JK, Knuuti J, Kolh P, Lev E, Mueller C, Neyses L, Nilsson PM, Perk J, Ponikowski P, Reiner Z, Sattar N, Schächinger V, Scheen A, Schirmer H, Strömberg A, Sudzhaeva S, Tamargo JL, Vigi-maa M, Vlachopoulos C, Xuereb RG (Authors/Task Force Members), ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD: The Task Force on Diabetes, Pre-Diabetes and Cardiovascular Diseases of the European Society of Cardiology (ESC) and developed in collaboration with the European Association for the Study of Diabetes (EASD), *European Heart Journal* 34: 3035–3087; 2013.
- ▶ Vaccarino V, Badimon L, Corti R, de Wit C, Dorobantu M, Manfrini O, Koller A, Pries A, Cenko E, Bugiardini R, Presentation, management, and outcomes of ischaemic heart disease in women, *Nature Reviews in Cardiology* 10(9):508-518; 2013.

## Active Grants

- ▶ Badimon L (PI), Safer and faster evidence-based translation (SAFE-T), 115003, IMI-JU, European Commission IMI\_Call\_2008\_1\_05, Sept 2009–Dec 2014.
- ▶ Badimon L/Vilahur G (PIs), Biomarker for cardiovascular risk assessment in Europe (Bio-marCaRe), GA 278913, FP7–European Commission HEALTH-2011, Oct 2011–Oct 2015.
- ▶ Badimon L (PI), PROMISE (Protecting the Heart from Ischaemia) International Re-



Active Grants

- search Training Group, German Research Foundation and Generalitat de Catalunya, Jan 2009–Dec 2013.
- ▶ Badimon L / Palomo I (University of Talca, Chile), Characterization of the platelet antiaggregant and endothelium protecting activities of tomato (*Solanum lycopersicum* L) extract, Fondecyt, Conicyt (Chile), 2013.
- ▶ Badimon L/Slevin M (PIs), Analysis of the endothelial effects of the bioactive components of aged garlic, Nutricia Research Foundation, 2012–2013.
- ▶ Badimon L (PI), 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), CEN20101016, Spanish Ministry of Economy and Competitiveness/CENIT, May 2010–Dec 2013.
- ▶ Badimon L (PI), Atherosclerotic plaque instability in relation to increasing cardiovascular risk: targeting angiogenesis (CARDIORISK), SAF2010–16549, Spanish Ministry of Economy and Competitiveness, Jan 2011–June 2014.
- ▶ Badimon L (PI), Making age healthy: keys to healthy vascular ageing in the octogenarian population (CEVASALU), 113/2011, Institute for the Elderly and Social Services (IMSERSO), Ministry of Health, Social Services and Equality, Jan 2012–July 2013.
- ▶ Vilahur G (PI), Functional and molecular effects of different HDL forms in myocardial remodelling post-infarction: application of a systems biology approach to identify regulated genes and gene products, SAF2012–40208, National Plan for Scientific Research and Technological Development, Jan 2013–Dec 2015.
- ▶ Arderiu G (PI), Peripheral vascular disease and angiogenesis: role of tissue factor in the stabilization of neovessels, PI12/02332, Health Research Projects, ISCIII-FIS, Jan 2013–Dec 2015.
- ▶ Badimon L (PI), Thematic physiopathology network for obesity and nutrition (CIBERobn), CIBER Project, CB2006/03, Carlos III Health Institute, Dec 2006–June 2013.
- ▶ Badimon L (PI), Cell Therapy Network (TerCel), RD06/0010/0017, Carlos III Health Institute, Dec 2006–Dec 2013.
- ▶ Badimon L (PI), Cell Therapy Network (TerCel), RD12/0019/0026, Carlos III Health Institute, Jan 2013–Dec 2017.
- ▶ Badimon L (PI), Cardiovascular Research Network (RIC), RD12/0042/0027, Carlos III Health Institute, Jan 2013–Dec 2017.
- ▶ Badimon L (PI), Consolidated Research Group, 2009SGR826, AGAUR-Generalitat de Catalunya, Jan 2009–Dec 2013.
- ▶ Vilahur G (PI), Functional and molecular effects of different HDL constituents on cardiac remodelling post myocardial infarction: magnetic resonance assessment and identification of molecular targets modulated by HDL, Spanish Society of Cardiology, Oct 2012–Dec 2014.
- ▶ Vilahur G (PI), Functional and molecular effects of different HDL constituents on cardiac remodelling post myocardial infarction: magnetic resonance assessment and identification of molecular targets modulated by HDL, 7th Edition L'Oréal–Unesco Research Awards For Women in Science Programme, Dec 2012–Dec 2013.
- ▶ Badimon L (PI), Proteomic characterization of intracoronary thrombus in STEMI patients,
- ▶ Spanish Thrombosis and Haemostasis Foundation (FETH), Jan 2013–Dec 2014.
- ▶ Badimon L (PI), Ticagrelor: does it afford cardioprotection in the setting of acute myocardial infarction? Astra Zeneca AB, June 2013–Dec 2014.
- ▶ Badimon L (PI), Comparative study of fibrin adhesives by confocal microscopy, Grifols Institute, SA, Oct 2013–Mar 2014.
- ▶ Badimon L (PI), Transcriptomic profile of cardiac markers and endothelial function in humans: effect from the moderate consumption of beer, Beer and Health Information Centre, Nov 2013–Mar 2016.

Awards

- ▶ Badimon L (ICCC), 2nd Prize for Innovation in Health and Nutrition 2013. Instituto Universitario de Innovación Alimentaria, Universidad Católica San Antonio de Murcia, Spain, 2013.
- ▶ Cubedo J, Extraordinary Award for the 2011-2012 Doctorate.
- ▶ Vilahur G, Badimon L, Non-alcoholic components in beer protect against coronary endothelial dysfunction induced by hypercholesterolemia by activating the Akt/eNOS signalling pathway, Special Mention 2nd Prize for the Best Work, Spanish Arteriosclerosis Society, Zaragoza, Spain, May 2013.

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.

**National**

- ▶ Department of Mechanical Engineering, Universitat Rovira i Virgili, Spain (Dr Salvatoreto Cito).
- ▶ Department of Internal Medicine, Hospital Clinic, Barcelona, Spain (Dr R. Estruch).
- ▶ Cancer Epigenetics and Biology Programme (PEBC), Bellvitge Biomedical Research Institute (IDIBELL), L'Hospitalet, Spain (Dr Manel Esteller).
- ▶ Biomedical Research Laboratory, Endocrinology Department, Hospital Virgen de la Victoria, Malaga, Spain (Dr M Rosa Bernal-Lopez, Dr Francisco Tinahones).

\*Total Impact Factor \*\*Mean Impact Factor

# Molecular Pathology and Therapeutic of Ischaemic and Atherothrombotic Diseases

## Collaborations

- ▶ Department of Cardiology, Thorax Institute, Hospital Clinic, University of Barcelona, Barcelona, Spain (Dr Salvatore Brugaletta, Dr Victoria Martin-Yuste, Dr Clarissa Cola, Dr Manel Sabaté).
- ▶ Quirúrgica Cirujanos Asociados (Dr Alberto Díez-Caballero).
- ▶ Department of Plastic Surgery, Centro Médico Teknon, Barcelona, Spain (Dr Fabrizio Moscattiello, Dr Javier Herrero).
- ▶ Centro Laparoscópico Doctor Ballesta SLU, Barcelona, Spain (Dr Carlos Ballesta-López).
- ▶ Fundación Jiménez Díaz, Madrid, Spain (Dr Rodrigo Alonso, Dr Pedro Mata).
- ▶ Carlos III National Centre of Cardiovascular Research (CNIC), Madrid, Spain and Cardiovascular Institute, Hospital Clínico San Carlos, Madrid, Spain (Dr Borja Ibañez).
- ▶ Cell Therapy Network (TerCel), RD12/0019.
- ▶ Cardiovascular Research Network (RIC), RD12/0042.
- ▶ Centre for Networked Biomedical Research in Physiopathology of

Obesity and Nutrition (CIBER), CB06/03CB2006/03.

## International

- ▶ Experimental, Diagnostic and Speciality Medicine, University of Bologna, Bologna, Italy (Prof Raffaele Bugiardini).
- ▶ School of Healthcare Science, John Dalton Building, Manchester Metropolitan University, UK (Dr Mark Slevin).
- ▶ Institute of Cardiology, Catholic University of the Sacred Heart, Rome, Italy (Dr Filippo Crea).
- ▶ Thoraxcenter, Erasmus Medical Centre, Rotterdam, Netherlands (Dr Patrick W Serruys).
- ▶ Atherothrombosis Research Unit, Zena and Michael A. Wiener Cardiovascular Institute, Mount Sinai School of Medicine, New York, USA (Dr Valentin Fuster, Dr Juan José Badimon).
- ▶ Department of Clinical Biochemistry and Immunohematology, Faculty of Health Sciences, University of Talca, Chile (Dr Ivan Palomo).

\*TIF: 156.135 \*\*MIF: 5.783

## ISI Web of Knowledge Indexed Publications with an IF

- Ryden L., Grant P.J., Anker S.D., Berne C., Cosentino F., Danchin N., Deaton C., Escaned J., Hammes H.-P., Huikuri H., Marre M., Marx N., Mellbin L., Ostergren J., Patrono C., Seferovic P., Uva M.S., Taskinen M.-R., Tendera M., Tuomilehto J., Valensi P., Zamorano J.L., Achenbach S., Baumgartner H., Bax J.J., Bueno H., Dean V., Erol C., Fagard R., Ferrari R., Hasdai D., Hoes A.W., Kirchhof P., Knuuti J., Kolh P., Lancellotti P., Linhart A., Nihoyannopoulos P., Piepoli M.F., Ponikowski P., Sirnes P.A., Tamargo J.L., Torbicki A., Wijns W., Windecker S., De Backer G., Ezquerro E.A., Avogaro A., Badimon L., Baranova E., Betteridge J., Ceriello A., Funck-Brentano C., Gulba D.C., Kjekshus J.K., Lev E., Mueller C., Neyses L., Nilsson P.M., Perk J., Reiner Z., Sattar N., Schachinger V., Scheen A., Schirmer H., Stromberg A., Sudzhaeva S., Viigimaa M., Vlachopoulos C., Xuereb R.G. ESC guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD. (2013) *Eur. Heart J.*, 34 (39), 3035-3087.  
**IF: 14.723**
- Fuentes E., Fuentes F., Vilahur G., Badimon L., Palomo I. Mechanisms of chronic state of inflammation as mediators that link obese adipose tissue and metabolic syndrome. (2013) *Mediat. Inflamm.*, 2013.  
**IF: 2.417**
- Vazquez-Agell M., Urpi-Sarda M., Sacanella E., Camino-Lopez S., Chiva-Blanch G., Llorente-Cortes V., Tobias E., Roura E.,

Andres-Lacueva C., Lamuela-Raventos R.M., Badimon L., Estruch R. Cocoa consumption reduces NF-κB activation in peripheral blood mononuclear cells in humans. (2013) *Nutr. Metab. Cardiovasc. Dis.*, 23 (3), 257-263.  
**IF: 3.875**

04 Costales P., Castellano J., Revuelta-Lopez E., Cal R., Aledo R., Llampayas O., Nasarre L., Juarez C., Badimon L., Llorente-Cortes V. Lipopolysaccharide downregulates CD91/low-density lipoprotein receptor-related protein 1 expression through SREBP-1 overexpression in human macrophages. (2013) *Atherosclerosis*, 227 (1), 79-88.  
**IF: 3.971**

05 Vaccarino V., Badimon L., Corti R., De Wit C., Dorobantu M., Manfrini O., Koller A., Pries A., Cenko E., Bugiardini R. Presentation, management, and outcomes of ischaemic heart disease in women. (2013) *Nat. Rev. Cardiol.*, 10 (9), 508-518.  
**IF: 10.154**

06 Vilahur G., Badimon L. Antiplatelet properties of natural products. (2013) *Vasc. Pharmacol.*, 59 (41732), 67-75.  
**IF: 4.62**

07 Vilahur G., Cubedo J., Casani L., Padro T., Sabate-Tenas M., Badimon J.J., Badimon L. Reperfusion-triggered stress protein response in the myocardium is blocked by post-conditioning. Systems biology pathway analysis highlights the key role of the canonical aryl-hydrocarbon receptor pathway. (2013) *Eur. Heart J.*, 34 (27), 2082-2093.  
**IF: 14.723**

08 Vera R.H., Vilahur G., Badimon L. Obesity with insulin resistance increase thrombo-

sis in wild-type and bone marrow-transplanted Zucker fatty rats. (2013) *Thromb. Haemost.*, 109 (2), 319-327.

**IF: 5.76**

09 Badimon L., Hernandez Vera R., Padro T., Vilahur G. Antithrombotic therapy in obesity. (2013) *Thromb. Haemost.*, 110 (4), 681-688.  
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10 Suades R., Padro T., Alonso R., Lopez-Miranda J., Mata P., Badimon L. Circulating CD45+/CD3+ lymphocyte-derived microparticles map lipid-rich atherosclerotic plaques in familial hypercholesterolaemia patients. (2013) *Thromb. Haemost.*, 111 (1), 111-121.  
**IF: 5.76**

11 Onate B., Vilahur G., Camino-Lopez S., Díez-Caballero A., Ballesta-Lopez C., Ybarra J., Moscattiello F., Herrero J., Badimon L. Stem cells isolated from adipose tissue of obese patients show changes in their transcriptomic profile that indicate loss in stemcellness and increased commitment to an adipocyte-like phenotype. (2013) *BMC Genomics*, 14 (1).  
**IF: 4.041**

12 Suades R., Padro T., Alonso R., Mata P., Badimon L. Lipid-lowering therapy with statins reduces microparticle shedding from endothelium, platelets and inflammatory cells. (2013) *Thromb. Haemost.*, 110 (2), 366-377.  
**IF: 5.76**

13 Sans S., Padro T., Tuomilehto J., Badimon L. Incidence of diabetes and serum adipokines in Catalonian men. the ADIPO-CAT study. (2013) *Ann. Med.*, 45 (1), 97-102.

## Scientific Production

\*TIF: 156.135 \*\*MIF: 5.783

Scientific Production

- IF: 4.733**
- 14 Fuentes E., Badimon L., Caballero J., Padro T., Vilahur G., Alarcon M., Perez P., Palomo I. Protective mechanisms of adenosine 5'-monophosphate in platelet activation and thrombus formation. (2014) *Thromb. Haemost.*, 111 (3), 491-507. **IF: 5.76**
- 15 Badimon L., Vera R.H., Vilahur G. Atherothrombotic risk in obesity. (2013) *Hemostaseologie*, 33 (4), 259-268. **IF: 1.589**
- 16 de la Torre R., Pena E., Vilahur G., Slevin M., Badimon L. Monomerization of C-reactive protein requires glycoprotein IIb-IIIa activation: Pentraxins and platelet deposition. (2013) *J. Thromb. Haemost.*, 11 (11), 2048-2058. **IF: 5.55**
- 17 Cubedo J., Padro T., Badimon L. Coordinated proteomic signature changes in immune response and complement proteins in acute myocardial infarction: The implication of serum amyloid P-component. (2013) *Int. J. Cardiol.*, 168 (6), 5196-5204. **IF: 6.175**
- 18 Bernal-Lopez M.R., Garrido-Sanchez L., Gomez-Carrillo V., Gallego-Perales J.L., Llorente-Cortes V., Calleja F., Gomez-Huelgas R., Badimon L., Tinahones F.J. Antioxidized LDL antibodies are associated with different metabolic pathways in patients with atherosclerotic plaque and type 2 diabetes. (2013) *Diabetes Care*, 36 (4), 1006-1011. **IF: 8.57**
- 19 Barriga M., Cal R., Cabello N., Llach A., Vallmitjana A., Benitez R., Badimon L., Cinca J., Llorente-Cortes V., Hove-Madsen L. Low Density Lipoproteins Promote Unstable Calcium Handling Accompanied by Reduced SERCA2 and Connexin-40 Expression in Cardiomyocytes. (2013) *PLoS One*, 8 (3). **IF: 3.534**
- 20 Cal R., Garcia-Arguinzonis M., Revuelta-Lopez E., Castellano J., Padro T., Badimon L., Llorente-Cortes V. Aggregated low-density lipoprotein induces LRP1 stabilization through E3 ubiquitin ligase CHFR downregulation in human vascular smooth muscle cells. (2013) *Arterioscler. Thromb. Vasc. Biol.*, 33 (2), 369-377. **IF: 5.533**
- 21 Cito S., Mazzeo M.D., Badimon L. A review of macroscopic thrombus modeling methods. (2013) *Thromb. Res.*, 131 (2), 116-124. **IF: 2.427**
- 22 Revuelta-Lopez E., Castellano J., Roura S., Galvez-Monton C., Nasarre L., Benitez S., Bayes-Genis A., Badimon L., Llorente-Cortes V. Hypoxia induces metalloproteinase-9 activation and human vascular smooth muscle cell migration through low-density lipoprotein receptor-related protein 1-mediated Pyk2 phosphorylation. (2013) *Arterioscler. Thromb. Vasc. Biol.*, 33 (12), 2877-2887. **IF: 5.533**
- 23 Pena E., Arderiu G., Badimon L. Tissue factor induces human coronary artery smooth muscle cell motility through Wnt-signalling. (2013) *J. Thromb. Haemost.*, 11 (10), 1880-1891. **IF: 5.55**
- 24 Cubedo J., Ramaiola I., Padro T., Martin-Yuste V., Sabate-Tenas M., Badimon L. High-molecular-weight kininogen and the intrinsic coagulation pathway in patients with de novo acute myocardial infarction. (2013) *Thromb. Haemost.*, 110 (6), 1121-1134. **IF: 5.76**
- 25 Bernal-Lopez M.R., Llorente-Cortes V., Calleja F., Lopez-Carmona D., Mayas M.D., Gomez-Huelgas R., Badimon L., Tinahones F.J. Effect of different degrees of impaired glucose metabolism on the expression of inflammatory markers in monocytes of patients with atherosclerosis. (2013) *Acta Diabetol.*, 50 (4), 553-562. **IF: 3.679**
- 26 Lugano R., Pena E., Casani L., Badimon L., Padro T. UPA promotes lipid-loaded vascular smooth muscle cell migration through LRP-1. (2013) *Cardiovasc. Res.*, 100 (2), 262-271. **IF: 5.808**
- 27 Marti-Fabregas J., Crespo J., Delgado-Mederos R., Martinez-Ramirez S., Pena E., Marin R., Dinia L., Jimenez-Xarrie E., Querol L., Suarez-Calvet M., Badimon L. Endothelial progenitor cells in acute ischaemic stroke. (2013) *IEEE Trans. Neural Netw. Learn. Syst.*, 3 (6), 649-655. **IF: 4.37**

Other Publications

Books or Chapters with ISBN

- ▶ Badimon L, Fuster V. Arterial thrombosis: a brief overview (Chapter 1), In: DJ Moliterno, SD Kristensen, R de Caterina, (eds), *Therapeutic Advances in Thrombosis*, 2nd Ed, Blackwell Publishing, 2013. ISBN 978-1-4051-9625-3.
- ▶ Badimon L, Oñate B, Vilahur G, Adipose tissue-derived mesenchymal stem cell and angiogenesis in ischemic heart disease (Chapter 16), In: J Mehta, NS Dhalla (eds.), *Biochemical Basis and Therapeutic Implications Of Angiogenesis*, Springer Science, New York. ISBN 978-1-4614-5856-2.
- ▶ Badimon L, Vilahur G, TLR-dependent pathways and Akt/mTOR/P70S6K pathways in cardiac remodelling after myocardial infarction (Chapter 19), In: Bl Jugdutt, NS Dhalla (eds.), *Cardiac Remodelling. Molecular Mechanisms (Vol. 5 of Advances in Biochemistry in Health and Disease (Series))*, Springer Science+Business Media, New York, 2013. ISBN 978-1-4614-5929-3
- ▶ Badimon L, Cubedo J, Vilahur G, Las lipoproteínas de alta densidad (HDL) y la aterosclerosis (Chapter 7), In: J Vilariño, A Lorenzatti (eds), *Lipidología: Presente y Futuro*, Ediciones Médicas del Sur, Buenos Aires, 2013. ISBN 978-987-26083-6-1.
- ▶ Kozarov E, Badimon L, Re-emerging pathogens associated with atherosclerosis, In: A Méndez-Vilas (ed), *Microbial Pathogens and Strategies for Combating Them: Science, Technology and Education*, Formatex Research Centre, Spain, 2013. ISBN 978-84-942134-1-0.
- ▶ Badimon L, Romero-Sandoval C, Borrell-Pagés M., Biomarcadores en la enfermedad cardiovascular, *Gerontology Year 2011*, Vol. 24, Ageing Institute-UAB (Spain), Glosa Ediciones, 2013. ISBN 978-84-7429-560-3.

dores en la enfermedad cardiovascular, *Gerontology Year 2011*, Vol. 24, Ageing Institute-UAB (Spain), Glosa Ediciones, 2013. ISBN 978-84-7429-560-3.

- ▶ Badimon L, Casani L, Vilahur G, Models for the study of atherosclerosis and thrombosis (Chapter 10), In: P. Michael Conn (ed), *Animal Models for the Study of Human Disease*, Elsevier. ISBN 978-0-12-415894-8.
- ▶ Badimon L, Padró T, Vilahur G., *Nutraceuticals and atherosclerosis: human trials*, In: Mahabir S, Pathak YV (eds), *Nutraceuticals and Health: Review of the Human Evidence*, CRC Press. ISBN 978-1466517226.

ISI Web of Knowledge Indexed Publications without an IF

- 01 Badimon L, Vilahur G., Mechanisms of action of antiplatelet agents [Mecanismos de acción de los diferentes agentes antiplaquetarios]. *Revista Española de Cardiología* 13 (suppl.2):8-15; 2013.
- 02 Martí-Fàbregas J, Crespo J, Delgado-Mederos R, Martínez-Ramírez S, Peña E, Marín R, Dinia L, Jiménez-Xarrié E, Fernández-Arcos A, Pérez-Pérez J, Querol L, Suárez-Calvet M, Badimon L. Endothelial progenitor cells in acute ischaemic stroke. *Brain and Behavior* 3(6):649-655; 2013.

\*Total Impact Factor \*\*Mean Impact Factor

# Inflammation and Vascular Remodelling

## Coordinator

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## Researchers

María Estefanía IR-HSCSP  
Saray Galán ICCC  
Segalés Varona ICCC

## Technician

Silvia Aguiló ICCC



## 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 scientific staffing.
- ▶ 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

- ▶ Dr Cristina Rodríguez Sinovas (PI), Epigenetic mechanisms involved in remodelling of the extracellular matrix associated with AAA: new therapeutic strategies (PI12/01952), Carlos III Health Institute, 2013-2015, €153,065.
- ▶ Dr Cristina Rodríguez Sinovas (PI), Epigenetic mechanisms involved in the control of intimal hyperplasia: role of lysyl oxidase (LOX) in restenosis, Spanish Society of Cardiology (SEC), Basic Research Grant 2012-2013, €18,000.
- ▶ Dr José Martínez González (PI), Cardiovascular Research Network (RIC) (RD12/0042/0053), MINECO-ISCI, 2013-2016, €205,000 (approx).

## Awards

- ▶ Orriols M, Guadall A, Galán M, Alonso J, Ferrán J, Rodríguez-Calvo R, Navarro MA, Osada J, Martínez-González J, Rodríguez C. Overexpression of LOX in the vessel wall limits neo-intimal thickening induced by carotid artery ligation. Best Oral Communication, Scientific Meeting of the Cardiovascular Thrombosis Working Group, Murcia, Spain, September 2013.



Collaborations

**Collaborations with other IIB Sant Pau Groups**

- ▶ Angiology, Vascular Biology and Inflammation (PI: Luis Vila).
- ▶ Cardiac Rhythm and Contraction (PI: Leif Hove-Madsen).
- ▶ Atherosclerosis and Vascular Biology (PI: José Martínez González).

**External Collaborations**

- ▶ Jain K. Mukesh, Case Western Reserve University School of Medicine, Cleveland, Ohio, USA.
- ▶ Mark Slevin, Manchester Metropolitan University, United Kingdom.
- ▶ Vicente Andrés, National Cardiovascular Research Centre (CNIC), Spain.
- ▶ José Manuel Redondo, National Cardiovascular Research Centre (CNIC), Spain.

- ▶ Jesús Egido, Jiménez Díaz Foundation, Madrid, Spain.
- ▶ Jesús Osada, CIBEROBN, University of Zaragoza, Spain.
- ▶ Manel Vázquez Carrera, CIBERDEM, University of Barcelona, Spain.
- ▶ Mercedes Salaices, Autonomous University of Madrid, Spain.
- ▶ Victoria Cachafeiro, Complutense University of Madrid, Spain.
- ▶ Francisco Marín, Department of Cardiology, Hospital Clínico Universitario Virgen de la Arrixaca, Murcia, Spain.
- ▶ Jerzy Krupinski, Hospital Mutua Universitaria de Terrassa, Barcelona, Spain.
- ▶ Francisco Sánchez Madrid, Hospital de la Princesa, Madrid, Spain.

\*TIF: 32.253 \*\*MIF: 5.376

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Stefanon I., Valero-Munoz M., Fernandes A.A., Ribeiro Jr. R.F., Rodriguez C., Miana M., Martinez-Gonzalez J., Spalenza J.S., Lahera V., Vassallo P.F., Cachafeiro V. Left and right ventricle late remodelling following myocardial infarction in rats. (2013) PLoS One, 8 (5). **IF: 3.534**
- 02 Silvestre-Roig C., Fernandez P., Esteban V., Pello O.M., Indolfi C., Rodriguez C., Rodriguez-Calvo R., Lopez-Maderuelo M.D., Bauriedel G., Hutter R., Fuster V., Ibanez B., Redondo J.M., Martinez-Gonzalez J., Andres V. Inactivation of nuclear factor- $\kappa$ B inhibits vascular smooth muscle cell proliferation and neointima formation. (2013) Arterioscler. Thromb. Vasc. Biol., 33 (5), 1036-1045.

**IF: 5.533**

- 03 Rodriguez-Calvo R., Guadall A., Calvayrac O., Navarro M.A., Alonso J., Ferran B., De Diego A., Muniesa P., Osada J., Rodriguez C., Martinez-Gonzalez J. Over-expression of neuron-derived orphan receptor-1 (NOR-1) exacerbates neointimal hyperplasia after vascular injury. (2013) Hum. Mol. Genet., 22 (10), 1949-1959. **IF: 6.677**
- 04 Mendez-Barbero N., Esteban V., Villahoz S., Escolano A., Urso K., Alfranca A., Rodriguez C., Sanchez S.A., Osawa T., Andres V., Martinez-Gonzalez J., Minami T., Redondo J.M., Campanero M.R. A major role for RCAN1 in atherosclerosis progression. (2013) EMBO Mol. Med., 5 (12), 1901-1917. **IF: 8.245**

- 05 Camacho M., Dilme J., Sola-Villa D., Rodriguez C., Bellmunt S., Sigüero L., Alcolea S., Romero J.-M., Escudero J.-R., Martinez-Gonzalez J., Vila L. Microvascular COX-2/mPGES-1/EP-4 axis in human abdominal aortic aneurysm. (2013) J. Lipid Res., 54 (12), 3506-3515. **IF: 4.73**
- 06 Bosutti A., Qi J., Pennucci R., Bolton D., Matou S., Ali K., Tsai L.-H., Krupinski J., Petcu E.B., Montaner J., Al Baradie R., Caccuri F., Caruso A., Alessandri G., Kumar S., Rodriguez C., Martinez-Gonzalez J., Slevin M. Targeting p35/CDK5 signaling via CIP-peptide promotes angiogenesis in hypoxia. (2013) PLoS One, 8 (9). **IF: 3.534**

# Biomarkers for Disease Status

## Coordinator

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## Researchers

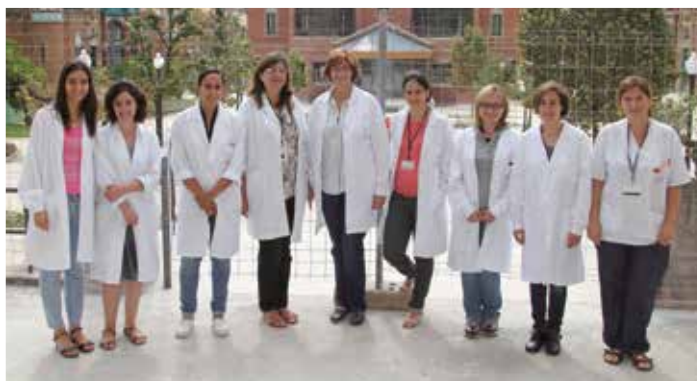
Maisa Inés García ICCC  
Esther Peña ICCC

## Technicians

M. Dolores Fernández ICCC  
Montserrat Gómez-Pardo ICCC  
Mónica Pescador ICCC

## Collaborators

Mónica Barco ICCC  
Roberta Lúgano ICCC  
Iñaria Ramaiola ICCC  
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, using cell culture studies, 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 postgenomic 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 and lipidomic techniques based on liquid chromatography and bidimensional electrophoresis, antibody array systems and mass spectrometry (MALDI-ToF/ToF; linear ion trap).
- ▶ Validate biomarkers identified in the diagnosis and prognosis of cardiovascular and/or cerebrovascular disease using specific quantitative techniques (confocal microscope, ELISA, multiplex assays, etc).
- ▶ Characterize molecular and functional mechanisms for selected biomarkers in cardiovascular pathology (biology of systems).
- ▶ Consolidate the lipidomic platform.
- ▶ Lead the Biobank in the SAFE-T European project.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Molecular Pathology and Therapeutics for Ischaemic and Atherothrombotic Diseases.
- ▶ Clinical and Translational Cardiology.
- ▶ Endocrinology, Diabetes and Nutrition.
- ▶ Pharmacological Research in Humans.

### External Collaborations

- ▶ Department of Cardiology, Thorax Institute, Hospital Clinic, University of Barcelona, Barcelona, Spain (Dr Salvatore Brugaletta, Dr Victoria Martín-Yuste, Dr Clarissa Cola, Dr Manel Sabaté).

- ▶ Fundación Jiménez Díaz, Madrid, Spain (Dr Rodrigo Alonso, Dr Pedro Mata).
- ▶ Cell Therapy Network (TerCel), RD12/0019.
- ▶ TerCel Network, RD06/0010.
- ▶ Redinscor Network, RD06/0003.
- ▶ CIBER-Physiopathology of Obesity and Nutrition, CB06/03CB2006/03.
- ▶ Member of the IIB Sant Pau Biobank External Committee.
- ▶ Member of the IIB Sant Pau Training Committee.

Active Grants

- ▶ Padró T (PI), Safer and Faster Evidence-Based Translation (SAFE-T),115003, IMI-JU,
- ▶ European Commission IMI Call\_2008\_1\_05, Sept 2009-Dec 2014.
- ▶ Padró T (PI), Biomarker for cardiovascular risk assessment in Europe (BiomarCaRe), GA 278913
- ▶ FP7–European Commission HEALTH-2011, Oct 2011-Oct 2015.
- ▶ Padró T (PI), PROMISE (Protecting the Heart from Ischaemia) International Research Training Group, German Research Foundation and Generalitat de Catalunya, Jan 2009-Dec 2013.
- ▶ Padró T (PI), 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), CEN20101016, Spanish Ministry of the Economy and Competitiveness/CENIT, May 2010-Dec 2013.
- ▶ Padró T (PI), Low density lipoproteins and atherosclerotic plaque stability, P110/01115
- ▶ Carlos III Health Institute, Jan 2011–Dec 2013.
- ▶ Padró T (PI), CEVASALU: Making age healthy: keys to healthy vascular ageing in the octogenarian population, 113/2011, Institute for the Elderly and Social Services (IMSERSO), Ministry of Health, Social Services and Equality, Jan 2012- July 2013.
- ▶ Padró T (PI), Consolidated Research Group, 2009SGR826, AGAUR, Generalitat de Catalunya,
- ▶ Jan 2009-Dec 2013.
- ▶ Padró T (PI), Proteomic characterization of intracoronary thrombus in STEMI patients,
- ▶ Spanish Thrombosis and Haemostasis Foundation (FETH), Jan 2013-Dec 2014.
- ▶ Padró T (PI), Thematic Physiopathology Network for Obesity and Nutrition (CIBERobn), CIBER Project, CB2006/03, Carlos III Health Institute, Dec 2006-June 2013.
- ▶ Padró T (PI), Cell Therapy Network (TerCel), RD06/0010/0017, Carlos III Health Institute,
- ▶ Dec 2006–Dec 2013.
- ▶ Padró T (PI), Redinscor Network, RD06/0003/0015, Carlos III Health Institute, Dec 2006–July 2013.
- ▶ Badimon L (PI), Cell Therapy Network (TerCel), RD12/0019/0026, Carlos III Health Institute, Jan 2013-Dec 2017.

\*TIF: 54.252 \*\*MIF: 6.782

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- |   |  |   |
|---|--|---|
| <p>01 Vilahur G., Cubedo J., Casani L., Padro T., Sabate-Tenas M., Badimon J.J., Badimon L. Reperfusion-triggered stress protein response in the myocardium is blocked by post-conditioning. Systems biology pathway analysis highlights the key role of the canonical aryl-hydrocarbon receptor pathway. (2013) Eur. Heart J., 34 (27), 2082-2093. <b>IF: 14.723</b></p> <p>02 Cubedo J., Padro T., Badimon L. Coordinated proteomic signature changes in immune response and complement proteins in acute myocardial infarction: The implication of serum amyloid P-component. (2013) Int. J. Cardiol., 168 (6), 5196-5204. <b>IF: 6.175</b></p> <p>03 Lugano R., Pena E., Casani L., Badimon</p> | <p>L., Padro T. UPA promotes lipid-loaded vascular smooth muscle cell migration through LRP-1. (2013) Cardiovasc. Res., 100 (2), 262-271. <b>IF: 5.808</b></p> <p>04 Badimon L., Hernandez Vera R., Padro T., Vilahur G. Antithrombotic therapy in obesity. (2013) Thromb. Haemost., 110 (4), 681-688. <b>IF: 5.76</b></p> <p>05 Cubedo J., Ramaiola I., Padro T., Martin-Yuste V., Sabate-Tenas M., Badimon L. High-molecular-weight kininogen and the intrinsic coagulation pathway in patients with de novo acute myocardial infarction. (2013) Thromb. Haemost., 110 (6), 1121-1134. <b>IF: 5.76</b></p> <p>06 Suades R., Padro T., Alonso R., Lopez-Miranda J., Mata P., Badimon L. Circulating CD45+/CD3+ lymphocyte-derived microparticles map lip-</p> | <p>id-rich atherosclerotic plaques in familial hypercholesterolaemia patients. (2013) Thromb. Haemost., 111 (1), 111-121. <b>IF: 5.76</b></p> <p>07 Cal R., Garcia-Arguinzonis M., Revuelta-Lopez E., Castellano J., Padro T., Badimon L., Llorente-Cortes V. Aggregated low-density lipoprotein induces LRP1 stabilization through E3 ubiquitin ligase CHFR downregulation in human vascular smooth muscle cells. (2013) Arterioscler. Thromb. Vasc. Biol., 33 (2), 369-377. <b>IF: 5.533</b></p> <p>08 Sans S., Padro T., Tuomilehto J., Badimon L. Incidence of diabetes and serum adipokines in Catalan men. The ADIPOCAT study. (2013) Ann. Med., 45 (1), 97-102. <b>IF: 4.733</b></p> |
|---|--|---|

Other Publications

Books or Chapters with ISBN

- ▶ Badimon L, Padró T, Vilahur G., Nutraceuticals and atherosclerosis: human trials, in Mahabir S, Pathak YV (eds), Nutraceuticals and Health: Review of the Human Evidence, CRC Press. ISBN 978-1466517226.

# Lipids and Cardiovascular Pathology

## Coordinator

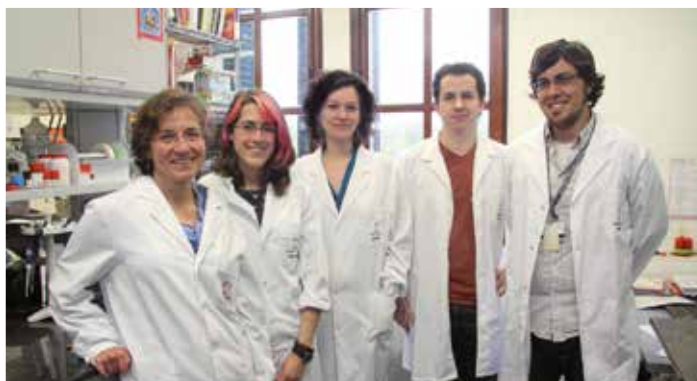
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## Researchers

David de Gonzálo-Calvo  
(post-doctoral researcher)  
Elena Revuelta López AGAUR  
(research grant 2013FI-B 01008)

## Technicians

Laura Nasarre Miarnau



## 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.
- ▶ Lipids and diabetic cardiomyopathy.
- ▶ 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 regarding 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

### International projects

- ▶ Dr Concepción Vicenta Llorente-Cortés, Cardiovascular Research Centre, CSIC-ICCC, IIB Sant Pau, and Dr Gustavo Alberto Chiabrand, CIBICI-CONICET/FCQ-UNC, Cordoba, Argentina, CONICET-CSIC 2013: PICT-2012-2607: Study of the molecular and cellular aspects that regulate the intracellular traffic of the alpha-2-macroglobulin receptor LRP1 and its implications for cell migration control, June 2013-May 2016, €29.72.
- ▶ UAB and Justus Liebig Universität, PROMISE International Research Training Group. Protecting the heart from ischaemia. Role of LRP1 in vascular and myocardial cells, 2010-2013.

### National projects

- ▶ David de Gonzálo Calvo (PI), Regulation of LRP1 receptor gene expression by microRNAs: a new therapeutic target in the treatment of atherosclerosis? Spanish Atherosclerosis Society, Jan 2014-Dec 2015, €8500.

### Networks

- ▶ Lina Badimon (PI), Francisco Fernández-Avilés (Coordinator), Cardiovascular Research Network (RIC).
- ▶ Programme 1: Research programme on adverse ventricular remodelling, RD12/0042/0027,
- ▶ Jan 2013-Dec 2015, €85,600 (2013).

## Awards

- ▶ Vicenta Llorente-Cortes (PI), Development of a blocking agent for the massive entry of cholesterol into cardiomyocytes in hypoxia/ischaemia, Selected Project (Ref. No. 023), InnoPharma-USC 2013 call for the InnoPharma Open-Lab initiative designed to share experience and know-how with projects for discovering new drugs. Lipids and Cardiovascular Pathology Group, CSIC-ICCC, IIB Sant Pau.



Collaborations

**Collaborations with IIB Sant Pau Groups**

**Cardiovascular Diseases**

- ▶ Cardiovascular Biochemistry.
- ▶ Regulation of Cardiac Rhythm and Contraction.
- ▶ Molecular Pathology and Therapeutics of Ischaemic and Atherothrombotic Diseases.
- ▶ Clinical and Translational Cardiology.

**Genetic, Metabolic and Inflammatory Diseases**

- ▶ Metabolic Bases of Cardiovascular Disease.

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

- ▶ Molecular Bases of Disease.

**Haematological and Oncological Diseases**

- ▶ Clinical Oncology.
- ▶ Oncogenes and Antitumour Drugs.

- ▶ Breast Cancer.

**Puigvert Foundation**

- ▶ Dr Lluís Guirado (PI).

**Other**

- ▶ InnoPharma BioFarma-USEF Research Group, University of Santiago de Compostela, Spain.
- ▶ Teresa Tarrago (PI), IPROTEOS, Parc Científic, Barcelona, Spain.

**External Collaborations**

**National**

- ▶ Heart Failure and Cardiac Regeneration Group (ICREC), Dr Bayes-Genis (PI), Hospital Germans Trias i Pujol, Badalona, Spain.
- ▶ Vascular Biology Laboratory, Dulcenombre Gomez Garre (PI), Hospital Clínico San Carlos, Madrid, Spain.
- ▶ Experimental Medical Pathology Unit, Marta Casado Pinna (PI), CSIC, Valencia, Spain.

- ▶ Endocrinology Department, Biomedical Research Laboratory, Hospital Virgen de la Victoria, Malaga, Spain.

**International**

- ▶ Group Physique des Polymères, Colette Lacabanne and Valerie Samouillan, Institut Carnot, CIRIMAT, Université Paul Sabatier, Toulouse, France.
- ▶ Vascular surgery group, Dr Max Bown, Department of Cardiovascular Sciences University of Leicester, New England, USA.
- ▶ Department of Experimental Clinical Medicine, Fulvia Ortolani (PI), Università degli Studi di Udine, Udine, Italy.
- ▶ CIBICI-CONICET/FCQ-Universidad Nacional de Córdoba, Gustavo Alberto Chiabrando (PI), Córdoba, Argentina.
- ▶ Department of Cardiovascular Medicine, Claudia Huesca Gómez (PI), Instituto Nacional de Cardiología Ignacio Chávez, Mexico City.
- ▶ Molecular Medicine and Chronic Diseases Research Centre (CIMUS), Santiago de Compostela, Spain.

\*TIF: 14.549 \*\*MIF: 3.637

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Vazquez-Agell M., Urpi-Sarda M., Sacanella E., Camino-Lopez S., Chiva-Blanch G., Llorente-Cortes V., Tobias E., Roura E., Andres-Lacueva C., Lamuela-Raventos R.M., Badimon L., Estruch R. Cocoa consumption reduces NF-κB activation in peripheral blood mononuclear cells in humans. (2013) *Nutr. Metab. Cardiovasc. Dis.*, 23 (3), 257-263.  
**IF: 3.875**
- 02 Costales P., Castellano J., Revuelta-Lopez E., Cal R., Aledo R., Llampayas O., Nasarre L., Juarez C., Badimon L., Llorente-Cortes V. Lipopolysaccharide downregulates CD91/low-density lipoprotein receptor-related protein 1 expression through SREBP-1 overexpression in human macrophages. (2013) *Atherosclerosis*, 227 (1), 79-88.  
**IF: 3.971**
- 03 Bernal-Lopez M.R., Garrido-Sanchez L., Gomez-Carrillo V., Gallego-Perales J.L.,

Llorente-Cortes V., Calleja F., Gomez-Huelgas R., Badimon L., Tinahones F.J. Antioxidized LDL antibodies are associated with different metabolic pathways in patients with atherosclerotic plaque and type 2 diabetes. (2013) *Diabetes Care*, 36 (4), 1006-1011.  
**IF: 8.57**

- 04 Barriga M., Cal R., Cabello N., Llach A., Vallmitjana A., Benitez R., Badimon L., Cinca J., Llorente-Cortes V., Hove-Madsen L. Low Density Lipoproteins Promote Unstable Calcium Handling Accompanied by Reduced SERCA2 and Connexin-40 Expression in Cardiomyocytes. (2013) *PLoS One*, 8 (3).  
**IF: 3.534**
- 05 Cal R., Garcia-Arguinzonis M., Revuelta-Lopez E., Castellano J., Padro T., Badimon L., Llorente-Cortes V. Aggregated low-density lipoprotein induces LRP1 stabilization through E3 ubiquitin ligase CHFR downregulation in human vascular smooth muscle cells. (2013) *Arterioscler. Thromb. Vasc. Biol.*, 33 (2), 369-377.

**IF: 5.533**

- 06 Revuelta-Lopez E., Castellano J., Roura S., Galvez-Monton C., Nasarre L., Benitez S., Bayes-Genis A., Badimon L., Llorente-Cortes V. Hypoxia induces metalloproteinase-9 activation and human vascular smooth muscle cell migration through low-density lipoprotein receptor-related protein 1-mediated Pyk2 phosphorylation. (2013) *Arterioscler. Thromb. Vasc. Biol.*, 33 (12), 2877-2887.  
**IF: 5.533**
- 07 Roura S., Galvez-Monton C., Pujal J.M., Casani L., Fernandez M.A., Astier L., Gastelurrutia P., Domingo M., Prat-Vidal C., Soler-Botija C., Llucia-Valldeperas A., Llorente-Cortes V., Bayes-Genis A. New insights into lipid raft function regulating myocardial vascularization competency in human idiopathic dilated cardiomyopathy. (2013) *Atherosclerosis*, 230 (2), 354-364.  
**IF: 3.971**

Other Publications

- ▶ David de Gonzalo-Calvo, Elena Revuelta-López, Vicenta Llorente-Cortés, Teaching material for the Spanish Arteriosclerosis Society's continuing medical education programme in clinical lipology (Mecanismos básicos. Regulación y aclaramiento de las lipoproteínas que contienen apolipoproteína B). *Clin Investig Arterioscler.* 2013; 25(4):194-200. DOI: 10.1016/j.arteri.2013.05.002.
- ▶ David de Gonzalo-Calvo, Vicenta Llorente-Cortés, Low-density lipoprotein receptor-related protein 1 (LRP1) as a modulator of the vascular inflammatory response to modified LDL (editorial/review), *Biohelikon: Cell Biology* (ISSN: 2348-3741), pp. 2-12, 2014.

\*Total Impact Factor \*\*Mean Impact Factor

# Regulation of Cardiac Rhythm and Contraction

## Coordinator

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## Researchers

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Cristina Espinosa Molina      ICC

## Technicians

Adela Herraiz      ICC

## Grant Holders

Carmen Tarifa      ICC



## 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

- ▶ Consolidate the group as a reference in research into calcium handling in atrial fibrillation and establish it within other lines of research by including emerging technologies and fields of research. Specifically:
  - 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 development 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.
- Obtain international funding for incorporation of scientific expertise and participation in multidisciplinary international research projects.

## Active Grants

- ▶ Hove-Madsen L (PI), Functional cellular bases of PITX2 involvement in human atrial fibrillation, Spanish Ministry of Science and Technology, July 2011–Nov 2014.
- ▶ Hove-Madsen L (PI), Effects of atrial fibrillation on the distribution and frequency of spontaneous calcium release events in human atrial myocytes, Spanish Ministry of Science and Technology, Jan 2012–Dec 2014.
- ▶ Hove-Madsen L (PI), Cristina Espinosa Molina (beneficiary), EU, Marie Curie FP7-PEOPLE-2012\_IJEF, April 2013–Mar 2015.
- ▶ Cinca J (PI), National Research Network on Heart Failure in Spain (REDINSCOR), Carlos III Health Institute, Spanish Ministry of Health and Consumer Affairs, Dec 2006–Dec 2012.

Collaborations

**Collaborations with IIB Sant Pau Groups**

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

**External Collaborations**

- ▶ Professor SR Wayne Chen, Department of Physiology and Pharmacology, University of Calgary, Canada.
- ▶ Professor Glen F Tibbits, Department of Biomedical Physiology

and Kinesiology, Simon Fraser University, Burnaby and Child and Family Research Institute, Vancouver, Canada.

- ▶ Professors Diego Franco and Amelia Aranega, Department of Experimental Biology, University of Jaén, Spain.
- ▶ Professor Blas Echebarria, Department of Applied Physics, Universitat Politècnica de Catalunya, Spain.
- ▶ Professor Raul Benitez, Systems Engineering and Automatic Control Department, Universitat Politècnica de Catalunya, Spain.

Patents

- ▶ L. Hove-Madsen, A Vallmitjana, R. Benítez (inventors), Computer-implemented method for dynamic characterization of cells in cell cultures and corresponding software method, P201330974 (Spain), Universitat Politècnica de Catalunya (titleholder), 28 June 2013.

\*TIF: 30.542 \*\*MIF: 6.108

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Bai Y., Jones P.P., Guo J., Zhong X., Clark R.B., Zhou Q., Wang R., Vallmitjana A., Benitez R., Hove-Madsen L., Semeniuk L., Guo A., Song L.-S., Duff H.J., Chen S.R.W. Phospholamban knockout breaks arrhythmogenic Ca<sup>2+</sup> waves and suppresses catecholaminergic polymorphic ventricular tachycardia in mice. (2013) *Circ.Res.*, 113 (5), 517-526.  
**IF: 11.089**
- 02 Cinca J., Mendez A., Puig T., Ferrero A., Roig E., Vazquez R., Gonzalez-Juanatey J.R., Alonso-Pulpon L., Delgado J., Brugada J., Pascual-Figal D., Brugada J., Batlle M., Berruezo A., Hevia S., Mont L., Perez-Villa F., Cinca J., Roig E., Bayes De Luna A., Borrás X., Carreras F., Ferrero A., Guerra J.M., Hove-Madsen L., Jorge E., Martínez R., Padro J., Puig T., Ribas N., Vinolas X., Alvarez-Garcia J., Gonzalez-Juanatey J.R., Bandin M., Eiras S., Fernandez-Hernandez L., Garcia-Acuna J., Gomez-Otero I., Grigorian-Shamagian L., Lago F., Manzon P., Moure M., Otero-Ravina F., Otero-Santiago F., Rodino Janeiro B.K., Rubio J., Salgado A., Seoane A., Varela A., Lear P.V., Fernandez-Cruz A., Alvarez De Arcaya Vicente A., Avila M., Bordiu E., Calle L., Fernandez-Pinilla C., Gomez-Garre D., Gonzalez-Rubio L., Marco J., Martell N., Munoz-Pacheco P., Ortega A., Patino R., Pedrajas J., Reinares L., Perez-Villacastin J., Bover R., Cobos M., Garcia-Quintanilla J., Moreno J., Pe-

rez-Castellano N., Perez-Serrano M., Vila I., Delgado J.F., Arribas F., Escribano P., Flox A., Jimenez Lopez-Guarch C., Parada M., Ruiz-Cano J., Saenz De La Calzada C., Salguero R., Sanchez-Sanchez V., Tello De Meneses R., Vicente-Hernandez M., Alonso-Pulpon L., Fernandez -Lozano I., Garcia-Pavia P., Garcia-Touchard A., Gomez-Bueno M., Marquez J., Segovia J., Silva L., Vazquez-Mosquera M., Valdes M., Garcia-Alberola A., Garrido I., Pascual-Figal D.A., Pastor-Perez F.J., Sanchez-Mas J., Tornel P., Rivera M., Almenar L., Cortes R., Martinez-Dolz L., Montero J., Portoles M., Rosello-Lleti E., Salvador A., Vila V., Vazquez R., Cubero J., Fernandez-Palacin A., Garcia-Medina D., Garcia-Rey S., Laguna E., Leal Del Ojo J., Minano F., Pastor-Torres L., Pavon R., Perez-Navarro A., Villagomez D., Vazquez R., Arana R., Bartolome D., Cabeza P., Calle-Perez G., Camacho F., Cano L., Carrillo A., Diaz-Retamino E., Escolar V., Fernandez-Rivero R., Gamaza S., Giraldes A., Hernandez-Vicente N., Lagares M., Lopez-Benitez J., Marante M., Otero E., Pedregal J., Sancho-Jaldon M., Sevillano R., Zayas R., Verdu J.M., Aguilar S., Aizpuru M., Alguacil F., Casacuberta J., Cerain J., Domingo M., Garcia-Lareo M., Hererro-Melechon J., Lopez-Pareja N., Mena A., Perez-Orcero A., Rodriguez- Cristobal J., Rozas M., Sorribes J., Toran P., Worner F., Barta L., Bravo C., Cabau J., Casanova J., Daga B., De La Puerta I., Hernandez-Martin I., Pinol E., Pueo E., Torres G., Troncoso A., Viles D., Bardaji A., Merce J.,

Sanz-Girgas E., Valdovinos P., Aramburu O., Arias J., Garcia-Gonzalez C., Alonso M., Bischofberger C., Dominguez-De Pablos G., Jimenez-Cervantes D., Urena I., Grau-Sepulveda A., Fiol C., Pericas P., Villalonga M., Orosa P., Agüero J., Planas-Ayma F., Grau-Amoros J., Planas-Comes F., San Vicente L. Differential clinical characteristics and prognosis of intraventricular conduction defects in patients with chronic heart failure. (2013) *Eur. J. Heart Fail.*, 15 (8), 877-884.  
**IF: 6.577**

- 03 De La Rosa A.J., Dominguez J.N., Sedmera D., Sankova B., Hove-Madsen L., Franco D., Aranega A.E. Functional suppression of Kcnq1 leads to early sodium channel remodelling and cardiac conduction system dysmorphogenesis. (2013) *Cardiovasc. Res.*, 98 (3), 504-514.  
**IF: 5.808**
- 04 Barriga M., Cal R., Cabello N., Llach A., Vallmitjana A., Benitez R., Badimon L., Cinca J., Llorente-Cortes V., Hove-Madsen L. Low density lipoproteins promote unstable calcium handling accompanied by reduced SERCA2 and Connexin-40 expression in cardiomyocytes. (2013) *PLoS One*, 8 (3).  
**IF: 3.534**
- 05 Alvarez-Lacalle E., Cantalapiedra I.R., Penaranda A., Cinca J., Hove-Madsen L., Echebarria B. Dependency of calcium alternans on ryanodine receptor refractoriness. (2013) *PLoS One*, 8 (2).  
**IF: 3.534**

\*Total Impact Factor \*\*Mean Impact Factor

## AREA 2

# Genetic, Metabolic Inflammatory Disease

**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



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# Genetic Diseases

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## 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.
- ▶ Molecular detection of circulating tumour cells (CTCs) in breast cancer.
- ▶ Introduction of next-generation sequencing (NGS) techniques in the diagnosis of monogenic disorders.
- ▶ 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, thalassaemic syndromes.

## Challenges

### Pharmacogenetics

- ▶ Colorectal and lung cancer treatments.
- ▶ Chronic inflammatory disease treatment.
- ▶ HIV infection 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.
- ▶ Workflow development for the analysis of DMD gene by NGS techniques.

### Hereditary breast/ovarian cancer

- ▶ DNA studies to classify DNA variants found in the BRCA genes as pathogenic or neutral.
- ▶ CTCs as prognostic markers in patients with locally advanced and disseminated breast cancer.

- ▶ Workflow development for the analysis of BRCA1 and BRCA2 genes by NGS techniques.

### Hereditary motor neurone diseases

- ▶ Development of neuromuscular junction studies in health and disease.
- ▶ Broadening of the spectrum of motor neuron diseases to include bulbar and spinal muscular atrophy, distal muscular atrophies and amyotrophic lateral sclerosis.

## Doctoral Theses

- ▶ Jonàs Juan Mateu, Molecular characterization in dystrophinopathies, genotype-phenotype correlation, University of Barcelona, Dr Pía Gallano (supervisor), University of Barcelona, April 2013.

## Transfer Products

- ▶ PM GenExperts (Personalised Medicine Gene Experts) spin-off: HYPERLINK "<http://www.pmgeneexperts.com>" <http://www.pmgeneexperts.com>. Registry details: Vol. 5416, p. 62, entry 1, sheet: BI-63242, CIF B95743399.

Active Grants

- ▶ Dr Vives, Dr Badell (PIs), Creation of a Catalan network for the diagnosis and clinical management of rare anaemias due to major haemoglobinopathies, 101730, TV3 Marathon Foundation, 2011-2013.
- ▶ Dr Baiget (PI), Pharmacogenetic studies in the treatment of colorectal cancer using biological therapies, P111/01711, Carlos III Health Institute, 2012-2014, €68,529.56.
- ▶ Dr Gallano (PI), Development of molecular diagnosis panels for hereditary monogenic pathology using Fluidigm access array system and next-generation sequencing GS junior system PI 11/02586, Carlos III Health Institute, 2012-2014, €94,682.
- ▶ Dr Tizzano (PI), Translational research in spinal muscular atrophy: phenotype modifiers, iPSCs derived motor neurons and developmental neuromuscular pathology, P111/02606, Carlos III Health Institute, 2012-2014, €107,000.
- ▶ Dr Tizzano, Dr Chertkoff (PIs), Genotypic characterization of Argentinian patients with spinal muscular atrophy, National Programme for the Internationalization of R&D, International Projects Subprogramme: Mobility Projects (Integrated Actions), 2012-2014.
- ▶ Dr Baiget (PI), Pharmacogenetic phase II randomized study to evaluate the efficacy and safety of FOLFIRI scheme with high doses of irinotecan in metastatic colorectal cancer patients, according to the UGT1A1 genotype, EC11-36, Carlos III Health Institute, 2012-2014, €64,700.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Clinical Oncology.
- ▶ Neuromuscular Diseases.
- ▶ Clinical Psychiatry.
- ▶ Infectious Pathology and Clinical Microbiology Research Centre (HIV and AIDS Unit).

**External Collaborations**

- ▶ Prof Renata Lonigro (SMA), Next-generation sequencing in type II and III SMA patients, University of Udine, Italy.
- ▶ Prof Rafael Yáñez (SMA), Development of iPSC derived fibroblasts from SMA patients, Royal Holloway University of London, UK.
- ▶ Dr Concepción Hernández, Genotype-phenotype studies in SMA patients, Molecular Genetics Unit, Hospital Ramón y Cajal, Spain.

- ▶ National Oncological Research Centre (CNIO), Evaluation of different genes as phenotypic modifiers in BRCA1/2 mutation carriers.
- ▶ CIMBA Group (Consortium of Researchers of Modifiers of BRCA1/BRCA2), Analysis of modifier genes in breast cancer.
- ▶ Molecular Medicine Unit—Fundacion Publica Galega de Medicina Xenomica (Hospital Clinico Universitario, Santiago de Compostela), Spain, Detection of large rearrangement in PALB2 in Spanish breast cancer families with male breast cancer.
- ▶ Institute of Molecular Biology and Genetics, Universidad de Valladolid, Spain, Splicing studies in breast cancer.
- ▶ Prof Heinz-Josef Lenz, Pharmacogenetics and colorectal cancer treatment, USC Norris Comprehensive Cancer Centre, School of Medicine of the University of Southern California, USA.
- ▶ Prof Armin Gerger, Pharmacogenetics and colorectal cancer treatment, Oncology Department, Medical University of Graz, Austria.
- ▶ Dysferlin Mutational Analysis Network.

\*TIF: 51.509 \*\*MIF: 3.962

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- |  |   |  |
|--|---|--|
| <p>01 Fernandez-Rozadilla C, Palles C, Carvajal-Carmona L, Peterlongo P, Nici C, Veneroni S, Pinheiro M, Teixeira MR, Moreno V, Lamas M-J, Baiget M, LA L-F, Gonzalez D, Brea-Fernandez A, Clofent J, Bujanda L, Bessa X, Andreu M, Xicola R, Llor X, Jover R, Castells A, Castellvi-Bell S, Carracedo A, Tomlinson I, Ruiz-Ponte C. BMP2/BMP4 colorectal cancer susceptibility loci in northern and southern European populations. (2013) <i>Carcinogenesis</i>, 34 (2), 314-318. <b>IF: 5.266</b></p> <p>02 Alias L, Barcelo MJ, Bernal S, Martinez-Hernandez R, Also-Rallo E, Vazquez</p> | <p>C, Santana A, Millan JM, Baiget M, Tizzano EF. Improving detection and genetic counselling in carriers of spinal muscular atrophy with two copies of the SMN1 gene. (2014) <i>Clin. Genet.</i>, 85 (5), 470-475. <b>IF: 3.652</b></p> <p>03 Domingo P, Mateo MG, Pruvost A, Torres F, Salazar J, de Gutierrez MM, Carmen MC, Domingo JC, Fernandez I, Villarroya F, Vidal F, Baiget M, de la Calle-Martin O. Polymorphisms of Pyrimidine Pathway Enzymes Encoding Genes and HLA-B*40:01 Carriage in Stavudine-Associated Lipodystrophy in HIV-Infected Patients. (2013) <i>PLoS One</i>, 8 (6). <b>IF: 3.534</b></p> | <p>04 Fernandez-Rozadilla C, Cazier JB, Moreno V, Crous-Bou M, Guino E, Duran G, Lamas MJ, Lopez R, Candamio S, Gallardo E, Pare L, Baiget M, Paez D, Lopez-Fernandez LA, Cortejoso L, Garcia MI, Bujanda L, Gonzalez D, Gonzalo V, Rodrigo L, Rene JM, Jover R, Brea-Fernandez A, Andreu M, Bessa X, Llor X, Xicola R, Palles C, Tomlinson I, Castellvi-Bell S, Castells A, Ruiz-Ponte C, Carracedo A. Pharmacogenomics in colorectal cancer: A genome-wide association study to predict toxicity after 5-fluorouracil or FOLFOX administration. (2013) <i>Pharmacogenomics J.</i>, 13 (3), 209-217. <b>IF: 5.513</b></p> <p>05 Felez-Carrobe E, Sagarra-Tio M, Rome-</p> |
|--|---|--|

\*Total Impact Factor \*\*Mean Impact Factor

## Genetic Diseases

\*TIF: 51.509 \*\*MIF: 3.962

## Scientific Production

- ro A, Rubio M, Planas L, Perez-Lucena MJ, Baiget M, Cabistan C, Felez J. Nurse-Driven training courses: Impact on Implementation of Ambulatory Blood Pressure Monitoring. (2013) *J. Proteomics*, 7 (1), 35-40.  
**IF: 3.929**
- 06 Juan-Mateu J, Gonzalez-Quereda L, Rodriguez MJ, Verdura E, Lazaro K, Jou C, Nascimento A, Jimenez-Mallebrera C, Colomer J, Monges S, Lubieniecki F, Foncuberta ME, Pascual-Pascual SI, Molano J, Baiget M, Gallano P. Interplay between DMD Point Mutations and Splicing Signals in Dystrophinopathy Phenotypes. (2013) *PLoS One*, 8 (3).  
**IF: 3.534**
- 07 Domingo P, Cabeza MDC, Torres F, Salazar J, Gutierrez MDM, Mateo MG, Martinez E, Domingo JC, Fernandez I, Villarroya F, Ribera E, Vidal F, Baiget M. Association of Thymidylate Synthase Polymorphisms with Acute Pancreatitis and/or Peripheral Neuropathy in HIV-Infected Patients on Stavudine-Based Therapy. (2013) *PLoS One*, 8 (2).  
**IF: 3.534**
- 08 Corton M, Tatu SD, Avila-Fernandez A, Vallespin E, Tapias I, Cantalapiedra D, Blanco-Kelly F, Riveiro-Alvarez R, Bernal S, Garcia-Sandoval B, Baiget M, Ayuso C. High frequency of CRB1 mutations as cause of Early-Onset Retinal Dystrophies in the Spanish population. (2013) *Orphanet J. Rare Dis.*, 8 (1).  
**IF: 3.958**
- 09 Fernandez-Rozadilla C, Cazier J-B, Tomlinson IP, Carvajal-Carmona LG, Palles C, Lamas MJ, Baiget M, Lopez-Fernandez LA, Brea-Fernandez A, Abuli A, Bujanda L, Clofent J, Gonzalez D, Xicola R, Andreu M, Bessa X, Jover R, Llor X, Moreno V, Castells A, Carracedo T, Castellvi-Bel S, Ruiz-Ponte C. A colorectal cancer genome-wide association study in a Spanish cohort identifies two variants associated with colorectal cancer risk at 1p33 and 8p12. (2013) *BMC Genomics*, 14 (1).  
**IF: 4.041**
- 10 Lasa A, Garcia A, Alonso C, Millet P, Cornet M, Cajal TR, Baiget M, Barnadas A. Molecular Detection of Peripheral Blood Breast Cancer mRNA Transcripts as a Surrogate Biomarker for Circulating Tumour Cells. (2013) *PLoS One*, 8 (9).  
**IF: 3.534**
- 11 Altes A, Pare L, Esquirol A, Xicoy B, Ramila E, Vicente L, Lopez R, Orriols J, Vall-Llovera F, Sanchez-Gonzalez B, Del Rio E, Sureda A, Paez D, Baiget M. Pharmacogenetic analysis in the treatment of Hodgkin lymphoma. (2013) *Leuk. Lymphoma*, 54 (8), 1706-1712.  
**IF: 2.605**
- 12 Sebjo A, Pare L, Paez D, Salazar J, Gonzalez A, Sala N, Del Rio E, Martin-Richard M, Tobena M, Barnadas A, Baiget M. The LCS6 polymorphism in the binding site of let-7 microRNA to the KRAS 3' untranslated region: Its role in the efficacy of anti-EGFR-based therapy in metastatic colorectal cancer patients. (2013) *Pharmacogenet. Genomics*, 23 (3), 142-147.  
**IF: 3.45**
- 13 Sandoval J, Heyn H, Mendez-Gonzalez J, Gomez A, Moran S, Baiget M, Melo M, Badell I, Nomdedeu JF, Esteller M. Genome-wide DNA methylation profiling predicts relapse in childhood B-cell acute lymphoblastic leukaemia. (2013) *Br. J. Haematol.*, 160 (3), 406-409.  
**IF: 4.959**



# Metabolic Bases of Cardiovascular Risk

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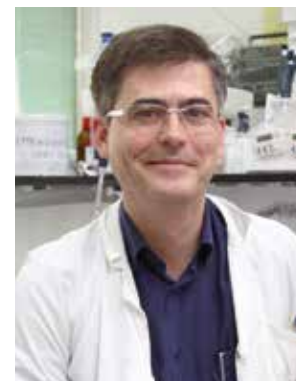
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## Main Lines of Research

- ▶ HDL and susceptibility to diabetes, arteriosclerosis and breast cancer: this relationship is being analysed through the study of metabolic disorders, genetic modification, and dietary or 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 niacine and fenofibrate in the HDL of patients with type 2 diabetes.
- ▶ Study anti-cancer mechanisms of HDL genetic modification and phytosterol consumption.
- ▶ Develop new molecular techniques to diagnose metabolic inherited diseases to be used in the clinical laboratory.

## Active Grants

- ▶ J.C. Escolà Gil (PI), Therapeutic and nutritional strategies based on improvement of antioxidant and anti-inflammatory HDL function in type 2 diabetes and breast cancer, FIS PI12/00291, Carlos III Health Institute, 2013–2015, €198,440.
- ▶ Helena Quesada (PI), Sara Borrell Contract, CD12/00533, Carlos III Health Institute, 2013–2015, €75,600.
- ▶ Josep Julve (PI), HDL functionality in diabetes mellitus and hyperhomocysteinaemia: studies in patients and in animal models, PI1000277, Carlos III Health Institute, 2011–2014, €63,525.
- ▶ F. Blanco Vaca (PI), Functionality of high density lipoproteins (HDL) and pleiotropic effects in diabetes, retinopathy and breast cancer, PI011/01076, Carlos III Health Institute, 2011–2014, €88,341.
- ▶ F. Blanco Vaca (PI), CIBER07/08/0016, Centre for Networked Biomedical Research in Diabetes and Associated Metabolic Disorders (CIBERDEM), 2008–, €62,425 (2013).
- ▶ D. Kardassis (PI), F. Blanco-Vaca (Spanish representative), HDL-from biological understanding to clinical exploitation, COST-HDL BM0904, COST Actions, EU, 2011–2014, €300,000.

## Doctoral Theses

- ▶ Jesús Mendez González, Effects of sterols and stanols on the enterohepatic metabolism of cholesterol and triglycerides, Department of Biochemistry and Molecular Biology, Autonomous University of Barcelona, Francisco Blanco-Vaca, Joan Carles Escolà Gil (supervisors), HSCSP Teaching Unit.

Transfer Products

- ▶ Innovation in assistance in the clinical laboratory. Use of Seqpro Lipo, a kit (reagent+software) to diagnose familial hypercholesterolaemia by next-generation sequencing. Seqpro Lipo® is a product of Progenika Biopharma Grifols and Roche Diagnostics and our laboratory, as the reference for this kind of molecular diagnosis in Catalonia, is the first laboratory to use it.
- ▶ Development of molecular diagnostic studies of thyroid hormone resistance and intermittent porphyria.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Cardiovascular Biochemistry (JL Sánchez and J Ordoñez).
- ▶ Breast Cancer (E Lerma).
- ▶ Endocrinology, Diabetes and Nutrition (R Corcoy and A de Leiva).
- ▶ Genomics of Complex Diseases (JM Soria).

**External Collaborations**

- ▶ Kovanen PT, Silvennoinen R, Lee-Rueckert, Wihuri Institut, Helsinki, Finland.
- ▶ Jauhiainen M R, National Institute of Health and Welfare, Helsinki, Finland.
- ▶ Andres-Lacueva C, University of Barcelona, Spain.
- ▶ Nilsson SK, Umea University, Sweden.

- ▶ Lookene A, Tallinn Technical University, Tallinn, Estonia.
- ▶ Lechuga-Sancho AM, Hospital Universitario Puerta del Mar, Cadiz, Spain.
- ▶ Sloan JJ, Eli Lilly and Company, Indianapolis, USA.
- ▶ Osada J, Universidad de Zaragoza, CIBEROBN, Spain.
- ▶ Mauricio D, Hospital Arnau de Vilanova, Spain.
- ▶ E. Ros, Hospital Clínic de Barcelona, CIBEROBN, Spain.
- ▶ CIBER-Diabetes and Associated Metabolic Diseases: COST-HDL BM0904 Programme.
- ▶ Reference laboratory for molecular diagnosis of familial hypercholesterolemia for the Catalan Network for Lipid and Atherosclerosis Research.

\*TIF: 49.415 \*\*MIF: 4.942

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Lee-Rueckert M., Blanco-Vaca F., Kovanen P.T., Escola-Gil J.C. The role of the gut in reverse cholesterol transport. Focus on the enterocyte. (2013) Prog. Lipid Res., 52 (3), 317-328. **IF: 12.963**
- 02 Mendoza-Barbera E., Julve J., Nilsson S.K., Lookene A., Martin-Campos J.M., Roig R., Lechuga-Sancho A.M., Sloan J.H., Fuentes-Prior P., Blanco-Vaca F. Structural and functional analysis of APOA5 mutations identified in patients with severe hypertriglyceridemia. (2013) J. Lipid Res., 54 (3), 649-661. **IF: 4.73**
- 03 Escola-Gil J.C., Chen X., Julve J., Quesada H., Santos D., Metso J., Tous M., Jauhiainen M., Blanco-Vaca F. Hepatic lipase- and endothelial lipase-deficiency in mice promotes macrophage-to-faeces RCT and HDL antioxidant properties. (2013) Biochim. Biophys. Acta Mol. Cell Biol. Lipids, 1831 (4), 691-697. **IF: 4.495**
- 04 Llaverias G., Escola-Gil J.C., Lerma E., Julve J., Pons C., Cabre A., Cofan M., Ros E., Sanchez-Quesada J.L., Blanco-Vaca F.

Phytosterols inhibit the tumour growth and lipoprotein oxidizability induced by a high-fat diet in mice with inherited breast cancer. (2013) J. Nutr. Biochem., 24 (1), 39-48. **IF: 4.592**

- 05 Escola-Gil J.C., Julve J., Llaverias G., Urpi-Sarda M., Silvennoinen R., Lee-Rueckert M., Andres-Lacueva C., Blanco-Vaca F. Resveratrol administration or SIRT1 overexpression does not increase LXR signalling and macrophage-to-faeces reverse cholesterol transport in vivo. (2013) Transl. Res., 161 (2), 110-117. **IF: 4.044**
- 06 Julve J., Escola-Gil J.C., Rodriguez-Millan E., Martin-Campos J.M., Jauhiainen M., Quesada H., Renteria-Obregon I.M., Osada J., Sanchez-Quesada J.L., Blanco-Vaca F. Methionine-induced hyperhomocysteinemia impairs the antioxidant ability of high-density lipoproteins without reducing in vivo macrophage-specific reverse cholesterol transport. (2013) Mol. Nutr. Food Res., 57 (10), 1814-1824. **IF: 4.909**
- 07 Mollo A., Hernandez M., Marsal J.R., Esquerda A., Rius F., Blanco-Vaca F., Verdguer J., Pozzilli P., de Leiva A., Mauricio D. Latent autoimmune diabetes in adults is perched between type 1 and type 2:

Evidence from adults in one region of Spain. (2013) J. Phys. Chem. B, 29 (6), 446-451. **IF: 3.377**

- 08 Sanchez-Quesada J.L., Vinagre I., De Juan-Franco E., Sanchez-Hernandez J., Bonet-Marques R., Blanco-Vaca F., Ordonez-Llanos J., Perez A. Impact of the LDL subfraction phenotype on Lp-PLA2 distribution, LDL modification and HDL composition in type 2 diabetes. (2013) Cardiovasc. Diabetol., 12 (1). **IF: 3.706**
- 09 Pascual-Garcia M., Rue L., Leon T., Julve J., Carbo J.M., Matalonga J., Auer H., Celada A., Escola-Gil J.C., Steffensen K.R., Perez-Navarro E., Valledor A.F. Reciprocal negative cross-talk between liver X receptors (LXRs) and STAT1: Effects on IFN-γ-induced inflammatory responses and LXR-dependent gene expression. (2013) J. Immunol., 190 (12), 6520-6532. **IF: 5.362**
- 10 Colom C., Oriola J., Martinez S., Blanco-Vaca F., Casamitjana R., Corcoy R. Family history in the diagnosis of monogenic diabetes "leads and misleads". (2013) Horm.-Int. J. Endocrinol. Metab., 12 (3), 466-469. **IF: 1.237**

# Inflammatory Diseases

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Carmen Hayles HSCSP



## 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 posttransplant patients.

## Challenges

- ▶ Role of cells and molecules of the innate immune response in the development and control of inflammatory processes, in the appearance of autoimmune phenomena, immunodeficiencies, infections, cardiovascular diseases and development of tumours.
- ▶ Role of TLR and STAT signalling in inflammatory diseases.
- ▶ Involvement of STAT family of transcription factors in response to superantigens.
- ▶ Study of mechanisms involved in immunodeficiency caused by alterations of the CD8a molecule.
- ▶ 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.
- ▶ Analysis of the evolution of immunological parameters and their correlation with clinical response to treatment with immunomodulators.
- ▶ Effects of rituximab, tocilizumab and adalimumab in immunological variables and their correlation with the clinical response in patients with inflammatory diseases.

## Active Grants

- ▶ Candido Juarez (PI), Mechanisms involved in the action of rituximab in myasthenia gravis: differential effects on autoantibodies to AChR and anti-MuSK, FIS 2011, 2011–2014.
- ▶ Silvia Vidal (PI), Study of the inflammatory mechanisms via TLR involved in intestinal tumorigenesis, FIS PS09/132, 2010–2013.

Collaborations	<b>Collaborations with IIB Sant Pau Groups</b>	<b>External Collaborations</b>
	<ul style="list-style-type: none"> <li>▶ Puigvert Foundation, ICCG and Rheumatology, Gastroenterology, Neurology, Dermatology, Respiratory, Haematology and Pathology Groups.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Vall d'Hebron Internal Medicine, UAB Veterinary Faculty and Catalan Oncology Institute (ICO).</li> </ul>

*TIF: 16.366 **MIF: 4.092		
Scientific Production	<b>ISI Web of Knowledge Indexed Publications with an IF</b>	
	<p>01 Cuenca S., Sanchez E., Santiago A., El Khader I., Panda S., Vidal S., Nieto J.C., Juarez C., Sancho F., Guarner F., Soriano G., Guarner C., Manichanh C. Microbiome composition by pyrosequencing in mesenteric lymph nodes of rats with CCl4-induced cirrhosis. (2014) <i>J. Innate Immun.</i>, 6 (3), 263-271. <b>IF: 4.557</b></p> <p>02 Zamora C., Canto E., Nieto J.C., Angels Ortiz M., Diaz-Torne C., Diaz-Lopez C.,</p>	<p>Llobet J.M., Juarez C., Vidal S. Functional consequences of platelet binding to T lymphocytes in inflammation. (2013) <i>J. Leukoc. Biol.</i>, 94 (3), 521-529. <b>IF: 4.304</b></p> <p>03 Domingo P., Mateo M.G., Pruvost A., Torres F., Salazar J., de Gutierrez M.M., Carmen M.C., Domingo J.C., Fernandez I., Villarroya F., Vidal F., Baiget M., de la Calle-Martin O. Polymorphisms of Pyrimidine Pathway Enzymes Encoding Genes and HLA-B*40:01 Carriage in Stavudine-Associated Lipodystrophy in HIV-Infected Patients. (2013) <i>PLoS One</i>, 8 (6). <b>IF: 3.534</b></p> <p>04 Costales P., Castellano J., Revuelta-Lopez E., Cal R., Aledo R., Llampayas O., Nasarre L., Juarez C., Badimon L., Llorente-Cortes V. Lipopolysaccharide downregulates CD91/low-density lipoprotein receptor-related protein 1 expression through SREBP-1 overexpression in human macrophages. (2013) <i>Atherosclerosis</i>, 227 (1), 79-88. <b>IF: 3.971</b></p>

Other Publications	<b>ISI Web of Knowledge Indexed Publications without an IF</b>
	<ul style="list-style-type: none"> <li>▶ Guide to Clinical Practice: Induced Sputum Guidelines. Cytometry Flow Analysis of Induced Sputum Cell Composition, GlaxoSmithKline, 2013.</li> </ul>



# Endocrinology, Diabetes and Nutrition

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## Collaborators

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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).
- ▶ Telemedicine and intelligent systems for therapeutic optimization of diabetes mellitus.
- ▶ Prediction, prevention and optimization of the treatment of obesity, hyperlipidaemia, metabolic syndrome and complications.
- ▶ Diabetes and endocrine disorders in pregnancy.

## Challenges

### Endocrine neoplasms

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

### Autoimmune diabetes mellitus and gestational diabetes

- ▶ Heterogeneity of autoimmune diabetes susceptibility.
- ▶ LADA type diabetes: prevalence of metabolic syndrome among patients with LADA compared to prevalence among

patients with classic type 1 and 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.

### Treatment optimization 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

- ▶ Alberto de Leiva, Honorary Member, Romanian Society of Diabetes, Nutrition and Metabolic Diseases (2013).

Active Grants

- ▶ de Leiva, A (PI), Diabetes and other endocrine diseases, Grants to support research groups in Catalonia, 2009SGR 806, AGAUR, Sept 2009-Dec 2013, €47,840.
- ▶ de Leiva, A, Corcoy, R (PI), CONCEPT trial: continuous glucose monitoring in women with type 1 diabetes in pregnancy, Juvenile Diabetes Research Foundation (JDRF), Jan 2010-Dec 2013, €272,386.
- ▶ Corcoy, R (PI), Vitamin D and lifestyle intervention for gestational diabetes mellitus (GDM) Prevention, (DALI), HEALTH-F2-2009-242187, 7th EU Framework Programme, Mar 2010-Aug 2014, €171,920,00.
- ▶ de Leiva, A (PI), 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, PI09/2286, FIS Project, Carlos III Health Institute, Jan 2010-Dec 2013, €243, 815.
- ▶ de Leiva, A (PI), Clinical effectiveness of telemedical artificial pancreas in patients with diabetes mellitus type 1 (PAT-DIA1), 1527-B-257CAIBER, Jan 2011-Dec 2013 (Funding pending).
- ▶ González, C (PI), Intensification and personalized telematic monitoring of lifestyle modification in obesity treatment and cardiometabolic risk prevention (multicentre project), FIS PI12/00931, FIS Project, Carlos III Health Institute, Jan 2013-Dec 2015, €82.280,00.
- ▶ de Leiva, A (PI), Centre for Networked Biomedical Research, Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), January 2006– , €21,174 (2013).

Contracts/Agreements

- ▶ Dr Fernando Rodríguez Álvarez, Ophthalmology Department (PI at our centre), José M Cubero Marcos, Endocrinology, Diabetes and Nutrition Group (coinvestigator), Dr Juan Jesús Gómez-Reino Carnota, UCICEC-CAIBER, Hospital Clínico de Santiago de Compostela (coordinator), HSCSP, HCU Santiago, HU San Carlos, HU Canarias, HU Ramón y Cajal, HU La Fe, HCU Lozano Blesa, HU Marqués de Valdecilla, HU Fuenlabrada, HU Bellvitge and Centro Oftalmológico Moreiras (participating centres), Treatment with tocilizumab in ophthalmopathy: phase 3 randomized, placebo-controlled, double-blind and multicentre clinical trial, in parallel groups, to evaluate the efficacy and safety of tocilizumab administration in patients diagnosed with moderate to severe thyroid orbitopathy or which threatens vision, who have not responded adequately to treatment with corticosteroids pulses, GRC-TCL-2010-01, CAIBER, 2011–2013.
- ▶ Ana Isabel Chico Ballesteros (PI), Expert study IIBSP-EXP-2012-05: Usefulness of a system that helps calculate the dose of prandial insulin in type 1 diabetics treated with multiple doses of insulin, HSCSP RI and IIB Sant Pau, Roche Diagnostics, 2012–2014, €73,909.35.
- ▶ Rosa Corcoy (PI), Vitamin D and lifestyle intervention for gestational diabetes mellitus (GDM) prevention (DALI) 1527-B-226, HSCSP RI and IIB Sant Pau, CAIBER, 2011–2013, €45,020.93.
- ▶ Alberto de Leiva (PI), PERSONA: personalized decision support for enhanced control in pervasive healthcare platforms, GBT-Universidad Politécnica de Madrid, Universidad de Sevilla (GIB-US), HSCSP RI and IIB Sant Pau, CIBER-Bioengineering, Biomaterials and Nanomedicine, 2011–2013, €22,000.
- ▶ Martina Corra, University of Padua, Italy, second year medical biotechnology student, 6-month ERASMUS stay, 2013.
- ▶ Eugènia Mato, teaching collaboration in the Master's in Biotechnology in Health Sciences (1501-M07004), Universitat de Lleida, Conxita Mora (coordinator), 2012-2013.
- ▶ Educational professional-business cooperation agreement with Escuela del Pinar for practical training of FP2 laboratory technicians, 2010– .
- ▶ Educational university-business cooperation agreement with the Advanced Agricultural Engineering School (EPSIAL) and CIBER-Bioengineering, Biomaterials and Nanomedicine covering external work experience in biotechnology, 2013.
- ▶ Educational cooperation agreement with the Universidad Rovira i Virgili and CIBER-Bioengineering, Biomaterials and Nanomedicine to develop an external work experience programme, 2013.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Oncogenesis and Antitumour Drugs (R. Mangués).
- ▶ Ophthalmology (F Rodríguez Álvarez).
- ▶ Cardiovascular Biochemistry (J Ordoñez, JL Quesada, F Blanco).
- ▶ General and Digestive Surgery (A Moral, I Pérez).
- ▶ Reproductive Health (J Adelantado).

**External Collaborations**

**CIBER-BBN**

- ▶ Bioengineering and Telemedicine Group at the Universidad Politécnica de Madrid, Spain (GBT-UPM), PI: Enrique J Gómez Aguilera.
- ▶ Biomedical Engineering Research Group at the Universidad de

Sevilla, Spain (GIB-US), PI: Laura Roa Romero

**CELL-NANO-THYROID**

- ▶ Molecular Oncology Group at HVH, PI: S. Schwartz, Jr.
- ▶ Development of New Drugs Group at the Universidad del País Vasco, Spain, PI: JL Pedraz.

**CONCEPT**

- ▶ Sansum Diabetes Research Institute, Santa Barbara, California, USA.
- ▶ Department of Endocrinology and Metabolism, University of Toronto, Mount Sinai Hospital, Toronto, Canada.
- ▶ Endocrinology Unit, Department of Medicine, Dalhousie University, Halifax, Canada.
- ▶ BC Women's Diabetes Pregnancy Service, University of British Columbia, Vancouver, Canada.

# Endocrinology, Diabetes and Nutrition

## Collaborations

- ▶ Endocrinology/General Internal Medicine, McMaster University, Hamilton, Canada.
  - ▶ Division of Endocrinology and Metabolism, University of Ottawa, The Ottawa Hospital, Ottawa, Canada.
  - ▶ Department of Endocrinology, Sunnybrook Health Sciences Centre, Toronto, Canada.
  - ▶ Department of Medicine, Endocrinology and Metabolism, University of Western Ontario, London, Ontario, Canada.
  - ▶ Unité de Recherche sur le Diabète, Centre de Recherche du CHUL, Québec, Canada.
  - ▶ Department of Medicine, Division of Endocrinology and Metabolism, Metabolic Day Centre and Antenatal Clinic, McGill University, Montreal, Canada.
  - ▶ Departments of Medicine/Obstetrics and Gynaecology, University of Calgary, Canada.
  - ▶ Charles H. Best Diabetes Centre, Ajax, Canada.
  - ▶ Yale University Diabetes Clinic, New Haven, USA.
  - ▶ Tel Aviv University, Helen Schneider Hospital for Women, Rabin Medical Centre, Israel.
  - ▶ Endocrinology, Diabetes and Nutrition group, Universitat Autònoma de Barcelona and HSCSP, Barcelona, Spain.
  - ▶ Health and Social Secretariat. Assembly of First Nations, Ottawa, Canada.
  - ▶ CIHR Institute of Aboriginal Peoples' Health, Ottawa, Canada.
  - ▶ Community Programmes Directorate: First Nations and Inuit Health Branch, Ottawa, Canada.
  - ▶ Department of Epidemiology and Biostatistics and Division of Endocrinology, University of Western Ontario, London, Ontario, Canada.
  - ▶ Department of Medicine, Royal University Hospital, Saskatoon, Canada.
  - ▶ Sunnybrook Health Sciences Centre, Centre for Mother, Infant and Child Research, Toronto, Canada.
  - ▶ Jaeb Center for Health Research, Tampa, USA.
  - ▶ Office of Research, University of Waterloo, Canada.
  - ▶ Juvenile Diabetes Research Foundation, Canada.
  - ▶ Juvenile Diabetes Research Foundation International, USA.
  - ▶ Juvenile Diabetes Research Foundation: Lay Review Committee Members.
  - ▶ Juvenile Diabetes Research Foundation: Canadian Clinical Trial Network.
- Clinical effectiveness of telemedical artificial pancreas in patients with type 1 diabetes mellitus (PAT-Dia1) CAIBER**
- ▶ Sansum Research Institution, University of California at Santa Barbara, USA.
  - ▶ Hospital San Carlos, Spain.
  - ▶ Hospital La Fe/Universidad de Valencia, Spain.
  - ▶ GBT (Ciber-BBN)/Universidad Politécnica de Madrid, Spain.
- Vitamin D and lifestyle intervention for gestational diabetes mellitus prevention (DALI)**
- ▶ Medizinische Universität Graz, Austria.
  - ▶ Medical Research Council, UK.
  - ▶ Medical University Vienna, Austria.
  - ▶ University Central Hospital, Finland.
  - ▶ Recherche en Santé Lawson SA, Switzerland.
  - ▶ Katholieke Universiteit Leuven, Belgium.
  - ▶ Copenhagen University Hospital, Denmark.
  - ▶ Akademia Medyczna im Karola Marcinkowskiego, Poland.
  - ▶ BAP Health Outcomes Research, Spain.
  - ▶ Università degli studi di Padova, Italy.
  - ▶ National University of Ireland, Ireland.
  - ▶ Vrije Universiteit Medisch Centrum, Netherlands.
- LADA Action European Consortium**
- ▶ David Leslie, Coordinator, St. Bartholomew's Hospital, UK.
  - ▶ Rhys Williams and Mark Airey, Nuffield Institute for Health, UK.
  - ▶ Henning Beck-Nielsen, Odense University Hospital, Denmark.
  - ▶ David Hadden and Stephen Hunter, Royal Victoria Hospital, UK.
  - ▶ Umberto Di Mario, University of Rome La Sapienza, Italy.
  - ▶ Werner Scherbaum and Jochen Seissler, University of Dusseldorf, Germany.
  - ▶ Hubert Kolb, Germany, University of Dusseldorf, Germany.
  - ▶ Guntram Scherthaner, Rudolfstiftung Hospital, Austria.
  - ▶ Jaakko Tuomilehto and Johan Eriksson, National Public Health Institute, Finland.
  - ▶ Alberto de Leiva, HSCSP, Spain.
  - ▶ Charles Thivolet, Hospital Edouard Herriot, France.
  - ▶ European Type 1 Diabetes Genetics Consortium (ET1DGC), Asia-Pacific, North America and the United Kingdom.

## Doctoral Theses

- ▶ Inka Miñambres Donaire, Hypovitaminosis D: relationship with metabolic syndrome and its components, Universitat Autònoma de Barcelona, Alberto de Leiva and Antonio Pérez (supervisors), September 2013.



\*TIF: 19.187 \*\*MIF: 2.741

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Gonzalez C, Aulinas A, Colom C, Tundidor D, Mendoza L, Corcoy R, Mato E, Alcantara V, Urgell Rull E, de Leiva A. Thyroglobulin as early prognostic marker to predict remission at 18-24 months in differentiated thyroid carcinoma. (2014) *Clin. Endocrinol.*, 80 (2), 301-306.  
**IF: 3.353**
- 02 Mollo A, Hernandez M, Marsal JR, Esquerda A, Rius F, Blanco-Vaca F, Verdaguer J, Pozzilli P, de Leiva A, Mauricio D. Latent autoimmune diabetes in adults is perched between type 1 and type 2: Evidence from adults in one region of Spain. (2013) *J. Phys. Chem. B*, 29 (6), 446-451.  
**IF: 3.377**
- 03 Sanchez-Quesada JL, Vinagre I, De Juan-Franco E, Sanchez-Hernandez J, Bonet-Marques R, Blanco-Vaca F, Ordonez-Llanos J, Perez A. Impact of the LDL subfraction phenotype on Lp-PLA2 distribution, LDL modification and HDL composition in type 2 diabetes. (2013) *Cardiovasc. Diabetol.*, 12 (1).  
**IF: 3.706**
- 04 Hawa MI, Kolb H, Schloot N, Beyan H, Paschou SA, Buzzetti R, Mauricio D, de Leiva A, Yderstraede K, Beck-Neilsen H, Tuomilehto J, Sarti C, Thivolet C, Hadden D, Hunter S, Scherthaner G, Scherbaum WA, Williams R, Brophy S, Pozzilli P, Leslie RD. Adult-onset autoimmune diabetes in Europe is prevalent with a broad clinical phenotype: Action LADA 7. (2013) *Diabetes Care*, 36 (4), 908-913.  
**IF: 8.57**
- 05 Donaire IM, Crespo DO, Garcia-Paterson A, Adelantado JM, Pla R.C. Sex ratio at birth is associated with first-trimester maternal thyrotropin in women receiving levothyroxine. (2013) *Thyroid*, 23 (12), 1514-1517.  
**IF: 3.843**
- 06 Aulinas A, Biagetti B, Vinagre I, Capel I, Ubeda J, Maria MA, Garcia-Patterson A, Adelantado JM, Ginovart G, Corcoy R. Gestational diabetes mellitus and maternal ethnicity: High prevalence of fetal macrosomia in non-Caucasian women [Diabetes mellitus gestacional y etnia materna: alta prevalencia de macrosomía fetal en mujeres no caucásicas]. (2013) *Med. Clin.*, 141 (6), 240-245.  
**IF: 1.252**
- 07 Jelsma JGM, van Poppel MNM, Galjaard S, Desoye G, Corcoy R, Devlieger R, van Assche A, Timmerman D, Jans G, Harreiter J, Kautzky-Willer A, Damm P, Mathiesen ER, Jensen DM, Andersen L, Dunne F, Lapolla A, Di Cianni G, Bertolotto A, Wender-Oegowska E, Zawiejska A, Blumska K, Hill D, Rebollo P, Snoek FJ, Simmons D. DALI: Vitamin D and lifestyle intervention for gestational diabetes mellitus (GDM) prevention: An European multicentre, randomised trial-study protocol. (2013) *BMC Pregnancy Childbirth*, 13.  
**IF: 2.152**
- 08 Salcedo-Sicilia L, Granell S, Jovic M, Sicart A, Mato E, Johannes L, Balla T, Egea G.  $\beta$ III spectrin regulates the structural integrity and the secretory protein transport of the golgi complex. (2013) *J. Biol. Chem.*, 288 (4), 2157-2166.  
**IF: 4.6**
- 09 Aulinas A, Ramirez MJ, Barahona MJ, Mato E, Bell O, Surralles J, Webb SM. Telomeres and endocrine dysfunction of the adrenal and GH/IGF-1 axes. (2013) *Clin. Endocrinol.*, 79 (6), 751-759.  
**IF: 3.353**
- 10 Alcantara V, Urgell E, Sancho JF, Chico A. Severe ectopic cushing syndrome caused by adenoid cystic carcinoma of a salivary gland. (2013) *Endocr. Pract.*, 19 (5), 118-121.  
**IF: 2.588**
- 11 Brotons C, Lobos JM, Royo-Bordonada MA, Maiques A, De Santiago A, Castellanos A, Diaz S, Obaya JC, Pedro-Botet J, Moral I, Lizarbe V, Moreno R, Perez A, Cordero A, Fornes-Ubeda F, Serrano-Saiz B, Camafort-Babkowski M, Elosua R, Sans S, De Pablo C, Gil-Nunez A, De Alvaro-Moreno F, Armario P, Rico OC, Villar F, Lizcano A. Implementation of Spanish adaptation of the European guidelines on cardiovascular disease prevention in primary care. (2013) *BMC Fam. Pract.*, 14.  
**IF: 1.735**
- 12 Aulinas A, Ramirez MJ, Barahona MJ, Mato E, Bell O, Surralles J, Webb SM. Telomeres and endocrine dysfunction of the adrenal and GH/IGF-1 axes. (2013) *Clin. Endocrinol.*, 79 (6), 751-759.  
**IF: 3.353**
- 13 Alcantara V, Urgell E, Sancho JF, Chico A. Severe ectopic cushing syndrome caused by adenoid cystic carcinoma of a salivary gland. (2013) *Endocr. Pract.*, 19 (5), e118-e121.  
**IF: 2.588**
- 14 Sanchez-Quesada JL, Perez A. Modified lipoproteins as biomarkers of cardiovascular risk in diabetes mellitus [Lipoproteínas modificadas como marcadores de riesgo cardiovascular en la diabetes mellitus]. (2013) *Hist. Polit.*, 60 (9), 518-528.  
**IF: 0.114**
- 15 Royo-Bordonada MA, Bejarano JML, Alvarez FV, Sans S, Perez A, Pedro-Botet J, Carriles RMM, Maiques A, Lizcano A, Lizarbe V, Nunez AG, Ubeda FF, Elosua R, De Pablo Zarzosa C, De Alvaro Moreno F, Cortes O, Cordero A, Babkowski MC, Cuixart CB, Armario P. Statement of the Spanish interdisciplinary cardiovascular prevention committee (CEIPC) on the 2012 European cardiovascular prevention guidelines [Comentarios del comité Español interdisciplinario de prevención cardiovascular (CEIPC) a las guías Europeas de prevención cardiovascular 2012]. (2013) *Rev. Esp. Salud Publica*, 87 (2), 103-120.  
**IF: 0.6**
- 16 Perez A, Jansen-Chaparro S, Saigi I, Bernal-Lopez MR, Minambres I, Gomez-Huelgas R. Glucocorticoid-induced hyperglycemia. (2014) *J. Diabetes*, 6 (1), 9-20.  
**IF: 2.349**
- 17 Salord N, Mayos M, Miralda RM, Farre A, Carreras M, Sust R, Masuet-Aumatell C, Rodriguez J, Perez A. Continuous positive airway pressure in clinically stable patients with mild-to-moderate obesity hypoventilation syndrome and obstructive sleep apnoea. (2013) *Respirology*, 18 (7), 1135-1142.  
**IF: 3.495**
- 18 Ziegler R, Tubili C, Chico A, Guerci B, Lundberg E, Borchert M, Loffler A, Bloethner S, Weissmann J, Pflutzner A. Proact study: New features of insulin pumps improve diabetes management and Glycemic control in patients after transition of continuous subcutaneous insulin infusion systems. (2013) *Diabetes Technol. Ther.*, 15 (9), 738-743.  
**IF: 2.293**
- 19 Brotons C, Lobos JM, Royo-Bordonada MA, Maiques A, De Santiago A, Castellanos A, Diaz S, Obaya JC, Pedro-Botet J, Moral I, Lizarbe V, Moreno R, Perez A, Cordero A, Fornes-Ubeda F, Serrano-Saiz B, Camafort-Babkowski M, Elosua R, Sans S, De Pablo C, Gil-Nunez A, De Alvaro-Moreno F, Armario P, Rico OC, Villar F, Lizcano A. Implementation of Spanish adaptation of the European guidelines on cardiovascular disease prevention in primary care. (2013) *BMC Fam. Pract.*, 14.  
**IF: 1.735**

# Endocrinology, Diabetes and Nutrition

## Other Publications

### Books or Chapters with ISBN

- ▶ Gemma Carreras González, Ana. Chico Ballesteros, José María Cubero Marcos, Cintia González Blanco, Inka Miñambres Donaïre, Antonio Pérez Pérez, Tratamiento de la Diabetes en Situaciones Especiales, Edikamed SL, Madrid. ISBN: 978-84-7877-755-6. 2013.

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Gonzalez, Cintia; Herrero, Pau; Cubero, Jose M; Iniesta, Jose M; Hernando, M Elena; Garcia-Saez, Gema; Serrano, Alvaro J; Martinez-Sarriegui, Inaki; Perez-Gandia, Carmen; Gomez, Enrique J; Rubinat, Esther; Alcantara, Valeria; Brugues, Eulalia; Chico, Ana; Mato, Eugenia; Bell, Olga; Corcoy, Rosa; Leiva, Alberto de. PREDIRCAM eHealth Platform for Individualized Telemedical Assistance for Lifestyle Modification in the Treatment of Obesity, Diabetes, and Cardiometabolic Risk Prevention: A Pilot Study (PREDIRCAM 1). *J Diabet Sci Technol*, 7(4): 888-97, 2013. ISSN:1932-2968. PubMed ID: 23911170.

- ▶ Maria Lucas, Eugenia Mato, Silvia Barceló-Batllo, Ramon Gomis and Anna Novials. Proteomics Characterization of the Secretome from Rat Pancreatic Stellate Cells with ATP-Binding Cassette Transporters (ABCG2) and NCAM Phenotype. *Hindawi Publishing Corporation. ISRN Cell Biology*. Volume 2013, Article ID 828060, 18 pages <http://dx.doi.org/10.1155/2013/828060>.

- ▶ Royo-Bordonada MÁ, Lobos Bejarano JM, Villar Alvarez F, Sans S, Pérez A, Botet JP, Moreno Carriles RM, Maiques A, Lizcano A, Lizarbe V, Gil Núñez A, Fornés Ubeda F, Elosua R, de Santiago Nocito A, de Pablo Zarzosa C, de Álvaro Moreno F, Cortés O, Cordero A, Camafort Babkowski M, Brotons Cuixart C, Armario P; Comité Español Interdisciplinario para la Prevención Cardiovascular (CEIPC). Statement of the Spanish. Interdisciplinary Cardiovascular Prevention Committee (CEIPC) on the 2012 European Cardiovascular Prevention Guidelines. *Neurologia*. 19 Aug 2013. PII: S0213-4853(13)00131-X. DOI: 10.1016/j.nrl.2013.04.011. [Epub ahead of print]

- ▶ Royo-Bordonada MÁ, Lobos JM, Brotons C, Villar F, de Pablo C, Armario P, Cortés O, Gil Núñez A, Lizcano A, de Santiago A, Sans S; on behalf of the Spanish Interdisciplinary Cardiovascular Prevention Committee (CEIPC) (A. Pérez). The condition of cardiovascular prevention in Spain. *Med Clin (Barc)*. 2014;142(1):7-14. DOI: 10.1016/j.medcli.2012.09.046. Epub 22 Feb 2013.

- ▶ Royo-Bordonada MÁ, Lobos Bejarano JM,

Villar Alvarez F, Sans S, Pérez A, Botet JP, Moreno Carriles RM, Maiques A, Lizcano A, Lizarbe V, Gil Núñez A, Fornés Ubeda F, Elosua R, de Santiago Nocito A, de Pablo Zarzosa C, de Álvaro Moreno F, Cortés O, Cordero A, Camafort Babkowski M, Brotons Cuixart C, Armario P; Statement of the Spanish Interdisciplinary Cardiovascular Prevention Committee (CEIPC) on the 2012 European Cardiovascular Prevention Guidelines. *Neurologia*. 19 Aug 2013. PII: S0213-4853(13)00131-X. DOI: 10.1016/j.nrl.2013.04.011. [Epub ahead of print]

- ▶ Royo-Bordonada MÁ, Lobos Bejarano JM, Villar Alvarez F, Sans S, Pérez A, Botet JP, Moreno Carriles RM, Maiques A, Lizcano A, Lizarbe V, Gil Núñez A, Fornés Ubeda F, Elosua R, de Santiago Nocito A, de Pablo Zarzosa C, de Álvaro Moreno F, Cortés O, Cordero A, Camafort Babkowski M, Brotons Cuixart C, Armario P; Statement of the Spanish Interdisciplinary Cardiovascular Prevention Committee (CEIPC) on the 2012 European Cardiovascular Prevention Guidelines. *Clin Investig Arterioscler*. 2013 ;25(3):127-39.

- ▶ Vinagre I, Sánchez-Hernández J, Sánchez-Quesada JL, María MA, de Leiva A, Pérez A. Switching to basal-bolus insulin therapy is effective and safe in long-term type 2 diabetes patients inadequately controlled with other insulin regimens. *Endocrinology and Nutrition Group, Spanish Endocrinology and Nutrition Society 2013*; 60(5): 249-253.

### Conference Contributions and Lectures

- ▶ de Leiva A, Plenary speaker: Priorities on the discovery of insulin—a controversial Issue. *International Symposium on Diabetes, Dyslipidemia and Cardiovascular Risk, University of Valencia, Calp, Spain, February 2013*.

- ▶ de Leiva A, Speaker: The role of blood glucose monitoring in pregnancy, 7th International DIP Symposium, Florence, March 2013.

- ▶ de Leiva A, Lecturer: Gestational Diabetes Heterogeneity, 19th Postgraduate in Endocrinology, Diabetes and Metabolism, Faculty of Medicine of Oporto, Portugal, March, 2013, *Arquivos de Medicina 2013*; 27(Supl. Mar/Abr 2013, p.5).

- ▶ de Leiva A, Guest speaker: Ninety years of insulin replacement therapy in diabetic pregnancies: An overview, 6th International Conference on Advanced Technologies and Treatments for Diabetes (ATTD), Paris, March 2013.

- ▶ de Leiva A, Speaker: Antibodies-related gestational diabetes, 39th National Congress, Romanian Society of Diabetes, Sib-

iu, Romania, May 2013.

- ▶ de Leiva A, Speaker: Differential prediction and prognosis of epithelial thyroid cancer. *AACE 22nd Annual Scientific and Clinical Congress, Phoenix, Arizona, USA, May 2013*.

- ▶ de Leiva A, Guest speaker: First insulin-treated type 1 diabetic patients — lights and shadows, 8th One-Day Symposium on Diabetes and Pregnancy, Faculty of Medicine, University of Roma, Sapienza, Italy, July 2013.

- ▶ Mato E, Speaker: VDACC as an apoptotic key factor, 2013 World Congress on Thyroid Cancer, Toronto, Canada, July 2013.

- ▶ de Leiva A, Speaker: A historical pearl among diabetic pregnancies, 45th Annual Meeting, European Diabetic and Pregnancy Study Group, St. Julians, Malta, October 2013.

- ▶ de Leiva A, Guest lecturer: Ketoacidotic diabetic coma. Historical overview and critical analysis. *Inaugural Symposium, Chair of History of Medicine, Faculty of Medicine, Universidad de Yucatán, Mérida, Mexico, September 2013*.

- ▶ de Leiva A, Chairperson: Session 3 of the 7th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

- ▶ de Leiva A, Speaker: European supremacy in the discovery of insulin, 7th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

- ▶ Pérez-Aguado MC, Alberto de Leiva, Eulàlia Brugués, Speakers: The historical archives of the Hospital de la Santa Creu i Sant Pau—Testimony of medicine in Catalonia (1401-2013), 77th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

- ▶ Pérez-Aguado MC, Eulàlia Brugués, Alberto de Leiva, Speakers: The prisoners' ward at the Hospital de la Santa Creu i Sant Pau during the Spanish Civil War and immediate postwar period, 7th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

- ▶ Pérez-Aguado MC, Alberto de Leiva, Eulàlia Brugués, Speakers: Latin American health service volunteers during the Spanish Civil War, 7th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

- ▶ de Leiva A, Speaker: Telemedical artificial pancreas—clinical validation, Bioengineering and Biomedical Imaging Session of the 7th Annual CIBER-BBN Conference, Torremolinos, Malaga, Spain, November 2013.
- ▶ de Leiva A, Speaker: CELL-NANO-THYROID: Targeted EGFR nanoparticle bioconjugates for thyroid cancer therapy, 7th International Meeting of the International Society of the History of Medicine, University of Yucatán, Mérida, Mexico, September 2013.

#### Posters and Oral Communications

- ▶ González C, Caimari F, Ramos A, Chico A, Cubero JM, Costa A, Pérez A, Treatment modifications at discharge in type 2 diabetic patients (ATTD 2013).
- ▶ Emilce Ramos A, Caimari F, Cubero JM, Chico A, Alcantara V, Costa A, Pérez A, González C, Therapeutic strategy in patients admitted to a surgical ward attended by the endocrinology service [Estrategia terapéutica en pacientes ingresados en una sala quirúrgica atendidos por el servicio de endocrinología], *Av Diabetol* 2013; 29: O-010.
- ▶ Alcantara V, González C, Orellana I, Corcoy R, Costa A, Mendoza L, Rabasa MF, Chico A, Insulin-carbohydrate ratio in patients with type 1 diabetes treated with insulin pump [Ratio insulina-carbohidrato en pacientes con diabetes tipo 1 en tratamiento con bomba de insulina], *Av. Diabetol* 2013; 29: O-048.
- ▶ Aulinas Masó A, Colom Comí C, Mendoza Mathison L, Alcántara Aragón V, Mato Matute E, Corcoy Plà R, Gich Saladich I, Rodríguez Espinosa, González Blanco C, Thyroglobulin as an early marker of persistent/recurrent disease in patients with differentiated thyroid carcinoma (ECE 2013).
- ▶ Gonzalez C, Orellana I, Corcoy R, Alcantara V, Chico A, Carbohydrate-to-insulin ratio in type 1 diabetic patients treated with continuous subcutaneous insulin infusion therapy (CSII), *Diabetologia* 2013; 56: S1-S566 (P1104).
- ▶ Ramos A, Cubero JM, Alcantara V, Costa A, Pérez A, Gonzalez C. Modification of treatment discharge in patients with type 2 diabetes [Modificació del tractament a l'alta en pacients amb diabetes tipus 2], Oral communication, 12th Conference of the Catalan Diabetes Association, Girona, Spain, 14-15 March 2013.
- ▶ de Leiva A, The role of SBGM in diabetic pregnancy, 7th International DIP Symposium, Abstract Book p.21.
- ▶ de Leiva A, González C, Barceló S, Orera I, Bell O, Moral A, Pérez J, Lerma E, Mato E, Transcriptomics as analytical tools for differential prediction and prognosis of epithelial thyroid cancer, American Association of Clinical Endocrinologists (AAACE) 22nd Annual Scientific and Clinical Congress, Phoenix, AZ, USA, May 2013, Abstract Book pp. 201-202.
- ▶ Mato E, Selva L, Corra M, Barceló S, Orera I, González C, Bell O, Moral A, Pérez I, de Leiva A, wo-dimensional difference gel electrophoresis (2D-DIGE) proteomic analysis in epithelial human thyroid carcinoma identified voltage-dependent anion channel 2 protein (VDAC2) as an apoptotic key factor, World Congress on Thyroid Carcinoma (Ref. 0257-000165), Toronto, Canada, July 2013, Abstract Book.
- ▶ de Leiva A, Pérez-Aguado MC, Brugués E, First reported insulin treatment of a severe diabetic pregnancy revisited 90 years later, 45th Annual DPSG Meeting, Abstract Book, p. 72.
- ▶ Mato E, Bordas A, Puras G, Zararte J, Hernández RM, Igartua M, González C, Bell O, Moral A, Pérez JI, Pedraz JL, de Leiva A, The use of PGLA nanoparticles as a delivery system of different antitumoural drugs to control the cell proliferation in epithelial thyroid neoplasms, Poster 10, 7th Annual CIBER-BBN Conference, Torremolinos, Malaga, Spain, November 2013.
- ▶ Mato E, González C, Bell O, Lerma E, Moral A, Pérez JI, Karseladze E, and Alberto de Leiva, Transcriptomics as analytical tool for differential prediction and prognosis of epithelial thyroid cancer, Poster 11, 7th Annual CIBER-BBN Conference, Torremolinos, Malaga, Spain, November 2013.
- ▶ Chico A, Alcántara V, María MA, Orellana I, Martínez MJ, Prados A, González C, Corcoy R, de Leiva A, Educational programme for insulin pump (CSII) users with suboptimal metabolic control: Impact on glycemic control, *Diabetes Technology & Therapeutics* 2013; 15(1): A37.



# 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.
- ▶ ERCUSYN: European Registry on Cushing syndrome. Initiated with funding from SANCO, EU Public Health Programme.
- ▶ Neuroradiological, neuropsychological and clinical study of endogenous hypercortisolism: comparison of Cushing syndrome and chronic major depressive disorder.
- ▶ 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.
- ▶ Aetiology of cardiopathy in acromegaly and its relation to body composition.
- ▶ 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 using 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), which at the end of 2013 included over 1100 patients from 57 centres in 36 countries.
- ▶ 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.

## Transfer Products

- Co-author and copyright owner of three disease-specific quality of life questionnaires (only ones used in clinical practice and clinical trials worldwide) generating revenue which is reinvested in research:
  - ▶ AcroQoL, for acromegaly (published in 2002).
  - ▶ CushingQoL for Cushing syndrome (published in 2008).
  - ▶ PHPQoL for primary hyperparathyroidism (published in 2013).

Active Grants

- ▶ Aetiology of cardiopathy in acromegaly and its relation with body composition, PI 1100001, FIS-ISCIII, 3 years, €198,000.
- ▶ Aetiology of cardiopathy in acromegaly and its relation with body composition, Merck Serono grant 2012 (Clinical Research in Endocrinology), Fundación Salud 2000, 2 years, €20,000.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Neuromuscular Diseases (Prof. I. Illa).
- ▶ Clinical and Translational Cardiology (Dr R Leta, FIS 01/0001).
- ▶ Multi-organ Damage (Dr Malouf, Validation of a health-related quality of life questionnaire in patients with primary hyperparathyroidism, an observational study, AMGEN SA, FIS 01/0001 and Merck Serono grant).
- ▶ Radiology (Dr J Llauger, FIS 01/0001 and Merck Serono grant).
- ▶ Clinical Psychiatry (Dr M Portella, study of depression and personality limit abnormalities, resulting several publications in 2013).

**External Collaborations**

- ▶ Jordi Surrallés, UAB (PI), Correlations of telomere length and different clinical and biochemical parameters in patients with Cushing syndrome: a contribution to premature ageing and specific morbidity? Group 745, CIBERER (see publication by Aulinas et al, ?????).
- ▶ ERCUSYN project (European coordinators), agreement with the European Society of Endocrinology (collaboration with 57 centres throughout Europe), financed by pharmaceutical industry.
- ▶ Spanish Acromegaly Registry (REA), led by the Spanish Endocrinology and Nutrition Society (SEEN) (see publication by Sesmilo G et al, ?????).

- ▶ REMAH study (Molecular Pituitary Adenomas Registry) led by SEEN.
- ▶ CRISALIDA study: Observational descriptive transversal study of efficacy of late night cortisol in saliva for the screening of hypercortisolism in populations at risk, controlled with the dexamethasone suppression test, protocol GNE-2012-01, SEEN (in collaboration with Dr E Urgell of the Biochemistry Unit).
- ▶ ACROSTART study: Retrospective and observational Spanish study to determine the time elapsed until hormone normalization is achieved, depending on initial dose and administration interval of Somatulin Autogel commonly used in clinical practice for treatment of patients with acromegaly, Ipsen, 2012-2013.
- ▶ ACROSAHS study: Detection of acromegaly in a cohort of patients with a snoring problem or suspected sleep apnoea-hypopneas and active screening of acral growth, Ipsen (in collaboration with Dr M Mayos of the Chronic Respiratory Diseases Group), 2012-2013.
- ▶ A Aulinas, S Webb, members of the International Consortium of Familial Isolated Pituitary Adenomas (led by Prof. Marta Korbonits from St. Bartholomew's Hospital, University of London, UK).
- ▶ Study of the effect of GH on cardiomyocytes, Group 708 CIBERER (Juan Bernal, PI) and CSIC-ICCC Sant Pau (Leif Hove, PI).
- ▶ Observational study on validation of a health-related quality of life questionnaire in patients with primary hyperparathyroidism (promoted by our Pituitary Gland Disorders Group), AMGEN, SA.

Clinical Trials

**Active in 2013**

- ▶ S Webb (PI), Phase 3, multicentre, randomized, double blind study, to evaluate the efficacy and safety of pasireotide LAR in patients with Cushing disease, Protocol CSOM230G2304, Novartis Farmacéutica SA.
- ▶ S Webb (PI), CP-4-00S Phase 3, multicentre study designed to evaluate the efficacy and safety of a long acting HGH product (mo 0-4023) in adult subjects with growth hormone deficiency, Prolor Biotech Ltd.
- ▶ S Webb (PI), Phase 2 randomized, open-label, parallel group study of the safety, tolerability, pharmacokinetics and efficacy of two subcutaneous dosing regimens of at1103 in adult patients with acromegaly, Protocol 1103-CT02, Antisense Therapeutics.

Doctoral Theses

- ▶ Maria Antonia Martinez Momblán, Impact of an educational study for patients with Cushing syndrome: multicentre study, Nursing Department, University of Barcelona, I Ubeda, SM Webb, E Resmini (supervisors). 6 March 2013.

# Pituitary Gland Disorders

\*TIF: 41.937 \*\*MIF: 3.226

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Sesmilo G, Gaztambide S, Venegas E, Pico A, Del Pozo C, Blanco C, Torres E, Alvarez-Escola C, Fajardo C, Garcia R, Camara R, Bernabeu I, Soto A, Villabona C, Serraclará A, Halperin I, Alcazar V, Palomera E, Webb SM. Changes in acromegaly treatment over four decades in Spain: Analysis of the Spanish Acromegaly Registry (REA). (2013) *Pituitary*, 16 (1), 115-121.  
**IF: 2.222**
- 02 Van Der Pas R, De Bruin C, Pereira AM, Romijn JA, Netea-Maier RT, Hermus AR, Zelissen PM, De Jong FH, Van Der Lely AJ, De Herder WW, Webb SM, Lamberts SWJ, Hofland LJ, Feelders RA. Cortisol diurnal rhythm and quality of life after successful medical treatment of Cushing disease. (2013) *Pituitary*, 16 (4), 536-544.  
**IF: 2.222**
- 03 Badia X, Roset M, Valassi E, Franz H, Forsythe A, Webb SM. Mapping CushingQOL scores to EQ-5D utility values using data from the European Registry on Cushing syndrome (ERCUSYN). (2013) *Qual. Life Res.*, 22 (10), 2941-2950.  
**IF: 2.864**
- 04 Aulinas A, Ramirez MJ, Barahona MJ, Mato E, Bell O, Surrallés J, Webb SM. Telomeres and endocrine dysfunction of the adrenal and GH/IGF-1 axes. (2013) *Clin. Endocrinol.*, 79 (6), 751-759.

### IF: 3.353

- 05 Resmini E, Santos A, Gomez-Anson B, Lopez-Mourelo O, Pires P, Vives-Gilabert Y, Crespo I, Portella MJ, De Juan-Delago M, Webb SM. Hippocampal dysfunction in cured Cushing syndrome patients, detected by 1H-MR-spectroscopy. (2013) *Clin. Endocrinol.*, 79 (5), 700-707.  
**IF: 3.353**
- 06 Webb SM, Puig-Domingo M, Villabona C, Munoz-Torres M, Farrerons J, Badia X. Development of a new tool for assessing Health-Related Quality of Life in patients with primary hyperparathyroidism. (2013) *Health Qual. Life Outcomes*, 11 (1).  
**IF: 2.099**
- 07 Roset M, Badia X, Forsythe A, Webb SM. Mapping CushingQoL scores onto SF-6D utility values in patients with Cushing syndrome. (2013) *Patient*, 6 (2), 103-111.  
**IF: 1.957**
- 08 Nelson LM, Forsythe A, McLeod L, Pulgar S, Maldonado M, Coles T, Zhang Y, Webb SM, Badia X. Psychometric evaluation of the Cushing quality-of-life questionnaire. (2013) *Patient*, 6 (2), 113-124.  
**IF: 1.957**
- 09 Barahona M-J, Resmini E, Vilades D, Pons-Llado G, Leta R, Puig T, Webb SM. Coronary artery disease detected by multislice computed tomography in patients after long-term cure of Cushing syndrome. (2013) *J. Clin. Endocrinol.*

*Metab.*, 98 (3), 1093-1099.

### IF: 6.31

- 10 Sesmilo G, Gaztambide S, Venegas E, Pico A, Del Pozo C, Blanco C, Torres E, Alvarez-Escola C, Fajardo C, Garcia R, Camara R, Bernabeu I, Soto A, Villabona C, Serraclará A, Halperin I, Alcazar V, Palomera E, Webb SM. Changes in acromegaly treatment over four decades in Spain: Analysis of the Spanish Acromegaly Registry (REA). (2013) *Pituitary*, 16 (1), 115-121.  
**IF: 2.222**
- 11 Serra-Blasco M, Portella MJ, Gomez-Anson B, De Diego-Adelino J, Vives-Gilabert Y, Puigdemont D, Granell E, Santos A, Alvarez E, Perez V. Effects of illness duration and treatment resistance on grey matter abnormalities in major depression. (2013) *Br. J. Psychiatry*, 202 (6), 434-440.  
**IF: 7.343**
- 12 Webb SM. How good is perceived health-related quality of life in patients treated for non-functioning pituitary adenomas? (2013) *Clin. Endocrinol.*, 78 (1), 21-22.  
**IF: 3.353**
- 13 Feliu-Soler A, Soler J, Elices M, Pascual JC, Perez J, Martin-Blanco A, Santos A, Crespo I, Perez V, Portella MJ. Differences in attention and impulsivity between borderline personality disorder and bipolar disorder. (2013) *Psychiatry Res.*, 210 (3), 1307-1309.  
**IF: 2.682**

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Juan R Gras Cabrerizo, Fernando Muñoz Hernández, Joan R Montserrat Gili, Pere Tresserras Ribo, Manuel de Juan Delago, Susan M Webb, Anna Aulinas Masó, Beatriz Martín Huerta, Joan Molet Teixidó, Miquel Quer Agustí, Humbert Masegur Solench. Endoscopic surgery in the skull base unit: Experience in the first 72 cases. *Acta Otorrinolaringologica Española*. 64:169-75. 2013. (A)
- ▶ Crespo I, Santos A, Resmini E, Valassi E, Martínez-Momblán MA, Webb SM. Improving quality of life in pituitary tumours. *European Endocrinology* 9:32-36, 2013. (R)
- ▶ Crespo I, Santos A, Resmini E, Webb SM, Valassi E (2013) La qualité de vie. *Médecine Clinique, Endocrinologie & Diabetes* 68:44-47, 2013. (R)

- ▶ Anna Aulinas, Felipe Casanueva, Fernando Goñi, Susana Monereo, Basilio Moreno, Antonio Picó, Manel Puig Domingo, Javier Salvador, Francisco J Tinahones, Susan M Webb. Adrenal insufficiency and adrenal replacement therapy. Current status in Spain. *Endocrinology and Nutrition Group of the Spanish Endocrinology and Nutrition Society* 60:136-179, 2013. (R)
- ▶ Tundidor Rengel D, Torres Grajales JL, Oriola J, Ferrer J, Webb SM. Cinacalcet for management of hypercalcemia secondary to calcium-sensing receptor mutation. *Endocrinology and Nutrition Group of the Spanish Endocrinology and Nutrition Society* 60:40-41, 2013. (A)
- ▶ Aulinas A, Santos A, Valassi E, Mato E, Crespo I, Resmini E, Roig O, Bell O, Webb SM. Telomeres, aging and Cushing's syndrome: are they related? *Endocrinology and Nutrition Group of the Spanish Endocrinology and Nutrition Society* 60(6):329-35, 2013. IF 0.450. (R)

## Other Publications

## Books or Chapters

### With ISBN

- ▶ Valassi E, Crespo I, Santos A, Webb SM. The aftermath of Cushing syndrome (Chapter 40, pp. 489-495), In: L Vilar (ed). *Endocrinologia Clínica*, 5th ed, Grupo Editorial Nacional, Guanabara Koogan, Rio de Janeiro, Brazil, 2013. ISBN 978-85-277-2204-9.



# 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.
- ▶ Cognitive impairment, falls and quality of life in patients with 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).
- ▶ Diagnosis and treatment in advanced gastrointestinal endoscopy.
- ▶ 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.

## Doctoral Theses

- ▶ Eva Román, Falls in patients with cirrhosis. Relationship with cognitive deterioration and quality of life, Dr Germán Soriano (supervisor), UAB, 8 May 2013.

## Active Grants

- ▶ Guarner C, Clinical and experimental study of bacterial translocation in cirrhosis by pyrosequencing, FIS, Carlos III Health Institute, 2011–2014.
- ▶ Villanueva C, Prevention of portal hypertension developing clinically significant hepatic cirrhosis compensated by selective hepatic vasodilation (multicenter, double-blind, randomized trial), FIS, Carlos III Health Institute, Jan 2011–Dec 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 Institute, Jan 2011–Dec 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, Carlos III Health Institute, Jan 2009–Dec 2013.
- ▶ Villanueva C, Association of statins to standard therapy in the prevention of rebleeding in patients with cirrhosis and variceal bleeding (multicentre study), Clinic Foundation, Jan 2010–Dec 2013.
- ▶ Villanueva C, Multicentre randomized double-blind, placebo-controlled study on the efficacy of treatment with beta-blockers to prevent decompensation of cirrhosis with portal hypertension, FIS, Carlos III Health Institute, Jan 2009–June 2013.
- ▶ Villanueva C, Randomized, controlled study comparing acenocoumarol versus bemparin in patients requiring anticoagulation restart after an episode of severe gastrointestinal bleeding, Ministry of Health, Social Services and Equality, Jan 2011–Dec 2013.
- ▶ Soriano G, Effects of administration of rifaximin in patients with severe acute alcoholic hepatitis (comparative pilot study), EC11-489, Ministry of Health and Social Policy, April 2013–Dec 2014.
- ▶ Soriano G, Effects of administration of ornithine phenylacetate (OCR-002) in patients with cirrhosis and upper gastrointestinal bleeding, FIS 10/1028, Ministry of Health, Carlos III Health Institute (Río Hortega) and Ocera Therapeutics, EudraCT 2009-017819-16, May 2011–Sept 2014.
- ▶ Torras X, A phase II randomized, partially double-blind and placebo-controlled study of BI 207127 in combination with faldaprevir and ribavirin for chronic genotype 1 hepatitis C infection in an extended population of treatment naïve patients that includes those ineligible to receive peginterferon, EudraCT 2012-003535-27, Jan 2013–Dec 2015.
- ▶ Torras X, Epidemiological study to assess the management of patients with chronic hepatitis C with prior treatment failure, 2009/3595, Hospital del Mar-Municipal Institute for Medical Research, Feb 2012–April 2015.
- ▶ Soriano G, Treatment of hepatorenal syndrome with terlipressin infusion adjusted to the hemodynamic response, FIS PI 08/0126, Fundació per a la Recerca Biomèdica Clínic (Hospital Clínic), EudraCT 2011-002166-20, Feb 2012–Dec 2014.
- ▶ Soriano G, Albumin administration in the prevention of hepatorenal syndrome and death in patients with cirrhosis, bacterial infections other than spontaneous bacterial peritonitis and high risk of hospital mortality, Fundació Clínic per a la Recerca Biomèdica on behalf of the EASL-CLIF Consortium, EudraCT 2013-002416-27, Jan 2013–Dec 2015.
- ▶ Soriano G, Study of the effect of VSL#3 on the risk of falls, cognitive function and quality of life of patients with cirrhosis, VSL3-PHARMA, EudraCT IBSP-VSL-2012-124, Mar 2013–Mar 2015.
- ▶ Torras X, Phase III, randomized, double blind and placebo-controlled study of 240 mg once daily of BI 201335 for 12 or 24 weeks in combination with pegylated alpha interferon and ribavirin in patients with genotype 1 chronic hepatitis C infection who failed a prior PegIFN/RBV treatment, Boehringer Ingelheim, EudraCT 2010-021715-17, June 2011–Mar 2014.
- ▶ Guarner C, Validation of a questionnaire of adherence to treatment in patients infected with hepatitis B, Hospital del Mar-Municipal Institute for Medical Research, EudraCT AC/10/123/3126 (code: Habit 01), Feb 2012–July 2013,
- ▶ Torras X, Clinical trial phase III randomized, double-blind, placebo-controlled of BI201335 120 mg once daily for 12 or 24 weeks or BI 201335 240 mg once daily for 12 weeks in combination with pegylated interferon alpha and ribavirin in patients who have not received previous treatment (naïve) and have chronic hepatitis C genotype 1, Boehringer Ingelheim, EudraCT 2010-021716-42, June 2011–Mar 2014.
- ▶ Torras X, Phase II, open-label study of once daily BI 201335 240mg for 24 weeks in combination with pegylated interferon alpha (PegIFN) and ribavirin (RBV) in patients with genotype 1 chronic hepatitis C infection who failed a prior PegIFN/RBV treatment, Boehringer Ingelheim, EudraCT 2011-000141-20.
- ▶ Román E, Fragility syndrome in cirrhotic patients, FIS PI12/0629, Mar 2012–2015.
- ▶ Guarner-Argente C, Multicentre, randomized, double-blind clinical trial on the use of prophylactic antibiotic EUS puncture of cystic lesions of the pancreas, PI13/00609, Carlos III Health Institute, 2014–2016.

## Transfer Products

- ▶ Martínez J, Abad-González A, Aparicio JR, Aparisi L, Boadas J, Boix E, de las Heras G, Domínguez-Muñoz E, Farré A, Fernández-Cruz L, Gómez L, Iglesias-García J, García-Malpartida K, Guarner L, Lariño-Noia J, Lluís F, López A, Molero X, Moreno-Pérez O, Navarro S, Palazón JM, Pérez-Mateo M, Sabater L, Sastre Y, Vaquero E, de-Madaria E, Spanish Pancreatic Club recommendations for the diagnosis and treatment of chronic pancreatitis: Part 1 (diagnosis). *Pancreatology* 2013; 13: 8-17
- ▶ Martínez J, Abad-González A, Aparicio JR, Aparisi L, Boadas J, Boix E, de las Heras G, Domínguez-Muñoz E, Farré A, Fernández-Cruz L, Gómez L, Iglesias-García J, García-Malpartida K, Guarner L, Lariño-Noia J, Lluís F, López A, Molero X, Moreno-Pérez O, Navarro S, Palazón JM, Pérez-Mateo M, Sabater L, Sastre Y, Vaquero E, de-Madaria E. Spanish Pancreatic Club recommendations for the diagnosis and treatment of chronic pancreatitis: Part 2 (treatment). *Pancreatology* 2013; 13:18-28.

# Digestive Diseases

## Collaborations

### Collaborations with IIB Sant Pau Groups

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

### External Collaborations

- ▶ Dr José Such, Hospital General Universitario, Alicante, Spain.
- ▶ Dr Joan Córdoba, Hospital de la Vall d'Hebron, Barcelona, Spain.
- ▶ Dr Vicente Arroyo, Hospital Clínic, 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 Bañares, Hospital General Universitario Gregorio Marañón, Madrid, Spain.
- ▶ Dr Raúl Andrade, Hospital Universitario Virgen de la Victoria, Malaga, Spain.
- ▶ Dr Bruce Runyon, David Geffen School of Medicine at UCLA, Los Angeles, USA.
- ▶ Dr Scott Friedman, Mount Sinai School of Medicine, New York, USA.
- ▶ Dr Reiner Wiest, Inselspital University Hospital, Bern, Switzerland.
- ▶ Dr Richard Moureau, Hôpital Beaujon, Clichy, France.
- ▶ Dr Rajiv Jalan, Royal Free Campus, London, UK.
- ▶ Dr Paolo Angeli, Hepatic Emergencies and Liver Transplantation, University of Padua, Italy.
- ▶ Dr Gregory Ginsberg, Hospital of the University of Pennsylvania, Philadelphia, USA.
- ▶ Dr Eduardo Albéniz Arbizu, Complejo Hospitalario de Navarra, Spain
- ▶ Dr Antoni Castells, Hospital Clínic, Barcelona, Spain.
- ▶ Dr Julià Panés, Hospital Clínic, Barcelona, Spain.
- ▶ Spanish Society of Digestive Endoscopy.

\*TIF: 193.911 \*\*MIF: 6.687

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Villanueva C., Colomo A., Bosch A., Concepcion M., Hernandez-Gea V., Aracil C., Graupera I., Poca M., Alvarez-Urturi C., Gordillo J., Guarner-Argente C., Santalo M., Muniz E., Guarner C. Transfusion strategies for acute upper gastrointestinal bleeding. (2013) *N. Engl. J. Med.*, 368 (1), 11-21.  
**IF: 54.42**
- 02 Bellot P., Welker M.-W., Soriano G., Von Schaeuwen M., Appenrodt B., Wiest R., Whittaker S., Tzonev R., Handshiev S., Verslype C., Moench C., Zeuzem S., Sauerbruch T., Guarner C., Schott E., Johnson N., Petrov A., Katzarov K., Nevens F., Zapater P., Such J. Automated low flow pump system for the treatment of refractory ascites: A multi-centre safety and efficacy study. (2013) *J. Hepatol.*, 58 (5), 922-927.  
**IF: 10.401**
- 03 Roman E., Cordoba J., Torrens M., Guarner C., Soriano G. Falls and cognitive dysfunction impair health-related quality of life in patients with cirrhosis. (2013) *Eur. J. Gastroenterol. Hepatol.*, 25 (1), 77-84.  
**IF: 2.152**
- 04 Sanchez E., Frances R., Soriano G., Mirelis B., Sancho F.J., Gonzalez-Navajas J.M., Munoz C., Song X.-Y., Perez-Mateo M., Such J., Guarner C. Modulation of Inflammatory Response in a Cirrhotic Rat Model with Induced Bacterial Peritonitis. (2013) *PLoS One*, 8 (3).  
**IF: 3.534**
- 05 Soriano G., Sanchez E., Guarner C. Probiotics in liver diseases [Probióticos en las enfermedades hepáticas]. (2013) *Nutr. Hosp.*, 28 (3), 558-563.  
**IF: 1.25**
- 06 Soriano G., Guarner C. Probiotics in cirrhosis: Do we expect too much? (2013) *Liver Int.*, 33 (10), 1451-1453.  
**IF: 4.412**
- 07 Guarner-Argente C., Buoncristiano T., Furth E.E., Falk G.W., Ginsberg G.G. Long-term outcomes of patients with Barrett's oesophagus and high-grade dysplasia or early cancer treated with endoluminal therapies with intention to complete eradication. (2013) *Gastrointest. Endosc.*, 77 (2), 190-199.  
**IF: 4.9**
- 08 Enestvedt B.K., Lugo R., Guarner-Argente C., Shah P., Falk G.W., Furth E., Ginsberg G.G. Location, location, location: Does early cancer in Barrett's oesophagus have a preference?. (2013) *Gastrointest. Endosc.*, 78 (3), 462-467.  
**IF: 4.9**
- 09 Zabana Y., Garcia-Planella E., van Domselaar M., Manosa M., Gordillo J., Lopez-Sanroman A., Cabre E., Domenech E. Predictors of favourable outcome in inflammatory Crohn disease. A retrospective observational study. (2013) *Gastroenterol. Hepatol.*, 36 (10), 616-623.  
**IF: 0.832**
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- IF: 3.562**
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- 28 Fernandez-Rozadilla C., Palles C., Carvajal-Carmona L., Peterlongo P., Nici C., Veneroni S., Pinheiro M., Teixeira M.R., Moreno V., Lamas M.-J., Baiget M., LA L.-F., Gonzalez D., Brea-Fernandez A., Clofent J., Bujanda L., Bessa X., Andreu M., Xicola R., Llor X., Jover R., Castells A., Castellvi-Bel S., Carracedo A., Tomlinson I., Ruiz-Ponte C. BMP2/BMP4 colorectal cancer susceptibility loci in northern and southern European populations. (2013) *Carcinogenesis*, 34 (2), 314-318. **IF: 5.266**
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# Digestive Diseases

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## Scientific Production

- Bujanda L., Clofent J., Gonzalez D., Xicola R., Andreu M., Bessa X., Jover R., Llor X., Moreno V., Castells A., Carracedo T., Castellvi-Bel S., Ruiz-Ponte C. A colorectal cancer genome-wide association study in a Spanish cohort identifies two variants associated with colorectal cancer risk at 1p33 and 8p12. (2013) *BMC Genomics*, 14 (1).  
**IF: 4.041**
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**IF: 5.266**
- 31 Guardiola J., Garcia-Iglesias P., Rodriguez-Moranta F., Brullet E., Salo J., Alba E., Espin E., Gallach M., Gene E., Tito L., Feu F., Villanueva C., Fort E., Martinez-Cerezo F.J., Planella M., Pons V., Calvet X. Management of acute lower gastrointestinal haemorrhage: Position statement of the Catalan Society of Gastroenterology. (2013) *Gastroenterol. Hepatol.*, 36 (8), 534-545.  
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**IF: 11.19**
- 33 Picelli S., Lorenzo Bermejo J., Chang-Claude J., Hoffmeister M., Fernandez-Rozadilla C., Carracedo A., Castells A., Castellvi-Bel S., Juan D.M., Raquel M., Marisa M., Francisco C., Jose D., Carolina I., Guadalupe L., Alberto I., Antoni C., Virginia P., Sergi C.-B., Balaguer F., Victoria G., Teresa O., Maria Dolores G., Maria P., Anna S., Leticia M., Miriam C., Josep M.P., Angel L., Javier A., Javier O., Joaquin C., Ma S.D., Mercedes S., Eloy S., Mariano V., Montserrat A., Anna A., Xavier B., Mar I., Agustin S., Felipe B., Gemma N., Beatriz B., De Josep M., Cristina A., Marc P., Luis B., Angel C., Ines G., Mikel L., Carlos P., Maria d.M.R., Elisabeth H., Jose M.E.-N., Jose L.E., Artemio P., Rodrigo J., Cristina A., Laura S., Nuria A., Estefania R., Lucia P.-C., Joaquim R., Angel S., Anna G., Joan S., Eduard B.-A., Josefina A., Ramon B., Ana M.G., Fernando C., Antonio B., Eduardo S., Fernando G., Jaime S., Akiko O., Mercedes L., Enrique M., Jaime C., Pilar C., Miguel M., Jose A.G., Francisco Q., Elisa O., Juan C., Jaime S., Antoni T., Eugenia S., de Ma L.C., Antoni T., Juan C., Vincent H., Xavier L., Rosa M.X., Marta P., Merce R., Anna R., Elisenda P., Jose M.H., Miquel A.G., Fernando F.-B., Josep M.V., Antonio S., Jorge E., Montserrat F., Maria E., Josep M.R., Carmen P., Juan B., Joan V., Enrique Q., David N., Adolfo P., Antonio M., Lidia A., Vicente P., Virginia P., Teresa S., Dolors G., Eva R., Teresa R., Maria P., Ma M.C., Marta M., Lourdes P., Daniel M., Angel C., Clara R.-P., Ceres F.-R., Ma M.C., Sabino R., Luis R., Javier F., Jose L.C., Luis C., Susana O., Federico B., Elena P., Jose M.B., Gloria C., Juan J.S., Antonio N., Naccarati A., Pardini B., Vodickova L., Muller H., Talseth-Palmer B.A., Stibbard G., Penterlongo P., Nici C., Veneroni S., Li L., Casey G., Tenesa A., Farrington S.M., Tomlinson I., Moreno V., van Wezel T., Wijnen J., Dunlop M., Radice P., Scott R.J., Vodicka P., Ruiz-Ponte C., Brenner H., Buch S., Volzke H., Hampe J., Schafmayer C., Lindblom A. Meta-Analysis of Mismatch Repair Polymorphisms within the Cogent Consortium for Colorectal Cancer Susceptibility. (2013) *PLoS One*, 8 (9).  
**IF: 3.534**

## Books or Chapters

### With ISBN

- ▶ G. Fernández-Esparrach, C. Guarner-Argente, JM. Bordas, Management of ulcers (pp. 103-113), In: CC. Thompson (ed), *Bariatric Endoscopy*, Springer, New York, 2013, ISBN 978-1-4419-1709-6.
- ▶ C. Guarner-Argente, C. Gómez-Oliva, C. Guarner. Adecuación de indicaciones para la CPRE (pp. 137-145), In: Bordas Alsina JM et al. *Actualizaciones en Endoscopia Digestiva 2*. Edimsa, Madrid, 2013, ISBN: 978-84-7714-392-5.

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Novoa R, Barnadas MA, Torras X, Curell R, Alomar A, Foreign body granulomatous reaction to silica, silicone, and hyaluronic acid in a patient with interferon-induced sarcoidosis. *Actas Dermosifiliogr* 2013 Dec;104(10):920-3.

# Microbiology and Infectious Diseases

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## Main Lines of Research

### Clinical microbiology

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

### Kidney transplantation

- ▶ Vaccines in patients at high risk of CMV infection post-transplantation.
- ▶ Detection of patients IgG positive for CMV but with posttransplantation risk of CMV infection.
- ▶ Biomarkers for BKV in urine samples.
- ▶ Medical care projects.

### Infectious pathologies

- ▶ 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 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 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 two 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 Unit.



Challenges

**Medical care**

- ▶ Government health department agreement (ongoing) 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.
- ▶ Multicentre studies of HIV (ongoing).
- ▶ Monitoring of congenital infection in prenat women with Chagas disease.

**Kidney surgery**

- ▶ Vaccine in patients with high risk of CMV infection post- transplantation: Phase 2 randomized, double-blind, placebo-controlled trial of MCMV5322A/MCMV3068A for the prevention of cytomegalovirus disease in high-risk kidney allograft recipients, Clinical trial sponsored by Genetech.
- ▶ Detection of patients IgG positive for CMV with high or low risk of CMV infection post- transplantation: Translational study to assess the clinical utility of determination pre-transplant of IFN-γ secreted by CD8 + T-cell-specific guide for the prevention of CMV infection in patients of low risk of CMV infection. Clinical trial sponsored by Consejería de Sanidad y Bienestar Social de Andalucía, Spain.
- ▶ Biomarkers for BKV in urine sample: Determination of a diagnostic and prognostic biomarker in urine by proteomics of nephropathy by BK virus in renal transplant receptors, sponsored by the Infectious Diseases Department, Vall d'Hebron University Hospital, Barcelona,

Spain.

**Infectious pathologies**

**Restricted-use antibiotic and antimicrobial policies**

- ▶ To minimize resistance, reduce cost and improve compliance with surgical prophylaxis (at the time of administration) through suitable use of antimicrobial agents.

**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 and work with the Microbiology Unit in epidemiology and molecular studies.

**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 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).
- ▶ Database for monitoring CMV infections after renal transplantation.
- ▶ Database for monitoring BK virus infections after renal transplantation.
- ▶ Observational and multicentre case-controlled (1:2) study to compare the evolution of renal transplantation in patients with HIV infection (Dr Canal, Dr Facundo and Dr Serra), sponsored by the Andalusian Organ and Tissue Transplantation Society.
- ▶ Observational, epidemiological and retrospective study of management of CMV infection in a cohort of patients receiving solid organ transplantation in Catalonia (Dr Canal, Dr Facundo and Dr Serra), sponsored by the Catalan Transplantation Society.

Active Grants

- ▶ Ferran Navarro, Involvement of plasmids and bacteriophages in the dissemination of antimicrobial resistance and bacterial virulence factors in humans, PI13/00329, Carlos III Health Institute Research Fund, Jan 2014–Dec 2016.
- ▶ Natividad de Benito, Epidemiology of prosthetic joint infection in Spain over the last decade: evolutionary analysis of the aetiology and risk factors for multidrug antibiotic, MAPFRE Foundation 2012, Jan 2012–Dec 2016.
- ▶ Jesús Rodríguez Baño (Virginia Pomar), Fosfomycin vs meropenem in the targeted treatment of bacteraemic UTI by ESBL-producing *Escherichia coli*, FOREST project (EudraCT 2013-002922-21), PI13/01282, Carlos III Health Institute Research Fund, Jan 2014–Dec 2016.
- ▶ Lorena López Cerero (Pere Coll, Francesca March), Design and Evaluation of a rapid method to study the sensitivity of *Mycobacterium tuberculosis* based on microencapsulation technology

by focussing microfluidic (Flow Focusing), PI13/01649, Carlos III Health Institute Research Fund, Jan 2014–Dec 2016.

- ▶ Pere Coll, Ferran Navarro, Natividad de Benito, Montserrat Español, Manel Flores, Joaquin López-Contreras, Beatriz Mirelis, Mercè Gurguí, Núria Margall, Francesca March, Elisenda Miró, Carme Muñoz, Virginia Pomar, Fernando Sánchez, Núria Rabella, Spanish Network Research in Infectious Diseases (REIPI), RD12/0015/0017, Carlos III Health Institute Research Fund (REIPI), 2013–2015.
- ▶ Jesús Oteo (Elisenda Miró, Virginia Pomar), Public health impact of the spread of strains of carbapenemase-producing *Enterobacteriaceae* in Spain: molecular characterization of circulating strains, PI12/01242, Carlos III Health Institute Research Fund, Jan 2013–Dec 2015.
- ▶ Natividad de Benito, Virginia Pomar, Beatriz Mirelis, Mercè Gurguí, Multicentre study on the usefulness of monitoring plasma

\*Total Impact Factor \*\*Mean Impact Factor

# Microbiology and Infectious Diseases

## Active Grants

levels of colistin and colistimethate sodium in patients with infections by multiresistant gram-negative bacilli treated with colistin, 2011 Call for Independent Clinical Research, EC11-318, Ministry of Health and Social Policy: General Directorate of Pharmacy and Health Products, Jan 2012–Dec 2014.

- ▶ Pere Coll, Ferran Navarro, Núria Rabella, Cooperation agreement to be signed between the Ministry of Health and the HSCSP Healthcare Management Foundation to develop support functions for the epidemiological surveillance of nosocomial infections and flaccid paralysis, General Directorate of Public Health, Department of Health, 2004–2014.
- ▶ Jordi Mancebo, Pere Coll, Joaquin López-Contreras, RGNOSIS: WP6, Ecological Effects of Decolonisation Strategies in Intensive Care Units, EudraCT 2012-002604-41, 7th EU Framework Programme (CCEE), University Medish Centrum Utrecht, Netherlands, 2014–2016.
- ▶ Virginia Pomar, An evaluation of adherence to LTBI treatment with 12 self-administered doses of once weekly rifapentine and isoniazid versus directly-observed therapy: iAdhere
- ▶ US, Public Health Service Study 33 Tuberculosis Trials Consor-

tium, Centers for Disease Control and Prevention, December 2012–2015.

- ▶ Dr J Cayla, (Virginia Pomar), A phase 3 contact tracing trial comparing the diagnostic performance of C-Tb to QuantiFERON®TB-Gold In Tube, in combination with a double-blind randomized, split-body safety assessment of C-Tb versus 2 T,U, Tuberculin PPD RT 23 SSI (PPD), TESEC-06, EudraCT: 2011-005617-36, 12/11/2012– .
- ▶ Natividad de Benito, Epidemiology of prosthetic joint infection in Spain in the last decade, Analysis of the evolution of the aetiology in time and risk factors of antibiotic multiresistance, REIPI, 2013–2014.
- ▶ Benito Almirante (Gurguí M, Mirelis B, López-Contreras J), Impact of Genotype and Phenotype of Staphylococcus aureus in clinical characteristics and evolution of Infective Endocarditis, IRH-ANT-2013-01, 2012–2015.

## Collaborations

### Collaborations with IIB Sant Pau Groups

#### External Collaborations

- ▶ Quality control agreement as referral centre for the Spanish Society of Clinical Microbiology and Infectious Diseases (SEIMC), Jan 2013– .
- ▶ Study of Bacillus cereus var. toyoi resistance to tetracycline and chloramphenicol, collaboration Agreement with Rubinum SA, 2013-2014.

- ▶ Evaluation of new commercial preparations, agreement with Izasa Distribuciones Tecnicas SA, 2013-2014.

- ▶ Validation of reactive syphilis BIOFLASH-BIO-FLASH HBeAg, Anti-HBe BIO-FLASH, all chemiluminescence immunoassays operating in the autoanalyzer BIO-FLASH, as well as other serological markers. Cooperation agreement, Biokit SA, 2014.

## Awards

- ▶ Fernández-Hidalgo N, Almirante B, Gavaldà J, Gurgui M, Peña C, de Alarcón A, Ruiz J, Vilacosta I, Montejo M, Vallejo N, López-Medrano F, Plata A, López J, Hidalgo-Tenorio C, Gálvez J, Sáez C, Lomas JM, Falcone M, de la Torre J, Martínez-Lacasa X, Pahissa A. Ampicillin plus ceftriaxone is as effective as ampicillin plus gentamicin for treating Enterococcus faecalis infective endocarditis. Clin Infect Dis. 2013 May; 56(9):1261-8. Emanuel Wolinsky Award 2013 (Clinical Infectious Diseases) and Dr Josep Barrio Best Scientific Article Award 2013 (Catalan Society of Infectious Diseases and Clinical Microbiology).

\*TIF: 96.120 \*\*MIF: 3.697

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Carrara L, Navarro F, Turbau M, Seres M, Moran I, Quintana I, Martino R, Gonzalez Y, Brell A, Cordon O, Diestra K, Mata C, Mirelis B, Coll P. Molecular diagnosis of bloodstream infections with a new dual-priming oligonucleotide-based multiplex PCR assay. (2013) *J. Med. Microbiol.*, 62 (PART 11), 1673-1679. **IF: 2.266**
- 02 Caballero F, Ris J, Puig M, Leal J, Benito S. Successful kidney transplantation from a brain-dead donor with ornithine transcarbamylase deficiency. (2013) *Transplantation*, 96 (8), e63-e64. **IF: 3.535**
- 03 De Ory F, Avellon A, Echevarria JE, Sanchez-Seco MP, Trallero G, Cabrerizo M, Casas I, Pozo F, Fedele G, Vicente D, Pena MJ, Moreno A, Niubo J, Rabella N, Rubio G, Perez-Ruiz M, Rodriguez-Iglesias M, Gimeno C, Eiros JM, Melon S, Blasco M, Lopez-Miragaya I, Varela E, Martinez-Sapina A, Rodriguez G, Marcos MA, Gegundez MI, Cilla G, Gabilondo I, Navarro JM, Torres J, Aznar C, Castellanos A, Guisasaola ME, Negredo AI, Tenorio A, Vazquez-Moron S. Viral infections of the central nervous system in Spain: A prospective study. (2013) *J. Med. Virol.*, 85 (3), 554-562. **IF: 2.217**
- 04 Domingo P, Pomar V, de Benito N, Coll P. The spectrum of acute bacterial meningitis in elderly patients. (2013) *BMC Infect. Dis.*, 13 (1). **IF: 2.561**
- 05 Domingo P, Pomar V, Benito N, Coll P. The changing pattern of bacterial meningitis in adult patients at a large tertiary university hospital in Barcelona, Spain (1982-2010). (2013) *J. Infect.*, 66 (2), 147-154. **IF: 4.017**
- 06 Gasch O, Camoez M, Dominguez MA, Padilla B, Pintado V, Almirante B, Molina J, Lopez-Medrano F, Ruiz E, Martinez JA, Bereciartua E, Rodriguez-Lopez F, Fernandez-Mazarrasa C, Goenaga MA, Benito N, Rodriguez-Bano J, Espejo E, Pujol M. Predictive factors for mortality in patients with methicillin-resistant *Staphylococcus aureus* bloodstream infection: Impact on outcome of host, microorganism and therapy. (2013) *Clin. Microbiol. Infect.*, 19 (11), 1049-1057. **IF: 5.197**
- 07 Horcajada JP, Shaw E, Padilla B, Pintado V, Calbo E, Benito N, Gamallo R, Gozalo M, Rodriguez-Bano J. Healthcare-associated, community-acquired and hospital-acquired bacteraemic urinary tract infections in hospitalized patients: A prospective multicentre cohort study in the era of antimicrobial resistance. (2013) *Clin. Microbiol. Infect.*, 19 (10), 962-968. **IF: 5.197**
- 08 Gasch O, Camoez M, Dominguez MA, Padilla B, Pintado V, Almirante B, Lepe J A, Lagarde M, de Gopegui ER, Martinez J A, Montejo M, Torre-Cisneros J, Arnaiz A, Goenaga M A, N Benito, Rodriguez-Bano J, Pujol M. Predictive factors for early mortality among patients with methicillin-resistant *Staphylococcus aureus* bacteraemia. (2013) *J. Antimicrob. Chemother.*, 68 (6), 1423-1430. **IF: 5.439**
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- 10 Lora-Tamayo J, Murillo O, Iribarren JA, Soriano A, Sanchez-Somolinos M, Baraia-Etxaburu JM, Rico A, Palomino J, Rodriguez-Pardo D, Horcajada JP, Benito N, Bahamonde A, Granados A, Del Toro MD, Cobo J, Riera M, Ramos A, Jover-Saenz A, Ariza J. A large multicenter study of methicillin-susceptible and methicillin-resistant *Staphylococcus aureus* prosthetic joint infections managed with implant retention. (2013) *Clin. Infect. Dis.*, 56 (2), 182-194. **IF: 9.416**
- 11 Perez-Llarena FJ, Kerff F, Zamorano L, Fernandez MC, Nunez ML, Miro E, Oliver A, Navarro F, Bou G. Characterization of the new AmpC  $\beta$ -lactamase FOX-8 reveals a single mutation, Phe313Leu, located in the R2 Loop that affects ceftazidime hydrolysis. (2013) *Antimicrob. Agents Chemother.*, 57 (10), 5158-5161. **IF: 4.451**
- 12 Pomar V, Benito N, Lopez-Contreras J, Coll P, Gurgui M, Domingo P. Spontaneous gram-negative bacillary meningitis in adult patients: Characteristics and outcome. (2013) *BMC Infect. Dis.*, 13 (1). **IF: 2.561**
- 13 Martinez-Castillo A, Quiros P, Navarro F, Miro E, Muniesa M. Shiga toxin 2-encoding bacteriophages in human faecal samples from healthy Individuals. (2013) *Appl. Environ. Microbiol.*, 79 (16), 4862-4868. **IF: 3.952**
- 14 Miro E, Grunbaum F, Gomez L, Rivera A, Mirelis B, Coll P, Navarro F. Characterization of aminoglycoside-modifying enzymes in Enterobacteriaceae clinical strains and characterization of the plasmids implicated in their diffusion. (2013) *Microb. Drug Resist.*, 19 (2), 94-99. **IF: 2.524**
- 15 Miro E, Aguero J, Larrosa MN, Fernandez A, Conejo MC, Bou G, Gonzalez-Lopez JJ, Lara N, Martinez-Martinez L, Oliver A, Aracil B, Oteo J, Pascual A, Rodriguez-Bano J, Zamorano L, Navarro F. Prevalence and molecular epidemiology of acquired AmpC  $\beta$ -lactamases and carbapenemases in Enterobacteriaceae isolates from 35 hospitals in Spain. (2013) *Eur. J. Clin. Microbiol. Infect. Dis.*, 32 (2), 253-259. **IF: 2.544**
- 16 Miro E, Aguero J, Larrosa MN, Fernandez A, Conejo MC, Bou G, Gonzalez-Lopez JJ, Lara N, Martinez-Martinez L, Oliver A, Aracil B, Oteo J, Pascual A, Rodriguez-Bano J, Zamorano L, Navarro F. Erratum: Prevalence and molecular epidemiology of acquired AmpC  $\beta$ -lactamases and carbapenemases in Enterobacteriaceae isolates from 35 hospitals in Spain (*European Journal of Clinical Microbiology and Infectious Diseases* DOI: 10.1007/s10096-012-1737-0). (2013) *Eur. J. Clin. Microbiol. Infect. Dis.*, 32 (2), 261-262. **IF: 2.544**
- 17 Prim N, Lopez G, Dominguez N, Torres O, Pomar V, Sanchez-Reus F. Disseminated *Penicillium marneffei* infection in an HIV infected patient returning from Vietnam. (2013) *Rev. Clin. Esp.*, 213 (7), e63-e66. **IF: 1.314**
- 18 Prim N, Benito N, Montes G, Pomar V, Molet J, Rabella N. Human herpesvirus 1 meningoencephalitis after trigeminal neuralgia surgery. (2013) *J. Infect.*, 67 (1), 79-81. **IF: 4.017**
- 19 Prim N, Remacha A, Sanchez-Reus F, Brio S, Ayats R, Munoz C. Candidaemia detected on direct blood smears. (2013) *Eur. J. Haematol.*, 90 (6), 536-537.

# Microbiology and Infectious Diseases

\*TIF: 96.120 \*\*MIF: 3.697

## Scientific Production

- IF: 2.414**
- 20 Prim N, Rodriguez G, Margall N, Del Cuerpo M, Trallero G, Rabella N. Combining cell lines to optimize isolation of human enterovirus from clinical specimens: Report of 25 years of experience. (2013) *J. Med. Virol.*, 85 (1), 116-120.
- IF: 2.217**
- 21 Rodriguez-Pardo D, Mirelis B, Navarro F. Reply to Infections caused by Clostridium difficile. Addendum [Réplica a Infecciones producidas por Clostridium difficile.Observaciones]. (2013) *Enferm. Infec. Microbiol. Clin.*, 31 (8), 558.
- IF: 1.881**
- 22 Rodriguez-Pardo D, Almirante B, Bartolome RM, Pomar V, Mirelis B, Navarro F, Soriano A, Sorli L, Martinez-Montauti J, Molins MT, Lung M, Vila J, Pahissa A. Epidemiology of clostridium difficile infection and risk factors for unfavourable clinical outcomes: Results of a hospital-based study in Barcelona, Spain. (2013) *J. Clin. Microbiol.*, 51 (5), 1465-1473.
- IF: 4.232**
- 23 Rodriguez-Pardo D, Mirelis B, Navarro F. Infections caused by Clostridium difficile [Infecciones producidas por Clostridium difficile]. (2013) *Enferm. Infec. Microbiol. Clin.*, 31 (4), 254-263.
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- 24 Rodriguez-Bano J, Oteo J, Ortega A, Villar M, Conejo MC, Bou G, Aranzamendi-Zaldumbide M, Cercenado E, Gurgui M, Martinez-Martinez L, Merino M, Rivera A, Oliver A, Weber I, Pascual A, Bartolome RM, Gonzalez-Lopez JJ, Campos J. Epidemiological and clinical complexity of amoxicillin-clavulanate-resistant Escherichia coli. (2013) *J. Clin. Microbiol.*, 51 (7), 2414-2417.
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- 25 Sorli L, Luque S, Grau S, Berenguer N, Segura C, Montero MM, Alvarez-Lerma F, Knobel H, Benito N, Horcajada JP. Trough colistin plasma level is an independent risk factor for nephrotoxicity: A prospective observational cohort study. (2013) *BMC Infect. Dis.*, 13 (1).
- IF: 2.561**
- 26 Sanchez E, Frances R, Soriano G, Mirelis B, Sancho FJ, Gonzalez-Navajas JM, Munoz C, Song X-Y, Perez-Mateo M, Such J, Guarner C. Modulation of Inflammatory Response in a Cirrhotic Rat Model with Induced Bacterial Peritonitis. (2013) *PLoS One*, 8 (3).
- IF: 3.534**

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Navarro F, Urinary infection by enterobacteria carriers of beta-lactamase AmpC inducible plasmid, Cases of Clinical Microbiology [Internet], 2013, Case No. 583. Available at: [http://www.f-soria.es/admfSORIA/casos/img/caso\\_583.pdf](http://www.f-soria.es/admfSORIA/casos/img/caso_583.pdf).
- ▶ Segura C, Plasencia V, Ventura E, Miró E, Navarro F, Grau S, Fusté E, Montero M, Horcajada J, Viñas M, In vitro activity of ceftazidime and meropenem in combination with tobramycin or ciprofloxacin in a clone of multiresistant Pseudomonas aeruginosa, Journal of Microbiology Research, 2013;3(2):99-105. Available at: <http://article.sapub.org/10.5923.j.microbiology.20130302.07.html>.



# Multi-organ Damage

## Coordinator

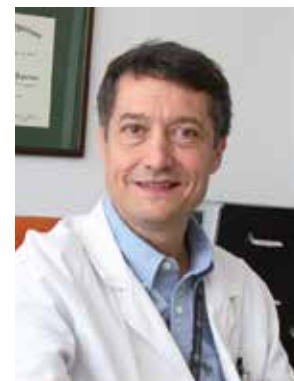
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Patricia Moya HSCSP RI  
Mireia Parés HSCSP RI  
Carme Rius HSCSP RI



## Main Lines of Research

### Bone metabolism and osteoporosis

- ▶ Analysis of genetic influence on osteoporosis by means of aggregation studies in families of three 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 the 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 a 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, internal medicine and geriatrics

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

### Rheumatology and rheumatoid arthritis

- ▶ Immunomodulation due to anti-CD20 (rituximab) treatment and study of polymor-

phisms.

- ▶ 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 tofacitinib in patients with moderately to severely active rheumatoid arthritis with inadequate response to biologic DMARD.
- ▶ Evaluation of the JAK-STAT pathway in patients with rheumatoid arthritis treated with tocilizumab.

### 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 endothelin receptor antagonism to prevent pulmonary arterial hypertension (in collaboration with Vall d'Hebron University Hospital, Barcelona, Spain).
- ▶ Genetic studies in systemic sclerosis and collaboration with DUO Registry and LAUDES study.
- ▶ Study of capillaroscopy patterns in diffuse connective tissue diseases: QuantiCAP study.

### Gout

- ▶ Epidemiology of hyperuricaemia and gout.

### Sjögren syndrome

- ▶ Clinical and epidemiological findings in Spanish patients with primary Sjögren syndrome (in collaboration with Spanish Society of Rheumatology).

Challenges

- ▶ To establish stable work relations between the HSCSP Bone Metabolism and Genomics of Complex Diseases Groups 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 ties between the HSCSP Rheumatology and Immunology departments regarding the study of immunological diseases.

Active Grants

- ▶ Dr Arroyo (PI), Cardiovascular risk in patients presenting to the emergency department with acute vascular accident, HSCSP Research Institute.
- ▶ Dr Arroyo (PI), Degree of control of risk factors one year after having suffered an acute stroke: acute coronary syndrome or CVA, HSCSP Research Institute.
- ▶ Dr Malouf (PI), Longitudinal epidemiological study for the assessment of arterial stiffness in patients with renal insufficiency and treatment with vitamin D3 and vitamin D analogues, HSCSP Research Institute.
- ▶ Dr Arroyo (PI), Effect of stress reduction based on mindfulness on blood pressure (BP) of patients with high BP or grade 1 hypertension (HTN). HSCSP Research Institute.
- ▶ Dr Arroyo (PI), SHOT study (Stroke in Hypertension Optimal Treatment Trial), European Society of Hypertension/Chinese Hypertension League.
- ▶ Dr Matas (PI), A randomized, double-blind study of the efficacy and safety of regn727 added on to rosuvastatin versus ezetimibe added on to rosuvastatin versus rosuvastatin dose increase in patients who are not controlled on rosuvastatin, Protocol R727-CL-1118, SANOFI Laboratories.
- ▶ Dr Matas (PI), A randomized, double-blind study of the efficacy and safety of regn727 added-on to atorvastatin versus ezetimibe added-on to atorvastatin versus atorvastatin dose increase in patients who are not controlled on atorvastatin, Protocol R727-CL-1110, SANOFI Laboratories.
- ▶ Dr Matas (PI), A randomized, double-blind, placebo-controlled, parallel group study to evaluate the efficacy and safety of alirocumab in patients with primary hypercholesterolemia not treated with a statin, Odyssey CHOICE II EFC13786, SANOFI Laboratories.
- ▶ Dr Matas (PI), A randomized, double-blind, placebo-controlled, parallel-group study to evaluate the effect of sar236553/regn727 on the occurrence of cardiovascular events in patients who have recently experienced an acute coronary syndrome, Odyssey OUTCOMES EFC 11570, SANOFI Laboratories.
- ▶ Olga H Torres (PI, and three researchers), Study on the misuse of drugs in elderly patients hospitalized in internal medicine in different Spanish hospitals for implementation and development at HSCSP (with Vall d'Hebron University Hospital, Bellvitge University Hospital, Hospital Clínic de Barcelona, Virgen de Rocío University Hospital, San Juan de Dios del Aljarafe Hospital, Hospital General Juan Ramón Jiménez), EC10-077, Ministry of Health and Social Policy, 16 Mar 2011–31 Dec 2014.
- ▶ Susan Webb (PI), Etiopathogenesis of cardiopathy in acromegaly and its relation to body composition, 11/00001, FIS Grant, 2011-2014, €172,500.
- ▶ J Casademont (PI), Intermediate phenotypes in the risk of developing osteoporosis. GAO (genetic analysis of osteoporosis) project, Health Research Projects Subprogramme, FIS PI11/01175, Ministry of Science and Innovation-ISCIII, 2012-2014, €169,345.55.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Digestive Diseases (Dr Germán Soriano), Study by densitometry and ergospirometry of the effects of an exercise programme in overweight patients with liver cirrhosis.
- ▶ Orthopaedic Surgery and Traumatology Service (Dr José Carlos González Rodríguez),
- ▶ Randomized, double-blind, placebo-controlled clinical trial of parallel groups assessing the efficacy of subcutaneous denosumab for periprosthetic resorption decrease in patients with total knee prosthesis, IIBSP-DEN-2012-24, Eudra No: 2012-001285-15.
- ▶ Cardiovascular Risk Group (Dr Laiz Matas), Longitudinal epidemiological study for the assessment of arterial stiffness in patients with renal insufficiency and treatment with vitamin D3 and vitamin D analogues, IIBSP-VIT-2013-138.

**External Collaborations**

- ▶ Dr Luis del Rio, Standardized measures of different tissues using dual-energy X-ray absorptiometry, CETIR Medical Group, Barcelona, Spain.
- ▶ Internal Medicine Pneumonia Study (ENEMI), coordinated by the Hospital General Universitario Gregorio Marañón, Madrid, Spain.
- ▶ Dr César Díaz Torné, panellist for the Guidelines to Clinical Practice for Gout (GuipClinGot), Spanish Rheumatology Society.



# Multi-organ Damage

\*TIF: 30.699 \*\*MIF: 2.558

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Dunkler D, Dehghan M, Teo KK, Heinze G, Gao P, Kohl M, Clase CM, Mann JFE, Yusuf S, Oberbauer R. Diet and kidney disease in high-risk individuals with type 2 diabetes mellitus. (2013) *JAMA Intern. Med.*, 173 (18), 1682-1692.  
**IF: N/D**
- 02 Oliveras A, Armario P, Sierra C, Arroyo JA, Hernandez-Del-Rey R, Vazquez S, Larrousse M, Sans L, Roca-Cusachs A, De La Sierra A. Urinary albumin excretion at follow-up predicts cardiovascular outcomes in subjects with resistant hypertension. (2013) *Am. J. Hypertens.*, 26 (9), 1148-1154.  
**IF: 3.402**
- 03 Zamora C, Canto E, Nieto JC, Angels Ortiz M, Diaz-Torne C, Diaz-Lopez C, Lobet JM, Juarez C, Vidal S. Functional consequences of platelet binding to T lymphocytes in inflammation. (2013) *J. Leukoc. Biol.*, 94 (3), 521-529.  
**IF: 4.304**
- 04 Prowse RL, Dalbeth N, Kavanaugh A, Adebajo AO, Gaffo AL, Terkeltaub R, Mandell BF, Suryana BPP, Goldenstein-Schainberg C, Diaz-Torne C, Khanna D, Liote F, McCarthy G, Kerr GS, Yamanaka H, Janssens H, Baraf HF, Chen J-H, Vazquez-Mellado J, Harrold LR, Stamp LK, Van De Laar MA, Janssen M, Doherty M, Boers M, Edwards NL, Gow P, Chapman P, Khanna P, Helliwell PS, Grainger R, Schumacher HR, Neogi T, Jansen TL, Louthrenoo W, Sivera F, Taylor WJ. A Delphi exercise to identify characteristic features of gout. Opinions from patients and physicians, the first stage in developing new classification criteria. (2013) *J. Rheumatol.*, 40 (4), 498-505.  
**IF: 3.173**
- 05 Casademont J, Porcel JM, Vargas Nunez JA, Gonzalez Macias J. Current status of General Pathology training in Spain [Situación actual de la enseñanza de la Patología General en España]. (2013) *Rev. Clin. Esp.*, 213 (9), 421-427.  
**IF: 1.314**
- 06 Ponte Marquez P, Torres Bonafonte O. Pesteurella multocida infection. (2013) *Emergencias*, 25 (6), 498.  
**IF: 2.583**
- 07 Prim N, Lopez G, Dominguez N, Torres O, Pomar V, Sanchez-Reus F. Disseminated *Penicillium marneffeii* infection in an HIV infected patient returning from Vietnam. (2013) *Rev. Clin. Esp.*, 213 (7), 63-66.  
**IF: 1.314**
- 08 Barcelo M, Torres O, Mascaro J, Francia E, Cardona D, Ruiz D. Assessing nutritional status in the elderly: evaluation of Chumlea's equations for weight [Valoración del estado nutricional en el anciano: evaluación de las ecuaciones de Chumlea para el cálculo del peso]. (2013) *Nutr. Hosp.*, 28 (2), 314-318.  
**IF: 1.125**
- 09 Quesada-Gomez JM, Diaz-Curiel M, Sosa-Henriquez M, Malouf-Sierra J, Nogues-Solan X, Gomez-Alonso C, Rodriguez-Manas L, Neyro-Bilbao JL, Cortes X, Delgado J. Low calcium intake and inadequate vitamin D status in postmenopausal osteoporotic women. (2013) *J. Steroid Biochem. Mol. Biol.*, 136 (1), 175-177.  
**IF: 4.049**
- 10 Barata A, Malouf J, Gutierrez M, Mateo GM, Sambeat MA, Gich I, Cadafalch J, Wulff J, Domingo P. Psychopathology and psychosocial adjustment in patients with HIV-associated lipodystrophy. (2013) *Braz. J. Infect. Dis.*, 17 (4), 444-449.  
**IF: 1.096**
- 11 Martinez E, Jodar Gimeno E, Reyes Garcia R, Carpintero P, Casado JL, Del Pino Montes J, Domingo Pedrol P, Estrada V, Maalouf J, Negredo E, Ocampo A, Munoz-Torres M. Consensus statement: Recommendations for the management of metabolic bone disease in human immunodeficiency virus patients [Documento de consenso: Recomendaciones para el manejo de la enfermedad ósea metabólica en pacientes con virus de la inmunodeficiencia humana]. (2014) *Enferm. Infec. Microbiol. Clin.*, 32 (4), 250-258.  
**IF: 1.881**
- 12 Malouf J, DiGregorio S, Del Rio L, Torres F, Marin AM, Farrerons J, Herrera S, Domingo P. Fat tissue measurements by dual-energy x-ray absorptiometry: Cross-calibration of 3 different fan-beam instruments. (2013) *J. Clin. Densitom.*, 16 (2), 212-222.  
**IF: 1.603**
- 13 Minicocci I, Santini S, Cantisani V, Stitzel N, Kathiresan S, Arroyo JA, Marti G, Pisciotto L, Noto D, Cefalu AB, Maranghi M, Labbadia G, Pigna G, Pannozzo F, Ceci F, Ciociola E, Bertolini S, Calandra S, Tarugi P, Aversa M, Arca M. Clinical characteristics and plasma lipids in subjects with familial combined hypolipidemia: A pooled analysis. (2013) *J. Lipid Res.*, 54 (12), 3481-3490.  
**IF: 4.73**

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Malouf J, Valoración clínica de la osteoporosis postmenopáusica [clinical assessment of postmenopausal osteoporosis], Activity accredited by the Continuing Education Committee of Health Professionals of the Community of Madrid (SNS). ESP/DNB/0051/13, YOU & US SA, 2013, ISBN: 978-84-695-7919-0.
- ▶ Torres OH, Gil E, Pacho C, Ruiz D, Actualización de la neumonía en el anciano [update on pneumonia in the elderly]. Revised article. 48, 72-78. Elsevier España. 2013. 0211-139X.

# Molecular Pathology of Gynaecologic Cancer

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Jorge Pena HSCSP RI  
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## Main Lines of Research

- ▶ Pathogenic mechanisms of gynaecological cancer (endometrial/ovarian cancer).
- ▶ Molecular mechanisms of stromal response and immunosuppression in endometrial 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.
- ▶ 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, 9438/2011, Mutua Madrileña Foundation, July 2011-July 2013, €16,000.
- ▶ Prat J, Agreement between the Department of Health and Farmaindustria, CAT-BIO-03, Farmaindustria, September 2010-June 2014, €44,694.
- ▶ Prat J, Retics Project, RD12\_4357-6116-0036-0011, Cancer Cooperative Research Thematic Network (RTICC), November 2012-December 2013, €44,275.
- ▶ Prat J, Tumour-stroma interaction in the progression of endometrial carcinoma: the role of tumour microenvironment and microRNAs in myometrial invasion, PI11-01561, FIS, September 2011-June 2015, €144,000.
- ▶ Prat J, Molecular alterations related with progression in endometrial cancer (Stable Research Group), Spanish Association Against Cancer (AECC) 2011, September 2011-September 2016, €1,200,000.
- ▶ Espinosa I, CSF1-signature in uterine leiomyosarcomas, PI12/01645, FIS, €84,700.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Experimental Immunology (Silvia Vidal, HSCSP IR).

### External Collaborations

Molecular alterations related with progression in endometrial cancer (Spanish Association Against Cancer (AECC)):

- ▶ Dr Jaume Reventós, Vall d'Hebron Hospital Research Institute (VHIR), Barcelona, Spain.
- ▶ Dr Xavier Matias-Guiu, Institute for Biomedical Research, Lleida (IRB Lleida), Spain.
- ▶ Dr Miguel Abal, Santiago de Compostela University Hospital Complex (CHUS), Spain.
- ▶ Dr Gema Moreno, Fundación MD Anderson Internacional, Madrid, Spain.

\*TIF: 42.274 \*\*MIF: 4.298

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Chen JL-Y, Espinosa I, Lin AY, Liao OY-W, Van De Rijn M, West RB. Stromal responses among common carcinomas correlated with clinicopathologic features. (2013) *Clin. Cancer Res.*, 19 (18), 5127-5135.  
**IF: 8.193**
- 02 Romero-Perez L, Castilla MA, Lopez-Garcia MA, Diaz-Martin J, Biscuola M, Ramiro-Fuentes S, Oliva E, Matias-Guiu X, Prat J, Cano A, Moreno-Bueno G, Palacios J. Molecular events in endometrial carcinosarcomas and the role of high mobility group AT-hook 2 in endometrial carcinogenesis. (2013) *Hum. Pathol.*, 44 (2), 244-254.  
**IF: 2.806**
- 03 Valera A, Lopez-Guillermo A, Cardesa-Salzmann T, Climent F, Gonzalez-Barca E, Mercadal S, Espinosa I, Novelli S, Briones J, Mate JL, Salamero O, Sancho JM, Arenillas L, Serrano S, Erill N, Martinez D, Castillo P, Rovira J, Martinez A, Campo E, Colomo L. MYC protein expression and genetic alterations have prognostic impact in patients with diffuse large B-cell lymphoma treated with immunochemotherapy. (2013) *Haematologica*, 98 (10), 1554-1562.  
**IF: 5.868**
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**IF: 2.806**
- 05 Mozos A, Prat J. Epithelial-to-mesenchymal transition in endometrioid adenocarcinoma of the endometrium-Reply. (2013) *Hum. Pathol.*, 44 (9), 1957.  
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- 06 D'Angelo E, Ali RH, Espinosa I, Lee C-H, Huntsman DG, Gilks B, Prat J. Endometrial stromal sarcomas with sex cord differentiation are associated with phf1 rearrangement. (2013) *Am. J. Surg. Pathol.*, 37 (4), 514-521.  
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- 07 Catusus L, Pons C, Munoz J, Espinosa I, Prat J. Promoter hypermethylation contributes to TIMP3 down-regulation in high stage endometrioid endometrial carcinomas. (2013) *Histopathology*, 62 (4), 632-641.  
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- 08 Munoz-Repeto I, Garcia MJ, Kamieniak M, Ramon y Caja T, Domingo S, Cazorla A, Donas JG, Polo SH, Sagredo JMG, Hernandez E, Lacambra C, Saez R, Robles L, Borrego S, Prat J, Palacios J, Benitez J. Phenotypic characterization of hereditary epithelial ovarian cancer based on a tissue microarray study. (2013) *Histol. Histopathol.*, 28 (1), 133-144.  
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Books or Chapters

With ISBN

- ▶ Prat J, Damjanov I, Tumours of the female genital organs (Chapter 10, pp. 109-129), in Damjanov I, Fan F (eds), *Cancer Grading Manual* (2nd ed), Springer New York, 2013.

Other Publications

Letters

- ▶ Mozos A, Prat J. Epithelial-to-mesenchymal transition in endometrioid adenocarcinoma of the endometrium reply. *Hum Pathol* 2013; 44:1957.

Video and DVDs

- ▶ Prat J. *Gynecologic Pathology (Masters of Pathology Series Vol. 1, Damjanov I, Ed). Video and DVDs (12). The Oakstone Institute. CMEinfo. Birmingham USA, 2013 (11 lectures, 20 hours).*

# Chronic Respiratory Diseases

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Laia García HSCSP RI



## 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 CIBER-Respiratory Disorders.

## Awards

- ▶ Astrid Crespo, Eder Mateus, Montserrat Torrejón, Alicia Belda, Jordi Giner, Teresa Garriga, Carmen Granel, Silvia Vidal, Cándido Juárez, Vicente Plaza, Pneumology and Immunology Service (HSCSP), The percentage of neutrophils expressing TLR4 in induced sputum decreases in non-IgE-dependent asthmatics, Spanish Society of Pneumology and Thoracic Surgery (SEPAR) ORO Best Communication Award (Asthma Area) 2013.



Active Grants

- ▶ Ramos Barbón, D (PI), Interaction between immune regulation and mechanisms of airway remodelling in asthma: pathogenic effects versus therapeutic potential, PI11/01001, FIS, Jan 2012-Dec 2014, €156,540.12.
- ▶ Ramos Barbón, D (PI), Development of a biobank subspecialized in bronchial biopsies for asthma research, 09/862, Spanish Society of Pneumology and Thoracic Surgery (SEPAR), June 2010-May 2013, €12,000.
- ▶ Crespo A (PI), Expression of toll-like receptors in sputum cells induced in asthmatic patients. Relationship with the phenotype, severity and level of asthma control, 2012 Maria Ravà Grant, Catalan Pneumology Foundation (FUCAP), Jan 2013-Dec 2014, €12,000.
- ▶ Solanes I (PI), Study of pulmonary defence mechanisms in severe COPD and their relation to infection of the airway, Catalan Pneumology Foundation (FUCAP), Jan 2011-Dec 2013, €12,000.
- ▶ Ramos Barbón, D (PI), Interaction between immune regulation and mechanisms of airway remodelling in asthma: pathogenic effects versus therapeutic potential. Catalan Pneumology Foundation (FUCAP), Jan 2013-Dec 2015, €9,000.
- ▶ Sibila O (PI), New diagnostic methods for bacterial colonization in COPD; electronic nose, microarrays and high-resolution CT. Spanish Society of Pneumology and Thoracic Surgery (SEPAR), /11, June 2012-May 2015, €12,000.
- ▶ Plaza V (PI), Expression of toll-like receptors in sputum cells induced in asthmatic patients. Relationship with the phenotype, severity and level of asthma control, 2011 Leti grant, Catalan, Pneumology Foundation (FUCAP), Jan 2012-Dec 2014.
- ▶ Mola A (PI), Study of cerebral hemodynamic and metabolic changes in patients with SAHS using optical transcranial spectroscopy techniques, Catalan Society of Pneumology (SOCAP), Jan 2011-Dec 2013, €16,000.
- ▶ Peiro M, Plaza V (PIs), Effectiveness of a programme of minimal educational intervention in asthma control and prevention of exacerbations (PROMETEO), Official College of Nurses of Barcelona (COIB), Jan 2011-Dec 2013, €6,000.
- ▶ Castillo Villegas D (PI), Functional and genetic characterization of pulmonary langerhans cell histiocytosis, 13/016/1404, Mútua Madrileña Foundation, 2013-2016, €6,000.
- ▶ Castillo Villegas D (PI), Functional and genetic characterization of pulmonary langerhans cell histiocytosis, 13/016/1404. EP-ID-Futuro Group, Spanish Society of Pneumology and Thoracic Surgery (SEPAR), 2013-2016., €24,320.
- ▶ Morante Vélez FE (PI), Impact of early rehabilitation respiratory on exacerbations in patients readmitted with chronic obstructive pulmonary disease (COPD), 229|2012, Spanish Society of Pneumology and Thoracic Surgery (SEPAR), June 2013-May 2016, €12,000.
- ▶ Güell Rous MR (PI), Effects of training after resection surgery in patients with lung cancer, Catalan Society of Pneumology (SOCAP), 2012-2015.
- ▶ Güell Rous MR (PI), Benefits of liquid oxygen in COPD patients without criteria for continuous domiciliary oxygen therapy, presenting with desaturation, Catalan Society of Pneumology (SOCAP), 2013-2016.
- ▶ Soto Retes L, (PI), EPONA study: evaluation and new perspectives in pathogenesis, detection and use of nasal nitric oxide and electronic nose, Spanish Society of Allergology and Clinical Immunology (SEAIC), 2013-2016, €15,000.
- ▶ Giner Donaire J (PI), Exhaled air temperature as a marker of bronchial inflammation in asthma, Spanish Society of Pneumology and Thoracic Surgery (SEPAR), 2011-2014, €8,000.
- ▶ Ramos Barbón, D. (PI), Interaction between immune regulation and mechanisms of airway remodelling in asthma: pathogenic effects versus therapeutic potential, 261|2012, Spanish Society of Pneumology and Thoracic Surgery (SEPAR), June 2013-May 2016, €12,000.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Dr V. Plaza, collaboration in the EPONA study with the Ear, Nose and Throat Cancers Group.
- ▶ Dr V. Plaza, collaboration in the TAGA study with the Genetics and Vascular Surgery Departments.

**External Collaborations**

- ▶ Dr V Plaza, Emergent Asthma Group, SEPAR.
- ▶ Dr V Plaza, INASMA Group.
- ▶ Drs V Plaza and D Ramos Barbón, Integrated Research Programme (PII) for Asthma, SEPAR.
- ▶ Drs V Plaza and D Ramos Barbón, group associated with CIBER-Respiratory.
- ▶ Dr D Castillo Villegas, National Institute for Rare Diseases, Carlos III Health Institute, Madrid, Spain.
- ▶ Dr D Castillo Villegas, International Working Group on Langerhans Cell Histiocytosis and EUROHISTIONET.

- ▶ Dr D Ramos Barbón (PI), Multicentre Biobank of Bronchial Biopsies for Asthma Research, with collaborators as follows:
  - Dr Carlos Martínez Rivera from Hospital Universitario Germans Trias i Pujol, Badalona, Spain.
  - Dr Antolín López Viña from Hospital Universitario Puerta de Hierro, Madrid, Spain.
  - Dr Francisco Javier González Barcala from Complejo Hospitalario de Pontevedra, Spain.
  - Dr Teresa Bazús González from Hospital Universitario Central de Asturias, Oviedo, Spain.
  - Dr Luis Pérez de Llano from Hospital Lucus Augusti, Lugo, Spain (pending approval).
  - Dr Patrick Berger from Université Bordeaux 2, Bordeaux, France.
  - Dr James G Martin from McGill University, Montreal, Canada.

# Chronic Respiratory Diseases

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- 01 Xaubet A, Ancochea J, Bollo E, Fernandez-Fabrellas E, Franquet T, Molina-Molina M, Montero MA, Serrano-Mollar A. Guidelines for the Diagnosis and Treatment of Idiopathic Pulmonary Fibrosis [Normativa sobre el diagnóstico y tratamiento de la fibrosis pulmonar idiopática]. (2013) Arch. Bronconeumol., 49 (8), 343-353. **IF: 1.816**
- 02 Garcia-Rio F, Calle M, Burgos F, Casan P, del Campo F, Galdiz JB, Giner J, Gonzalez-Mangado N, Ortega F, Puente Maestu L. Spirometry [Espirometria]. (2013) Arch. Bronconeumol., 49 (9), 388-401. **IF: 1.816**
- 03 Salord N, Mayos M, Miralda RM, Farre A, Carreras M, Sust R, Masuet-Aumatell C, Rodriguez J, Perez A. Continuous positive airway pressure in clinically stable patients with mild-to-moderate obesity hypoventilation syndrome and obstructive sleep apnoea. (2013) Respirology, 18 (7), 1135-1142. **IF: 3.495**
- 04 Roger N, Burgos F, Giner J, Rosas A, Tresserras R, Escarrabill J. Survey about the use of lung function testing in public hospitals in Catalonia in 2009 [Encuesta de utilizacion de la funcion pulmonar en los hospitales publicos de Cataluña en 2009]. (2013) Arch. Bronconeumol., 49 (9), 371-377. **IF: 1.816**
- 05 Sibila O, Laserna E, Mortensen EM, Anzueto A, Restrepo MI. Effects of inhaled corticosteroids on pneumonia severity and antimicrobial resistance. (2013) Respir. Care, 58 (9), 1489-1494. **IF: 1.84**
- 06 Sibila O, Meduri GU, Mortensen EM, Anzueto A, Laserna E, Fernandez JF, El-Sohl A, Restrepo MI. Improving the 2007 Infectious Disease Society of America/American Thoracic Society severe community-acquired pneumonia criteria to predict intensive care unit admission. (2013) J. Crit. Care, 28 (3), 284-290. **IF: 2.191**
- 07 Sibila O, Anzueto A, Restrepo MI. The paradoxical effect on pneumonia of chronic inhaled corticosteroids. (2013) J. Child Adolesc. Subst. Abuse., 20 (1), 6-10. **IF: 0.782**
- 08 Girschikofsky M, Arico M, Castillo D, Chu A, Doberauer C, Fichter J, Haroche J, Kaltsas GA, Makras P, Marzano AV, De Menthon M, Micke O, Passoni E, Seegenschmiedt HM, Tazi A, McClain KL. Management of adult patients with Langerhans cell histiocytosis: Recommendations from an expert panel on behalf of Euro-Histio-Net. (2013) Orphanet J. Rare Dis., 8 (1). **IF: 3.958**
- 09 Soto-Campos JG, Plaza V, Soriano JB, Cabrera-Lopez C, Almonacid-Sanchez C, Vazquez-Oliva R, Serrano J, Ballaz-Quincoces A, Padilla-Galo A, Santos V. "Causes of death in asthma, COPD and non-respiratory hospitalized patients: A multicentre study". (2013) BMC Pulm. Med., 13 (1). **IF: 2.489**
- 10 Plaza V, Ramos-Barbon D, Munoz AM, Fortuna AM, Crespo A, Murio C, Palomino R. Exhaled Nitric Oxide Fraction as an Add-On to ACQ-7 for Not Well Controlled Asthma Detection. (2013) PLoS One, 8 (10). **IF: 3.534**
- 11 Crespo-Lessmann A, Torrego-Fernandez A. Obstructive inflammatory tracheal pseudomembrane [Tabique traqueal inflamatorio]. (2013) Arch. Bronconeumol., 49 (9), 402-404. **IF: 1.816**
- 12 [No author name available] SEPAR-ALAT Consensus on Inhaled Therapies [Consenso SEPAR-ALAT sobre terapia inhalada]. (2013) Arch. Bronconeumol., 49 (SUPPL.1), 2-14. **IF: 1.816**
- 13 Roger A, Vazquez R, Almonacid C, Padilla A, Serrano J, Garcia-Salmones M, Molina F, Pinedo C, Torrejon M, Picado C, Lopez-Vina A, Plaza V. Knowledge of their own allergic sensitizations in asthmatic patients and its impact on the level of asthma control [Grado de conocimiento de las propias sensibilizaciones alérgicas en pacientes asmáticos y su repercusión en el nivel de control del asma]. (2013) Arch. Bronconeumol., 49 (7), 289-296. **IF: 1.816**
- 14 Braidó F, Brusselle G, Ingrassia E, Nicolini G, Price D, Roche N, Soriano JB, Worth H. International cross-sectional and longitudinal assessment on asthma control in European adult patients-the LIAISON study protocol. (2013) BMC Pulm. Med., 13 (1). **IF: 2.489**
- 15 Sibila O, Restrepo MI, Anzueto A. What is the Best Antimicrobial Treatment for Severe Community-Acquired Pneumonia (Including the Role of Steroids and Statins and Other Immunomodulatory Agents). (2013) Infect. Dis. Clin. North Am., 27 (1), 133-147. **IF: 2.312**
- 16 Sibila O, Restrepo MI. Editorial: Corticosteroids for pneumonia: Are we there yet?. (2013) Respirology, 18 (2), 199-200. **IF: 3.495**
- 17 Urrutia I, Plaza V, Pascual S, Cisneros C, Entrenas LM, Luengo MT, Caballero F. Asthma control and concordance of opinions between patients and pulmonologists. (2013) J. Asthma, 50 (8), 877-883. **IF: 1.828**
- 18 Quirce S, Munoz X, Urrutia I, Perez-Camino I, Sabadell C, Dominguez-Ortega J, Barranco P, Plaza V. Changes in the asthma control test score in patients with work-related asthma. (2013) J. Invest. Allergol. Clin. Immunol., 23 (4), 284-285. **IF: 2.642**
- 19 Sanchis J, Corrigan C, Levy ML, Viejo JL. Inhaler devices-From theory to practice. (2013) Respir. Med., 107 (4), 495-502. **IF: 2.917**
- 20 Braidó F, Brusselle G, Ingrassia E, Nicolini G, Price D, Roche N, Soriano JB, Worth H. International cross-sectional and longitudinal assessment on asthma control in European adult patients-the LIAISON study protocol. (2013) BMC Pulm. Med., 13 (1). **IF: 2.489**
- 21 Cimbolek S, Plaza V, Quirce S, Costa R, Urrutia I, Ojeda P, Garcia JL, Sabadell C, Blanco M, Rosado A, Roura P. Knowledge, attitude and adherence of Spanish healthcare professionals to asthma management recommendations during pregnancy. (2013) Allergol. Immunopath., 41 (2), 114-120. **IF: 1.58**
- 22 Watadani T, Sakai F, Johkoh T, Noma S, Akira M, Fujimoto K, Bankier AA, Lee KS, Muller NL, Song J-W, Park J-S, Lynch DA, Hansell DM, Remy-Jardin M, Franquet T, Sugiyama Y. Interobserver variability in the CT assessment of honeycombing in the lungs. (2013) Radiology, 266 (3), 936-944. **IF: 6.214**
- 23 Alonso-Coello P, Rigau D, Sanabria AJ, Plaza V, Miravittles M, Martinez L. Quality and strength: The GRADE system for formulating recommendations in clinical practice guidelines [Calidad y



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Scientific Production

- fuerza: El sistema GRADE para la formulación de recomendaciones en las guías de práctica clínica]. (2013) Arch. Bronconeumol., 49 (6), 261-267.  
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- 24 Acuna-Izcaray A, Sanchez-Angarita E, Plaza V, Rodrigo G, De Oca MM, Gich I, Bonfi LI X, Alonso-Coello P. Quality assessment of asthma clinical practice guidelines: A systematic appraisal. (2013) Chest, 144 (2), 390-397.  
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- 25 Haque R, Hakim A, Moodley T, Torrego A, Essilfie-Quaye S, Jazrawi E, Johnson M, Barnes PJ, Adcock IM, Usmani OS. Inhaled long-acting  $\beta_2$  agonists enhance glucocorticoid receptor nuclear translocation and efficacy in sputum macrophages in COPD. (2013) J. Allergy Clin. Immunol., 132 (5), 1166-1173.  
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- 26 Pajares V, Torrego A, Granel M, Szaf-ranska J, Mozos A, Puzo C. Recurrent Endobronchial Diffuse Large B-cell Lymphoma. Diagnosed by Cryoprobe [Recidiva endobronquial de linfoma difuso de células grandes B. Diagnósti-co con criosonda]. (2013) Arch. Bronconeumol., 49 (5), 210-212.  
**IF: 1.816**
- 27 Sanchez B, Vandersteen G, Martin I, Castillo D, Torrego A, Riu PJ, Schoukens J, Bragos R. In vivo electrical bio-impedance characterization of human lung tissue during the bronchoscopy procedure. A feasibility study. (2013) Med. Eng. Phys., 35 (7), 949-957.  
**IF: 1.839**

Books or Chapters

With ISBN

- ▶ V. Plaza and A. Crespo, Asthma (Chapter 5), In: Pascual Piñera Salmerón (ed), Urgencias Neumológicas. Editorial Saned, Madrid, 2013, DL: M-15505-2013. ISBN: 978-84-96835-70-2.
- ▶ V. Plaza, A. López-Viña and S. Quirce (eds), Asma Grave y Asma De Control Dificil, Sanidad y Ediciones, SL (SANED), Esplugues de Llogregat (Barcelona), 2013, DL: M-16604-2013. ISBN: 978-84-96835-71-9.
- ▶ V. Plaza, Diferencias entre las grandes guías de práctica clínica en el tratamiento del asma grave y en el del asma de control difícil (Chapter 15), In: V. Plaza, A. López-Viña and S. Quirce (eds), Asma Grave y Asma De Control Dificil, Sanidad y Ediciones, SL (SANED), Esplugues de Llogregat (Barcelona), 2013, DL: M-16604-2013. ISBN: 978-84-96835-71-9.
- ▶ V. Plaza and A. Crespo, Medidas no invasivas de la inflamación en el asma de control difícil (Chapter 3), In: A. López-Viña and C. Melero (eds), Asma Grave: Evidencias y Carencias, Viguera, Barcelona, 2013, DL: B.18091.2013. ISBN: 978-84-92931-32-3.
- ▶ J. Soriano and V. Plaza, Epidemiología del asma grave: el problema y el impacto (Chapter 1), In: A. López-Viña and C. Melero (eds), Asma Grave: Evidencias y Carencias, Viguera, Barcelona, 2013, DL: B.18091.2013. ISBN: 978-84-92931-32-3.

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Garcia-Bellmunt L, Sibila O, Restrepo MI, Anzueto A. Chronic bronchitis: a risk factor for bronchial infection. Eur Respir Monogr 2013;60:18-26.

AREA 3

# Haematological and Oncological D

**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

# iseases



# Clinical Oncology

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## Administrative Staff

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## Main Lines of Research

### Clinical

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

### Translational

- ▶ 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 0/1 studies).

## Active Grants

- ▶ Agustí Barnadas Molins (PI), Development of an algorithm to predict treatment response in patients with head and neck locally advanced squamous cell cancer, PI11-00525, FIS, Carlos III Health Institute.
- ▶ Agustí Barnadas Molins (PI), Identification of molecular markers predictors of genotoxic response in patients with locally advanced head and neck squamous cell cancer, Merck Serono Fundación Salud 2000 (2011 Call).
- ▶ Daniel Escuin Borrás (PI), Mechanism of action and resistance to taxanes in breast cancer, PI10-00307, FIS, Carlos III Health Institute.
- ▶ Teresa Ramon y Cajal Asensio (PI), Mammographic density, genetic susceptibility and breast cancer in women from high-risk families (DM-BRCA project), PI10, FIS, Carlos III Health Institute.
- ▶ Daniel Escuin Borrás (PI), Expression profile of miRNAs in primary breast tumor and sentinel lymph nodes: implications for the invasion mechanisms and value as metastatic markers, PI13-00110, FIS, Carlos III Health Institute.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Oncogenesis and Antitumour Drugs (Dr R Mangués).
- ▶ Molecular Pathology of Gynaecologic Cancer (Dr J Prat).
- ▶ Genetic Diseases (Dr M Baiget).
- ▶ Breast Cancer (Dr E Lerma).

### External Collaborations

- ▶ Tumoural progression modelling group at the Biomedical Research Institute (IRB) (Dr A Nebreda).
- ▶ Methylation and resistance to chemotherapy in ovarian cancer (Dr M Esteller).



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**ISI Web of Knowledge Indexed  
Publications with an IF**

- 01 Sebio A., Pare L., Paez D., Salazar J., Gonzalez A., Sala N., Del Rio E., Martin-Richard M., Tobena M., Barnadas A., Baiget M. The LCS6 polymorphism in the binding site of let-7 microRNA to the KRAS 3' untranslated region: Its role in the efficacy of anti-EGFR-based therapy in metastatic colorectal cancer patients. (2013) *Pharmacogenet. Genomics*, 23 (3), 142-147.  
**IF: 3.45**
- 02 Martin-Richard M., Gallego R., Pericay C., Foncillas J.G., Queralt B., Casado E., Barriuso J., Iranzo V., Juez I., Visa L., Saigi E., Barnadas A., Garcia-Albeniz X., Maurel J. Multicenter phase II study of oxaliplatin and sorafenib in advanced gastric adenocarcinoma after failure of cisplatin and fluoropyrimidine treatment. A gemcad study. (2013) *Invest. New Drugs*, 31 (6), 1573-1579.  
**IF: 2.927**
- 03 Del Barco S., Ciruelos E., Tusquets I., Ruiz M., Barnadas A. SEOM Clinical Guidelines for the systemic treatment of early breast cancer 2013. (2013) *Clin. Transl. Oncol.*, 15 (12), 1011-1017.  
**IF: 1.6**
- 04 Lasa A., Garcia A., Alonso C., Millet P., Cornet M., Cajal T.R., Baiget M., Barnadas A. Molecular Detection of Peripheral Blood Breast Cancer mRNA Transcripts as a Surrogate Biomarker for Circulating Tumor Cells. (2013) *PLoS One*, 8 (9).  
**IF: 3.534**
- 05 Tellez-Gabriel M., Arroyo-Solera I., Leon X., Gallardo A., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Quer M., Mangues M.A., Barnadas A., Mangues R., Pavon M.A. High RAB25 expression is associated with good clinical outcome in patients with locally advanced head and neck squamous cell carcinoma. (2013) *Toxicol. Res.*, 2 (6), 950-963.  
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**IF: 5.8**
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# Clinical Oncology

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

## Scientific Production

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**IF: 4.817**

# 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 for the mechanistic study of metastases and preclinical drug development
- ▶ Identification of prognostic biomarkers in head and neck squamous cell carcinoma and their functional validation in vivo
- ▶ Development of nanoconjugates for targeted drug delivery of antitumour drugs to metastasis-initiating cells

## Challenges

- ▶ Obtain funding to ensure stable employment of senior researchers, attract post-doctoral fellows and reinforce current collaborations with clinicians.
- ▶ Develop molecular markers for therapeutic decision-making in head and neck carcinomas.
- ▶ Achieve antimetastatic effects by targeting antitumour drugs to metastasis-initiating cells.
- ▶ Enhance international collaboration and participation in EU networks and industrial projects.

## Active Grants

- ▶ Mangues R, Development of metastatic colorectal cancer models to study tumour relapse, PI12/01861, FIS, Carlos III Health Institute, Jan 2013-Dec 2014, €220,000.
- ▶ Mangues R, International Cooperative Project. ATL: Oncogenesis induced by HTLV-1 and inhibition of focal adhesions as a therapeutic strategy, PIB2010BZ-00563, Spanish Ministry of Economy and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq, Brazil), 15 Dec 2010-14 Dec 2013, €140,000.
- ▶ Barnadas A, Development of an algorithm predictor of response to therapy in locally advanced head and neck cancer patients, PS09/00334, FIS, Carlos III Health Institute, Jan 2010- Dec 2013, €220,715.
- ▶ Sierra J, Minimal residual disease in acute myeloid leukaemia: involvement of the bone marrow microenvironment and evaluation of nanoparticles for targeted gene therapy, PI11/00872, FIS, Carlos III Health Institute, Jan 2012-Dec 2014, €213,565.
- ▶ Sierra J, Coordinated Project: Evaluation of focal adhesions as novel therapeutic targets in acute myeloid leukaemia, 2010-100830, Marató de TV3 Foundation, HSCSP (coordinator) with Hospital Universitari La Fe de Valencia and Hospital Universitario de Salamanca, 4 Mar 2011-4 Mar 2014, €403,750.
- ▶ Trias M, Coordinated Project: Development of nanomedicines for enzyme replacement therapy in Fabry disease, 2010-101233, La Marató de TV3 Foundation, Hospital Vall d'Hebron (coordinator: S. Schwartz) with HSCSP, IBEC, ICMB-CSIC and UAB, 4 Mar 2011-4 Mar 2014, €475,050.

Research Network Participation

- ▶ Mangués R, HypoxiaNet, Hypoxia sensing, signalling and adaptation, Roland H. Wenger, University of Zurich, Switzerland (chair), EU COST Action TD0901, 16 Dec 2009-15 Nov 2013, €480,000.
- ▶ Mangués R, CIBER- Bioengineering, Biomaterials and Nanomedicine, CB06/01/1031, Carlos III Health Institute, Jan 2013-Dec 2013, €98,000.
- ▶ Mangués R. Oncogenesis and Antitumour Drugs Group (IIB-Sant Pau), 2009-SGR-1437, AGAUR (consolidated research group funding), Jan 2009-Dec 2013, €69,680.

Transfer Products

- ▶ Mangués R. Lead optimization for innovative, orally bioavailable wide spectrum antitumour drugs (Wis-pATDrug). Consortium: Elexopharm (Germany), Pharmacelsus (Germany), PharmBioTech (Germany), Admescope SBW/Novamass Ltd (Finland). Coordinator SME: Argon Pharma (Barcelona, Spain), Argon Pharma legal representative: R. Mangués, EU, 1.1.2013-31.12.2015, RDNET12-1-0003, EUROTRANS-BIO, €1,500,000.

Patents

- ▶ Vazquez E, Unzueta U, Ferrer N, Villaverde A, Céspedes MV, Casanova I, Mangués R, Methods and reagents for efficient and targeted delivery of therapeutic molecules to CXCR4 cells, Institut de Recerca, HSCSP, UAB and CIBER-BBN (titleholders), USA, China, Japan and EU (PCT Int. Appl. Number: 13/979560; UIS Application PTO/SB/01A(09-12)), 12 July 2013.
- ▶ Mangués R, Casanova I, Albericio, Alvarez M, Savina S, Antitumour 1,2-diphenylpyrrole compounds and their preparation process, Argon Pharma SL (titleholder), EU, USA, China, Japan and Canada (EPO P1381EP01), 26 June 2013 (Intention to Grant).

Collaborations

Collaborations with IIB Sant Pau Groups

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

External Collaborations

- ▶ Alberto Bardelli, InstitutE for Cancer Research and Treatment, ICRT, Candiolo, Italy.

- ▶ Arne Östman, Cancer Center Karolinska, Karolinska Institutet, Stockholm, Sweden.
- ▶ Achilea Bittencourt, Conselho Nacional de Desenvolvimento Científico, Salvador, Brazil.
- ▶ Lourdes Farré Vallvé, Gonçalo Moniz Research Centre (FIOCRUZ), Salvador, Brazil.
- ▶ Antonio Villaverde, Universitat Autònoma de Barcelona, Spain.
- ▶ Ramon Eritja, CSIC, Barcelona, Spain.
- ▶ Eduard Batlle, Biomedical Research Institute, Barcelona, Spain.
- ▶ Roger Gomis, Biomedical Research Institute, Barcelona, Spain.
- ▶ Felix Bonilla, Hospital Puerta del Hierro, Madrid, Spain.

\*TIF: 22.722 \*\*MIF: 4.544

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- |   |  |   |
|---|--|---|
| <p>01 Pena C., Cespedes M.V., Lindh M.B., Kiflemariam S., Mezheyeuski A., Edqvist P.-H., Hagglof C., Birgisson H., Bojmar L., Jirstrom K., Sandstrom P., Olsson E., Veerla S., Gallardo A., Sjoblom T., Chang A.C.-M., Reddel R.R., Mangués R., Augsten M., Ostman A. STC1 expression by cancer-associated fibroblasts drives metastasis of colorectal cancer. (2013) <i>Cancer Res.</i>, 73 (4), 1287-1297.<br/><b>IF: 9.284</b></p> <p>02 Hoyos M., Nomdedeu J.F., Esteve J., Duarte R., Ribera J.M., Llorente A., Escoda L., Bueno J., Tormo M., Gallardo D., de Llano M.P.Q., Marti J.M., Aventin A., Mangués</p> | <p>R., Brunet S., Sierra J. Core binding factor acute myeloid leukemia: The impact of age, leukocyte count, molecular findings and minimal residual disease. (2013) <i>Eur. J. Haematol.</i>, 91 (3), 209-218.<br/><b>IF: 2.414</b></p> <p>03 Unzueta U., Saccardo P., Ferrer-Miralles N., Garcia-Fruitos E., Vazquez E., Villaverde A., Cortes F., Mangués R. Improved performance of protein-based recombinant gene therapy vehicles by tuning downstream procedures. (2013) <i>Biotechnol. Prog.</i>, 29 (6), 1458-1463.<br/><b>IF: 1.883</b></p> <p>04 Bosch R., Moreno M.J., Dieguez-Gonzalez R., Cespedes M.V., Gallardo A., Trias M., Granena A., Sierra J., Casanova I., Mangués R. A novel orally available in-</p> | <p>hibitor of focal adhesion signaling increases survival in a xenograft model of diffuse large B-cell lymphoma with central nervous system involvement. (2013) <i>Haematologica</i>, 98 (8), 1242-1249.<br/><b>IF: 5.868</b></p> <p>05 Tellez-Gabriel M., Arroyo-Solera I., Leon X., Gallardo A., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Quer M., Mangués M.A., Barnadas A., Mangués R., Pavon M.A. High RAB25 expression is associated with good clinical outcome in patients with locally advanced head and neck squamous cell carcinoma. (2013) <i>Toxicol. Res.</i>, 2 (6), 950-963.<br/><b>IF: 3.273</b></p> |
|---|--|---|

\*Total Impact Factor \*\*Mean Impact Factor

# Haematological Diagnosis

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Camino Estivill HSCSP  
Francisca Fuentes HSCSP  
Nieves Hernández HSCSP  
Rosa Ortín HSCSP  
Jana Sánchez HSCSP  
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Josep Úbeda HSCSP



## Main Lines of Research

### Malignant Haemopathologies

- ▶ Diagnostic activities: morphological, immunophenotyping, cytogenetic and molecular characterization (particularly of acute leukaemias).
- ▶ Biological characteristics responding to therapy.
- ▶ New treatments using cell line models aimed at molecular targets.
- ▶ Genomic (microarrays) and proteomic platforms for diagnosis.
- ▶ Murine models development.

### Noncancerous Haemopathologies

- ▶ 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.
- ▶ 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 characterization of haematological tumours and complex, rare and genetic noncancerous 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 neoplasms and noncancerous pathologies.
- ▶ Develop functional cell culture and animal (murine) models.
- ▶ Consolidate cooperation with the GAIT-2 project, especially regarding platelet and other blood cell participation in thrombosis generation.
- ▶ Promote interaction and stable links with internal groups (clinical haematology, pathology, gastrointestinal, haemostasis and thrombosis, complex disease genomics areas) and with other groups in Spain and abroad, especially those with complementary technologies.

## Active Grants

- ▶ Josep F Nomdedéu Guinot (PI), WT1 mRNA levels in myeloid malignancies: digital PCR methods for prognostic stratification and relapse management, PI13/02729, FIS, Ministry of Science and Innovation (health research projects), 2014-2016.
- ▶ Diagnostic haematology, SGR 383, AGAUR, 2014.



**Collaborations with IIB Sant Pau Group**

- ▶ Haematology (Dr Sierra)
- ▶ Genetics (Dr Baiget)
- ▶ Proteins (Dr Pablo Fuentes Prior)

**External Collaborations**

- ▶ Dr A Bigas, IMIM Hospital del Mar.
- ▶ Dr Pablo Menéndez, Josep Carreras Foundation (Hospital Clínic).
- ▶ Dr Alberto Villanueva, IDIBELL-Bellvitge Biomedical Research Institute.

\*TIF: 67.748 \*\*MIF: 5.211

**ISI Web of Knowledge Indexed Publications with an IF**

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**IF: 2.414**
- 02 Rossi D., Spina V., Bomben R., Rasi S., Dal-Bo M., Brusca A., Rossi F.M., Monti S., Degan M., Ciardullo C., Serra R., Zucchetto A., Nomdedeu J., Bulian P., Grossi A., Zaja F., Pozzato G., Laurenti L., Efremov D.G., Di-Raimondo F., Marasca R., Forconi F., Del Poeta G., Gaidano G., Gattei V. Association between molecular lesions and specific B-cell receptor subsets in chronic lymphocytic leukemia. (2013) *Blood*, 121 (24), 4902-4905.  
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- 03 Nomdedeu J.F., Hoyos M., Carricondo M., Bussaglia E., Estivill C., Esteve J., Tormo M., Duarte R., Salamero O., De Llano M.P.Q., Garcia A., Bargay J., Heras I., Marti-Tutusaus J.M., Llorente A., Ribera J.M., Gallardo D., Aventin A., Brunet S., Sierra J. Bone marrow WT1 levels at diagnosis, post-induction and post-intensification in adult de novo AML. (2013) *Leukemia*, 27 (11), 2157-2164.  
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- 04 Pratcorona M., Brunet S., Nomdedeu J., Ribera J.M., Tormo M., Duarte R., Escoda L., Guardia R., Queipo de Llano M.P., Salamero O., Bargay J., Pedro C., Marti J.M., Torreadell M., Diaz-Beya M., Camos M., Colomer D., Hoyos M., Sierra J., Esteve J., Grupo Cooperativo Para el Estudio y Tratamiento de las Leucemias Agudas Mieloblasticas Favorable outcome of patients with acute myeloid leukemia harboring a low-allelic burden FLT3-ITD mutation and concomitant NPM1 mutation: relevance to post-remission therapy. (2013) *Chem. Rec.*, 121 (14), 2734-2738.  
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- 05 Travella A., Ripolles L., Aventin A., Rodriguez A., Bezares R.F., Caballin M.R., Slavutsky I. Structural alterations in chronic lymphocytic leukaemia. Cytogenetic and FISH analysis. (2013) *Hematol. Oncol.*, 31 (2), 339-347.  
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- 06 Rossi D., Rasi S., Spina V., Brusca A., Monti S., Ciardullo C., Deambrogi C., Khiabanian H., Serra R., Bertoni F., Forconi F., Laurenti L., Marasca R., Dal-Bo M., Rossi F.M., Bulian P., Nomdedeu J., Del Poeta G., Gattei V., Pasqualucci L., Rabadan R., Foa R., Dalla-Favera R., Gaidano G. Integrated mutational and cytogenetic analysis identifies new prognostic subgroups in chronic lymphocytic leukemia. (2013) *Blood*, 121 (8), 1403-1412.  
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- 07 Sandoval J., Heyn H., Mendez-Gonzalez J., Gomez A., Moran S., Baiget M., Melo M., Badell I., Nomdedeu J.F., Esteller M. Genome-wide DNA methylation profiling predicts relapse in childhood B-cell acute lymphoblastic leukaemia. (2013) *Br. J. Haematol.*, 160 (3), 406-409.  
**IF: 4.959**
- 08 Puiggros A., Delgado J., Rodriguez-Vicente A., Collado R., Aventin A., Luno E., Grau J., Hernandez J.A., Marugan I., Ardanaz M., Gonzalez T., Valiente A., Osma M., Calasanz M.J., Sanzo C., Carrio A., Ortega M., Santacruz R., Abrisqueta P., Abella E., Bosch F., Carbonell F., Sole F., Hernandez J.M., Espinet B. Biallelic losses of 13q do not confer a poorer outcome in chronic lymphocytic leukaemia: Analysis of 627 patients with isolated 13q deletion. (2013) *Br. J. Haematol.*, 163 (1), 47-54.  
**IF: 4.959**
- 09 Wright I., Blanco-Rojo R., Fernandez M.C., Toxqui L., Moreno G., Perez-Granados A.M., De La Piedra C., Remacha A.F., Vaquero M.P. Bone remodelling is reduced by recovery from iron-deficiency anaemia in premenopausal women. (2013) *J. Physiol. Biochem.*, 69 (4), 889-896.  
**IF: 2.496**
- 10 Prim N., Remacha A., Sanchez-Reus F., Brio S., Ayats R., Munoz C. Candidaemia detected on direct blood smears. (2013) *Eur. J. Haematol.*, 90 (6), 536-537.  
**IF: 2.414**
- 11 Remacha A.F., Sarda M.P., Canals C., Queralto J.M., Zapico E., Remacha J., Carrascosa C. Combined cobalamin and iron deficiency anemia: A diagnostic approach using a model based on age and homocysteine assessment. (2013) *Ann. Hematol.*, 92 (4), 527-531.  
**IF: 2.396**



# Ear, Nose, Throat Cancer

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HSCSP

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Humbert Massegur  
Joan Montserrat  
César Orús  
M. del Prado Venegas

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## Main Lines of Research

- ▶ Genetic and molecular predictors of response to head and neck cancer (with the Oncogenesis and Antitumour Drugs group).
- ▶ Molecular mechanisms of inflammation in head and neck cancer (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 into 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

- ▶ Xavier León, Role of the IL-1/NF- $\kappa$ B axis in squamous cell head and neck cancers, FIS PI11/02380, Carlos III Health Institute, 2012-2014, €84,000.
- ▶ Ramón Mangues Bafalluy, Oncogenesis and Antitumoural Group, Consolidated Research Group, AGAUR (Generalitat de Catalunya), 2009-2013.
- ▶ Manuel Doblaré (scientific director) and Ramón Mangues Bafalluy (PI), Participation in CIBER-Bioengineering, Biomaterials and Nanomedicine, Carlos III Health Institute and Ministry of Science and Innovation, 2010-2013.
- ▶ F X Bosch José (PI), The etiologic and prognostic role of papillomavirus in patients with oropharyngeal cancer, National R+D+I Plan 2011-2014, 2011-2014.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Angiology, Vascular Biology and Inflammation (Dr Vila).
- ▶ Oncogenesis and Antitumour Drugs (Dr Mangues).
- ▶ Translational Molecular Oncology (Dr Matilde Parreño).

### External Collaborations

- ▶ Catalan Institute of Oncology: epidemiology (Dr X Bosch).
- ▶ Catalan Institute of Oncology: oncology (Dr Ricard Mesia).
- ▶ Hospital Joan XXIII: head and neck cancer (Dr FJ Avilés).
- ▶ Hospital Central de Asturias: head and neck cancer (Dr C Suárez).

Doctoral Theses

- ▶ Susana López Fernández, Free-flap reconstructive surgery for head and neck carcinomas. Clinical and biological prognostic factors related to complications, Faculty of Medicine, Universidad Autónoma de Barcelona, May 2013.
- ▶ Katarzyna Alicja Kolanczak, Global electromyographic pattern of the human larynx. Function of the laryngeal connections, Faculty of Medicine, Universidad Autónoma de Barcelona, July 2013.
- ▶ Laura Gañán Albuissech, Results of rescue surgery head and neck tumour relapse, Faculty of Medicine, Universidad Autónoma de Barcelona, Oct 2013.
- ▶ Gabriel Pedemonte Sarrias, Management of CN 0 ganglia in local relapse and second head and neck neoplasms, Faculty of Medicine, Universidad Autónoma de Barcelona, Oct 2013.

\*TIF: 20.232 \*\*MIF: 3.372

Scientific Production

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| <p>01 Viros D., Camacho M., Zarraonandia I., Garcia J., Quer M., Vila L., Leon X. Prognostic role of MMP-9 expression in head and neck carcinoma patients treated with radiotherapy or chemoradiotherapy. (2013) <i>Oral Oncol.</i>, 49 (4), 322-325.<br/><b>IF: 3.029</b></p> <p>02 Hilgers F.J.M., Lorenz K.J., Maier H., Meeuwis C.A., Kerrebijn J.D.F., Vander Poorten V., Vinck A.S., Quer M., Van Den Brekel M.W.M. Development and (pre-) clinical assessment of a novel surgical tool for primary and secondary tracheoesophageal puncture with immediate voice prosthesis insertion, the Provox Vega Puncture Set. (2013) <i>Eur. Arch. Oto-Rhino-Laryn.</i>, 270 (1), 255-262.<br/><b>IF: 1.608</b></p> | <p>03 De Juan J., Garcia J., Lopez M., Orus C., Esteller E., Quer M., Leon X. Inclusion of extracapsular spread in the pTNM classification system: A proposal for patients with head and neck carcinoma. (2013) <i>JAMA Otolaryngol-Head Neck Surg.</i>, 139 (5), 483-488.<br/><b>IF: N/D</b></p> <p>04 Quintana A., Aviles F.X., Terra X., Alcolea S., Camacho M., Quer M., Vila L., Leon X. Overexpression of the nuclear factor-kappa B (p65) in association with local failure in patients with head and neck carcinoma undergoing radiotherapy or chemoradiotherapy. (2013) <i>Head Neck-J. Sci. Spec. Head Neck</i>, 35 (3), 370-375.<br/><b>IF: 3.006</b></p> <p>05 Merlo A., De Quiros S.B., De Santa-Maria I.S., Pitiot A.S., Balbin M., Astudillo A., Scola B., Aristegui M., Quer M., Suarez C., Chiara M.-D. Identification of somatic VHL gene mutations in sporadic head and neck paragangliomas</p> | <p>in association with activation of the HIF-1α/miR-210 signaling pathway. (2013) <i>J. Clin. Endocrinol. Metab.</i>, 98 (10), 1661-1666.<br/><b>IF: 6.31</b></p> <p>06 Tellez-Gabriel M., Arroyo-Solera I., Leon X., Gallardo A., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Quer M., Mangues M.A., Barnadas A., Mangues R., Pavon M.A. High RAB25 expression is associated with good clinical outcome in patients with locally advanced head and neck squamous cell carcinoma. (2013) <i>Toxicol. Res.</i>, 2 (6), 950-963.<br/><b>IF: 3.273</b></p> <p>07 Aviles-Jurado F.X., Leon X. Prognostic factors in head and neck squamous cell carcinoma: Comparison of CHAID decision trees technology and cox analysis. (2013) <i>Head Neck-J. Sci. Spec. Head Neck</i>, 35 (6), 877-883.<br/><b>IF: 3.006</b></p> |
|---|--|---|

Books or Chapters

With ISBN

- ▶ León X, Quer M, Papel actual de la cirugía en el tratamiento multidisciplinar del cáncer de cabeza y cuello. Impacto de las nuevas modalidades terapéuticas. Cambio de paradigmas in: Estado del Arte del Tratamiento Quirúrgico del Cáncer de Cabeza y Cuello, Gregorio Sánchez Aniceto (ed), Colección Biblioteca Oncológica Merck Serono, Madrid, 2013, Ch. 1. pp. 1-18, ISBN 978-84-695-7063-0.

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Pedemonte-Sarrias G, Villatoro-Solagaistoa JC, Ale-Inostroza P, López-Vilas M, León-Vintró X, Quer-Agustí, M.: Adherencia crónica al humidificador de traqueostoma en pacientes laringectomizados. *Acta Otorrinolaringol Esp.* 2013; 64: 247-52
- ▶ Gras-Cabrerizo JR, Muñoz-Hernández F, Montserrat-Gili JR, Tresserras-Ribo P, de Juan-Delago M, Webb SM, Aulinas-Masó A, Martín-Huerta B, Molet-Teixidó J, Quer-Agustí M, Masegur-Solench H.: Integración de la cirugía endoscópica en una unidad de base de cráneo: experiencia en los primeros 72 casos. *Acta Otorrinolaringol Esp.* 2013; 64: 169-175.

# Oncology/Haematology and Transplantation

## Coordinator

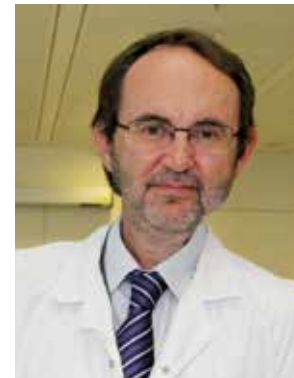
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## Main Lines of Research

- ▶ 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 targeting molecular mechanisms.
- ▶ Design of new modalities of haematopoietic stem-cell transplantation and cell therapy.
- ▶ Psychological intervention and quality of life in patients with haematological malignancies.

## Challenges

- ▶ Identify new prognostic parameters for risk and therapeutic stratification.
- ▶ Evaluate targeted therapy in cell lines and animal models (with the Oncogenesis and Antitumour Drugs group).
- ▶ Reduce toxicity and increase availability of allogeneic transplants.
- ▶ Molecularly characterize acute myeloid leukaemia and determine the prognostic value of known genes and other genes of uncertain significance (with the Haematology Laboratory).
- ▶ Model leukaemia and lymphoma in animals to better understand cell pathophysiology and test new drugs (with the Oncogenesis and Antitumour Drugs group).
- ▶ Molecularly characterize and determine the prognostic significance of cell pathophysiology and immunotherapy for lymphoproliferative diseases and evaluate antitumour immunotherapy in animals and humans.

## Transfer Products

- ▶ Rawstron AC, Böttcher S, Letestu R, Villamor N, Fazi C, Kartsios H, de Tute RM, Shingles J, Ritgen M, Moreno C, Lin K, Pettitt AR, Kneba M, Montserrat E, Cymbalista F, Hallek M, Hillmen P, Ghia P (European Research Initiative in CLL), Improving efficiency and sensitivity: European Research Initiative in CLL (ERIC) update on the international harmonised approach for flow cytometric residual disease monitoring in CLL, 2013 Jan;27(1):142-9. DOI: 10.1038/leu.2012.216. Epub 2012 Jul 31.

Active Grants

- ▶ Sierra J, Analysis of FcγRIIb expression and function in normal B cells and in chronic lymphatic leukaemia, Cellex Foundation, 2013-2016, €133,000.
- ▶ Sierra J, Evaluation of focal adhesions as a new therapeutic target in acute myeloid leukaemia, 100830/31/32, La Marató de TV3, 2011-2013, €403,750.
- ▶ Sierra J, Minimal residual disease in acute myeloid leukaemia: involvement of bone marrow microenvironment and evaluation of a new nanoparticle for targeted therapy, PI01100872, FIS, Carlos III Health Institute, 2012-2014, €252,258.
- ▶ Moreno C, Immunophenotypic and molecular characterization of residual leukaemic cells posttreatment in patients with chronic lymphatic leukaemia, PI01101740, FIS, Carlos III Health Institute, 2012-2014, €90,000.
- ▶ Brunet S, Prospective phase I/II toxicity and efficacy study of treatment of de novo acute myeloid leukaemia with the combination of increasing doses of idarubicin and cytarabine and priming with G-CSF, EC11-364FIS, Carlos III Health Institute, 2012-2014, €90,000.
- ▶ Sierra J, Diagnosis and treatment of haematological malignancies, 2009SGR-168, AGAUR (grants to support research groups in Catalonia), 2009-2013, €46,800.
- ▶ Sierra J, Cooperative Cancer Research Network (RTICC), RD12/0036/0071, Carlos III Health Institute, 2012-2016, €90,850.
- ▶ Briones J, Preclinical study of stimulation of immune response to B lymphoma by adenovirus recombined with the survivin and immunostimulatory genes, Cellex Foundation, 2012-2015, €137,400.

Collaborations

**Collaborations with IIB Sant Pau Groups**

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

**External Collaborations**

- ▶ Haematologic cancer programme groups, Carlos III Health Institute Cooperative Cancer Research Network (RTICC): J Sierra, coordinator.

- ▶ European Research Initiative on Chronic Lymphocytic Leukemia (ERIC): C Moreno, coordinator.
- ▶ Spanish lymphoma transplantation groups (GELTAMO): J Briones, S Novelli
- ▶ Spanish haematologic malignancies consortium (PETHEMA): J Sierra, M Granell, S Brunet
- ▶ Spanish CETLAM acute myeloid leukaemia and myelodysplasia group hospitals: coordinator, S Brunet.
- ▶ European Leukaemia Network of Excellence groups.

\*TIF: 133.741 \*\*MIF: 4.953

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Nomdedeu J.F., Hoyos M., Carricondo M., Bussaglia E., Estivill C., Esteve J., Tormo M., Duarte R., Salameo O., De Llano M.P.Q., Garcia A., Bargay J., Heras I., Marti-Tutusaus J.M., Llorente A., Ribera J.M., Gallardo D., Aventin A., Brunet S., Sierra J. Bone marrow WT1 levels at diagnosis, post-induction and post-intensification in adult de novo AML. (2013) *Leukemia*, 27 (11), 2157-2164. **IF: 9.379**
- 02 Hoyos M., Nomdedeu J.F., Esteve J., Duarte R., Ribera J.M., Llorente A., Escoda L., Bueno J., Tormo M., Gallardo D., de Llano M.P.Q., Marti J.M., Aventin A., Mangues R., Brunet S., Sierra J. Core binding factor acute myeloid leukemia: The impact of age, leukocyte count, molecular findings and minimal residual disease. (2013) *Eur. J. Haematol.*, 91 (3), 209-218. **IF: 2.414**
- 03 Bosch R., Moreno M.J., Dieguez-Gonzalez R., Cespedes M.V., Gallardo A., Trias M., Granena A., Sierra J., Casanova I., Mangues R. A novel orally available inhibitor of focal adhesion signaling increases survival in a xenograft model of diffuse large B-cell lymphoma with central nervous system involvement. (2013) *Haematologica*, 98 (8), 1242-1249. **IF: 5.868**
- 04 Pratorcorona M., Brunet S., Nomdedeu J., Ribera J.M., Tormo M., Duarte R., Escoda L., Guardia R., Queipo de Llano M.P., Salameo O., Bargay J., Pedro C., Marti J.M., Torrealbadell M., Diaz-Beya M., Camos M., Colomer D., Hoyos M., Sierra J., Esteve J., Grupo Cooperativo Para el Estudio y Tratamiento de las Leucemias Agudas Mieloblasticas Favorable outcome of patients with acute myeloid leukemia harboring a low-allelic burden FLT3-ITD mutation and concomitant NPM1 mutation: relevance to post-remission therapy.. (2013) *Chem. Rec.*, 121 (14), 2734-2738. **IF: 5.577**
- 05 Brunet S., Martino R., Sierra J. Hematopoietic transplantation for acute myeloid leukemia with internal tandem duplication of FLT3 gene (FLT3/ITD). (2013) *Curr. Opin. Oncol.*, 25 (2), 195-204. **IF: 3.761**
- 06 Valera A., Lopez-Guillermo A., Cardesa-Salzmann T., Climent F., Gonzalez-Barca E., Mercadal S., Espinosa I., Novelli S., Briones J., Mate J.L., Salameo O., Sancho J.M., Arenillas L., Serrano S., Erill N., Martinez D., Castillo P., Rovira J., Martinez A., Campo E., Colomo L. MYC protein expression and genetic alterations have prognostic impact in patients with diffuse large B-cell lymphoma treated with immunochemotherapy. (2013) *Haematologica*, 98 (10), 1554-1562. **IF: 5.868**
- 07 Bertolo C., Roa S., Sagardoy A., Mena-Varas M., Robles E.F., Martinez-Ferrandis J.I., Sagaert X., Tousseyn T., Orta A., Lossos I.S., Amar S., Natkunam Y., Briones J., Melnick A., Malumbres R., Martinez-Climent J.A. LITAF, a BCL6 target gene, regulates autophagy in mature B-cell lymphomas. (2013) *Br. J. Haematol.*, 162 (5), 621-630. **IF: 4.959**
- 08 Perez-Simon J.A., Martino R., Parody R.,

\*Total Impact Factor \*\*Mean Impact Factor



## Oncology/Haematology and Transplantation

\*TIF: 133.741 \*\*MIF: 4.953

## Scientific Production

- Cabrero M., Lopez-Corral L., Valcarcel D., Martinez C., Solano C., Vazquez L., Marquez-Malaver F.J., Sierra J., Caballero D. The combination of sirolimus plus tacrolimus improves outcome after reduced-intensity conditioning, unrelated donor hematopoietic stem cell transplantation compared with cyclosporine plus mycophenolate. (2013) *Haematologica*, 98 (4), 526-532.  
**IF: 5.868**
- 09 Barba P., Valcarcel D., Perez-Simon J.A., Fernandez-Aviles F., Pinana J.L., Martino R., Lopez-Anglada L., Rovira M., Garcia-Cadenas I., Novelli S., Carreras E., Lopez Corral L., Sierra J. Impact of Hyperferritinemia on the Outcome of Reduced-Intensity Conditioning Allogeneic Hematopoietic Cell Transplantation for Lymphoid Malignancies. (2013) *Biol. Blood Marrow Transplant.*, 19 (4), 597-601.  
**IF: 3.348**
- 10 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. (2013) *Biol. Blood Marrow Transplant.*, 19 (3), 435-439.  
**IF: 3.348**
- 11 Paiva B., Vidriales M.-B., Rosinol L., Martinez-Lopez J., Mateos M.-V., Ocio E.M., Montalban M.-A., Cordon L., Gutierrez N.C., Corchete L., Oriol A., Terol M.-J., Echeveste M.-A., De Paz R., De Arriba F., Palomera L., De La Rubia J., Diaz-Mediavilla J., Granell M., Gorosquieta A., Alegre A., Orfao A., Lahuerta J.-J., Blade J., Miguel J.F.S. A multiparameter flow cytometry immunophenotypic algorithm for the identification of newly diagnosed symptomatic myeloma with an MGUS-like signature and long-term disease control. (2013) *Leukemia*, 27 (10), 2056-2061.  
**IF: 9.379**
- 12 Guillem V., Hernandez-Boluda J.C., Gallardo D., Buno I., Bosch A., Martinez-Laperche C., de la Camara R., Brunet S., Martin C., Nieto J.B., Martinez C., Perez A., Montoro J., Garcia-Noblejas A., Solano C. A polymorphism in the TYMP gene is associated with the outcome of HLA-identical sibling allogeneic stem cell transplantation. (2013) *Am. J. Hematol.*, 88 (10), 883-889.  
**IF: 3.477**
- 13 Ferrer G., Navarro A., Hodgson K., Aymerich M., Pereira A., Baumann T., Monzo M., Moreno C., Montserrat E. MicroRNA expression in chronic lymphocytic leukemia developing autoimmune hemolytic anemia. (2013) *Leuk. Lymphoma*, 54 (9), 2016-2022.  
**IF: 2.605**
- 14 Pajares V., Torrego A., Granell M., Szafarska J., Mozos A., Puzo C. Recurrent Endobronchial Diffuse Large B-cell Lymphoma. Diagnosed by Cryoprobe [Recidiva endobronquial de linfoma difuso de células grandes B. Diagnóstico con criosonda]. (2013) *Arch. Bronconeumol.*, 49 (5), 210-212.  
**IF: 1.816**
- 15 Ribrag V., Caballero D., Ferme C., Zucca E., Arranz R., Briones J., Gisselbrecht C., Salles G., Gianni A.M., Gomez H., Kahatt C., Corrado C., Szyldergemajn S., Extremera S., de Miguel B., Cullell-Young M., Cavalli F. Multicenter phase II study of plitidepsin in patients with relapsed/refractory non-Hodgkin's lymphoma. (2013) *Haematologica*, 98 (3), 357-363.  
**IF: 5.868**
- 16 Rawstron A.C., Bottcher S., Letestu R., Villamor N., Fazi C., Kartsios H., De Tute R.M., Shingles J., Ritgen M., Moreno C., Lin K., Pettitt A.R., Kneba M., Montserrat E., Cymbalista F., Hallek M., Hillmen P., Ghia P. Improving efficiency and sensitivity: European research initiative in CLL (ERIC) update on the international harmonised approach for flow cytometric residual disease monitoring in CLL. (2013) *Leukemia*, 27 (1), 142-149.  
**IF: 9.379**
- 17 Brand R., Putter H., van Biezen A., Niederwieser D., Martino R., Mufti G., Onida F., Symeonidis A., Schmid C., Garderet L., Robin M., van Gelder M., Finke J., Bornhauser M., Kobbe G., Germing U., de Witte T., Kroger N. Comparison of Allogeneic Stem Cell Transplantation and Non-Transplant Approaches in Elderly Patients with Advanced Myelodysplastic Syndrome: Optimal Statistical Approaches and a Critical Appraisal of Clinical Results Using Non-Randomized Data. (2013) *PLoS One*, 8 (10).  
**IF: 3.534**
- 18 Styczynski J., Gil L., Tridello G., Ljungman P., Donnelly J.P., Van Der Velden W., Omar H., Martino R., Halkes C., Faraci M., Theunissen K., Kalwak K., Hübacek P., Sica S., Nozzoli C., Fagioli F., Matthes S., Diaz M.A., Migliavacca M., Balduzzi A., Tomaszewska A., Camara R.D.L., Van Biezen A., Hoek J., Iacobelli S., Einsele H., Cesaro S. Response to rituximab-based therapy and risk factor analysis in Epstein Barr virus-related lymphoproliferative disorder after hematopoietic stem cell transplant in children and adults: A study from the infectious diseases working party of the European group for blood and marrow transplantation. (2013) *Clin. Infect. Dis.*, 57 (6), 794-802.  
**IF: 9.416**
- 19 Martin-Antonio B., Suarez-Lledo M., Arroyos M., Fernandez-Aviles F., Martinez C., Rovira M., Espigado I., Gallardo D., Bosch A., Buno I., Martinez-Laperche C., Jimenez-Velasco A., De La Camara R., Brunet S., Nieto J.B., Urbano-Ispizua A. A variant in IRF3 impacts on the clinical outcome of AML patients submitted to Allo-SCT. (2013) *Bone Marrow Transplant.*, 48 (9), 1205-1211.  
**IF: 3.466**
- 20 Caballero-Velazquez T., Lopez-Corral L., Encinas C., Castilla-Llorente C., Martino R., Rosinol L., Sampol A., Caballero D., Serrano D., Heras I., San Miguel J., Perez-Simon J.A. Phase II clinical trial for the evaluation of bortezomib with the reduced intensity conditioning regimen (RIC) and post-allogeneic transplantation for high-risk myeloma patients. (2013) *Br. J. Haematol.*, 162 (4), 474-482.  
**IF: 4.959**
- 21 Ribera J.-M., Garcia O., Grande C., Esteve J., Oriol A., Bergua J., Gonzalez-Campos J., Vall-Llovera F., Tormo M., Hernandez-Rivas J.-M., Garcia D., Brunet S., Alonso N., Barba P., Miralles P., Llorente A., Montesinos P., Moreno M.-J., Hernandez-Rivas J.-A., Bernal T. Dose-intensive chemotherapy including rituximab in Burkitt's leukemia or lymphoma regardless of human immunodeficiency virus infection status: Final results of a phase 2 study (Burkimab). (2013) *Cancer*, 119 (9), 1660-1668.  
**IF: 4.901**
- 22 Foran J.M., Pavletic S.Z., Logan B.R., Agovi-Johnson M.A., Perez W.S., Bolwell B.J., Bornhauser M., Bredeson C.N., Cairo M.S., Camitta B.M., Copelan E.A., Dehn J., Gale R.P., George B., Gupta V., Hale G.A., Lazarus H.M., Litzow M.R., Maharaj D., Marks D.I., Martino R., Maziarz R.T., Rowe J.M., Rowlings P.A., Savani B.N., Savoie M.L., Szer J., Waller E.K., Wiernik P.H., Weisdorf D.J. Unrelated Donor Allogeneic Transplantation after Failure of Autologous Transplantation for Acute Myelogenous Leukemia: A Study from the Center for International Blood and Marrow



\*TIF: 133.741 \*\*MIF: 4.953

## Scientific Production

- Transplantation Research. (2013) *Biol. Blood Marrow Transplant.*, 19 (7), 1102-1108.  
**IF: 3.348**
- 23 Martino R., De Wreede L., Fiocco M., Van Biezen A., Von Dem Borne P.A., Hamladji R.-M., Volin L., Bornhauser M., Robin M., Rocha V., De Witte T., Kroger N., Mohty M. Comparison of conditioning regimens of various intensities for allogeneic hematopoietic SCT using HLA-identical sibling donors in AML and MDS with <10% BM blasts: A report from EBMT. (2013) *Bone Marrow Transplant.*, 48 (6), 761-770.  
**IF: 3.466**
- 24 Cesaro S., Pillon M., Tridello G., Aljurf M., Martino R., Schroyens W., Nozzoli C., Barba P., Faraci M., Fagioli F., Cappelli B., Cordonnier C., Al-Mohareb F., Floisand Y., Greil J., Panizzolo I.S., Santarone S. Relationship between clinical and BK virological response in patients with late hemorrhagic cystitis treated with cidofovir: A retrospective study from the European Group for Blood and Marrow Transplantation. (2013) *Bone Marrow Transplant.*, 48 (6), 809-813.  
**IF: 3.466**
- 25 Hicheri Y., Einsele H., Martino R., Cesaro S., Ljungman P., Cordonnier C. Environmental prevention of infection in stem cell transplant recipients: A survey of the Infectious Diseases Working Party of the European Group for Blood and Marrow Transplantation. (2013) *Transpl. Infect. Dis.*, 15 (3), 251-258.  
**IF: 2.25**
- 26 Altes A., Pare L., Esquirol A., Xicoy B., Ramila E., Vicente L., Lopez R., Orriols J., Vall-Llovera F., Sanchez-Gonzalez B., Del Rio E., Sureda A., Paez D., Baiget M. Pharmacogenetic analysis in the treatment of Hodgkin lymphoma. (2013) *Leuk. Lymphoma*, 54 (8), 1706-1712.  
**IF: 2.605**
- 27 Hirsch H.H., Martino R., Ward K.N., Boeckh M., Einsele H., Ljungman P. Fourth European conference on infections in leukaemia (ECIL-4): Guidelines for diagnosis and treatment of human respiratory syncytial virus, parainfluenza virus, metapneumovirus, rhinovirus, and coronavirus. (2013) *Clin. Infect. Dis.*, 56 (2), 258-266.  
**IF: 9.416**

## Other Publications

## ISI Web of Knowledge Indexed Publications without an IF

- ▶ Izquierdo I, Briones J, Lluch R, Arqueros C, Martino R. Fatal strongyloides hyperinfection complicating a gram-negative sepsis after allogeneic stem cell transplantation: a case report and review of the literature. *Case Rep Hematol.* 2013;2013:860976.
- ▶ Novelli S, Briones J, Sierra J. Epidemiology of lymphoid malignancies: last decade update. *Springerplus.* 2013 Dec;2(1):70.
- ▶ Crespo C, Moreno E, Sierra J, Serip S, Rubio M. Cost-effectiveness analysis of azacitidine in the treatment of high-risk myelodysplastic syndromes in Spain. *Health Econ Rev.* 2013 Dec 5;3(1):28.

AREA 4

# Neurological, Mental 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



# tal Disorders

150 Genetics in Neurodegenerative Diseases

152 Human Experimental Neuropsychopharmacology

154 Neurobiology of Dementia

156 Neuroradiology

158 Ageing Institute

160 Addictive Behaviours

# Cerebrovascular Diseases

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Elena Jiménez HSCSP RI  
Lavinia Diniá HSCSP RI

## Nursing Researchers

Rebeca Marín HSCSP RI



## Main Lines of Research

- ▶ Brain neurorepair after stroke.
- ▶ Role of statins in ischemic and haemorrhagic stroke.
- ▶ Prevention of cerebral haemorrhage with anticoagulants.
- ▶ Endothelial progenitor cells in stroke.
- ▶ Aetiological classification of brain haemorrhage.
- ▶ Pathophysiology of hematoma growth in acute cerebral haemorrhage.
- ▶ Benefits and risks of intravenous thrombolysis.
- ▶ Sonothrombolysis.
- ▶ Non-invasive monitoring of cerebral flow with applied optic methods.
- ▶ Participation in clinical trials

## 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

- ▶ Joan Martí Fàbregas, Sonothrombolysis enhanced with microbubbles as a new treatment for acute ischaemic stroke: a pilot prospective randomized study, 334/U/2011, Fundació La Marató de TV3, 2nd year, €199,924.
- ▶ Joan Martí Fàbregas, RETICS-INVICTUS, RD012/0014, FIS, 2013-2016, €47,500.87/year.
- ▶ Joan Martí Fàbregas, Cerebral haemorrhage and oral anticoagulants in the secondary prevention of stroke. Predictive value of leukoaraiosis and microbleeds detected by MRI, F112/00296, FIS, 2012-2014, €37,741.11.

## Transfer Products

- ▶ Rodríguez-Yáñez M, Castellanos M, Freijo MM, López Fernández JC, Martí-Fàbregas J, Nombela F, Simal P, Castillo J (Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la Sociedad Española de Neurología), Díez-Tejedor E, Fuentes B, Alonso de Leciñana M, Alvarez-Sabin J, Arenillas J, Calleja S, Casado I, Dávalos A, Díaz-Otero F, Egido JA, Gállego J, García Pastor A, Gil-Núñez A, Gilo F, Irimia P, Lago A, Maestre J, Masjuan J, Martínez-Sánchez P, Martínez-Vila E, Molina C, Morales A, Purroy F, Ribó M, Roquer J, Rubio F, Segura T, Serena J, Tejada J, Vivancos J, Clinical practice guidelines in intracerebral haemorrhage, *Neurologia*. 2013 May;28(4):236-49. doi: 10.1016/j.nrl.2011.03.010. Epub 2011 May 13, PubMed PMID: 21570742.



Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Neuroradiology.
- ▶ Thrombosis and Haemostasis.
- ▶ Cardiovascular Biochemistry.
- ▶ Neurobiology of Dementias.
- ▶ Molecular Pathology and Therapies for Atherothrombotic and Ischemic Diseases.

**External Collaborations**

- ▶ Dr García-Verdugo, Universidad de Valencia, Spain.
- ▶ Dr Carles Arús, Facultad de Ciencias, Universidad Autónoma de Barcelona, Spain.
- ▶ Dr Turgut Durduran, Instituto de Ciencias Fotónicas, 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 Patricia Martínez, Hospital La Paz, Madrid, Spain.
- ▶ Dr Antonio Gil, Hospital Gregorio Marañón, Madrid, Spain.
- ▶ Dr Ángel Chamorro, Hospital Clínico de Barcelona, Spain.
- ▶ Dr Antonio Dávalos, Hospital Germans Trias i Pujol, Badalona, Spain.
- ▶ Dr Francesc Purroy, Hospital Arnau de Vilanova, Lleida, Spain.
- ▶ RETICS (cooperative health research network)/INVICTUS (ictus research)
- ▶ Clinical trials:
  - IMPACT-24b: Implant in the sphenopalatine ganglion to increase cerebral blood flow 24 hours after stroke onset.
  - IMPACT-24Bt: Implant in the sphenopalatine ganglion to increase cerebral blood flow 24 hours after stroke onset (rt-PA port).
  - CLEAR III: Evaluation of thrombolytic therapy in intraventricular haemorrhage.
  - LIFE: Multicentre, randomized, double-blind, parallel group, placebo-controlled study of the effect of treatment with F2695 (75 mg OD) in 3 months to improve functional capacity in patients with ischaemic stroke.

Doctoral Theses

- ▶ Elena Jiménez Xarrié, Characterization of cell proliferation in the subventricular zones using spectroscopic magnetic resonance in a preclinical model of cerebral ischaemia, Autonomous University of Barcelona, a, Carles Arús, Joan Martí Fabregas (supervisors), HSCSP.

\*TIF: 32.363 \*\*MIF: 3.596

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

01 Ringelstein E.B., Thijs V., Norrving B., Chamorro A., Aichner F., Grond M., Saver J., Laage R., Schneider A., Rathgeb F., Vogt G., Charisse G., Fiebach J.B., Schwab S., Schabitz W.R., Kollmar R., Fisher M., Brozman M., Skoloudik D., Gruber F., Leal J.S., Veltkamp R., Kohrmann M., Berrouschot J. Granulocyte colony-stimulating factor in patients with acute ischemic stroke results of the Ax200 for ischemic stroke trial. (2013) *Stroke*, 44 (10), 2681-2687.

**IF: 6.018**

02 Martí-Fabregas J., Crespo J., Delgado-Mederos R., Martínez-Ramírez S., Pena E., Marin R., Diniá L., Jiménez-Xarrié E., Fernández-Arcos A., Pérez-Pérez J., Querol L., Suárez-Calvet M., Badimon L. Endothelial progenitor cells in acute ischemic stroke. (2013) *IEEE Trans. Neural Netw. Learn. Syst.*, 3 (6), 649-655.

**IF: 4.37**

03 Martí-Fabregas J., Delgado-Mederos R., Granell E., Morenas Rodríguez E., Marin Lahoz J., Diniá L., Carrera D., Pérez De La Ossa N., Sanahuja J., Sobrino T., De Arce A.M., Alonso De Lecinana M. Microbleed burden and hematoma expansion in acute intracerebral hemorrhage on behalf of the RENEVAS group (Stroke Research Network, RETICS, Instituto de Salud Carlos III). (2013) *Eur. Neurol.*, 70 (41732), 175-178.

**IF: 1.362**

04 Purroy F., Jiménez-Caballero P.E., Mauri-Capdevila G., Torres M.J., Gorospe A., Ramírez Moreno J.M., De la Ossa N.P., Canovas D., Arenillas J., Álvarez-Sabin J., Martínez Sánchez P., Fuentes B., Delgado-Mederos R., Martí-Fabregas J., Rodríguez Campello A., Masjuan J. Predictive value of brain and vascular imaging including intracranial vessels in transient ischaemic attack patients: External validation of the ABCD3-I

score. (2013) *Eur. J. Neurol.*, 20 (7), 1088-1093.

**IF: 3.852**

05 Purroy F., Caballero P.E.J., Gorospe A., Torres M.J., Álvarez-Sabin J., Santamarina E., Martínez-Sánchez P., Canovas D., Freijo M.J., Egido J.A., Ramírez-Moreno J.M., Alonso-Arias A., Rodríguez-Campello A., Casado I., Delgado-Mederos R., Martí-Fabregas J., Fuentes B., Silva Y., Quesada H., Cardona P., Morales A., De La Ossa N.P., García-Pastor A., Arenillas J.F., Segura T., Jiménez C., Masjuan J. Recurrent transient ischaemic attack and early risk of stroke: Data from the PROMAPA study. (2013) *J. Neurol. Neurosurg. Psychiatry*, 84 (6), 596-603.

**IF: 5.58**

06 Rodríguez-Yanez M., Castellanos M., Freijo M.M., López-Fernández J.C., Martí-Fabregas J., Nombela F., Simal P., Castillo J., Díez-Tejedor E., Fuentes B., Alonso de Lecinana M., Álvarez-Sabin J., Arenillas J., Calleja S., Casado I.,



# Cerebrovascular Diseases

\*TIF: 32.363 \*\*MIF: 3.596

## Scientific Production

- Davalos A., Diaz-Otero F., Egido J.A., Gallego J., Garcia Pastor A., Gil-Nunez A., Gilo F., Irimia P., Lago A., Maestre J., Masjuan J., Martinez-Sanchez P., Martinez-Vila E., Molina C., Morales A., Purroy F., Ribo M., Roquer J., Rubio F., Segura T., Serena J., Tejada J., Vivancos J. Clinical practice guidelines in intracerebral haemorrhage [Guías de actuación clínica en la hemorragia intracerebral]. (2013) *Neurologia*, 28 (4), 236-249.  
**IF: 1.352**
- 07 Ni Chroinin D., Asplund K., Asberg S., Callaly E., Cuadrado-Godia E., Diez-Tejedor E., Di Napoli M., Engelter S.T., Furie K.L., Giannopoulos S., Gotto A.M., Hannon N., Jonsson F., Kapral M.K., Marti-Fabregas J., Martinez-Sanchez P., Milionis H.J., Montaner J., Muscari A., Pijija S., Probstfield J., Rost N.S., Thrift A.G., Vemmos K., Kelly P.J. Statin therapy and outcome after ischemic stroke: Systematic review and meta-analysis of observational studies and randomized trials. (2013) *Stroke*, 44 (2), 448-456.  
**IF: 6.018**
- 08 Rico Santana N., Zapico Muniz E., Cocho D., Bravo Y., Delgado Mederos R., Marti-Fabregas J. Analysis of peptidome profiling of serum from patients with early onset symptoms of ischemic stroke. (2014) *J. Stroke Cerebrovasc. Dis.*, 23 (2), 235-240.  
**IF: 1.993**
- 09 Dinia L., Bonzano L., Albano B., Finocchi C., Del Sette M., Saitta L., Castellan L., Gandolfo C., Roccatagliata L. White Matter Lesions Progression in Migraine with Aura: A Clinical and MRI Longitudinal Study. (2013) *J. Neuroimaging*, 23 (1), 47-52.  
**IF: 1.818**

# Neuromuscular Diseases

## Coordinator

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



## Main Lines of Research

### Autoimmune neuromuscular diseases

- ▶ Immunopathogenic studies with characterization of new target antigens in Myasthenia Gravis, and immune neuropathies (CIDP, GBS, MMN). Analysis of the innate immunity in inflammatory myopathies.
- ▶ Analysis of the impact of new immunomodulating therapies on IgG4 mediated NMD.
- ▶ Functional aspects of immune system cells (response to ligands, production of antibodies, etc).
- ▶ IGOS data base for Guillain Barre syndrome and NMD-ES Spanish registry for neuromuscular diseases.

- ▶ Clinical characterization, MRI analysis as a biomarker of MD
- ▶ Molecular pathways involved in differentiation and molecular and functional interactions of dysferlin and other proteins involved in MD.
- ▶ Functional analysis of truncated forms of dysferlin with possible therapeutic implications.
- ▶ Natural history of dysferlinopathies, COS-study (Jain Foundation).

### New therapies in genetic diseases

- ▶ Bone marrow transplant in dysferlinopathy (animal model).
- ▶ Advanced therapy with stem cells and mesoangioblasts in muscular dystrophies.

### Muscular dystrophy, dysferlinopathy and distal myopathies

## Challenges

- ▶ Advance knowledge of the immunological mechanisms involved in the pathogenesis of autoimmune neuromuscular diseases (MG, CIDP, MMN) and inflammatory myopathies (DM, PM).
- ▶ Search for new antigens and develop diagnostic tests with new biomarkers in CIDP and MG.
- ▶ Implement new diagnostic methods for muscular dystrophies resulting from dysferlinopathy and other myopathies (miRNA and secretome biomarkers, MRI, etc).
- ▶ Advance knowledge of the pathogenetic

- mechanisms involved in muscular dystrophy resulting from dysferlin deficiency and other muscular dystrophies.
- ▶ Implement cell therapy in mouse models of muscular dystrophy using mesoangioblasts and bone marrow to study possible applications in humans and 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

### External Collaborations

- ▶ Jerome Devaux, Marseilles, France.
- ▶ Silvere van der Maarel, Leiden, The Netherlands.
- ▶ Xavier Navarro, Dept Medicina, UAB, Barcelona, Spain.
- ▶ R Martí, Hospital Vall Hebron, Barcelona, Spain.



# Neuromuscular Diseases

## Active Grants

- ▶ Eduard Gallardo, Search for biomarkers of muscular dystrophies with limb-girdle weakness, PI12/02291, FIS, 2013-2015, €109,550.
- ▶ Isabel Illa, Immunological studies regarding the development of therapeutic strategies for neuromuscular diseases, PI09/1964, FIS INTRASALUD, 2010-2013, €604,395.
- ▶ Eduard Gallardo, Research into neuromuscular diseases, 2009 SGR1004 (Consolidated Research Group), Generalitat de Catalunya, 2010-2014, €43,680.
- ▶ Isabel Illa, Clinical outcome study for dysferlinopathy, Jain Foundation, 2011-2016, €216,000.
- ▶ Eduard Gallardo, Combined cell transplantation as a therapeutic approach for dysferlinopathies and transversal study to evaluate the frequency of carriers of dysferlinopathy in Caucasian population using a monocytes test to detect dysferlin expression, Jain Foundation, 2012-2013, €91,361.
- ▶ John Newsom-Davies, A multi-centre, single-blind, randomized study comparing thymectomy to no thymectomy in non-thymomatous myasthenia gravis (MG) patients receiving prednisone, U01 NS042685-01A2, NIH, 2009-2013, €38,700.
- ▶ Isabel Illa, Research into advanced therapies in muscular dystrophy: marrow transplant and mesangioblasts in murine models, Fundación Mútua Madrileña, 2012-2013, €21,000.
- ▶ Isabel Illa, Research into advanced therapies in muscular dystrophy: marrow transplant and mesangioblasts in murine models, Fundación Gemio para la Investigación de las Distrofias Musculares o Otras Enfermedades Raras, 2009-2014, €400,000.
- ▶ Isabel Illa, Biomarkers in dysferlinopathies, Association Francaise contre les Myopathies, 2013-2014, €12,000.
- ▶ Isabel Illa, Role of RLR immunity in dermatomyositis, The Myositis Association, 2013, €32,000.

## Doctoral Theses

- ▶ Barbara Flix Ordoñez, Functional studies of dysferlin and therapeutic approaches in a mouse model of myopathy with dysferlin deficiency, Autonomous University of Barcelona, Eduard Gallardo Vigo (supervisor), IIB Sant Pau.
- ▶ Jordi Diaz Manera, Dysferlinopathy: new diagnostic and therapeutic aspects, Autonomous University of Barcelona, Isabel Illa Sendra (supervisor), IIB Sant Pau, EU.
- ▶ Luis Querol Gutiérrez, New antigenic reactivity in immune-mediated neuropathies, Autonomous University of Barcelona, Illa Sendra (supervisor), IIB Sant Pau.

\*TIF: 57.115 \*\*MIF: 4.080

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- |   |   |  |
|---|---|--|
| <p>01 Flix B., Suarez-Calvet X., Diaz-Manera J., Santos-Nogueira E., Mancuso R., Barquinero J., Navas M., Navarro X., Illa I., Gallardo E. Bone marrow transplantation in dysferlin-deficient mice results in a mild functional improvement. (2013) <i>Stem Cells Dev.</i>, 22 (21), 2885-2894.<br/><b>IF: 4.202</b></p> <p>02 Vanhoutte E.K., Faber C.G., Merkies I.S.J. 196th ENMC international workshop: Outcome measures in inflammatory peripheral neuropathies 8-10 February 2013, Naarden, The Netherlands. (2013) <i>Neuromusc. Disord.</i>, 23 (11), 924-933.<br/><b>IF: 3.134</b></p> <p>03 Querol L., Illa I. Myasthenia gravis and the neuromuscular junction. (2013) <i>Curr. Opin. Neurol.</i>, 26 (5), 459-465.<br/><b>IF: 5.729</b></p> <p>04 Flix B., De La Torre C., Castillo J., Casal C., Illa I., Gallardo E. Dysferlin interacts with calsequestrin-1, myomesin-2 and dynein in human skeletal muscle. (2013) <i>Int. J. Biochem. Cell Biol.</i>, 45 (8), 1927-1938.<br/><b>IF: 4.24</b></p> | <p>05 Rojas-Garcia R., Gallardo E., Illa I. Para-proteinemic neuropathies. (2013) <i>Presse Med.</i>, 42 (6 PART2), e225-e234.<br/><b>IF: 1.173</b></p> <p>06 Querol L., Rojas-Garcia R., Casanovas C., Sedano M.J., Munoz-Blanco J.L., Alberti M.A., Paradas C., Sevilla T., Pardo J., Capablo J.L., Sivera R., Guerrero A., Gutierrez-Rivas E., Illa I. Long-term outcome in chronic inflammatory demyelinating polyneuropathy patients treated with intravenous immunoglobulin: a retrospective study. (2013) <i>J. Surfactants Deterg.</i>, 48 (6), 870-876.<br/><b>IF: 1.352</b></p> <p>07 De Bleeker J.L., Lundberg I.E., De Visser M. 193rd ENMC International workshop Pathology diagnosis of idiopathic inflammatory myopathies 30 November - 2 December 2012, Naarden, The Netherlands. (2013) <i>Neuromusc. Disord.</i>, 23 (11), 945-951.<br/><b>IF: 3.134</b></p> <p>08 Guell M.R., Anton A., Rojas-Garcia R., Puy C., Pradas J. Comprehensive care of amyotrophic lateral sclerosis patients: A care model [Atención integral a pacientes con esclerosis lateral amiotrófica: Un modelo asistencial]. (2013) <i>Arch. Bron-</i></p> | <p><i>coneumol.</i>, 49 (12), 529-533.<br/><b>IF: 1.816</b></p> <p>09 Sarkozy A., Hicks D., Hudson J., Laval S.H., Barresi R., Hilton-Jones D., Deschauer M., Harris E., Ruffbach L., Hwang E., Bashir R., Walter M.C., Krause S., van den Bergh P., Illa I., Penisson-Besnier I., De Waele L., Turnbull D., Guglieri M., Schrank B., Schoser B., Seeger J., Schreiber H., Glaser D., Eagle M., Bailey G., Walters R., Longman C., Norwood F., Winer J., Muntoni F., Hanna M., Roberts M., Bindoff L.A., Brierley C., Cooper R.G., Cottrell D.A., Davies N.P., Gibson A., Gorman G.S., Hammans S., Jackson A.P., Khan A., Lane R., Mcconville J., Mcentagart M., Al-Memmar A., Nixon J., Panicker J., Parton M., Petty R., Price C.J., Rakowicz W., Ray P., Schapira A.H., Swingler R., Turner C., Wagner K.R., Maddison P., Shaw P.J., Straub V., Bushby K., Lochmuller H. ANO5 Gene Analysis in a Large Cohort of Patients with Anoctaminopathy: Confirmation of Male Prevalence and High Occurrence of the Common Exon 5 Gene Mutation. (2013) <i>Hum. Mutat.</i>, 34 (8), 1111-1118.<br/><b>IF: 5.05</b></p> <p>10 De Morree A., Flix B., Bagaric I., Wang J.,</p> |
|---|---|--|

\*TIF: 57.115 \*\*MIF: 4.080

- Van Den Boogaard M., Moursel L.G., Frants R.R., Illa I., Gallardo E., Toes R., Van Der Maarel S.M. Dysferlin regulates cell adhesion in human monocytes. (2013) *J. Biol. Chem.*, 288 (20), 14147-14157.  
**IF: 4.6**
- 11 Pradas J., Puig T., Rojas-Garcia R., Viguera M.L., Gich I., Logroscino G. Amyotrophic lateral sclerosis in Catalonia: A population based study. (2013) *Amyotroph. Lateral Scher. Frontotemp. Degenerat.*, 14 (4), 278-283.  
**IF: 2.591**
- 12 Garcia-Redondo A., Dols-Icardo O., Rojas-Garcia R., Esteban-Perez J., Corde-ro-Vazquez P., Munoz-Blanco J.L., Catalina I., Gonzalez-Munoz M., Varona L., Sarasola E., Povedano M., Sevilla T., Guerrero A., Pardo J., de Munain A.L., Marquez-Infante C., de Rivera F.J.R., Pastor P., Jerico I., de Arcaya A.A., Mora J.S., Clarimon J. Analysis of the C9orf72 Gene in Patients with Amyotrophic Lateral Sclerosis in Spain and Different Populations Worldwide. (2013) *Hum. Mutat.*, 34 (1), 79-82.  
**IF: 5.05**
- 13 Pinos T., Melia M.J., Ortiz N., Martinez-Vea A., Raventos-Estelle A., Gallardo E., Hernandez-Losa J., Camara Y., Andreu A.L., Garcia-Arumi E. Identification of the novel mutation m.5658T>C in the mitochondrial tRNA(Asn) gene in a patient with myopathy, bilateral ptosis and ophthalmoparesis. (2013) *Neuromusc. Disord.*, 23 (4), 330-336.  
**IF: 3.134**
- 14 Querol L., Nogales-Gadea G., Rojas-Garcia R., Martinez-Hernandez E., Diaz-Manera J., Suarez-Calvet X., Navas M., Araque J., Gallardo E., Illa I. Antibodies to contactin-1 in chronic inflammatory demyelinating polyneuropathy. (2013) *Ann. Neurol.*, 73 (3), 370-380.  
**IF: 11.91**

# Parkinson Disease and Movement Disorders

## Coordinator

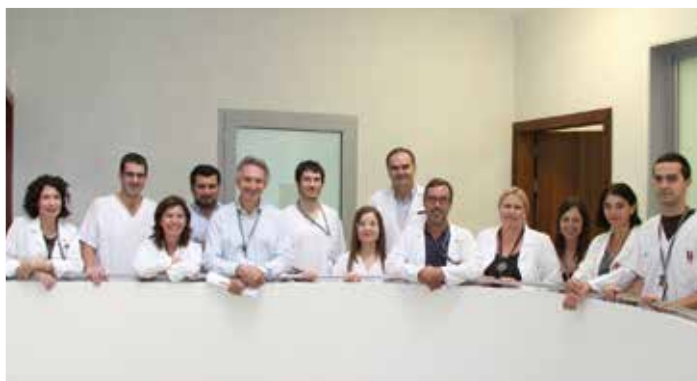
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Berta Pascual HSCSP  
Jesús Pérez HSCSP RI  
Roser Ribosa HSCSP RI  
Juan Marin-Lahoz HSCSP  
Victoria Sosti HSCSP RI

## Nursing Researchers

Antonia Campolongo 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.
- ▶ Neurophysiological and cognitive correlates of impulse control disorders in Parkinson disease and other movement disorders: behavioural and pharmacological treatment.
- ▶ Surgery and treatment of continuous infusion in Parkinson disease.
- ▶ Follow-up and aetiological study of weight loss in patients treated with continuous infusion of intraduodenal levodopa.
- ▶ Follow-up and aetiological 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 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).
- ▶ Assessment of behavioural and cognitive traits of murine models of HD

### Translational research – cell models:

- ▶ Assessment of cell cultures of neurons derived of induced pluripotent cells obtained from skin fibroblast as in vitro model for the modulation of key factors associated to both cognitive and neurotransmitter disturbances in Parkinson disease.

### Huntington disease:

- ▶ Metabolic correlates (18-FDG PET) of disease progression from pre-manifestation to the early stages.
- ▶ Metabolic correlates (18-FDG PET) of apathy and depression in pre-manifested gene carriers.
- ▶ Functional MRI study of reward sensitivity in pre-manifested and early-stage Huntington disease.
- ▶ Determination of prevalence and clinical significance of neuropsychiatric features in Huntington disease.
- ▶ Development of new instruments for cognitive and functional assessment in Huntington disease.
- ▶ Prospective observational study of Huntington disease in a European cohort (Registry Study).
- ▶ Molecular, clinical, behavioural and cognitive characterisation of the BACHD rat model of Huntington disease.





Main Lines of Research

- ▶ Collaboration in multicentre and coordinated national projects:
  - Relationship between intermediate alleles and clinical manifestations (PI: Esther Cubo, Burgos).
  - Validation of the Spanish version of the Problem Behaviour Assessment Scale (PI: Jesús Ruíz, Barcelona).
  - Study of dietary intake in Huntington disease (PI: Esther Cubo, Burgos).
  - Multimodal neuroimaging approach to delineate emotional,

motor and cognitive corticostriatal pathways, PSI2011-2014, IDIBELL (PI: Ruth de Diego-Balaguer, Barcelona)

**Progressive supranuclear palsy:**

- ▶ Development of a cognitive rating scale.
- ▶ Development of standardized eye movement evaluation.

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.

**Huntington disease:**

- ▶ Study of the dynamics of mutant Htt protein aggregation and related neural and cognitive correlates along disease stages in Huntington disease.
- ▶ Validation of new instruments to assess and track subtle cognitive changes in pre-manifested and early-stage Huntington disease population.

**Essential tremor and other movement disorders:**

- ▶ Genetic studies and genotype-phenotype correlations in essential tremor.
- ▶ Development of new therapeutic interventions in essential tremor.
- ▶ Neurochemical and structural neuroimaging studies on the pathophysiological bases of essential tremor.

**Translational research - animal models of parkinsonism:**

- ▶ Behavioural, physiological and pharmacological characterization of animal models of parkinsonism with combined dopaminergic and noradrenergic lesions.
- ▶ Physiopathology of motor, cognitive and behavioural complications linked to antiparkinsonian drugs in animal models of parkinsonism.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Neuroradiology and Nuclear Medicine (Huntington disease).

**External Collaborations**

- ▶ Cognition and Brain Plasticity Group at the Bellvitge Health Science Campus attached to the Department of Basic Psychology, Faculty of Psychology, University of Barcelona and the IDIBELL (Bellvitge Biomedical Research Institute).

Clinical trials

- ▶ Dr J Kulisevsky (PI), Open 6-12 months to evaluate the safety and efficacy of levodopa-carbidopa intestinal gel in patients with advanced Parkinson disease that responds to levodopa and severe motor fluctuations, Protocol GLORIA, Abbott.
- ▶ Dr J Kulisevsky (PI), Efficacy and safety of BIA 9-1067 in patients with idiopathic Parkinson disease and end-of-dose wearing-off treated with levodopa plus a decarboxylase inhibitor: multicentre, double-blind, randomized, placebo- and active substance-controlled parallel groups, Protocol BIA 9-1067 (BIPARK STUDY I), Bial.
- ▶ Dr J Kulisevsky (PI), Phase 3 study, 40 week, double-blind, double-dummy active-ingredient controlled study of preladenant in subjects with moderate to severe Parkinson disease, Merck.
- ▶ Dr J Kulisevsky (PI), Observational, retrospective, multicentre national study to assess the effectiveness of levodopa/carbidopa gel in patients with advanced Parkinson disease (Phase EPA-OD) Protocol ABB-LEV-2011-01 (e-DUO), Abbvie Farmaceutica SLU.

- ▶ Dr J Kulisevsky (PI), Phase IV multicentre, multinational, double-blind, placebo-controlled, three-arm study to evaluate the efficacy of rotigotine in apathy, motor symptoms and mood swings associated with Parkinson disease, Protocol PD0005 (BRIGHT), UCB.
- ▶ Dr J Kulisevsky (PI), Double-blind, placebo-controlled, fixed-dose, multicentre, 13-week follow-up to evaluate the efficacy and safety of modified release AFQ056 in reducing moderate to severe levodopa-induced dyskinesia in patients with Parkinson disease, Protocol CAFQ056A2223, Novartis.
- ▶ Dr J Kulisevsky (PI), Open study to evaluate the safety, tolerability and efficacy of AFQ056 in levodopa-induced dyskinesia in patients with Parkinson disease, Protocol CAFQ0562299, Novartis.

\*Total Impact Factor \*\*Mean Impact Factor

# Parkinson Disease and Movement Disorders

## Doctoral Theses

- ▶ María Victoria Sosti, Molecular and cognitive profiles characterization of parkinsonism rat models with 6-OHDA lesion, Jaime Kulisevsky and Fabián Arenas (supervisors), Faculty of Medicine, Autonomous University of Barcelona, 29 Nov 2013.

\*TIF: 54.722 \*\*MIF: 3.420

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Tolosa E., Hernandez B., Linazasoro G., Lopez-Lozano J.J., Mir P., Marey J., Kulisevsky J. Efficacy of levodopa/carbidopa/entacapone versus levodopa/carbidopa in patients with early Parkinson's disease experiencing mild wearing-off: A randomised, double-blind trial. (2014) *J. Neural Transm.*, 121 (4), 357-366.  
**IF: 2.871**
- 02 Pagonabarraga J., Soriano-Mas C., Llebaria G., Lopez-Sola M., Pujol J., Kulisevsky J. Neural correlates of minor hallucinations in non-demented patients with Parkinson's disease. (2014) *Parkinsonism Relat. Disord.*, 20 (3), 290-296.  
**IF: 4.126**
- 03 Kulisevsky J., Fernandez de Bobadilla R., Pagonabarraga J., Martinez-Horta S., Campolongo A., Garcia-Sanchez C., Pascual-Sedano B., Ribosa-Nogue R., Villa-Bonomo C. Measuring functional impact of cognitive impairment: Validation of the Parkinson's disease cognitive functional rating scale. (2013) *Parkinsonism Relat. Disord.*, 19 (9), 812-817.  
**IF: 4.126**
- 04 Fernandez de Bobadilla R., Pagonabarraga J., Martinez-Horta S., Pascual-Sedano B., Campolongo A., Kulisevsky J. Parkinson's disease-cognitive rating scale: Psychometrics for mild cognitive impairment. (2013) *Mov. Disord.*, 28 (10), 1376-1383.  
**IF: 5.634**
- 05 Pagonabarraga J., Corcuera-Solano I., Vives-Gilabert Y., Llebaria G., Garcia-Sanchez C., Pascual-Sedano B., Delfino M., Kulisevsky J., Gomez-Anson B. Pattern of Regional Cortical Thinning Associated with Cognitive Deterioration in Parkinson's Disease. (2013) *PLoS One*, 8 (1).  
**IF: 3.534**
- 06 Kulisevsky J., Luquin M.R., Arbelo J.M., Burguera J.A., Carrillo F., Castro A., Chacon J., Garcia-Ruiz P.J., Lezcano E., Mir P., Martinez-Castrillo J.C., Martinez-Torres I., Puente V., Sesar T., Valldeoriola-Serra F., Yanez R. Advanced Parkinson's disease: Clinical characteristics and treatment. Part II [Enfermedad de Parkinson avanzada. Características clínicas y tratamiento. Parte II]. (2013) *Neurologia*, 28 (9), 558-583.  
**IF: 1.352**
- 07 Kulisevsky J., Luquin M.R., Arbelo J.M., Burguera J.A., Carrillo F., Castro A., Chacon J., Garcia-Ruiz P.J., Lezcano E., Mir P., Martinez-Castrillo J.C., Martinez-Torres I., Puente V., Sesar A., Valldeoriola-Serra F., Yanez R. Advanced Parkinson's disease: Clinical characteristics and treatment (part 1). (2013) *Neurologia*, 28 (8), 503-521.  
**IF: 1.352**
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**IF: 4.126**
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**IF: N/D**
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**IF: 3.009**
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**IF: 3.852**
- 13 Ortega-Cubero S., Lorenzo-Betancor O., Lorenzo E., Alonso E., Coria F., Pastor M.A., Fernandez-Santiago R., Marti M.J., Ezquerro M., Valldeoriola F., Compta Y., Tolosa E., Agundez J.A., Jimenez-Jimenez F.J., Gironell A., Clarimon J., de Castro P., Garcia-Martin E., Alonso-Navarro H., Pastor P. Fused in sarcoma (FUS) gene mutations are not a frequent cause of essential tremor in europeans. (2013) *Neurobiol. Aging*, 34 (10), 2441-2441.  
**IF: 4.853**
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**IF: N/D**
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**IF: 0.926**
- 16 Villa-Bonomo C., Pagonabarraga J., Martinez-Horta S., Fernandez de Bobadilla R., Garcia-Sanchez C., Cam-

## Scientific Production

\*TIF: 54.722 \*\*MIF: 3.420

Scientific  
Production

- polongo A., Kulisevsky J. Short-lasting episodes of prosopagnosia in Parkinson's disease. (2013) *Parkinsonism Relat. Disord.*, 19 (3), 375-377.  
**IF: 4.126**
- 17 Kurtis M.M., Rodriguez-Blazquez C., Martinez-Martin P. Relationship between sleep disorders and other non-motor symptoms in Parkinson's disease. (2013) *Parkinsonism Relat. Disord.*, 19 (12), 1152-1155.  
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- 18 Clarimon J., Kulisevsky J. Parkinson's disease: From genetics to clinical practice. (2013) *Curr. Genomics*, 14 (8), 560-567.  
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## Books or Chapters

## With ISBN

- ▶ Jaime Kulisevsky, Saül Martínez-Horta and Javier Pagonabarraga, Cognitive assessment in Parkinson disease, in Dag Aarsland, Jeffrey Cummings, Daniel Weintraub, K. Ray Chaudhuri (eds), *Neuropsychiatric and Cognitive Changes in Parkinson's Disease and Related Movement Disorders: Diagnosis and Management*, Cambridge University Press, pp. 54-65, ISBN: 9781107039223.

# Molecular Neuropharmacology

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## Main Lines of Research

- ▶ Neuropharmacology of acute and chronic pain.
- ▶ Biochemical and molecular mechanisms involved in combined drug treatments.
- ▶ New strategies in the treatment of diabetic neuropathy.
- ▶ Identification of new targets in the modulation of emotional behaviour.

## Challenges

- ▶ Investigate new approaches to relieving-inflammatory and neuropathic pain using specific drug combinations that enhance the analgesic action of opioids and/or cannabinoids and avoid side effects.
- ▶ Advance knowledge in the molecular mechanisms involved in the antinociceptive actions of the heme oxygenase 1 enzyme during acute pain (inflammatory, visceral, heat) and chronic pain (arthritis, neuropathy).
- ▶ Identify new drugs to treat painful diabetic neuropathy and oxidative stress.
- ▶ Evaluate possible interactions between carbon monoxide and nitric oxide in the modulation of emotional behaviour.

## Active Grants

- ▶ Olga Pol, Study of new therapeutic targets in the treatment of chronic pain, PI09/0968,
- ▶ FIS, Carlos III Health Institute, January 2010-June 2014.



## Collaborations

**Collaborations with IIBSant PauGroups**

- ▶ Metabolic Bases of Cardiovascular Risk.

**External Collaborations**

- ▶ Prof Roberto Motterlini, INSERMU955, University Paris-Est, Creteil, France.
- ▶ Profs Ana Baamonde and Luis Menéndez, Universidad de Oviedo, Spain.

\*TIF: 10.156 \*\*MIF: 5.078

## Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Hervera A., Leanez S., Motterlini R., Pol O. Treatment with carbon monoxide-releasing molecules and an HO-1 inducer enhances the effects and expression of  $\mu$ -opioid receptors during neuropathic pain. (2013) *Anesthesiology*, 118 (5), 1180-1197.  
**IF: 6.168**
- 02 Hervera A., Gou G., Leanez S., Pol O. Effects of treatment with a carbon monoxide-releasing molecule and a heme oxygenase 1 inducer in the antinociceptive effects of morphine in different models of acute and chronic pain in mice. (2013) *Psychopharmacology*, 228 (3), 463-477.  
**IF: 3.988**



# Pharmacological Research in Humans

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## Collaborators

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Maribel Martínez HSCSP RI



## Main Lines of Research

### Clinical trials with no therapeutic benefits to volunteer participants

- ▶ Phase I clinical trials (healthy volunteers) whose main objectives include: first-time-in-humans, safety and tolerability (local, 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 the same or different characteristics (elderly, obese, postmenopausal, with liver or kidney failure).
- ▶ Collaboration with clinical services to conduct phase II/III studies.

### Neuro-physio-pharmacology of sleep/wake states

- ▶ Investigate human brain activity in sleep and wakefulness, mechanisms involved in these states, problems derived from sleep disturbances and possible interventions.
- ▶ Approach the phenomenon as a continuum: 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.
- ▶ Develop studies that consider the 24-hour day/night cycle as the phenomenon under study cannot be evaluated without taking this interactivity into account.
- ▶ Develop psychomotor performance tests, subjective evaluation scales, neurophysiologic 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 the neuro-physio-pharmacology of sleep/wake states, focusing on pharmacotherapeutic objectives and also on physiopathologic objectives in related fields, such as dreams.
- ▶ Develop neurophysiologic recording performance 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 dual objective: to return knowledge generated to society and 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 our two main research lines: the application of good clinical practices in clinical research into sleep medicine and its medical (pathology, and treatment) and social (quality of life, prevention of accident risk) consequences.

**Active Grants**

- ▶ Rosa Antonijoan (coordinator), INNFACTO 2012, IPT-2012-1208-300000, Ministry of the Economy and Competitiveness, nLife Therapeutics SL.
- ▶ Rosa Antonijoan (coordinator), INNFACTO 2011, IPT-2011-1048-900000, Ministry of the Economy and Competitiveness, Oryzon Genomics.
- ▶ Juan Martí, Neurology (PI), Intracerebral hemorrhage due to oral anticoagulants: prediction of the risk by magnetic resonance (HERO), PI11/00296, 2012-, FIS.

**Collaborations**

**External Collaborations**

- ▶ Phase I clinical trials for national and international pharmaceutical companies (12 in total).

**\*TIF: 59.367 \*\*MIF: 4.240**

**Scientific Production**

**ISI Web of Knowledge Indexed Publications with an IF**

<p>01 Bouso J.C., Fabregas J.M., Antonijoan R.M., Rodriguez-Fornells A., Riba J. Acute effects of ayahuasca on neuropsychological performance: Differences in executive function between experienced and occasional users. (2013) <i>Psychopharmacology</i>, 230 (3), 415-424. <b>IF: 3.988</b></p> <p>02 Aguilera X., Martinez-Zapata M.J., Bosch A., Urrutia G., Gonzalez J.C., Jordan M., Gich I., Maymo R.M., Martinez N., Monllau J.C., Celaya F., Fernandez J.A. Efficacy and safety of fibrin glue and tranexamic acid to prevent postoperative blood loss in total knee arthroplasty: A randomized controlled clinical trial. (2013) <i>J. Bone Joint Surg.-Am. Vol.</i>, 95 (22), 2001-2007. <b>IF: 4.309</b></p> <p>03 Bonfill X., Ballesteros M., Gich I., Serrano M.A., Garcia Lopez F., Urrutia G. Description of the protocols for randomized controlled trials in cancer drugs conducted in Spain (1999-2003). (2013) <i>PLoS One</i>, 8 (11). <b>IF: 3.534</b></p> <p>04 Lopez-Ferrer A., Vilarrasa E., Gich I.J., Puig L. Adalimumab for the treatment of psoriasis in real life: A retrospective cohort</p>	<p>of 119 patients at a single Spanish centre. (2013) <i>Br. J. Dermatol.</i>, 169 (5), 1141-1147. <b>IF: 4.1</b></p> <p>05 Alarcon J.D., Rubiano A.M., Chirinos M.S., Valderrama A., Gich I., Bonfill X., Alonso-Coello P. Clinical practice guidelines for the care of patients with severe traumatic brain injury: A systematic evaluation of their quality. (2013) <i>J. Trauma Acute Care Surg.</i>, 75 (2), 311-319. <b>IF: 1.97</b></p> <p>06 Acuna-Izcaray A., Sanchez-Angarita E., Plaza V., Rodrigo G., De Oca M.M., Gich I., Bonfill X., Alonso-Coello P. Quality assessment of asthma clinical practice guidelines: A systematic appraisal. (2013) <i>Chest</i>, 144 (2), 390-397. <b>IF: 7.132</b></p> <p>07 Santalo M., Martin A., Velilla J., Povar J., Temboury F., Balaguer J., Munoz M., Calmarza P., Ortiz C., Carratala A., Gich I., Merce J., Jaffe A.S., Ordonez-Llanos J. Using high-sensitivity troponin T: The importance of the proper gold standard. (2013) <i>Am. J. Med.</i>, 126 (8), 709-717. <b>IF: 5.302</b></p> <p>08 Barata A., Malouf J., Gutierrez M., Mateo G.M., Sambeat M.A., Gich I., Cadafalch J., Wulff J., Domingo P. Psychopathology</p>	<p>and psychosocial adjustment in patients with HIV-associated lipodystrophy. (2013) <i>Braz. J. Infect. Dis.</i>, 17 (4), 444-449. <b>IF: 1.096</b></p> <p>09 Pradas J., Puig T., Rojas-Garcia R., Viguera M.L., Gich I., Logroscino G. Amyotrophic lateral sclerosis in Catalonia: A population based study. (2013) <i>Amyotroph. Lateral Scher. Frontotemp. Degenerat.</i>, 14 (4), 278-283. <b>IF: 2.591</b></p> <p>10 Verd S., Barriuso L., Gich I., Gutierrez A., Nadal-Amat J., Carreras E. Risk of early breastfeeding cessation among symmetrical, small for gestational age infants. (2013) <i>Ann. Hum. Biol.</i>, 40 (2), 146-151. <b>IF: 1.148</b></p> <p>11 Arevalo-Rodriguez I., Pedraza O.L., Rodriguez A., Sanchez E., Gich I., Sola I., Bonfill X., Alonso-Coello P. Alzheimer's disease dementia guidelines for diagnostic testing: A systematic review. (2013) <i>Am. J. Alzheimers Dis. Other Dement.</i>, 28 (2), 111-119. <b>IF: 1.426</b></p>
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**Other Publications**

**ISI Web of Knowledge Indexed Publications without an IF**

- ▶ Recognized Research Group, SGR 386, Generalitat de Catalunya.
- ▶ CB07/09/0010, CIBER-Mental Health
- ▶ PT13/0002/0023, Clinical Research Support Platform.
- ▶ Coordinator of a Sant Pau IIB Research Group.

\*Total Impact Factor \*\*Mean Impact Factor

# Clinical Psychiatry

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Eva M. Grasa CIBERSAM  
Albert Feliu HSCSP RI  
(European Project)  
Maria Serra HSCSP RI (AGAUR)  
Mar Carceller HSCSP RI  
Francisco Javier de Diego HSCSP



## Main Lines of Research

- ▶ Psychotic disorders (first episodes and persistent hallucinations).
- ▶ Affective disorders (major depression and validation of scales).
- ▶ Borderline personality disorder.

## Challenges

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

### Psychotic disorders

- ▶ Study neuroimaging in first psychotic episodes.
- ▶ Study environmental, biological and genetic factors in psychosis.
- ▶ Study efficacy and effectiveness of anti-psychotic drugs.
- ▶ Study efficacy and effectiveness of psychotherapy for hallucinations.
- ▶ Study treatment resistance in schizophrenia.

### Affective disorders

- ▶ Identify and evaluate new therapeutic targets in depression.
- ▶ Study biological and genetic markers in affective disorders.
- ▶ Implement new therapeutic programmes.
- ▶ Evaluate depression and social aspects of depression.

### Personality disorders

- ▶ Implement clinical trials regarding the usefulness of mixed treatment in patients with borderline personality disorder and validate diagnostic instruments.
- ▶ Conduct genetic-neuroimaging studies of borderline personality disorder.
- ▶ Study efficacy and effectiveness of psychotherapy for treating borderline personality disorder.

## Awards

- ▶ Mar Carceller-Sindreu, Sara Vieira da Costa, Xavier Garcia-Moll, Maria Figueras, Cristina González, Maria J. Portella, Enric Álvarez, Citalopram, escitalopram and prolonged QT: alert or alarm? Bes Poster, Best Oral Communication and Second Prize, Les Jornades de Cloendes, Catalan Society of Psychiatry and Mental Health, Barcelona, June 2013.



Active Grants

- ▶ De Diego J, Pharmacogenetics research into antidepressant-induced sexual dysfunction Catalan Psychiatry Society, 2013-2014, €3000.
- ▶ Álvarez E, Deep brain stimulation in treatment-resistant schizophrenia: a randomized, controlled, crossover pilot study, PI12/00042, FIS, 2013-2015, €110,715.
- ▶ Álvarez E, Clinical Psychiatry Group, 2009SGR 179, AGAUR Grants to Support Research Groups, Sept 2009-Dec 2013, €42,640.
- ▶ Pascual J, Study of genetic sensitivity to the environment in patients with borderline personality disorder: case-control study of gene-environment interaction, PI10/00253, FIS, Carlos III Health Institute, Jan 2011-Dec 2014, €150,040.
- ▶ Pérez V, Deep brain stimulation: functional neuroimaging studies, optimization of stimulation parameters and new indications in affective disorders, PI09/0580, FIS, Carlos III Health Institute, Jan 2010-June 2013, €92,565.
- ▶ Portella MJ, Study of structural and functional brain changes after deep brain stimulation of treatment resistant depression. Biomarkers of DBS antidepressant effects and optimization of parameters, CP10/00393, FIS, Carlos III Health Institute, Jan 2011-Dec 2014, €121,300.
- ▶ Berrocoso E, Universidad de Cádiz, MJ Portella, V Pérez, IIB Sant Pau (co-investigators), Deep brain stimulation for the treatment of resistant depression. Mechanism of action, preclinical and clinical studies, neuroimaging studies,

- CTS-7748, Junta de Andalucía Excellence project, 2012-2016, €267,458,95
- ▶ Catalán R, Hospital Clínic, J Pérez-Blanco, MJ Arranz, IIB Sant Pau (co-investigators), Evaluation of the cost-effectiveness of pharmacogenetic intervention in optimizing treatment with antipsychotics in patients with schizophrenia, PI11/02006, FIS, 2012-2014, €120,000.
- ▶ Corripio I (Dr Bernardo, Hospital Clínic, PI/coordinator), Clinical and neurobiological determinants of second episodes of schizophrenia. Longitudinal study of first psychotic episodes, PI11/00260, FIS, 2012-2014, €91,629.67.
- ▶ Pérez V (U Hegerl, University of Leipzig, EU coordinator), PREDI-NU: preventing depression and improving awareness through networking in the EU, A100893, European Commission, 2011-2014, €1,099,306.
- ▶ Pérez J, Pérez V (JL Ayuso, Hospital Princesa, Spanish coordinator; U Hegerl, University of Leipzig, EU coordinator), Immediate-release methylphenidate in symptomatic improvement of acute mania, EC10-297, Ministry of Health, Social Policy and Equality, 2011-2015, €6,000.
- ▶ Christine Freitag (PI), MJ Arranz (named collaborator in Dr Amaia Hervas' team), Neurobiology and treatment of adolescent female conduct disorder: the central role of emotion processing, FP7, €5,997,000.

**CIBERSAM**

- ▶ Portella MJ, Neurotoxicity of depressive

- illness. Longitudinal study of neuroimaging, neurocognitive and biological markers, PI10/00372, FIS, Carlos III Health Institute, 2011-2013, €168,000.
- ▶ Pérez V, Factorial structure, reliability, convergent validity, discriminatory capacity and sensitivity to change of the Spanish version of the Remission from Depression Questionnaire (RDQ), 11BI02, CIBERSAM (Instruments), 2011-2013, €5,150.
- ▶ Corripio I (PI/coordinator: Dr Sanjuan, University of Valencia), Cortical activity in schizophrenia: a translational study on the pharmacological response to hallucinations, 11INT03, Intramural CIBERSAM, 2011-2013.
- ▶ Pérez V (PI/coordinator: JL Ayuso, Hospital Princesa), Use of antidepressants in the last decade and its relation to mortality and suicide-related events, with special focus on children and adolescents, 11INT1, Intramural CIBERSAM, 2011-2015, €55,000.
- ▶ Pérez V (PI/coordinator: JL Ayuso, Hospital Princesa), Methylphenidate immediate release in the initial treatment of symptoms of acute mania, 11INT2, Intramural CIBERSAM, 2011-2015, €53,000.
- ▶ Trujols J (co-investigators: Portella MJ, Pérez V, de Diego J), Quality of life and treatment satisfaction of opioid-dependent patients on methadone maintenance: pilot study and development of two self-reports focused on the patient's perspective, 12BI07, CIBERSAM (Instruments), 2012-2014, €4,050.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Addictive Behaviours.
- ▶ Image Diagnostic Centre.
- ▶ Neurosurgery.
- ▶ Pituitary Gland Diseases (Department of Endocrinology).
- ▶ Centre for Drug Research (CIM Sant Pau).
- ▶ Pain Clinic and Anaesthesia.
- ▶ Department of Genetics.

**External Collaborations**

- ▶ Hospital Clínic de Barcelona (Psychiatry Department), Spain.
- ▶ Hospital Parc Taulí (Psychiatry Department), Sabadell, Spain.
- ▶ Universidad Complutense de Madrid

- (Medicine-Pharmacology Department)
- ▶ Hospital Universitario de la Princesa (Psychiatry Department), Madrid, Spain.
- ▶ Universidad de Valencia (Medicine-Psychiatry Department), Spain.
- ▶ Leipzig University (Medicine-Psychiatry Department), Germany.
- ▶ Universidad de Cádiz (Medicine-Pharmacology Department), Spain.
- ▶ Hospital Benito Menni (FIDMAG) (Psychiatry Department), Barcelona, Spain.
- ▶ University of Oxford (Psychiatry Department), UK.
- ▶ Central Institute of Mental Health, Mannheim, Germany.
- ▶ University of Valencia (Personality, Evaluation and Psychological Treatment Department), Spain.

- ▶ Miguel Servet Hospital/University of Zaragoza/Health Sciences Institute of Aragon (REDIAPP: Network Health Prevention and Promotion Network), Spain.
- ▶ Mente Aberta Brazilian Centre for Mindfulness and Health Promotion, Federal University of Sao Paulo/UNIFESP (Department of Preventive Medicine), Sao Paulo, Brazil.
- ▶ CIBEROBN-Obesity and Nutrition, Santiago de Compostela, Spain.
- ▶ Universitat Jaume I (Department of Basic and Clinical Psychology and Psychobiology), Spain.
- ▶ CIBER-Rare Diseases, Madrid, Spain.
- ▶ Anoa Healthcare Consortium/Hospital d'Igualada (Psychiatry and Mental Health Area), Spain.

# Clinical Psychiatry

## Doctoral Theses

- Irene Cristina Romera Fernández, Remisión y funcionalidad en el trastorno depresivo mayor, Autonomous University of Barcelona, Víctor Pérez, Inmaculada Gilaberte (supervisors), Psychiatry Department, Autonomous University of Barcelona.

\*TIF: 136.123 \*\*MIF: 4.862

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Sainz J., Mata I., Barrera J., Perez-Iglesias R., Varela I., Arranz M.J., Rodriguez M.C., Crespo-Facorro B. Inflammatory and immune response genes have significantly altered expression in schizophrenia. (2013) *Mol. Psychiatr.*, 18 (10), 1056-1057.  
**IF: 15.147**
- 02 Cebria A.I., Parra I., Pamiás M., Escayola A., Garcia-Pares G., Puntí J., Laredo A., Valles V., Caveró M., Oliva J.C., Hegerl U., Perez-Sola V., Palao D.J. Effectiveness of a telephone management programme for patients discharged from an emergency department after a suicide attempt: Controlled study in a Spanish population. (2013) *J. Affect. Disord.*, 147, 269-276.  
**IF: 3.705**
- 03 Gilaberte I., Romera I., Perez-Sola V., Menchon J.M., Schacht A. Different levels of lack of improvement at 4 weeks of escitalopram treatment as predictors of poor 8-week outcome in MDD. (2013) *J. Affect. Disord.*, 146 (3), 433-437.  
**IF: 3.705**
- 04 Mora E., Portella M.J., Forcada I., Vieta E., Mur M. Persistence of cognitive impairment and its negative impact on psychosocial functioning in lithium-treated, euthymic bipolar patients: A 6-year follow-up study. (2013) *Psychol. Med.*, 43 (6), 1187-1196.  
**IF: 5.428**
- 05 Soler J., Soriano J., Ferraz L., Grasa E., Carmona C., Portella M.J., Seto V., Alvarez E., Perez V. Direct experience and the course of eating disorders in patients on partial hospitalization: A pilot study. (2013) *Eur. Eat. Disord. Rev.*, 21 (5), 399-404.  
**IF: 2.252**
- 06 Duran-Sindreu S.F., Grasa-Bello E., Corripio-Collado I., Sauras-Quetcuti R.B., Keymer-Gausset A., Roldan-Bejarano A., Alonso-Solis A., Figueras-Vilalta M., Alvarez-Martinez E. [Olanzapine long-acting post-injection syndrome: a case report and brief review]. [Síndrome post-inyección por olanzapina de liberación retardada: Breve revisión a propósito de un caso.]. (2013) *Rev. Int. Med. Cienc. Act. Fis. Dep.*, 41 (1), 60-62.  
**IF: 0.167**
- 07 De Diego-Adelino J., Portella M.J., Gomez-Anson B., Lopez-Moruelo O., Serra-Blasco M., Vives Y., Puigdemont D., Perez-Egea R., Alvarez E., Perez V. Hippocampal abnormalities of glutamate/glutamine, N-acetylaspartate and choline in patients with depression are related to past illness burden. (2013) *J. Psychiatry Neurosci.*, 38 (2), 107-116.  
**IF: 7.492**
- 08 Romera I., Perez V., Ciudad A., Caballero L., Roca M., Polavieja P., Gilaberte I. Residual symptoms and functioning in depression, does the type of residual symptom matter? A post-hoc analysis. (2013) *BMC Psychiatry*, 13.  
**IF: 2.237**
- 09 Trujols J., Portella M.J., Iraurgi I., Campins M.J., Sinol N., Cobos J.P.D.L. Patient-reported outcome measures: Are they patient-generated, patient-centred or patient-valued?. (2013) *J. Ment. Heal.*, 22 (6), 555-562.  
**IF: 1.762**
- 10 Trujols J., Portella M.J. Not all PROMs reflect patients' perspectives.. (2013) *BMJ-British Medical Journal*, 346.  
**IF: 16.378**
- 11 Feliu-Soler A., Pascual J.C., Soler J., Perez V., Armario A., Carrasco J., Sanz A., Villamarin F., Borrás X. Emotional responses to a negative emotion induction procedure in borderline personality disorder. (2013) *Int. J. Clin. Health Psychol.*, 13 (1), 9-17.  
**IF: 2.915**
- 12 Serra-Blasco M., Portella M.J., Gomez-Anson B., De Diego-Adelino J., Vives-Gilabert Y., Puigdemont D., Granell E., Santos A., Alvarez E., Perez V. Effects of illness duration and treatment resistance on grey matter abnormalities in major depression. (2013) *Br. J. Psychiatry*, 202 (6), 434-440.  
**IF: 7.343**
- 13 Kluge M., Hegerl U., Sander C., Dietzel J., Mergl R., Bitter I., Demyttenaere K., Gusmao R., Gonzalez-Pinto A., Perez-Sola V., Vieta E., Juckel G., Zimmermann U.S., Bauer M., Sienaert P., Quintao S., Edel M.-A., Bolyos C., Ayuso-Mateos J.L., Lopez-Garcia P. Methylphenidate in mania project (MEMAP): Study protocol of an international randomised double-blind placebo-controlled study on the initial treatment of acute mania with methylphenidate. (2013) *BMC Psychiatry*, 13.  
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**IF: 0.766**
- 15 Ezquiaga E., Garcia-Lopez A., Montes J.M., Alegria A., De Dios C., Balanza V., Sierra P., Perez J., Toledo F., Rodriguez A. Variables associated with disability in elderly bipolar patients on ambulatory treatment [Discapacidad en pacientes bipolares ancianos en tratamiento ambulatorio. Variables asociadas]. (2012) *Rev. Psiquiatr. Salud Ment.*, 5 (3), 183-190.  
**IF: 1.044**
- 16 De Salas-Cansado M., Alvarez E., Olivares J.M., Carrasco J.L., Ferro M.B., Rejas J. Modelling the cost-effectiveness of pregabalin versus usual care in daily practice in the treatment of refractory generalised anxiety disorder in Spain. (2013) *Soc. Psychiatry Psychiatr. Epidemiol.*, 48 (6), 985-996.  
**IF: 2.575**
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## Scientific Production



\*TIF: 136.123 \*\*MIF: 4.862

## Scientific Production

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**IF: 0.759**
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- 23 Romera I., Perez V., Gilaberte I. Remission and functioning in major depressive disorder. (2013) *Actas Esp. Psiquiatri.*, 41 (5), 263-268.  
**IF: 0.759**
- 24 Trujols J., Feliu-Soler A., De Diego-Adelino J., Portella M.J., Cebria Q., Soler J., Puigdemont D., Alvarez E., Perez V. A psychometric analysis of the Clinically Useful Depression Outcome Scale (CUDOS) in Spanish patients. (2013) *J. Affect. Disord.*, 151 (3), 920-923.  
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**IF: 3.705**
- 26 Trujols J., Portella M.J., Perez V. Toward a genuinely patient-centered metric of depression recovery: One step further. (2013) *JAMA Psychiatry*, 70 (12), 1375.  
**IF: N/D**
- 27 Bernardo M., Bioque M., Parellada M., Saiz Ruiz J., Cuesta M.J., Llerena A., Sanjuan J., Castro-Fornieles J., Arango C., Cabrera B. Assessing clinical and functional outcomes in a gene-environment interaction study in first episode of psychosis (PEPs) [Criterios de valoración clínicos y de funcionamiento en un estudio de interacción gen-ambiente en primeros episodios psicóticos (PEPs)]. (2013) *Rev. Psiquiatr. Salud Ment.*, 6 (1), 4-16.  
**IF: 1.044**
- 28 [No author name available] A genome-wide association analysis of a broad psychosis phenotype identifies three loci for further investigation. (2014) *Biol. Psychiatry*, 75 (5), 386-397.  
**IF: 9.472**
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**IF: 29.648**
- 30 Shaikh M., Hall M.-H., Schulze K., Dutt A., Li K., Williams I., Walshe M., Constante M., Broome M., Picchioni M., Toulopoulou T., Collier D., Stahl D., Rijdsdijk F., Powell J., Murray R.M., Arranz M., Bramon E. Effect of DISC1 on the P300 waveform in psychosis. (2013) *Schizophr. Bull.*, 39 (1), 161-167.  
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## Other Publications

## ISI Web of Knowledge Indexed Publications without an IF

- ▶ Arranz MJ, Perez V, Perez J, Gutierrez B, Hervas A. Pharmacogenetic applications and pharmacogenomic approaches in schizophrenia. *Current Genetic Medicine Reports* 2013; 1(1): 58-64.
- ▶ Olivares JM, Carrasco JL, Álvarez E, Perez M, López-Gómez V, Rejas J. The effect of broadening the definition of generalized anxiety disorder on healthcare resource utilization and related costs in outpatient psychiatric clinics. *Open Journal of Psychiatry*, 2013, 3, 158-167.
- ▶ Miquel Bernardo, Miquel Bioque, Mara Parellada, Jerónimo Saiz

Ruiz, Manuel J. Cuesta, Adrián Llerena, Julio Sanjuán, Josefina Castro-Fornieles, Celso Arango, Bibiana Cabrera y PEPs Group. Criterios de valoración clínicos y de funcionamiento en un estudio de interacción gen-ambiente en primeros episodios psicóticos (PEPs). *Rev Psiquiatr Salud Ment (Barc.)*. 2013;6(1): 4-16.

- ▶ Ezquiaga E, García-López A, Montes JM, Alegria A, de Dios C, Balanzá V, Sierra P, Perez J, Toledo F, Rodríguez A. Variables associated with disability in elderly bipolar patients on ambulatory treatment. *Rev Psiquiatr Salud Ment*. 2012 Jul-Sep;5(3):183-90.
- ▶ Farré A, Arranz MJ, Pérez Blanco J, Catalán R, Pérez V. Farmacogenética de las reacciones adversas a los antipsicóticos en pacientes con esquizofrenia. *Psiquiatr Biol*. 2012;19(Supl.1):15-20.

# Genetics in Neurodegenerative Diseases

## Coordinator

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## Researchers

Oriol Dols HSCSP RI

## Technicians

Laia Muñoz CIBERNED

## Collaborators

Laura Cervera UPF  
Meritxell Perramon UAB



## Main Lines of Research

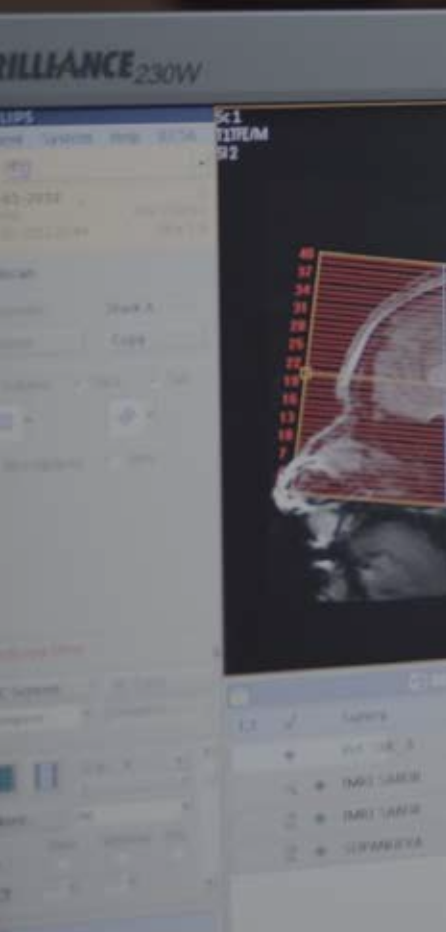
- ▶ Use of state-of-the-art genomic strategies to study the genetic architecture of complex diseases caused by neurodegenerative processes, including Alzheimer disease and other dementias, Parkinson disease, and neuromuscular disorders.
- ▶ Cloning and evaluation of novel genes associated with neurodegenerative disorders through genomic analyses on families with Mendelian pattern of inheritance.
- ▶ Study of the relationship between biomarkers and endophenotypes at the individual genetic background.
- ▶ Evaluation of the effect of novel genes related to neurodegenerative disorders in the Spanish population through multicentre collaborative studies.

## Challenges

- ▶ Assemble a research team of excellence in the international field of genetics of neurodegenerative disorders.
- ▶ Increase our capacity of funding through EU support.
- ▶ Develop a comprehensive genomic database from well-characterized Spanish patients of European origin suffering from neurodegenerative disorders.

## Active Grants

- ▶ Rare genetic variants and their involvement in Alzheimer disease: use of new ultra-sequencing technologies, PI12/01311, Carlos III Health Institute.



Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Neurobiology of Dementia (Alberto Lleó).
- ▶ Parkinson Disease and Movement Disorders (Jaime Kulisevsky).
- ▶ Neuromuscular Diseases (Isabel Illa).

**External Collaborations**

- ▶ National and international consortiums
- ▶ European Early Onset Dementia Consortium (EU-EOD).
- ▶ European Alzheimer Disease Initiative (EADI).
- ▶ International Genomics of Alzheimer Project (IGAP).
- ▶ Dementia Genetics Spanish Consortium (DEGESCO).
- ▶ CIBER-Neurodegenerative Diseases (CIBERNED).

**Collaborations with international centres**

- ▶ Dr John Hardy, University College of London, UK.
- ▶ Dr Andrew Singleton, National Institutes of Health, USA.
- ▶ Dr Coro Paisán-Ruiz, Mount Sinai School of Medicine, USA.
- ▶ Dr Ekaterina Rogaeva, University of Toronto, Canada.
- ▶ Dr Mikko Hiltunen, Kuopio University, Finland.
- ▶ Dr Martin Ingelsson, Uppsala University, Sweden.
- ▶ Dr Liana Fidani, Aristotle University of Thessaloniki, Greece.
- ▶ Dr Philippe Amouyel, Institut Pasteur de Lille, France.
- ▶ Dr Christine Van Broeckhoven, University of Antwerp, Belgium.

\*TIF: 69.252 \*\*MIF: 6.925

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Costa S., Suarez-Calvet M., Anton S., Dols-Icardo O., Clarimon J., Alcolea D., Fortea J., Carmona M., Sala I., Sanchez-Saudinos M.B., Blesa R., Lleo A. Comparison of 2 diagnostic criteria for the behavioral variant of frontotemporal dementia. (2013) *Am. J. Alzheimers Dis. Other Dement.*, 28 (5), 469-476.  
**IF: 1.426**
- 02 Rodriguez-Rodriguez E., Sanchez-Juan P., Vazquez-Higuera J.L., Mateo I., Pozueta A., Berciano J., Cervantes S., Alcolea D., Martinez-Lage P., Clarimon J., Lleo A., Pastor P., Combarros O. Genetic risk score predicting accelerated progression from mild cognitive impairment to Alzheimer's disease. (2013) *J. Neural Transm.*, 120 (5), 807-812.  
**IF: 2.871**
- 03 Williams J., Amouyel P. Meta-analysis of 74,046 individuals identifies 11 new susceptibility loci for Alzheimer's disease. (2013) *Nature Genet.*, 45 (12), 1452-1458.  
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- 04 Ortega-Cubero S., Lorenzo-Betancor O., Lorenzo E., Alonso E., Coria F., Pastor M.A., Fernandez-Santiago R., Marti M.J., Ezquerra M., Valldeoriola F., Compta Y., Tolosa E., Agundez J.A., Jimenez-Jimenez F.J., Gironell A., Clar-

- imon J., de Castro P., Garcia-Martin E., Alonso-Navarro H., Pastor P. Fused in sarcoma (FUS) gene mutations are not a frequent cause of essential tremor in europeans. (2013) *Neurobiol. Aging*, 34 (10), 2441-2441.  
**IF: 4.853**
- 05 Colom-Cadena M., Gelpi E., Charif S., Belbin O., Blesa R., Marti M.J., Clarimon J., Lleo A. Confluence of  $\alpha$ -synuclein, tau, and  $\beta$ -amyloid pathologies in dementia with Lewy bodies. (2013) *J. Neuropathol. Exp. Neurol.*, 72 (12), 1203-1212.  
**IF: 4.372**
- 06 Rubio-Moscardo F., Seto-Salvia N., Pera M., Bosch-Morato M., Plata C., Belbin O., Gene G., Dols-Icardo O., Ingelsson M., Helisalmi S., Soininen H., Hiltunen M., Giedraitis V., Lannfelt L., Frank A., Bullido M., Combarros O., Sanchez-Juan P., Boada M., Tarraga L., Pastor P., Perez-Tur J., Baquero M., Molinuevo J.L., Sanchez-Valle R., Fuentes-Prior P., Fortea J., Blesa R., Munoz F.J., Lleo A., Valverde M.A., Clarimon J. Rare Variants in Calcium Homeostasis Modulator 1 (CALHM1) Found in Early Onset Alzheimer's Disease Patients Alter Calcium Homeostasis. (2013) *PLoS One*, 8 (9).  
**IF: 3.534**
- 07 Clarimon J., Kulisevsky J. Parkinson's disease: From genetics to clinical practice. (2013) *Curr. Genomics*, 14 (8), 560-567.

- 08 Garcia-Redondo A., Dols-Icardo O., Rojas-Garcia R., Esteban-Perez J., Cordeiro-Vazquez P., Munoz-Blanco J.L., Catalina I., Gonzalez-Munoz M., Varona L., Sarasola E., Povedano M., Sevilla T., Guerrero A., Pardo J., de Munain A.L., Marquez-Infante C., de Rivera F.J.R., Pastor P., Jerico I., de Arcaya A.A., Mora J.S., Clarimon J. Analysis of the C9orf72 Gene in Patients with Amyotrophic Lateral Sclerosis in Spain and Different Populations Worldwide. (2013) *Hum. Mutat.*, 34 (1), 79-82.  
**IF: 5.05**
- 09 Pera M., Alcolea D., Sanchez-Valle R., Guardia-Laguarta C., Colom-Cadena M., Badiola N., Suarez-Calvet M., Llado A., Barrera-Ocampo A.A., Sepulveda-Falla D., Blesa R., Molinuevo J.L., Clarimon J., Ferrer I., Gelpi E., Lleo A. Distinct patterns of APP processing in the CNS in autosomal-dominant and sporadic Alzheimer disease. (2013) *Acta Neuropathol.*, 125 (2), 201-213.  
**IF: 9.777**
- 10 Colom-Cadena M., Gelpi E., Marti M.J., Charif S., Dols-Icardo O., Blesa R., Clarimon J., Lleo A. MAPT H1 haplotype is associated with enhanced  $\alpha$ -synuclein deposition in dementia with Lewy bodies. (2013) *Neurobiol. Aging*, 34 (3), 936-942.  
**IF: 4.853**

\*Total Impact Factor \*\*Mean Impact Factor

# Human Experimental Neuropsychopharmacology

## Coordinator

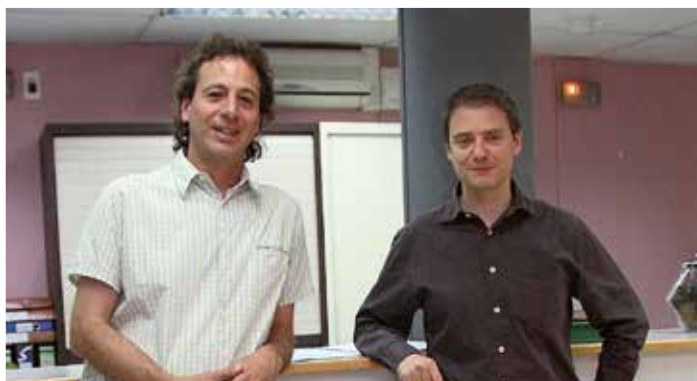
Jordi Riba  
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HSCSP RI

## Collaborators

Ana Maqueda

UAB



## Main Lines of Research

### General neuropsychopharmacology

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

### Neuropsychopharmacology of abused substances

- ▶ 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 and extend existing research lines through possible cooperation agreements with other groups and according to internal growth.
- ▶ Obtain emerging-group recognition.
- ▶ Obtain stable funding and supporting technical staff.
- ▶ Communicate activities.
- ▶ Maintain existing external cooperation agreements.
- ▶ Establish new cooperation agreements within HSCSP RI.

## Active Grants

- ▶ Riba J, Human pharmacology of salvinorin A: study of pharmacokinetics, pharmacodynamics and mechanism of action by pharmacological blocking of the effects, PI12/02758, Ministry of the Economy and Competitiveness, 2012-2015.

**Collaborations**

**Collaborations with IIB Sant Pau Groups**

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

**External Collaborations**

- ▶ Cognition and Brain Plasticity Group (IDIBELL Bellvitge Biomedical Research Institute), Spain.
- ▶ Biomedical Engineering Research Centre, Universitat Politècnica de Catalunya (UPC), Spain.
- ▶ Brain Institute, Federal University of Rio Grande do Norte, Natal, Brazil.
- ▶ Neuroscience and Behaviour Department, Ribeirão Preto Medical School, University of São Paulo, Brazil.
- ▶ Psychiatry and Behavioral Sciences Department, Johns Hopkins School of Medicine, USA.
- ▶ Department of Comparative Biomedical Sciences, Louisiana State University, USA.

\*TIF: 3.988 \*\*MIF: 3.988

**Scientific Production**

**ISI Web of Knowledge Indexed Publications with an IF**

01 Bouso JC, Fabregas JM, Antonijoan RM, Rodriguez-Fornells A, Riba J, Acute effects of ayahuasca on neuropsychological performance: Differences in executive function between experienced and occasional users. (2013) *Psychopharmacology*, 230 (3), 415-424.  
**IF: 3.988**

**Books or Chapters**

**With ISBN**

- ▶ Riba J, Barbanoj MJ, Farmacología de la Ayahuasca: Investigaciones con voluntarios mediante ensayos clínicos, in Labate BC & Bouso JC (eds), *Ayahuasca y Salud*. Los Libros de la Liebre de Marzo, 2013.

**Publications**

**ISI Web of Knowledge Indexed Publications without an IF**

- ▶ Riba, J, Vaquero, L, Bouso, J.; et al, Abnormal functional and structural corticostriatal connectivity associated to reward processing in cocaine dependence, *Society for Neuroscience Abstract Viewer*, Vol. 43.
- ▶ De Araujo, D, Bouso, J, et al, Long-term psychedelic drug use is associated with modifications in cortical thickness in the anterior and posterior cingulate cortices, *Society for Neuroscience Abstract Viewer* Vol. 43.
- ▶ Garrido, M, Charlotte, L, Riba J, et al, Low abuse potential and overall subjective effects after the sublingual administration of therapeutic single doses of tetrahydrocannabinol, cannabidiol or the combination of both drugs, *Basic & Clinical Pharmacology & Toxicology* Vol. 113; SI Suppl 2, pp: 12-13.

\*Total Impact Factor \*\*Mean Impact Factor



# Neurobiology of Dementia

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## Researchers

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Juan Fortea HSCSP  
Daniel Alcolea HSCSP RI  
Olivia Belbin HSCSP RI  
María Carmona HSCSP RI  
Martí Colom HSCSP RI  
Estrella Morenas HSCSP RI  
Marc Suárez HSCSP RI  
Isabel Sala HSCSP  
M. Belen Sánchez-Saudinós HSCSP RI

## Technicians

Sofía Antón HSCSP RI  
Laia Muñoz HSCSP RI



## Main Lines of Research

- ▶ Biomarkers in Alzheimer disease and other neurodegenerative dementias:
  - CSF biomarkers in Alzheimer disease, dementia with Lewy bodies and frontotemporal dementia.
  - Amyloid imaging in neurodegenerative dementias.
- Novel MRI markers in preclinical Alzheimer disease.
- ▶ Biomarkers of Alzheimer disease in Down syndrome
- ▶ Molecular basis of neurodegenerative diseases.

## 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 to increase number of applications for European and international projects.
- ▶ Establish links with technological innovation groups and companies to foster patent applications and contracts.

## Active Grants

- ▶ A Lleó Blesa (PI), Gamma-secretase complex: effect of genetic mutations and role as a therapeutic target in Alzheimer disease, P110/00018, FIS, 2011-2014, €260,936.
- ▶ A Lleó Blesa (coordinator of 11 groups), Multicentre study of CSF biomarkers and neuroimaging in the Alzheimer disease preclinical-prodromal continuum (SIGNAL), CIBERNED, 2011-2013, €70,000.
- ▶ A Lleó Blesa (PI and WP leader), B Winblad, Karolinska Institutet (coordinator), Neurodegenerative diseases. Biomarkers for Alzheimer disease and Parkinson disease (BIOMARKAPD), Joint Programming for Neurodegenerative Diseases, Carlos III Health Institute, 2012-2014, €117,370.
- ▶ A Lleó Blesa (PI), T Iglesias (coordinator of 5 groups), Role of GSK-3  $\beta$  in cortical network abnormalities in Alzheimer disease, 2010-2013, CIBERNED, 2013-2015, €70,000.
- ▶ PJ Visser (coordinator), EMIF-AD, 7th Call, Innovative Medicines Initiative (EU), 2013-2018, €15,000/year.
- ▶ Blesa R, Cerebral amyloid deposits in pre-symptomatic Alzheimer disease: role of genetic risk factors and genes involved in neuroplasticity and synaptogenesis, FIS Grant, Carlos III Health Institute, P110/01878, Jan 2011-Dec 2013, €328,515.
- ▶ Fortea J, Multimodal studies of cerebrospinal fluid and MRI in preclinical Alzheimer disease, P111/02425, FIS, Carlos III Health Institute, Jan 2012-Dec 2014, €112,540.
- ▶ R Blesa, Alzheimer disease and Down syndrome. Multimodal studies of cerebrospinal fluid, MRI and amyloid PET, P113/01532, €130,075.

## Transfer Products

- ▶ Agreement with the company Thrombotargets.

## Patents

- ▶ Mireia Coma, Patrick Aloy, Albert Pujol, Xavier Gomis, Baldomero Oliva, Alberto Lleó, José Manuel Mas, Combination therapies for treating neurological disorders, US Patent Application 20130116215.

**Collaborations with IIB Sant Pau Groups**

- ▶ Genetics in Neurodegenerative Diseases (Dr Jordi Clarimon).
- ▶ Molecular Physiology of the Synapse (Dr Alex Bayes).
- ▶ Cerebrovascular Diseases (Dr Joan Martí-Fabregas).
- ▶ Neuromuscular Diseases (Dr Isabel Illa).
- ▶ Parkinson Disease and Movement Disorders (Dr Jaume Kulisevsky).
- ▶ Nuclear Medicine (Dr Ignasi Carrió).

**External Collaborations**

- ▶ Ellen Gelpi, José L Molinuevo, Hospital Clínic-IDIBAPS, Barcelona, Spain.
- ▶ Jordi Magrané, Cornell University, New York, USA.
- ▶ Tiago Outeiro, University Medical Centre, Goettingen, Germany.
- ▶ Martin Ingelsson, MD, PhD, Uppsala University, Sweden.
- ▶ Tara Spiers-Jones, University of Edinburgh, UK.
- ▶ Kaj Blennow, Göteborg, Sweden.
- ▶ Pieter J Visser, Amsterdam University, The Netherlands.

\*TIF: 113.557 \*\*MIF: 6.680

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Williams J., Amouyel P. Meta-analysis of 74,046 individuals identifies 11 new susceptibility loci for Alzheimer's disease. (2013) *Nature Genet.*, 45 (12), 1452-1458. **IF: 29.648**
- 02 Mattsson N., Andreasson U., Persson S., Carrillo M.C., Collins S., Chalbot S., Cutler N., Dufour-Rainfray D., Fagan A.M., Heegaard N.H.H., Robin Hsiung G.-Y., Hyman B., Iqbal K., Lachno D.R., Lleo A., Lewczuk P., Molinuevo J.L., Parchi P., Regeniter A., Rissman R., Rosenmann H., Sancesario G., Schroder J., Shaw L.M., Teunissen C.E., Trojanowski J.Q., Vanderstichele H., Vandijck M., Verbeek M.M., Zetterberg H., Blennow K., Kaser S.A. CSF biomarker variability in the Alzheimer's Association quality control program. (2013) *Alzheimers. Dement.*, 9 (3), 251-261. **IF: 17.472**
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- 12 Colom-Cadena M., Gelpi E., Charif S., Belbin O., Blesa R., Marti M.J., Clarimon J., Lleo A. Confluence of  $\alpha$ -synuclein, tau, and  $\beta$ -amyloid pathologies in dementia with

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**IF: 4.372**

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- 17 Rubio-Moscardo F., Seto-Salvia N., Pera M., Bosch-Morato M., Plata C., Belbin O., Gene G., Dols-Icardo O., Ingelsson M., Helisalmi S., Soininen H., Hiltunen M., Giedraitis V., Lannfelt L., Frank A., Bullido M., Combarros O., Sanchez-Juan P., Boada M., Tarraga L., Pastor P., Perez-Tur J., Baquero M., Molinuevo J.L., Sanchez-Valle R., Fuentes-Prior P., Fortea J., Blesa R., Munoz F.J., Lleo A., Valverde M.A., Clarimon J. Rare Variants in Calcium Homeostasis Modulator 1 (CALHM1) Found in Early Onset Alzheimer's Disease Patients Alter Calcium Homeostasis. (2013) *PLoS One*, 8 (9). **IF: 3.534**

# Ageing Institute

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## Administrative Staff

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## Main Lines of Research

- ▶ Health research into ageing:
  - Healthy ageing: physical activity, nutrition and cognition.
  - Frequent health problems in 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, social services and active ageing.

## Challenges

### Health research

- ▶ Improve quality of life among older people through health promotion and disability prevention.
- ▶ Conduct clinical and epidemiological observational and intervention studies into mobility, nutrition and cognition.

### Health and social services research

- ▶ Promote social and healthcare as key for the maintenance of autonomy, with a focus on:
  - Models of social and healthcare.
  - Health and social services organization.
  - Comprehensive needs assessment.
  - Care quality.

- Good caregiving practices.
- Assessment of dependence.
- Home care services.
- Cost analysis.

### Research into ICT applications to health, social services and active ageing:

- ▶ Work with technology companies to develop systems aimed at monitoring health, facilitating participation and ensuring safety, mainly focused on social appropriation of ICTs and e-health development.
- ▶ Develop new technological products to promote active ageing.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ FIS Fragility, EAP Sardenya.
- ▶ FIS Memory Workshops, Public Health Agency of Barcelona and EAP Sardenya.

### External Collaborations

- ▶ EC-funded projects: PROFOUND and SAA-PHO.
- ▶ Global Research Network of the International Association of Geriatrics and Gerontology (joint organization of a yearly course in Bar-

celona; International Conference on Frailty and Sarcopenia Research 2014).

- ▶ Participation in European groups: Nutrition and Cognitive Decline Group of the European Union Geriatric Medicine Society and MOBEX Group (mobility and falls).

Active Grants

- ▶ Salvà A, Secure Active Ageing: Participation and Health for the Old (SAAPHO), AAL-010000-2011-12, European Commission, 2011-2014. €3,078,799.34.
- ▶ Salvà A, Prevention of Falls Network for Dissemination (PRO-FOUND), CIP- 325087, European Commission, 2012-2015, €1,026,569.00.
- ▶ Salvà A, Frailty screening in the elderly according to cognitive status (FRAPEM), P111/02001, FIS, 2012-2014, €74,266.
- ▶ 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 aged 65 to 80 years, P111/02060, FIS, 2012-2013, €126,072.
- ▶ Salvà A, Active ageing, citizenship and participation, CSIC Foundation, 2012-2014, €207,719.

\*TIF: 14.477 \*\*MIF: 2.895

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

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|--|--|--|
| <p>01 Kelaiditi E., Cesari M., Canevelli M., Abellan Van Kan G., Ousset P.-J., Gillette-Guyonnet S., Ritz P., Duveau F., Soto M.E., Provencher V., Nourhashemi F., Salva A., Robert P., Andrieu S., Rolland Y., Touchon J., Fitten J.L., Vellas B. Cognitive frailty: Rational and definition from an (I.A.N.A./I.A.G.G.) International Consensus Group. (2013) <i>J. Nutr. Health Aging</i>, 17 (9), 726-734.<br/><b>IF: 2.659</b></p> <p>02 Ferry M., Coley N., Andrieu S., Bonhomme C., Caubere J.P., Cesari M., Gautry J.,</p> | <p>Garcia Sanchez I., Hugonot L., Mansuy L., Pahor M., Pariente J., Ritz P., Salva A., Sijben J., Wieggers R., Ythier-Moury P., Zaim M., Zetlaoui J., Vellas B. How to design nutritional intervention trials to slow cognitive decline in apparently healthy populations and apply for efficacy claims: A statement from the international academy on nutrition and aging task force. (2013) <i>J. Nutr. Health Aging</i>, 17 (7), 619-623.<br/><b>IF: 2.659</b></p> <p>03 Canevelli M., Adali N., Cantet C., Andrieu S., Bruno G., Cesari M., Vellas B. Impact of behavioral subsyndromes on cognitive decline in Alzheimer's disease: Data from the ICTUS study. (2013) <i>J. Neurol.</i></p> | <p>260 (7), 1859-1865.<br/><b>IF: 3.841</b></p> <p>04 Roque M., Salva A., Vellas B. Malnutrition in community-dwelling adults with dementia (Nutrialz Trial). (2013) <i>J. Nutr. Health Aging</i>, 17 (4), 295-299.<br/><b>IF: 2.659</b></p> <p>05 Inzitari M., Gine-Garriga M., Martinez B., Perez-Fernandez M., Barranco-Rubia E., Lleo A., Salva-Casanovas A. Cerebrovascular disease and gait and balance impairment in mild to moderate Alzheimer's disease. (2013) <i>J. Nutr. Health Aging</i>, 17 (1), 45-48.<br/><b>IF: 2.659</b></p> |
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ISI Web of Knowledge Indexed Publications without an IF

- ▶ Salvà A, Domingo A, Roqué-i-Figuls, M, Serra, JA. Informe: análisis de las publicaciones de socios de la Sociedad Española de Geriátria y Gerontología (SEGG) del año 2006 al 2011. *Revista Española de Geriátria y Gerontología*. 2013; 48(4):180-184
- ▶ González Ramírez A, Calvo Aguirre JJ, Lekuona Ancizar P, González Oliveras JL, Marcellán Benavente T, Ruiz de Gordo Armendia A, Salvà Casanovas A, Alcalde Tirado P, González Alonso T, Padilla Clemente R, Clerencia Sierra M, Ubis Diez E. El fenómeno de las caídas en residencias e instituciones: Revisión del Grupo de Trabajo de Osteoporosis, Caídas y Fracturas de la Sociedad Española de Geriátria y Gerontología (GCOF-SEGG), *Revista Española de Geriátria y Gerontología* 2013; 48(1):30-38
- ▶ Domènech S, Rivero J, Coll-Planas L, Sainz FJ, Reissner A, Miralles F. Involving older people in the design of an innovative information and communication technologies system promoting active aging: the SAAPHO project. *Journal of Accessibility and Design for all*. 2013 ; 3(1): 13-17
- ▶ Osuna-Pozo CM, Serra-Rexach JA, Viña J, Gómez-Cabrera MD, Salvà A, Ruiz D, Masanes F, Lopez-Soto A, Formiga F, Cuesta F, Cruz-Jentoft A. Prevalencia de sarcopenia en consultas de geriatría y residencias. Estudio ELLI, *Revista Española de Geriátria y Gerontología*. 2013 Apr 11.[Epub ahead of print]
- ▶ Coll-Planas L, Gómez G, Márquez M, Bonilla P, Menero L, Matas M. Guía de intervención grupal en atención primaria para aliviar la soledad de las personas sociales promoviendo la participación social. *Revista de Trabajo Social y Salud*. 2013; 72:191-198

Other Publications



# Addictive Behaviours

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## Main Lines of Research

### Alcohol

- ▶ 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.
- ▶ Escitalopram for the treatment of depression and anxiety associated with alcoholism.
- ▶ Efficacy of nalmefene in alcohol-dependent patients (randomized, double-blind, parallel, placebo-controlled study).

### Cocaine

- ▶ Evaluation of cocaine craving in 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 smoking addiction with varenicline in psychiatric patients.

### Opiates

- ▶ Patient satisfaction concerning maintenance treatment with opioid agonists.
- ▶ Heroin-dependent patient satisfaction regarding methadone and methadone pharmacogenetics.

## Challenges

- ▶ Establish bidirectional links between clinical practice and investigation to suggest hypotheses and 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 procedure effectiveness.
- ▶ Evaluate validity and reliability of frequently used clinical evaluation procedures.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Clinical Epidemiology and Healthcare.
- ▶ Clinical Psychiatry.
- ▶ Genetic Diseases.

### External Collaborations

- ▶ DeustoPsych, R+D+I in Psychology and Health, University of Deusto, Bilbao, Spain.



Active Grants

- ▶ J. Pérez de los Cobos, Towards the identification of mechanisms to inhibit cocaine craving: assessment of cognitive and motivational factors potentially related to the absence of craving in cocaine-dependent patients, PI12/00105, FIS, Spanish Ministry of the Economy, 2013-2015, €90,145.
- ▶ MT Puig (Epidemiology), J. Trujols (co-investigator), Challenges in public health: knowledge transfer in obesity, cardiovascular disease and alcohol consumption, PI12/02257, FIS Carlos III Health Institute, Spanish Ministry of Economy, 2013-2015.

CIBERSAM

- ▶ Pérez V, J. Trujols (co-investigator), Factorial structure, reliability, convergent validity, discriminatory capacity and sensitivity to change of the Spanish version of the Remission from Depression Questionnaire (RDQ), 11BI02, CIBERSAM (Instruments), 2011-2013, €5,150.
- ▶ Pérez V, J. Trujols (co-investigator), JL Ayuso (Hospital Princesa, coordinator), Use of antidepressants in the last decade and its relationship with mortality and suicide-related events, with special focus

on children and adolescents, 11INT1, Intramural CIBERSAM, 2011-2015, €55,000.

- ▶ Trujols J, Quality of life and treatment satisfaction of opioid-dependent patients on methadone maintenance: pilot study and development of two self-reports focused on the patient's perspective, 12BI07, CIBERSAM (Instruments), 2012-2014, €4,050.

\*TIF: 30.447 \*\*MIF: 3.806

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- |  |   |  |
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| <p>01 Trujols J., Portella M.J., Iraurgi I., Campins M.J., Sinol N., Cobos J.P.D.L. Patient-reported outcome measures: Are they patient-generated, patient-centred or patient-valued? (2013) <i>J. Ment. Heal.</i>, 22 (6), 555-562.<br/><b>IF: 1.762</b></p> <p>02 Trujols J., Portella M.J. Not all PROMs reflect patients' perspectives. (2013) <i>BMJ-British Medical Journal</i>, 346.<br/><b>IF: 16.378</b></p> <p>03 Trujols J., Portella M.J., Perez V. Toward a genuinely patient-centered metric of depression recovery: One step further. (2013) <i>JAMA Psychiatry</i>, 70 (12), 1375.<br/><b>IF: N/D</b></p> <p>04 Trujols J., Feliu-Soler A., De Diego-Adelino J., Portella M.J., Cebria Q., Soler J., Puigdemont D., Alvarez E., Perez V. A psychometric analysis of the Clinically Useful Depression Outcome Scale</p> | <p>(CUDOS) in Spanish patients. (2013) <i>J. Affect. Disord.</i>, 151 (3), 920-923.<br/><b>IF: 3.705</b></p> <p>05 Trujols J., Sinol N., Perez De Los Cobos J. Trends in the average prescribed dose of methadone: More than a proxy for the evolution of severity of opioid dependence. (2013) <i>J. Obstet. Gynaecol.</i>, 33 (4), 430.<br/><b>IF: 0.604</b></p> <p>06 Soler J., Vega D., Feliu-Soler A., Trujols J., Soto A., Elices M., Ortiz C., Perez V., Bohus M., Pascual J.C. Validation of the Spanish version of the borderline symptom list, short form (BSL-23). (2013) <i>BMC Psychiatry</i>, 13.<br/><b>IF: 2.237</b></p> <p>07 Marco A., Gallego C., Trujols J., Blanco X.R., Arguelles M.J., Puig A., Marin E., Moruno L., Argiles V., Blanco R.M., Golf J.P., Perez De Los Cobos J. Satisfaction with Methadone Treatment Among Prison Inmates: Exploring Predictive Factors. (2013) <i>Crim. Justice Behav.</i>, 40 (10), 1163-1177.</p> | <p><b>IF: 1.662</b></p> <p>08 Sinol N., Martinez-Sanchez E., Guillermo E., Josefa Campins M., Larger F., Trujols J. Effectiveness of exercise as a complementary intervention in addictions: A review [Efectividad del ejercicio físico como intervención coadyuvante en las adicciones: Una revisión]. (2013) <i>Adicciones</i>, 25 (1), 71-85.<br/><b>IF: 1.167</b></p> <p>09 Ramon J.M., Nerin I., Comino A., Pinet C., Abella F., Carreras J.M., Banque M., Baena A., Morchon S., Jimenez-Muro A., Marqueta A., Vilarasau A., Bullon R., Masuet-Aumatell C. A multicentre randomized trial of combined individual and telephone counselling for smoking cessation. (2013) <i>Prev. Med.</i>, 57 (3), 183-188.<br/><b>IF: 2.932</b></p> |
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Books or Chapters

- ▶ Trujols, J. (2013), Hacia una participación significativa de las personas usuarias de drogas por vía parenteral en el desarrollo de las políticas e intervenciones en el ámbito del uso de drogas: apuntes para una historia mal conocida, in A. Llort, T. Borràs (eds), *Apuntes para la Promoción de Intervenciones con Pares: Reducción de Daños y Riesgos Relacionados con el Uso de las Drogas* (pp. 124-148), Reus: Pragma General d'Edicions, ISBN: 978-84-938588-5-8.
- ▶ Borràs, T., Trujols, J. (2013), La reducción de riesgos en el ámbito asistencial, in D.P. Martínez-Oró, J. Pallarès (eds.), *De Riesgos y Placeres: Manual para Entender las Drogas* (pp. 219-237), Lleida: Milenio, ISBN: 978-84-9743-558-1.

AREA 5

# Urology and Experimental S

**164** General and Digestive Surgery

**167** Neurosurgery

**169** Nephrology



# Surgery

# 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 to biliary lithiasis.
- ▶ Surgery for sarcomas: participation in GIST research through the Spanish Sarcoma Research Group (GEIS) 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 for polytraumatized patients.

## Active Grants

- ▶ M Trias Folch, Development of nanomedicines for enzymatic replacement therapy in Fabry disease, Marató TV3 (coordinated research project), 2013-2014, €399,975.
- ▶ Dr. A de Leiva Hidalgo (PI), The value of predictive-diagnostic molecular markers that form the genetic signature of poor prognosis in thyroid samples and implication for the tumour dedifferentiation process, PS09/02286, FIS, 2010-2013.
- ▶ Dr Antonio Moral Duarte (PI), Validation of the secondary sentinel node as a predictor of axillary node status in breast cancer, PI-13-007 (IRB-approved Nov 2013), Hospital Germans Trias i Pujol (Dr Miguel A. Luna Tomás).
- ▶ Dr. Alberto de Leiva Hidalgo (IP and coordinator), Use of nanoparticles as a delivery system for different inhibitor molecules for carcinoma thyroid therapy, CIBER-BBN and

EDUAB-HSPIP, 2013-2014.

- ▶ Dr MT Ramón y Cajal (PI), Impact of genetic counselling, study and results on diagnosis regarding surgical treatment for patients with suspected breast cancer, candidates for neoadjuvant chemotherapy: satisfaction with the decision to operate, concerns regarding cancer and secondary psychological distress, HSCSP Breast Cancer Department (research ethics approved by IIB-SP-IMP-2012-97), April 2013.
- ▶ European Association for Endoscopic Surgery: ESCO (enteral stents for colonic obstruction) and design of a 3D model to evaluate sleeve diameter and antrum size after sleeve gastrectomy and the impact on weight loss, 2011-2013.

## Doctoral Theses

- ▶ Dr. Franco Marinello, Laparoscopic approach to achalasia. Clinical outcomes, quality of life and long-term functional response, Autonomous University of Barcelona, EM Targarona and X Rius (supervisors), 22 Mar 2013.



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**

- ▶ 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.

\*TIF: 56.487 \*\*MIF: 4.035

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- 01 Fingerhut A., Dziri C., Garden O.J., Gouma D., Millat B., Neugebauer E., Paganini A., Targarona E. ATOM, the all-inclusive, nominal EAES classification of bile duct injuries during cholecystectomy. (2013) *Surg. Endosc.*, 27 (12), 4608-4619. **IF: 3.313**
- 02 Lopez-Monclova J., Soler E.T., Ponz C.B., Vilallonga R., Rodriguez-Gomez K., Baeza-Vitolas M. Pilot study comparing the leak pressure of the sleeved stomach with and without reinforcement. (2013) *Surg. Endosc.*, 27 (12), 4721-4730. **IF: 3.313**
- 03 Gallego-Escuredo J.M., Villarroya J., Domingo P., Targarona E.M., Alegre M., Domingo J.C., Villarroya F., Giral M. Differentially altered molecular signature of visceral adipose tissue in HIV-1-associated lipodystrophy. (2013) *JAIDS*, 64 (2), 142-148. **IF: 4.394**
- 04 Bosch R., Moreno M.J., Dieguez-Gonzalez R., Cespedes M.V., Gallardo A., Trias M., Granena A., Sierra J., Casanova I., Mangues R. A novel orally available inhibitor of focal adhesion signaling increases survival in a xenograft model of diffuse large B-cell lymphoma with central nervous system involvement. (2013) *Haematologica*, 98 (8), 1242-1249. **IF: 5.868**
- 05 Murillo A., Artigas V., Gonzalez J.A., Gallego A., Montserrat E., Rodriguez M., Trias M.

- Hepatic resection in hepatocarcinoma: A comparative study between patients under and over 70 years-old [Resección hepática por hepatocarcinoma: Estudio comparativo entre pacientes menores y mayores de 70 años]. (2013) *Cir. Espan.*, 91 (4), 224-230. **IF: 0.89**
- 06 Targarona E.M., Grisales S., Uyanik O., Balague C., Pernas J.C., Trias M. Long-term outcome and quality of life after laparoscopic treatment of large paraesophageal hernia. (2013) *World J.Surg.*, 37 (8), 1878-1882. **IF: 2.348**
  - 07 Saldana L.J., Targarona E.M. Single-incision pediatric endosurgery: a systematic review. (2013) *J. Cell. Autom.*, 23 (5), 467-480. **IF: 0.235**
  - 08 Garay M., Bollo J., Balague C., Targarona E., Trias M. Gastrointestinal bleeding as a first symptom of a focal jejunal amyloidosis [Hemorragia digestiva como primer síntoma de una amyloidosis yeyunal focal]. (2013) *Cir. Espan* **IF: 0.89**
  - 09 Monclova J.L., Targarona E.M., Vidal P., Peraza Y., Garcia F., Otero C.R., Pallares L., Balague C., Trias M. Single incision versus reduced port splenectomy - Searching for the best alternative to conventional laparoscopic splenectomy. (2013) *Surg. Endosc.*, 27 (3), 895-902. **IF: 3.313**
  - 10 van der Pas M.H.G.M., Haglind E., Cuesta M.A., Furst A., Lacy A.M., Hop W.C.J., Bonjer

- H.J. Laparoscopic versus open surgery for rectal cancer (COLOR II): Short-term outcomes of a randomised, phase 3 trial. (2013) *Lancet Oncol.*, 14 (3), 210-218. **IF: 24.725**
- 11 Lopez-Monclova J., Soler E.T., Ponz C.B., Vilallonga R., Rodriguez-Gomez K., Baeza-Vitolas M. Pilot study comparing the leak pressure of the sleeved stomach with and without reinforcement. (2013) *Surg. Endosc.*, 27 (12), 4721-4730. **IF: 3.313**
  - 12 Mocanu S.N., Balague Ponz M.C., Targarona Soler E.M., Roque Figuls M., Trias Folch M. Influence of the type of thoracic access on postesophagectomy respiratory complications [La influencia del tipo de abordaje torácico sobre el desarrollo de complicaciones respiratorias tras la esofagectomía/esofagectomía]. (2013) *Cir. Espan.*, 91 (9), 563-573. **IF: 0.89**
  - 13 Marinello F.G., Targarona E.M., Poca M., Mones J., Hernandez-Ballesteros C. Late-onset achalasia after esophageal atresia repair. (2013) *Dis. Esophagus*, 26 (3), 311-313. **IF: 2.057**
  - 14 Lopez Monclova J., Targarona Soler E., Peraza Solis Y., Vidal Gonzalez P., Balague Ponz C., Rodriguez Luppi C., Trias Folch M. Laparoscopic approach for isolated splenic metastasis: Comprehensive literature review and report of 6 cases. (2013) *Surg. Laparosc. Endosc. Pct. Tech.*, 23 (1), 21-24. **IF: 0.938**

Books or Chapters with ISBN

- ▶ Moral A, Pérez JI, Trias M., Efectividad del uso del adhesivo de fibrina Tissucol Duo en la cirugía tiroidea (Ch. 5, pp. 34-41), in: XXXXX (ed), XXXXX XXXXXX XXXXXX, Baxter Award 13th Edition, Ediciones de Salas Isasa Comunicación, Madrid, 2013, ISBN: 978-84-938112-2-8.
- ▶ Solá M, Alberro JA, Fraile M, Santesteban P, Ramos M, Fabregas R, Moral A, Ballester B, Vidal S., Complete axillary lymph node dissection versus clinical follow-up in breast cancer patients with sentinel node micrometastasis. Final results from multicentre clinical trial, AATRM 048/13/2000, *Annals of Surgical Oncology* 2013; 20: 120-127. DOI 10.1245/s10434-012-2569-y.
- ▶ Targarona, EM, Lopez Monclova, J, Rodriguez Luppi, C, Balague, C, Targarona, EM, *SURGICAL APPROACH* (Ch. 10), in: Current and Emerging Treatments for Immune Thrombocytopenia, S. Abdulgabar (ed), Future Medicine Ltd, 2013, DOI: 10.2217/9781780841953, eISBN (PDF): 978-1-78084-195-3.
- ▶ Caballero F, Trias M, Medrano R (eds), *Abdomen Abierto y Síndrome de Hipertensión Abdominal*, ICG Marge, Barcelona, 2013, ISBN: 978-84-15340-90-4.

\*Total Impact Factor \*\*Mean Impact Factor



# Neurosurgery

## Coordinator

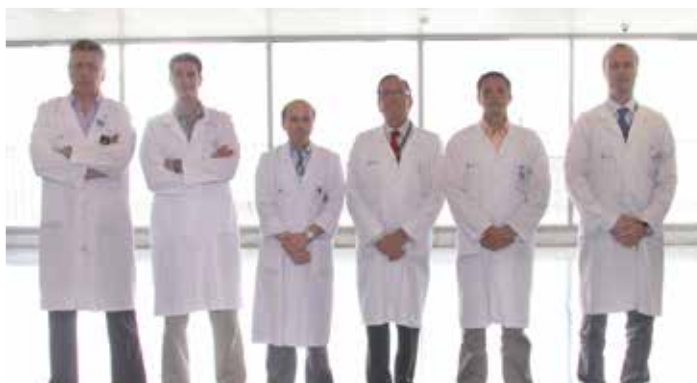
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Fernando Muñoz HSCSP  
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Xavier Vilana HSCSP RI



## Main Lines of Research

- ▶ Biomaterials: comparative study of two different cranial bone fixations.
- ▶ Tumour biology: gliomas (prognostic value of different mutations in anaplastic astrocytoma and GBM), pituitary gland adenomas.
- ▶ Biomarkers in anaplastic astrocytomas and glioblastoma multiforme.
- ▶ Anatomy of the skull base.
- ▶ Clinical evaluation of neurostimulation techniques in different neurological entities (treatment-resistant depression and neuropathic pain).

## Challenges

- ▶ Monitor the clinical trial on treatment-resistant depression treated using deep brain stimulation techniques (jointly with psychiatry).
- ▶ Evaluate neurostimulation for other disorders: cluster headache.

## Challenges

### Collaborations with IIB Sant Pau Groups

- ▶ Dr. J. Molet (PI), Dr. R. Rodríguez, F. Muñoz, C. de Quintana, I. Català, A. Ortega (co-investigators), Clinical research into two cranial fixation devices (Cranial-Loop, Cranial-Fix), NEOS.
- ▶ Dr. Joan Martí, Neurology (PI), Dr. Fernando Muñoz, Neurosurgery (co-investigator), IMPACT-24 study. Effects of pterygopalatine ganglion stimulation on cerebral perfusion in patients with stroke, Brainsgate.
- ▶ Dr. Joan Martí, Neurology and Dr. Fernando Muñoz, Neurosurgery (PIs), Dr. Cristian de Quintana and Dr. Carles Asencio, Neurosurgery (co-investigators), CLEAR III study. Clot lysis: evaluating accelerated resolution of intraventricular haemorrhage phase III, John Hopkins Hospital.
- ▶ Enric Álvarez (PI), Drs. Joan Molet and Rodrigo Rodríguez, Neurosurgery (co-investigators), DBS in the treatment of refractory schizophrenia: randomized, controlled, crossover pilot study, PI12/00042

(FIS), Carlos III Health Institute, Ministry of the Economy and Competitiveness, 2013-2015.

### External Collaborations

- ▶ Dr. Carlos Diaz Acedo and Sandra Plans (coordinators Spain), CREAL (coordinator Catalonia), MOBI-KITS study. Prospective multicentre worldwide study of the relationship between cell phone use and brain tumour development in the youth population, 7th Framework Programme ENV-2008-226873 (Dr. J. Molet).
- ▶ Dr. Joan Molet (local PI), M. Teresa Sánchez Shupis (coordinator), Dr. Guillermo Montes Graciano (co-investigator), Prospective multicentre worldwide study: implantable systems performance registry (ISPR), ID No. 1649, Protocol NSP0010-10000, Medtronic Europa, 3 years.

**\*TIF: 4.661 \*\*MIF: 1.554****Scientific Production****ISI Web of Knowledge Indexed Publications with an IF**

- 01 Prim N., Benito N., Montes G., Pomar V., Molet J., Rabella N. Human herpesvirus 1 meningoencephalitis after trigeminal neuralgia surgery. (2013) *J. Infect.*, 67 (1), 79-81.  
**IF: 4.017**
- 02 Roldan P.P., Rodriguez R.R., Rossell S.B., De Juan Delago M., Teixido J.M. Sclerosing epithelioid fibrosarcoma of the paravertebral column. Case report and literature review [Fibrosarcoma epitelioido esclerosante a nivel paraespinal. Caso clínico y revisión de la literature]. (2013) *Neurocirugia*, 24 (4), 178-182.  
**IF: 0.322**

**Other Publications****ISI Web of Knowledge Indexed Publications without an IF**

- ▶ Rodrigo R, Molet J. Puerta P, Perez V, Puigdemont D, Gironell A. DBS for severe treatment-resistant depression. *Stereotact Funct Neurosurg* 2013; vol 19 (suppl 1).
- ▶ Rodríguez R, Molet J. Letter to the Editor of *Acta Neurochirurgica*: Obstructive hydrocephalus caused by unruptured arteriovenous malformation treated with endoscopic third ventriculostomy. *Acta Neurochirug (Wien)* 155; 901-902, 2013. DOI 10.1007/s00701-013-1673-5. 2013.

# Nephrology

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Gemma Bullich Puigvert Foundation  
Olga Sancho Puigvert Foundation  
Irene Silva Puigvert Foundation



## Main Lines of Research

### Proteomics applied to nephrology and hypertension

- ▶ Water and sodium renal transport analysed from urinary exosomes, urinary proteomic characterization in diabetic nephropathy: evaluation of renal-angiotensin blockade.

### Hereditary kidney diseases

- ▶ Genetic and clinical studies in cystic and glomerular inherited kidney diseases such as polycystic kidney disease, Alport, corticoid-resistant nephrotic syndrome, Fabry disease, tuberous sclerosis and familial nephropathies of uncertain origin.

### Glomerular disorders

- ▶ Molecular and clinical studies in disorders such as membranous glomerulopathy and vasculitis with renal involvement, among others.

### Kidney transplantation

- ▶ Protocol biopsies, chronic transplant nephropathy, kidney transplant and associated cardiovascular risk factors, pharmacogenetic and genomic studies.

### Chronic kidney disease (CKD)

- ▶ Early diagnosis of CKD, epidemiological and clinical studies in CKD-related complications such as renal anaemia, CKD mineral and bone disorders (CKD-MBD) and associated cardiovascular risk; haemodialysis techniques and studies of genetic damage in patients with CKD.
- ▶ Mechanisms of epithelial-mesenchymal transition and renal fibrosis.

## Challenges

- ▶ Maintain the level of national and international publication.
- ▶ Continue with both clinical and basic research in all the previously described areas.
- ▶ Participate in the elaboration of clinical nephrology guidelines.
- ▶ Continue with active collection of research samples from CKD and transplant patients.
- ▶ Maintain participation in national working groups and increase international cooperation.
- ▶ Engage in new pharmaceutical clinical studies, including clinical trials.

## Doctoral Theses

- ▶ Deborah Grazia Lo Giacco, Genetics of male infertility: molecular study of non-syndromic cryptorchidism and spermatogenic impairment, Puigvert Foundation/Universitat Autònoma de Barcelona, E Ars (supervisor).

Active Grants

- ▶ Fernández-Llama, P, Diabetic nephropathy: characterisation of urinary proteoma and evaluation of renin angiotensin blocker treatment, PI10/01261, Carlos III Health Institute, 2011-2015, €181,742.
- ▶ Díaz, M, Involvement of the nucleoside transporter ENT1 in the modulation of macrophage-mediated renal fibrosis
- ▶ PI12/01524, Carlos III Health Institute, 2013-2015, €41,745.
- ▶ Torra, R, Genomic study of familial nephropathies of uncertain aetiology, PI12/01523, Carlos III Health Institute, 2013-2015, €109,505.
- ▶ Coll, E, Prognostic biomarkers and strategies to decrease morbimortality in chronic kidney disease patients, PI12/02559, Carlos III Health Institute, 2013-2015, €126,445.
- ▶ Ars, E, Cystic and glomerular inherited kidney diseases: panel-based next-generation sequencing to improve diagnosis and exome sequencing to identify novel genes, PI13/01731, Carlos III Health Institute, 2014-2017, €82,280.

Transfer Products

- ▶ M Díaz, J Bover, Peer-review of the International KDIGO 2013 Clinical Practice Guidelines for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int Supplement* 3 (1): 1-308, 2013.
- ▶ J Bover, Peer-review of the Latin-American Society of Nephrology and Hypertension (SLANH) Clinical Practice Guidelines for the Prevention, Diagnosis and Treatment of Chronic Kidney Disease: <http://www.theisn.org/education-by-topic/chronic-kidney-disease/guias-latinoamericanas-de-practica-clinica-sobre-la-prevencion-diagnostico-y-tratamiento-de-los-estados-1-5-de-la-enfermedad-renal-cronica>
- ▶ J Bover (co-author), Consensus Document on Chronic Kidney Disease (endorsed by ten academic medical Spanish Societies including the Spanish Society of Nephrology): [http://www.senefro.org/modules.php?name=news&d\\_op=detail&idnew=1274](http://www.senefro.org/modules.php?name=news&d_op=detail&idnew=1274)
- ▶ P Fernández-Llama (co-author), Catalan Hypertension Society (SCHA) Clinical Practice Guidelines on the Diagnosis and Treatment of Hypertension: [http://www.schta.cat/nostres\\_guies.asp](http://www.schta.cat/nostres_guies.asp)

Collaborations

**Collaborations with IIB Sant Pau Groups Basic and clinical research projects**

**Inflammatory Diseases: renal fibrosis**

- ▶ Anaesthesiology (and Catalan ANESCARDIOCAT Group): risk of major adverse cardiovascular and cerebrovascular events in non-cardiac surgery associated with preoperative estimated glomerular filtration rate
- ▶ CSIC-CIC: vascular integrity.
- ▶ Paediatrics: SD nephrotic evolution and inherited kidney diseases.
- ▶ Andrology: infertility
- ▶ Urology: genetic predisposition to prostate cancer
- ▶ Biobank: accreditation application of the IIB SantPau Biobank.

**External Collaborations**

**National networks**

- ▶ Ars, E, Biobanks Network 2010-2014, Carlos III Health Institute, 2 RD09/0076/00064, €138,000.
- ▶ Ballarin, J, RedinRen, 2007-2014, Carlos III Health Institute, 2 R06/0016/0001, €33,590.
- ▶ Ballarin, J, Kidney Research Network, 2013- , Carlos III Health Institute, 2 RD12/0021/0033, €47,150.

**Other academic**

- ▶ Department of Biochemistry and Molecular Biology, University of Barcelona, Institute of Biomedicine and Oncology Programme, National Biomedical Research Institute for Liver and Gastrointestinal Diseases (CIBER EHD): renal fibrosis.
- ▶ Laboratory of Proteomics CSIC/Autonomous University of Barcelona: diabetic nephropathy.

- ▶ Mutagenesis Department of Autonomous University of Barcelona: renal impairment in chronic kidney disease
- ▶ Genomic Regulation Center (CRG): inherited kidney diseases
- ▶ Scientific national societies (such as SEN) and investigators of other centres: basic and clinical studies (including public grant-aided projects, clinical trials, observational studies, etc).

**International academic**

- ▶ Biochemistry and Microbiology Institute, UACH (Chile): renal fibrosis and diabetic nephropathy.
- ▶ Mayo Clinic (Rochester, USA): autosomal dominant polycystic kidney disease.
- ▶ Hospital Tenon (Paris, France): nephrotic syndrome.
- ▶ EURenOmics Platform: membranous nephropathy and nephrotic syndrome.
- ▶ Toronto General Hospital (Canada): molecular genetics of idiopathic nephrotic syndrome.
- ▶ University of Melbourne (Australia): Alport syndrome.
- ▶ University Medicine Goettingen (Germany): Alport syndrome.
- ▶ EDTA (multinational, Europe): inherited kidney diseases and chronic kidney disease/mineral and bone disorders.
- ▶ EUVAS (multinational, Europe): vasculitis.

**Private**

- ▶ Participation in clinical studies including clinical trials and post-authorisation studies promoted by national and international pharmaceutical companies.
- ▶ Research joint-venture with VU Medisch Centrum (Amsterdam, The Netherlands); Medizinische Klinik I (Aachen, Germany) and San Paolo Hospital (Milan, Italy) sponsored by Abbvie Co on effects of vitamin D derivatives in CKD-MBD.



## Nephrology

## Patents

- Dr J Bover (co-inventor), Diagnostic method for renal insufficiency P201131506 (filed, pending resolution), Universidad de Alcalá, Puigvert Foundation, Biomedical Research Foundation and Hospital Gregorio Marañón (co-titleholders).

\*TIF: 72.061 \*\*MIF: 3.792

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Ayasreh-Fierro N., Ars-Criach E., Lopes-Martin V., Arce-Terroba Y., Ruiz-del Prado P., Ballarin-Castan J., Torra-Balcells R. Nefropatía intersticial crónica familiar con hiperuricemia causada por el gen UMOD. (2013) *Nefrologia*, 33 (4), 587-592.  
**IF: 1.442**
- 02 Borque A., Del Amo J., Esteban L.M., Ars E., Hernandez C., Planas J., Arruza A., Llarena R., Palou J., Herranz F., Raventos C.X., Tejedor D., Artieda M., Simon L., Martinez A., Carceller E., Suarez M., Allue M., Sanz G., Morote J. Genetic predisposition to early recurrence in clinically localized prostate cancer. (2013) *BJU Int.*, 111 (4), 549-558.  
**IF: 3.13**
- 03 Campistol J.M., Arias M., Ariceta G., Blasco M., Espinosa M., Grinyo J.M., Praga M., Torra R., Vilalta R., De Cordoba S.R. An update for atypical haemolytic uraemic syndrome: Diagnosis and treatment. A consensus document. (2013) *Nefrologia*, 33 (1), 27-45.  
**IF: 1.442**
- 04 Armario P., Oliveras A., Hernandez-Del-Rey R., Suarez C., Martell N., Ruilope L.M., Sierra A.D.L. Increased pulse pressure is associated with left atrial enlargement in resistant hypertensive patients. (2013) *Blood Pressure*, 22 (1), 39-44.  
**IF: 1.605**
- 05 Campistol J.M., Carreno A., Morales J.M., Pallardo L., Franco A., Navarro D., Grinyo J.M., Montenegro J., Sanchez Fructuoso A.I., Romero R., Guirado L., Arias M. Once-monthly pegylated epoetin beta versus darbepoetin alfa every two weeks in renal transplant recipients: A randomized trial. (2013) *Transplantation*, 95 (2), e6-e10.  
**IF: 3.535**
- 06 Chianese C., Lo Giacco D., Tuttelmann F., Ferlin A., Ntostis P., Vinci S., Balercia G., Ars E., Ruiz-Castane E., Giglio S., Forti G., Kliesch S., Krausz C. Y-chromosome microdeletions are not associated with SHOX haploinsufficiency. (2013) *Hum. Reprod.*, 28 (11), 3155-3160.  
**IF: 4.585**
- 07 Coll E., Stoyanova E., Rodriguez-Ribera L., Solozabal M., Pastor S., Silva I., Diaz J.M., Ballarin J., Xamena N., Marcos R. Genomic damage as an independent predictor marker of mortality in hemodialysis patients. (2013) *Clin. Nephrol.*, 80 (2), 81-87.  
**IF: 1.232**
- 08 Coll E., Torre-Cisneros J., Calvo R., Garrido G., Matesanz R. Incidence of tuberculosis in deceased-organ donors and transmission risk to recipients in Spain. (2013) *Transplantation*, 96 (2), 205-210.  
**IF: 3.535**
- 09 Gorritz J.L., Molina P., Bover J., Barril G., Martin-de Francisco A.L., Caravaca F., Hervas J., Pinera C., Escudero V., Molinero L.M. Characteristics of bone mineral metabolism in patients with stage 3-5 chronic kidney disease not on dialysis: Results of the OSERCE study. (2013) *Nefrologia*, 33 (1), 46-60.  
**IF: 1.442**
- 10 Fernandez Juarez G., Luno J., Barrio V., De Vinuesa S.G., Praga M., Goicoechea M., Cachofeiro V., Nieto J., Fernandez Vega F., Tato A., Gutierrez E. Effect of dual blockade of the renin-angiotensin system on the progression of type 2 diabetic nephropathy: A randomized trial. (2013) *Am. J. Kidney Dis.*, 61 (2), 211-218.  
**IF: 5.756**
- 11 Herrera-Gutierrez M.E., Seller-Perez G., Sanchez-Izquierdo-Riera J.A., Maynar-Moliner J. Prevalence of acute kidney injury in intensive care units: The "Corte de prevalencia de disFunción RenAl y DEpuración en críticos" point-prevalence multicenter study. (2013) *J. Crit. Care*, 28 (5), 687-694.  
**IF: 2.191**
- 12 Matesanz R., Dominguez-Gil B., Coll E. Uncontrolled non-heart beating donation: Need, opportunity and challenge [Donación en asistolia no controlada: Necesidad, oportunidad y reto]. (2013) *Med. Intensiv.*, 37 (4), 221-223.  
**IF: 1.24**
- 13 Mazuecos A., Fernandez A., Zarraga S., Andres A., Rodriguez-Benot A., Jimenez C., Gomez E., Paul J., Jimeno L., Fernandez C., Burgos D., Sanchez-Fructuoso A., Guirado L. High incidence of delayed graft function in HIV-infected kidney transplant recipients. (2013) *Transpl. Int.*, 26 (9), 893-902.  
**IF: 3.12**
- 14 Lopez-Hellin J., Cantarell C., Jimeno L., Sanchez-Fructuoso A., Puig-Gay N., Guirado L., Vilarino N., Gonzalez-Roncero F.M., Mazuecos A., Lauzurica R., Burgos D., Plumed J.S., Jacobs-Cacha C., Jimenez C., Fernandez A., Fernandez-Alvarez P., Torregrosa V., Nieto J.L., Meseguer A., Alonso A. A form of apolipoprotein A-I is found specifically in relapses of focal segmental glomerulosclerosis following transplantation. (2013) *Am. J. Transplant.*, 13 (2), 493-500.  
**IF: 6.19**
- 15 Martinez V., Comas J., Arcos E., Diaz J.M., Muray S., Cabezuelo J., Ballarin J., Ars E., Torra R. Renal replacement therapy in ADPKD patients: A 25-year survey based on the Catalan registry. (2013) *BMC Nephrol.*, 14 (1).  
**IF: 1.52**
- 16 Marco H., Mirapeix E., Arcos E., Comas J., Ara J., Gil-Vernet S., Puig J., Vinyas O., Perello M., Oppenheimer F., Poveda R., Ibernón M., Diaz M., Ballarin J. Long-term outcome of antineutrophil cytoplasmic antibody-associated small vessel vasculitis after renal transplantation. (2013) *Clin. Transplant.*, 27 (3), 338-347.  
**IF: 1.486**
- 17 Lloret M.J., Ruiz-Garcia C., DaSilva L., Furlano M., Barreiro Y., Ballarin J., Bover J. Lanthanum carbonate for the control of hyperphosphatemia in chronic renal failure patients: A new oral powder formulation - Safety, efficacy, and patient adherence. (2013) *Patient Prefer. Adherence*, 7, 1147-1156.  
**IF: 1.491**
- 18 Portoles J., Gorritz J.L., Rubio E., De Alvaro F., Garcia F., Alvarez-Chivas V., Aranda P., Martinez-Castelao A. The development of anemia is associated

## Scientific Production



\*TIF: 72.061 \*\*MIF: 3.792

Scientific Production

- to poor prognosis in NKF/KDOQI stage 3 chronic kidney disease. (2013) BMC Nephrol., 14 (1).  
**IF: 1.52**
- 19 Rivera F, Illescas M.L., Lopez-Rubio E., Fulladosa J., Poveda R., Baltar J., Fernandez-Juarez G., Ballarin J., Oliet A., Vigil A., Lucas J., Sierra M., Frutos M.A., Garcia-Frias P., Ramos C., Merida E., Praga M., Segarra A. Mycophenolate as maintenance therapy for lupus nephritis with impaired renal function. (2013) Am. J. Nephrol., 37 (6), 509-517.  
**IF: 2.646**
- 20 Pérez - Sáez MJ, Crespo M, Cofán F, Alonso A, Díaz JM, Errasti P, Fijo J, Fraile P, Gutiérrez A, Hernández A, Jimeno L, López MO, Romero R, Sanahuja MJ, Sanchez, R. Enfermedad mineral ósea del trasplante renal: clinica y diagnóstico. (2013) Nefrologia, 4 (1), 27-42.  
**IF: 1.442**

Certifications

- ▶ Ballarin, J, Consolidated Nephrology Research Group, 2009-2013, AGAUR, 2009SGR1116, €46,800.

Other Publications

**Indexed Publications without an IF**

- ▶ Romero M, Ortega A, Olea N, Arenas MI, Izquierdo A, Bover J, Esbrit P, Bosch RJ. Novel role of parathyroid hormone-related protein in the pathophysiology of the diabetic kidney: evidence from experimental and human diabetic nephropathy. J Diabetes Res. 2013;2013:162846. doi: 10.1155/2013/162846. Epub 2013 Jul 31. PubMed PMID: 23984429; PubMed Central PMCID: PMC3747478.

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

# Public Health and S





# Clinical Epidemiology and Healthcare Services

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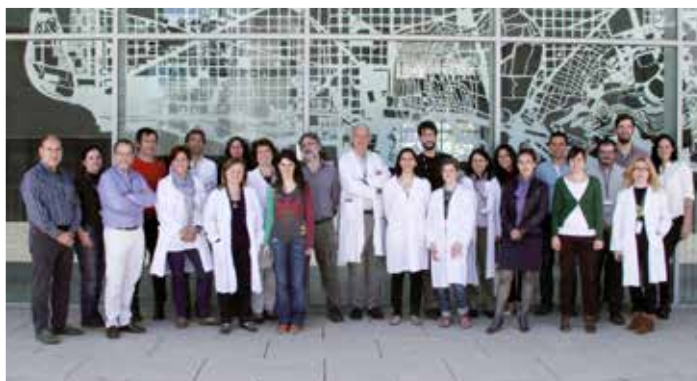
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Juliana Sanabria HSCSP RI



## Main Lines of Research

- ▶ Clinical epidemiology.
- ▶ Systematic reviews.
- ▶ Clinical practice guidelines.
- ▶ Health service evaluations.
- ▶ Clinical trials (phase III/IV).
- ▶ Methodological research.

## Areas of interest

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

## Challenges

- ▶ Become a reference group in Spain and South 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 government, 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.
- ▶ Set up clinical and epidemiological studies (phase III/IV trials with non-commercial interests for research into healthcare services and results and studies of research methodologies) and apply 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.

Active Grants

- ▶ Alonso P, Evaluation of the validity and updating strategies for clinical practice guidelines: analysis of the National Program GPC for the National Health System, PI10/00346, FIS, Carlos III Health Institute, Jan 2011-June 2015, €103,636.50.
- ▶ Alonso P, Developing and evaluating communication strategies to support informed decisions and practice based on evidence (DECIDE), 258583, EU, Jan 2011-Dec 2015, €245,979.60.
- ▶ Alonso P, Vascular events in patients undergoing non-cardiac surgery: prospective cohort study (VISION), 08/2330, La Marató de TV3 Foundation, Mar 2009-June 2013, €143,003.
- ▶ Alonso P, Vascular events in patients undergoing surgery for non-cardiac surgery (VISION), CP09/00137, FIS, Feb 2010-June 2014, €30,000.
- ▶ Alonso P, Clinical trial evaluating delayed antibiotic prescription for uncomplicated paediatric acute respiratory infections, EC11-339, Spanish Ministry of Health, Social Services and Equality, Jan 2012-Dec 2014, €30,248.
- ▶ Bonfill X, Clinical Epidemiology and Health Services Group, 2009SGR 786, AGAUR Grants to Support Research Groups in Catalonia, Sept 2009-Dec 2013, €41,600.
- ▶ Bonfill X, Multicentre and coordinated study on the health care process and observed outcomes in a cohort of patients diagnosed with urologic cancer (bladder and prostate), PI09/1204, FIS, Carlos III Health Institute, Jan 2010-June 2013, €123,420.
- ▶ Bonfill X, Overcome failure to publish negative findings (OPEN). 282543, EU, Nov 2011-Oct 2013, €57,929.
- ▶ 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, 112210, La Marató de TV3 Foundation, Apr 2012-Apr 2015, €198,601.25.
- ▶ Bonfill X, Analysis and improvement of the degree of appropriateness of elective surgery for repairing abdominal aortic aneurysm, PI12/02530, FIS, Carlos III Health Institute, Jan 2013-Dec 2015, €58,685.
- ▶ Martínez MJ, Prevention of postoperative bleeding: a multicentre, randomized, parallel, controlled clinical trial evaluating the efficacy of tranexamic acid and fibrin glue in patients undergoing interventions for sub-capital femoral fracture, EC11-341, Spanish Ministry of Health, Social Services and Equality, Jan 2012-Dec 2013, €57,009.80.
- ▶ Martínez MJ, Assessment of quality of life in patients with subcapital femoral fractures, MAPFRE Foundation, €11,111.10.
- ▶ Mas G, Perceptions, attitudes and satisfaction of the general practice and patients about the delayed prescription in the non-complicated acute respiratory tract infections in primary care, PI12/03043, FIS, Carlos III Health Institute, Jan 2013-Dec 2015, €19,965.
- ▶ Osorio D (M De la Poza Abad, PI), Clinical trial for the assessment of delayed antibiotic treatment in the non-complicated acute respiratory tract infections in paediatrics (DAP-Paediatrics), FIS, Carlos III Health Institute, Jan 2012-June 2016, €81,003.45.
- ▶ Puig T, Challenges in public health: knowledge translation in obesity, cardiovascular disease and alcohol misuse, PI12/02257, FIS, Carlos III Health Institute, Jan 2013-Dec 2015.
- ▶ Bonfill X, Infrastructure improvement programme for institutes of health research (PROMIIS), IIS12/00001, Carlos III Health Institute, €116,483.85.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Locomotor System Research.
- ▶ Evaluation of Public Health Policies and Programmes.
- ▶ Nephrology.
- ▶ Palliative Care.
- ▶ Angiology, Vascular Biology and Inflammation.
- ▶ Anaesthesiology.

**External Collaborations**

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

Doctoral Theses

- ▶ Leticia Andrea Barajas, Scientific evidence on patient safety, Autonomous of Barcelona, Xavier Bonfill Cosp (supervisor), HSCSP.
- ▶ Maria Ximena Rojas Reyes, Respiratory management of preterm infant and other factors associated with bronchopulmonary dysplasia: an evaluation from the evidence and the current situation in neonatal intensive care units in Colombia, Autonomous of Barcelona, Xavier Bonfill Cosp (supervisor), HSCSP.



## Clinical Epidemiology and Healthcare Services

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## ISI Web of Knowledge Indexed Publications with an IF

- 01 Alonso-Coello P, Rigau D, Sanabria A.J., Plaza V., Miravittles M., Martinez L. Quality and strength: The GRADE system for formulating recommendations in clinical practice guidelines [Calidad y fuerza: El sistema GRADE para la formulación de recomendaciones en las guías de práctica clínica]. (2013) Arch. Bronconeumol, 49 (6), 261-267.  
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- 04 Verd S., Barriuso L., Gich I., Gutierrez A., Nadal-Amat J., Carreras E. Risk of early breastfeeding cessation among symmetrical, small for gestational age infants. (2013) Ann. Hum. Biol., 40 (2), 146-151.  
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- 05 Arevalo-Rodriguez I., Pedraza O.L., Rodriguez A., Sanchez E., Gich I., Sola I., Bonfill X., Alonso-Coello P. Alzheimer's disease dementia guidelines for diagnostic testing: A systematic review. (2013) Am. J. Alzheimers Dis. Other Dement., 28 (2), 111-119.  
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- 08 Guyatt G.H., Oxman A.D., Santesso N., Helfand M., Vist G., Kunz R., Brozek J., Norris S., Meerpohl J., Djulbegovic B., Alonso-Coello P., Post P.N., Busse J.W., Glasziou P., Christensen R., Schunemann H.J. GRADE guidelines: 12. Preparing Summary of Findings tables - Binary outcomes. (2013) J. Clin. Epidemiol., 66 (2), 158-172.  
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- 09 Treweek S., Oxman A.D., Alderson P., Bossuyt P.M., Brandt L., Brozek J., Davoli M., Flottorp S., Harbour R., Hill S., Liberati A., Liira H., Schunemann H.J., Rosenbaum S., Thornton J., Vandvik P.O., Alonso-Coello P. Developing and evaluating communication strategies to support informed decisions and practice based on evidence (DECIDE): Protocol and preliminary results. (2013) Implement. Sci., 8 (1).  
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- 10 Guyatt G.H., Thorlund K., Oxman A.D., Walter S.D., Patrick D., Furukawa T.A., Johnston B.C., Karanickolas P., Akl E.A., Vist G., Kunz R., Brozek J., Kupper L.L., Martin S.L., Meerpohl J.J., Alonso-Coello P., Christensen R., Schunemann H.J. GRADE guidelines: 13. Preparing Summary of Findings tables and evidence profiles - Continuous outcomes. (2013) J. Clin. Epidemiol., 66 (2), 173-183.  
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- 11 Vandvik P.O., Brandt L., Alonso-Coello P., Treweek S., Akl E.A., Kristiansen A., Fog-Heen A., Agoritsas T., Montori V.M., Guyatt G. Creating clinical practice guidelines we can trust, use, and share a new era is imminent. (2013) Chest, 144 (2), 381-389.  
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## Scientific Production

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**IF: 0.912**



# Transport and Health: Injuries and Mobility

## Coordinator

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## Researchers

Ana Novoa ASPB  
Elena Santamariña ASPB

## Grant Holder

Marta Olabarria ASPB



## 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.
- ▶ Health impact assessment of active transport (walking and cycling).
- ▶ Les pratiques de mobilité et risques d'accidents routiers des ménages: inégalités sociales, culturelles et territoriales en France et en Espagne, Agence Nationale de Recherche Française.
- ▶ Safety indicators for IRTAD cities, Joint Transport Research Centre of the OECD and the International Transport Forum.

### Research projects in the planning and design phase

#### Participation in international projects

- ▶ Road safety data collection, transfer and analysis (DACOTA), European Commission FP7-(SST)-2008-TREN-1.
- ▶ Joint action on monitoring injuries in Europe (JAMIE), European Agency for Health and Consumers.
- ▶ Record linkage between health and police registers to study road traffic injury determinants.
- ▶ Intersectoral transport policies: impact on the environment, health and equity.

## Challenges

- ▶ Study injuries and their severity according to collision characteristics and vehicles involved, particularly in urban settings.
- ▶ Evaluate road safety policies and interventions.
- ▶ Calculate risk indicators using mobility exposure.
- ▶ Study motorized and non-motorized mobility and its impact on health.

## Doctoral Theses

- ▶ Marta Olabarria, Walking as transportation. Study of individual and contextual factors that influence walking as transportation and health implications, Agència de Salut Pública de Barcelona, Catherine Pérez (supervisor), Pompeu Fabra University.

Transfer Products

- ▶ Mercè Gotsens, Marc Marí Dell’Olmo, Laia Palència, Catherine Pérez, Maica Rodríguez Sanz, Carme Borrell, Socioeconomic inequalities in mortality from falls in the elderly in 11 European cities, Ibero-American Epidemiology and Public Health Congress, 30th Scientific Meeting of the Spanish Epidemiology Society, Granada, Spain, 4-6 Sept 2013.
- ▶ Marta Olabarria, Catherine Pérez, Elena Santamariña Rubio, Ana Maria Novoa, Relationship between excess weight/obesity and daily mobility patterns of urban populations, Ibero-American Epidemiology and Public Health Congress, 30th Scientific Meeting of the Spanish Epidemiology Society, Granada, Spain, 4-6 Sept 2013.
- ▶ Catherine Pérez, Elena Santamariña Rubio, Ana Maria Novoa, Marta Olabarria, Does the Minimum Basic Data Set provide information on alcohol and drug abuse and dependence in people injured by traffic? Ibero-American Epidemiology and Public Health Congress, 30th Scientific Meeting of the Spanish Epidemiology Society, Granada, Spain, 4-6 Sept 2013.
- ▶ Catherine Pérez, Elena Santamariña Rubio, Ana Maria Novoa, Marta Olabarria, Head injury in hospitalized cyclists in Spain, Ibero-American Epidemiology and Public Health Congress, 30th Scientific Meeting of the Spanish Epidemiology Society, Granada, Spain, 4-6 Sept 2013.
- ▶ Puigdomènech Puig E, Garcia Muñoz M, Valiente Hernandez S, Perez K, Feijoo V, del Val JL, Martín Cantera, C, Characteristics of drivers of two-wheeled motor vehicles treated in primary care centres in the Barcelona metropolitan area: Baseline data of the injured cohort, International Road Safety Conference, Santander, Spain, 16-18 May 2013.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Health Inequalities (Carme Borrell).

**External Collaborations**

- ▶ Working Group for Health Impact Evaluation of Injuries in Spain of the Spanish Epidemiology Society (led by Catherine Pérez).
- ▶ CIBERESP Social Inequalities Group.
- ▶ Transport and Health Study Group (European Committee member: Catherine Pérez).
- ▶ Catherine Pérez, Semi-separation of lanes in conventional roads: analysis of different systems and evaluation of interventions already made, 0100DGT22160, General Traffic Directorate Spain, 2013-2014, €38,701.85 (external contract).
- ▶ Catherine Pérez, Promotion and development of specific studies of accidents in Barcelona, Mobility Service, Barcelona City Council, 2013, €27,534.99 (external agreement).

\*TIF: 18.544 \*\*MIF: 2.318

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

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|--|--|--|
| <p>01 Olabarria M., Perez K., Santamarina-Rubio E., Novoa A.M., Racioppi F. Health impact of motorised trips that could be replaced by walking. (2013) Eur. J. Public Health, 23 (2), 217-222.<br/><b>IF: 2.459</b></p> <p>02 Santamarina-Rubio E., Perez K., Olabarria M., Novoa A.M. Measures of exposure to road traffic injury risk. (2013) Inj. Prev., 19 (6), 436-439.<br/><b>IF: 1.941</b></p> <p>03 Gotsens M., Mari-Dell’Olmo M., Perez K., Palencia L., Martinez-Beneito M.-A., Rodriguez-Sanz M., Burstrom B., Costa G., Deboosere P., Dominguez-Berjon F., Dzurkova D., Gandarillas A., Hoffmann R., Kovacs K., Marinacci C., Martikainen P., Pikhart H., Rosicova K., Saez M., Santana P., Riegelgnig J., Schwierz C., Tarkiainen L.,</p> | <p>Borrell C. Socioeconomic inequalities in injury mortality in small areas of 15 European cities. (2013) Health Place, 24, 165-172.<br/><b>IF: 2.435</b></p> <p>04 Arcas M.M., Novoa A.M., Artazcoz L. Gender inequalities in the association between demands of family and domestic life and health in Spanish workers. (2013) Eur. J. Public Health, 23 (5), 883-888.<br/><b>IF: 2.459</b></p> <p>05 Rocha K.B., Rodriguez-Sanz M., Perez K., Obiols J.E., Borrell C. Inequalities in the utilization of psychiatric and psychological services in catalonia: A multilevel approach. (2013) Adm. Policy. Ment. Health, 40 (5), 355-363.<br/><b>IF: 3.442</b></p> <p>06 Olabarria M., Perez K., Santamarina-Rubio E., Aragay J.M., Capdet M., Peiro R., Rodriguez-Sanz M., Artazcoz L., Borrell C.</p> | <p>Work, family and daily mobility: A new approach to the problem through a mobility survey. (2013) Gac. Sanit., 27 (5), 433-439.<br/><b>IF: 1.25</b></p> <p>07 Rocha K.B., Perez K., Rodriguez-Sanz M., Alonso J., Muntaner C., Borrell C. Inequalities in the use of services provided by psychiatrists in Spain: A multilevel study. (2013) Psychiatr. Serv., 64 (9), 901-907.<br/><b>IF: 1.987</b></p> <p>08 Gotsens M., Mari-Dell’Olmo M., Perez K., Palencia L., Borrell C. Trends in socio-economic inequalities in injury mortality among men in small areas of 26 Spanish cities, 1996-2007. (2013) Accid. Anal. Prev., 51, 120-128.<br/><b>IF: 2.571</b></p> |
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\*Total Impact Factor \*\*Mean Impact Factor



# Transmissible Diseases

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## Main Lines of Research

### Application of new technologies to tuberculosis control

- ▶ International diffusion of the new technologies. Google Analytics offers a highly effective system for analysing website visits that enables us to profile visitors (2007, 13,429 visitors, 21% from Latin America).
- ▶ Production of scientific knowledge of relevance on the control, diagnosis, treatment and prevention of tuberculosis (key role in Spain and South America).

### Clinical trials for tuberculosis prevention and treatment

- ▶ Our centre, which is the only such centre in Europe, is part of a network of international centres (in Canada, Brazil, South Africa and Uganda) associated with the Tuberculosis Trials Consortium of the CDCs, promoting international involvement in laying the therapeutic and strategic bases for the treatment of tuberculosis and tubercular infection. Preliminary results have recently been presented at the ICAAC and other important international conferences e.g., the American Thoracic Society (the article with definitive study data is pending publication). A major research line aims to fix the bases for shortening treatment times for tubercular infection and, by extension, ensure compliance and control over the disease.

### Community health worker's and notifiable disease control

- ▶ The experiment regarding the community health worker's role in the control of notifiable diseases has been presented at tuberculosis and primary care conferences and workshops and in journals (Emerging Infectious Diseases; Ethnicity and Health). Results of a comparative study have recently been presented as a thesis in fulfilment of the master in public health of Pompeu Fabra University and the Autonomous University of Barcelona (an article is undergoing final review before publication).
- ▶ The inclusion of community health workers in tuberculosis programme teams has led to the creation of new tuberculosis consensus protocols. Institute of Health studies are under development with sponsorship from the authorities and we are participating as instructors and students in the first inter-cultural mediation course in the healthcare arena. The concept of the community health worker has been included in the framework Tuberculosis Prevention and Control Plan for Spain. The short- to medium-term objective is for community health workers to continue working with us and for these professionals to be included in other public health areas.

## Challenges

- ▶ Prevent sexually transmitted infections and other transmissible diseases.
- ▶ Evaluate HIV screening programmes in gay saunas.
- ▶ Improve detection and research into causes of hepatitis C.
- ▶ Improve detection and control measures of outbreaks.

Active Grants

- ▶ JA Caylà, Comparison of 12 doses per week of 900 mg of rifapentine for 3 months of supervised treatment versus daily self-administration of 270 doses of 300 mg of isoniazid for 9 months (Study 26), CDC-USA/TBTC26, 2003- , \$188.777 (€113,266).
- ▶ JA Caylà, Impact of chronic viral hepatitis in discontinuation of treatment for latent tuberculosis infection due to hepatotoxicity (Study 26A), CDC-USA, 2004- .
- ▶ Joan A. Caylà, HIV-TB co-infection project. Euro TB Study, 2011-2013.
- ▶ JA Caylà, Country of probable acquisition of HIV infection and barriers to prevention and HIV testing of immigrants in Spain, 361036/10, FIPSE, 2011-2015, €24,750.
- ▶ C Tortajada (work package leader) JA Caylà, Screening for hepatitis B and C among migrants in the EU, SANCO 2010 grant, Executive Agency for Health and Consumers, 2011-2013, €72,054.
- ▶ P García de Olalla, Rapid HIV testing in Spain: description of programmes, impact assessment and analysis of potential as a strategy to promote early diagnosis, 240961/10, FIS, 2011-2013, €2,750.
- ▶ JA Caylà, Assessment of adherence to latent tuberculosis infection treatment of 12 doses of rifapentine and isoniazid self-administered once a week versus directly observed treatment: i-Adhere (Study 33), CDC-USA/TBTC33, 2012-2014, \$387,382 (€297,007)
- ▶ JA Caylà, Phase III contact tracing trial comparing the diagnostic performance of C-Tb to QuantiFERON®-TB Gold In-Tube, in combination with a double blind randomized split-body safety assessment of C-Tb versus 2 TU Tuberculin PPD RT23 SSI, Statens Serum Institut TESEC-06, 2012-2014, €42,673,42.
- ▶ JA Caylà, Cribado de las enfermedades transmisibles en población inmigrante de un barrio con bajo nivel socioeconómico: comparación de dos estrategias, PI12/02573, FIS, 2013-2016, €78,712.92.
- ▶ J Pau Millet, Impact of the economic crisis on the major notifiable infectious diseases: a population-based study, PI13/02757, FIS, 2013-2016, €12,000.
- ▶ P García de Olalla, Analysis of competing risks in HIV/AIDS survival. Clinical applicability to the study of concurring diseases in HIV+ patients exposed to highly active antiretroviral therapy in the GEMES cohort, Ministry of Health and Social Policy, 2012-2014, €6,000.00.
- ▶ P García de Olalla, Effectiveness of a pilot study of proactive contacts of people infected with HIV, Ministry of Health and Social Policy, 2012-2014, €26,806.00.

Transfer Products

- ▶ Improvements in tuberculosis control in large cities (video). Available at: <https://www.youtube.com/watch?v=mE1nZn3bCmE>
- ▶ Protocol of a partner notification programme for new HIV cases.
- ▶ Comparison of 12 doses per week of 900 mg of rifapentine for 3 months of supervised treatment versus daily self-administration of 270 doses of 300 mg of isoniazid for 9 months, Study 26 (clinical trial).
- ▶ Impact of chronic viral hepatitis in discontinuation of treatment for latent tuberculosis infection due to hepatotoxicity, Study 26A (clinical trial).

Collaborations

External Collaborations

- ▶ CDC.
- ▶ CASCADE.
- ▶ GEMES.
- ▶ SANCO.
- ▶ COHERE.

Awards

- ▶ Caylà JA, Millet JP, García de Olalla P, Martín V, Nelson J, Orcau A, The current status of tuberculosis in the world: the influence of poverty, prisons, HIV, immigration and control programmes (Ch. 2, pp. 15-29), in Norazmi NM, Acosta A, Sarmiento ME (eds), The Art and Science of Tuberculosis Vaccine Development, Oxford Fajar Sdn Bhd, Malaysia, 2010, Annual Health Prize (book).
- ▶ Effectiveness of a pilot programme to study for new HIV diagnosis contacts. A multidisciplinary approach to the treatment and quality of life of patients with HIV, Best Communication Award of the Spanish Interdisciplinary AIDS Society, Madrid, 26 June 2014.

Doctoral Theses

- ▶ Ignaci Monedero, Towards better control of multi-drug-resistant tuberculosis in developing countries, University of Barcelona, Joan A. Caylà, Rafael Vidal (supervisors), Hospital del Mar Barcelona.

# Transmissible Diseases

\*TIF: 107.515 \*\*MIF: 3.840

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- 01 Millet J.-P., Moreno A., Fina L., Bano L.D., Orcau A., De Olalla P.G., Cayla J.A. Factors that influence current tuberculosis epidemiology. (2013) *Eur. Spine J.*, 22 (SUPPL.4), S539-S548.  
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- 02 Marco A., Esteban J.I., Sole C., Da Silva A., Ortiz J., Roget M., Sarriera C., Teixido N., Guerrero R.A., Cayla J.A. Hepatitis C virus reinfection among prisoners with sustained virological response after treatment for chronic hepatitis C. (2013) *J. Hepatol.*, 59 (1), 45-51.  
**IF: 10.401**
- 03 Millet J.-P., Shaw E., Orcau A., Casals M., Miro J.M., Cayla J.A., Vidal R., Tortola M.T., Martin N., Martinez J.A., Gonzalez J., Tundo G., Borrell S., Lopez-Colomes J.L., Sanchez F., Salvado M., Sambeat M.A., Pomar V., Coll P., March F., Espanol M., Jimenez M.A., Mila C., de Souza M.L., Clos R., Gorrindo P., Nelson J.L. Tuberculosis Recurrence after Completion Treatment in a European City: Reinfection or Relapse?. (2013) *PLoS One*, 8 (6).  
**IF: 3.534**
- 04 Godoy P., Cayla J.A., Carmona G., Camps N., Alvarez J., Alseda M., Minguell S., Rodes A., Altet N., Pina J.-M., Barrabeig I., Orcau A., Parron I., March J., Follia N., Sabater M., Dominguez A. Smoking in tuberculosis patients increases the risk of infection in their contacts. (2013) *Int. J. Tuberc. Lung Dis.*, 17 (6), 771-776.  
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- 05 Rodriguez M., Monedero I., Caminero J.A., Encarnacion M., Dominguez Y., Acosta I., Munoz E., Camilo E., Martinez-Selmo S., De Los Santos S., Del Granado M., Casals M., Cayla J., Marcelino B. Successful management of multidrug-resistant tuberculosis under programme conditions in the Dominican Republic. (2013) *Int. J. Tuberc. Lung Dis.*, 17 (4), 520-525.  
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- 06 Podlekareva D.N., Grint D., Post F.A., Mcroft A., Pantelev A.M., Miller R.F., Miro J.M., Bruyand M., Furrer H., Riekstina V., Girardi E., Losso M.H., Cayla J.A., Malashenkova E.A., Obel N., Skrahina A.M., Lundgren J.D., Kirk O., Chentsova N., Duiculescu D., Toibaro J.J. Health care index score and risk of death following tuberculosis diagnosis in HIV-positive patients. (2013) *Int. J. Tuberc. Lung Dis.*, 17 (2), 198-206+i.  
**IF: 2.756**
- 07 Millet J.-P., Orcau A., Casals M., Garcia De Olalla P., Cayla J.A. Recurrences in tuberculosis in a cohort of human immunodeficiency virus-infected patients: The influence of highly active antiretroviral therapy. (2013) *Enferm. Infec. Microbiol. Clin.*, 31 (4), 227-229.  
**IF: 1.881**
- 08 Lafuente S., Bellido J.B., Moraga F.A., Herrera S., Yague A., Montalvo T., De Simo M., Simon P., Cayla J.A. Salmonella paratyphi B and Salmonella litchfield outbreaks associated with pet turtle exposure in Spain. (2013) *Enferm. Infec. Microbiol. Clin.*, 31 (1), 32-35.  
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- 09 Rivero A., Pulido F., Cayla J., Iribarren J.A., Miro J.M., Moreno S., Perez-Camacho I. The Spanish AIDS Study Group and Spanish National AIDS Plan (GESIDA/Secretaría del Plan Nacional sobre el Sida) recommendations for the treatment of tuberculosis in HIV-infected individuals (Updated January 2013) [Recomendaciones de GESIDA/Secretaría del Plan Nacional sobre el Sida para el tratamiento de la tuberculosis en adultos infectados por el virus de la inmunodeficiencia humana (actualización enero de 2013)]. (2013) *Enferm. Infec. Microbiol. Clin.*, 31 (10), 672-684.  
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- 10 Solano R., Lafuente S., Sabate S., Tortajada C., Garcia de Olalla P., Hernando A.V., Cayla J. Enterotoxin production by *Staphylococcus aureus*: An outbreak at a Barcelona sports club in July 2011. (2013) *Food Control*, 33 (1), 114-118.  
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- 11 Efsen A.M.W., Pantelev A.M., Grint D., Podlekareva D.N., Vassilenko A., Rakhmanova A., Zeltina I., Losso M.H., Miller R.F., Girardi E., Cayla J., Post F.A., Miro J.M., Bruyand M., Furrer H., Obel N., Lundgren J.D., Mcroft A., Kirk O. TB meningitis in HIV-positive patients in Europe and Argentina: Clinical outcome and factors associated with mortality. (2013) *Biomed Res. Int.*, 2013.  
**IF: N/D**
- 12 Vives N., Lugo R., Lopez E., Garcia de Olalla P., Minguell S., Barrabeig I., Pons P., Lopez-Grado E., Ferre I., Escriche R., Armengol P., Vall M., Soler-Palacin P., Leon I., Gascon I., Vicente A.M., Falguera G., AVECILLA-PALAU A., Martinez C., Barbera M.J., Gonzalez V., Cayla J., Casabona J. Increase in gonorrhoea among very young adolescents, Catalonia, Spain, January 2012 to June 2013. (2013) *Eurosurveillance*, 18 (33), 20560.  
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- 13 Dominguez A., Godoy P., Castilla J., Soldevila N., Toledo D., Astray J., Mayoral J.M., Tamames S., Garcia-Gutierrez S., Gonzalez-Candela F., Martin V., Diaz J., Torner N., Alonso J., Baricot M., Cayla J., Lafuente S., Cenoz M.G., Baz I.M., Quintana J.M., Gonzalez A.B. Knowledge of and attitudes to influenza vaccination in healthy primary healthcare workers in Spain, 2011-2012. (2013) *PLoS One*, 8 (11).  
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- 14 Altet M.N., Vidal R., Mila C., Rodrigo T., Casals M., Mir I., Ruiz-Manzano J., Jimenez-Fuentes M.A., Sanchez F., Maldonado J., Blanquer R., De Souza-Galvao M.L., Solsona J., Azlor E., Diaz D., Calpe J.L., Cayla J.A. Monitoring changes in anti-tuberculosis treatment: Associated factors determined at the time of diagnosis. (2013) *Int. J. Tuberc. Lung Dis.*, 17 (11), 1435-1441.  
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- 15 Lafuente S., Nolla J., Valdezate S., Tortajada C., Vargas-Leguas H., Parron I., Saez-Nieto J.A., Portana S., Carrasco G., Moguel E., Sabate S., Argelich R., Cayla J.A. Two simultaneous botulism outbreaks in Barcelona: *Clostridium baratii* and *Clostridium botulinum*. (2013) *Epidemiol. Infect.*, 141 (9), 1993-1995.  
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- 16 Godoy P., Cayla J.A., Carmona G., Camps N., Alvarez J., Rodes A., Altet N., Pina J.-M., Barrabeig I., Orcau A., Parron I., Alseda M., March J., Follia N., Minguell S., Dominguez A. Immigrants do not transmit tuberculosis more than indigenous patients in Catalonia (Spain). (2013) *Tuberculosis*, 93 (4), 456-460.  
**IF: 3.503**
- 17 Reyes-Uruena J.M., Olalla P.G.D., Perez-Hoyos S., Cayla J.A. Time series analysis comparing mandatory and voluntary notification of newly diagnosed HIV infections in a city with a concentrated epidemic. (2013) *BMC Public Health*, 13 (1).  
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- 18 Manzanares S., Lafuente S., Marti M., Simon P., Gorrindo P., Cayla J.A. Incidence of whooping cough in the city of Barcelona between 1999 and 2011 [Evolución de la incidencia de tos ferri-



\*TIF: 107.515 \*\*MIF: 3.840

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- 19 Casals M., Martinez J.A. Modelling player performance in basketball through mixed models. (2013) *Int. J. Perform. Anal. Sport*, 13 (1), 64-82.

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- 20 Castilla J., Godoy P., Dominguez A., Martinez-Baz I., Astray J., Martin V., Delgado-Rodriguez M., Baricot M., Soldevila N., Mayoral J.M., Quintana J.M., Galan J.C., Castro A., Gonzalez-Candelas F., Garin O., Saez M., Tamames S., Pumarola T. Influenza vaccine effectiveness in preventing outpatient, inpatient, and severe cases of laboratory-confirmed influenza. (2013) *Clin. Infect. Dis.*, 57 (2), 167-175.

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- 21 Delgado-Rodriguez M., Castilla J., Godoy P., Martin V., Soldevila N., Alonso J., Astray J., Baricot M., Galan J.C., Castro A., Gonzalez-Candelas F., Mayoral J.M., Quintana J.M., Pumarola T., Tamames S., Saez M., Dominguez A. Different prognosis in hospitalized patients with influenza one season after the pandemic H1N1 influenza of 2009-2010 in Spain. (2013) *Influenza Other Respir. Viruses*, 7 (6), 1336-1342.

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- 22 Castilla J., Martinez-Baz I., Godoy P., Toledo D., Astray J., Garcia S., Mayoral J.M., Martin V., Gonzalez-Candelas F., Guevara M., Diaz-Borrego J., Torner N., Baricot M., Tamames S., Dominguez A. Trends in influenza vaccine coverage among primary healthcare workers in Spain, 2008-2011. (2013) *Prev. Med.*, 57 (3), 206-211.

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- 23 Dominguez A., Castilla J., Godoy P., Delgado-Rodriguez M., Saez M., Soldevila N., Astray J., Mayoral J.M., Martin V., Quintana J.M., Gonzalez-Candelas F., Galan J.C., Tamames S., Castro A., Baricot M., Garin O., Pumarola T. Effectiveness of vaccination with 23-valent pneumococcal polysaccharide vaccine in preventing hospitalization with laboratory confirmed influenza

during the 2009-2010 and 2010-2011 seasons. (2013) *Human Vaccines Immunother.*, 9 (4), 865-873.

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- 24 Huang X., Lodi S., Fox Z., Li W., Phillips A., Porter K., Lutsar I., Kelleher A., Li N., Xu X., Wu H., Johnson A.M. Rate of CD4 decline and HIV-RNA change following HIV seroconversion in men who have sex with men: A comparison between the Beijing PRIMO and CASCADE cohorts. (2013) *JAIDS*, 62 (4), 441-446.

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- 25 Mourino A.M., Gallego Castellvi C., Garcia De Olalla P., Sole Zapata N., Arguelles Fernandez M.J., Escribano Ibanez M., Sanchez Roig M., Cayla Buqueras J.A. Late diagnosis of HIV infection among prisoners. (2013) *Aids Rev.*, 15 (3), 146-151.

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- 26 Martinez A., Torner N., Broner S., Bartolome R., Guix S., De Simon M., Godoy P., Moreno A., Company M., Balanya P.J., Sala M.R., Torra R., Ferrus G., Parron I., Barrabeig I., Dominguez A. Norovirus: A growing cause of gastroenteritis in Catalonia (Spain)?. (2013) *J. Food Prot.*, 76 (10), 1810-1816.

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- 27 Van Der Helm J., Geskus R., Sabin C., Meyer L., Del Amo J., Chene G., Dorrucchi M., Muga R., Porter K., Prins M. Effect of HCV infection on cause-specific mortality after HIV seroconversion, before and after 1997. (2013) *Gastroenterology*, 144 (4), 751-760.e2.

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- 28 Touloumi G., Pantazis N., Pillay D., Paraskevis D., Chaix M.-L., Bucher H.C., Kucherer C., Zangerle R., Kran A.-M.B., Porter K. Impact of HIV-1 subtype on CD4 count at HIV seroconversion, rate of decline, and viral load set point in European seroconverter cohorts. (2013) *Clin. Infect. Dis.*, 56 (6), 888-897.

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- 29 Rosinska M., Marzec-Bogustawska A., Janiec J., Smolen-Dzirba J., Wasik T., Gniewosz J., Zalewska M., Murphy G., McKinney E., Porter K. High percentage of recent HIV infection among

HIV-positive individuals newly diagnosed at voluntary counseling and testing sites in Poland. (2013) *Aids Res. Hum. Retrovir.*, 29 (5), 805-813.

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- 31 Launes C., Garcia-Garcia J.J., Martinez-Planas A., Moraga F., Soldevila N., Astigarraga I., Aristegui J., Korta J., Quintana J.M., Torner N., Dominguez A. Clinical features of influenza disease in admitted children during the first postpandemic season and risk factors for hospitalization: A multicentre Spanish experience. (2013) *Clin. Microbiol. Infect.*, 19 (3), E157-E162.

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**IF: 6.557**

# 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 census section level (as the maximum disaggregation unit) and at higher geographic aggregation levels (neighbourhood, town and region).

### Gender inequalities in health

- ▶ Sexual division between productive and reproductive work (gender roles) and sex

differences as the main structural factors that generate gender health inequalities.

- ▶ Social and political determinants of health and impact on policies and interventions
- ▶ Macroeconomic determinants of health inequalities between countries.
- ▶ Impact of the political context on population health and the conclusion that countries with better developed welfare states have better levels of health.

## Challenges

### Health inequalities according to different inequality axes

- ▶ Study social determinants of health in terms of social class and gender, with the purpose of integrating both axes and analysing inequalities among immigrants.
- ▶ Research the impact of residence on health, especially smaller urbanized areas.

### Gender inequalities in health

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

- ▶ Social and political determinants of health and impact on policies and interventions
- ▶ Study the influence of policies on population health 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).

## Doctoral Theses

- ▶ Dolores Ruiz Muñoz, Socioeconomic inequalities in sexual and reproductive health in Spain, ASPB, Glòria Pérez (supervisor), Pompeu Fabra University (EU).



## Active Grants

- ▶ Carme Borrell, Evaluating the impact of structural policies on health inequalities and their social determinants, and fostering change-SOPHIE, 278173-2, European Commission, 2011-2015, €3,310,530.
- ▶ Carme Borrell, Effects of the crisis on population health and determinants in Spain, PI13/00897, Carlos III Health Institute, 2014-2016, €58,564.00.
- ▶ Glòria Pérez, The impact of the economic crisis on sexual and reproductive health and social and economic inequalities in Spain and its regions, PI13/02292, Carlos III Health Institute, 2014-2016, €32,518.75.
- ▶ Glòria Pérez, The role of sexuality in active and healthy ageing: evidence and effective interventions, RecerCaixa, 2011-2013, €71,480.00.
- ▶ Joaquín Salvador, Typology of European countries by policies to reduce gender inequalities in health, PI12/03114, Carlos III Health Institute, 2013-2015, €38,115.00.

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## ISI Web of Knowledge Indexed Publications with an IF

- 01 Kulik M.C., Hoffmann R., Judge K., Looman C., Menvielle G., Kulhanova I., Toch M., Ostergren O., Martikainen P., Borrell C., Rodriguez-Sanz M., Bopp M., Leinsalu M., Jasilionis D., Eikemo T.A., Mackenbach J.P. Smoking and the potential for reduction of inequalities in mortality in Europe. (2013) *Eur. J. Epidemiol.*, 28 (12), 959-971.  
**IF: 5.147**
- 02 Borrell C., Dominguez-Berjon F., Galan I., Fernandez E. Farewell to paper in *Gaceta Sanitaria* [Adiós al papel en *Gaceta Sanitaria*]. (2013) *Gac. Sanit.*, 27 (6), 479.  
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- 04 Macias F., Malmusi D., Borrell C. Different patterns by age-group and gender of socioeconomic inequalities in smoking in Colombia. (2013) *Nicotine Tob. Res.*, 15 (10), 1745-1755.  
**IF: 2.805**
- 05 Gotsens M., Mari-Dell'Olmo M., Perez K., Palencia L., Martinez-Beneito M.-A., Rodriguez-Sanz M., Burstrom B., Costa G., Deboosere P., Dominguez-Berjon F., Dzurova D., Gandarillas A., Hoffmann R., Kovacs K., Marinacci C., Martikainen P., Pikhart H., Rosicova K., Saez M., Santana P., Riegelning J., Schwierz C., Tarkainen L., Borrell C. Socioeconomic inequalities in injury mortality in small areas of 15 European cities. (2013) *Health Place*, 24, 165-172.  
**IF: 2.435**
- 06 Barrionuevo-Rosas L., Palencia L., Borrell C. How does type of health insurance affect receipt of Pap testing in Peru? [¿cómo afecta el tipo de seguro de salud a la realización del Papanicolaou en Perú?]. (2013) *Rev. Panam. Salud Publica*, 34 (6), 393-400.  
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- 07 Rodriguez-Fonseca M., Palencia L., Mari-Dell'Olmo M., Gandarillas A., Dominguez-Berjon M.F., Gotsens M., Rodriguez-Sanz M., Borrell C. Evolution of socio-economic inequalities in mortality in small geographical areas of the two largest cities in Spain (Barcelona and Madrid), 1996-2007. (2013) *Public Health*, 127 (10), 916-921.  
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- 08 Mehdipanah R., Malmusi D., Muntaner C., Borrell C. An evaluation of an urban renewal program and its effects on neighborhood resident's overall well-being using concept mapping. (2013) *Health Place*, 23 (), 9-17.  
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- 09 Rocha K.B., Rodriguez-Sanz M., Perez K., Obiols J.E., Borrell C. Inequalities in the utilization of psychiatric and psychological services in catalonia: A multilevel approach. (2013) *Adm. Policy. Ment. Health*, 40 (5), 355-363.  
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- 10 Olabarria M., Perez K., Santamariña-Rubio E., Aragay J.M., Capdet M., Peiro R., Rodriguez-Sanz M., Artazcoz L., Borrell C. Work, family and daily mobility: A new approach to the problem through a mobility survey. (2013) *Gac. Sanit.*, 27 (5), 433-439.  
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- 12 Bacigalupe A., Esnaola S., Martin U., Borrell C. Two decades of inequalities in smoking prevalence, initiation and cessation in a southern European region: 1986-2007. (2013) *Eur. J. Public Health*, 23 (4), 552-558.  
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- 13 Artazcoz L., Cortes I., Escriba-Aguir V., Bartoll X., Basart H., Borrell C. Long working hours and health status among employees in Europe: Between-country differences. (2013) *Scand. J. Work Environ. Health*, 39 (4), 369-378.  
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- 14 Cornejo-Ovalle M., Costa-de-Lima K., Perez G., Borrell C., Casals-Pedro E. Oral health care activities performed by caregivers for institutionalized elderly in Barcelona-Spain. (2013) *Rev. Int. Androl.*, 18 (4), e641-e649.  
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- 15 Vives-Cases C., Dominguez Berjon F., Borrell C. A new *Gaceta Sanitaria* guideline: Basic recommendations for the publication of qualitative studies [Avanzando en las guías de *Gaceta Sanitaria*: Recomendaciones básicas para la publicación de estudios cualitativos]. (2013) *Gac. Sanit.*, 27 (4), 290-291.  
**IF: 1.25**
- 16 Villalonga-Olives E., Mari-Dell'Olmo M., Gotsens M., Ramos M., Ramon J., Cabeza E., Borrell C. Analysis of inequalities in mortality in small areas: Obstacles to overcome [Análisis de desigualdades en mortalidad en áreas pequeñas: Queda camino por recorrer]. (2013) *Gac. Sanit.*, 27 (4), 378-380.  
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- 17 Martinez-Beneito M.A., Zurriaga O., Botella-Rocamora P., Mari-Dell'Olmo M., Nolasco A., Moncho J., Daponte A., Dominguez-Berjon M.F., Gandarillas A., Martos C., Montoya I., Sanchez-Villegas P., Taracido M., Borrell C. Do socioeconomic inequalities in mortality vary between different Spanish cities? A pooled cross-sectional analysis. (2013) *BMC Public Health*, 13 (1).  
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- 18 Domingo-Salvany A., Bacigalupe A., Carrasco J.M., Espelt A., Ferrando J., Borrell C. Proposals for social class

## Scientific Production

# Health Inequalities

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## Scientific Production

- classification based on the Spanish National Classification of Occupations 2011 using neo-Weberian and neo-Marxist approaches [Propuestas de clase social neoweberiana y neo-marxista a partir de la Clasificación Nacional de Ocupaciones 2011]. (2013) *Gac. Sanit.*, 27 (3), 263-272.  
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- 19 Xu Y., Dadvand P., Barrera-Gomez J., Sartini C., Mari-Dell'Olmo M., Borrell C., Medina-Ramon M., Sunyer J., Basagana X. Differences on the effect of heat waves on mortality by sociodemographic and urban landscape characteristics. (2013) *J. Epidemiol. Community Health*, 67 (6), 519-525.  
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- 20 Borrell C., Pons-Vigues M., Morrison J., Diez E. Factors and processes influencing health inequalities in urban areas. (2013) *J. Epidemiol. Community Health*, 67 (5), 389-391.  
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- 21 Rocha K.B., Muntaner C., Gonzalez Rodriguez M.J., Baksai P.B., Vallebuona C., Borrell C., Solar O. Social class, health inequalities, and health-related behaviors of working people in Chile [Clase social, desigualdades en salud y conductas relacionadas con la salud de la población trabajadora en Chile]. (2013) *Rev. Panam. Salud Publica*, 33 (5), 340-348.  
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- 22 Palencia L., Espelt A., Rodriguez-Sanz M., B. Rocha K., Isabel Pasarin M., Borrell C. Trends in social class inequalities in the use of health care services within the Spanish National Health System, 1993-2006. (2013) *Eur. J. Health Econ.*, 14 (2), 211-219.  
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- 23 Cornejo M., Perez G., de Lima K.-C., Casals-Pedro E., Borrell C. Oral health-related quality of life in institutionalized elderly in (Spain) Barcelona. (2013) *Rev. Int. Androl.*, 18 (2), e285-e292.  
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- 24 Borrell C., Morrison J., Burstrom B., Pons-Vigues M., Hoffmann R., Gandarillas A., Martikainen P., Dominguez-Berjon M.F., Tarkiainen L., Diez E. Comparison of health policy documents of European cities: Are they oriented to reduce inequalities in health. (2013) *J. Public Health Policy*, 34 (1), 100-120.  
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- 27 Borrell, Carme; Felicitas Dominguez-Berjon, Ma; Alvarez-Dardet, Carlos; Bermudez-Tamayo, Clara; Godoy, Pere; Jose Lopez, Maria; Angel Negrin, Miguel; Perez, Gloria; Perez-Farinos, Napoleon; Rodriguez, Marisol; Ruano, Alberto; Vives Cases, Carmen; Garcia, Ana M. GACETA SANITARIA in 2012. (2013) *Gac. Sanit.*, 27 (1), 1-4.  
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- 28 Arcas M.M., Novoa A.M., Artazcoz L. Gender inequalities in the association between demands of family and domestic life and health in Spanish workers. (2013) *Eur. J. Public Health*, 23 (5), 883-888.  
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- 29 Ruiz-Munoz D., Wellings K., Castellanos-Torres E., Alvarez-Dardet C., Casals-Cases M., Perez G. Sexual health and socioeconomic-related factors in Spain. (2013) *Ann. Epidemiol.*, 23 (10), 620-628.  
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- 30 Campos-Serna J., Ronda-Perez E., Artazcoz L., Moen B.E., Benavides F.G. Gender inequalities in occupational health related to the unequal distribution of working and employment conditions: A systematic review. (2013) *Int. J. Equity Health*, 12 (1).  
**IF: 1.589**
- 31 Campos-Serna J., Ronda-Perez E., Moen B.E., Artazcoz L., Benavides F.G. Welfare state regimes and gender inequalities in the exposure to work-related psychosocial hazards. (2013) *Int. J. Occup. Environ. Health*, 19 (3), 179-195.  
**IF: 1.099**
- 32 Escriba-Aguir V., Royo-Marques M., Artazcoz L., Romito P., Ruiz-Perez I., Martin-Baena D. Personal and psychosocial predictors of psychological abuse by partners during and after pregnancy: A longitudinal cohort study in a community sample. (2013) *BJOG*, 120 (5), 576-582.  
**IF: 3.862**
- 33 Escriba-Aguir V., Royo-Marques M., Artazcoz L., Romito P., Ruiz-Perez I. Longitudinal study of depression and health status in pregnant women: Incidence, course and predictive factors. (2013) *Eur. Arch. Psych. Clin. Neurosci.*, 263 (2), 143-151.  
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- 34 Ramos P., Isabel Pasarin M., Artazcoz L., Diez E., Juarez O., Gonzalez I. Healthy and participative schools: Evaluation of a public health strategy [Escuelas saludables y participativas: Evaluación de una estrategia de salud pública]. (2013) *Gac. Sanit.*, 27 (2), 104-110.  
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- 36 Castellanos-Torres E., Alvarez-Dardet C., Ruiz-Munoz D., Perez G. Social determinants of sexual satisfaction in Spain considered from the gender perspective. (2013) *Ann. Epidemiol.*, 23 (3), 150-156.  
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- 37 Barberia E., Gotsens M., Xifro A., Castella J., Rodriguez-Sanz M., Medallo J. Retrospective study of out-of-hospital sudden cardiovascular death in middle-aged adults in Barcelona city [Estudio retrospectivo de la muerte súbita cardiovascular extrahospitalaria de adultos de mediana edad en la ciudad de Barcelona]. (2013) *Rev. Esp. Cardiol.*, 66 (3), 226-227.  
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- 38 Loane M., Morris J.K., Addor M.-C., Ariola L., Budd J., Doray B., Garne E., Gatt M., Haeusler M., Khoshnood B., Klungsoyr Melve K., Latos-Bielenska A., McDonnell B., Mullaney C., O'Mahony M., Queisser-Wahrendorf A., Rankin J., Rissmann A., Rounding C., Salvador J., Tucker D., Wellesley D., Yevtushok L., Dolk H. Twenty-year trends in the prevalence of Down syndrome and other trisomies in Europe: Impact of maternal age and prenatal screening. (2013) *Eur. J. Hum. Genet.*, 21 (1), 27-33.  
**IF: 4.225**
- 39 Cirera L., Cirarda F., Palencia L., Estalich M., Montes-Martinez A., Lorenzo P., Daponte-Codina A., Lopez-Abente G. Mortality due to haematological cancer in cities close to petroleum refineries in Spain. (2013) *Environ. Sci. Pollut. Res.*, 20 (1), 591-596.

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Scientific Production

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- 40 Ruiz-Munoz D., Perez G. Women's socioeconomic factors associated to the choice of contraceptive method in Spain. (2013) *Gac. Sanit.*, 27 (1), 64-67. **IF: 1.25**
- 41 Benach J., Malmusi D., Yasui Y., Martinez J.M. A new typology of policies to tackle health inequalities and scenarios of impact based on rose's population approach. (2013) *J. Epidemiol. Community Health*, 67 (3), 286-291. **IF: 3.294**
- 42 Pasarin M.I., Diez E. Community health: Action needed [Salud comunitaria: Una actuación necesaria]. (2013) *Gac. Sanit.*, 27 (6), 477-478. **IF: 1.25**
- 43 Ariza C., Perez A., Sanchez-Martinez F., Dieguez M., Espelt A., Pasarin M.I., Suelves J.M., De la Torre R., Nebot M. Evaluation of the effectiveness of a school-based cannabis prevention program. (2013) *Drug Alcohol Depend.*, 132 (41671), 257-264. **IF: 3.278**
- 44 Khoshnood B., Loane M., Garne E., Ad-dor M.-C., Arriola L., Bakker M., Barisic I., Bianca S., Boyd P., Calzolari E., Doray B., Draper E., Gatt M., Haeusler M., Melve K.K., Latos-Bielenska A., McDonnell B., Mullaney C., Nelen V., O'Mahony M., Pierini A., Queisser-Luft A., Randraivaivo H., Rankin J., Rissmann A., Salvador J., Tucker D., Verellen-Dumoulin C., Wellesley D., Zymak-Zakutnya N., Dolk H. Recent decrease in the prevalence of congenital heart defects in Europe. (2013) *J. Pediatr.*, 162 (1), 108-11300. **IF: 3.736**

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Serral G, Puigpinós-Riera R, Maydana E, Pons-Vigues M, Borrell C. Perception of healthcare professionals on the Breast Cancer Screening Programme in Barcelona. *Revista de Calidad Asistencial*. 2013; 28(4): 244-53.

# Epidemiology of Addictions

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## Main Lines of Research

### Epidemiology of drug consumption and patterns of use

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

### Health problems associated with drug use

- ▶ Quality of life and psychiatric comorbidity in cocaine users.
- ▶ Service use in cocaine and alcohol users.
- ▶ Factors associated with cocaine addict and alcoholic retention in treatment programmes.
- ▶ Violent behaviour and aggressive atti-

tudes in young cocaine consumers.

- ▶ Mortality and its determinants in cohorts with substance abuse disorders (alcohol, heroin and cocaine).
- ▶ Factors associated with acute health problems developing after cocaine and heroin use.
- ▶ Social and health discrepancies between immigrants and native drug users.

### Health policies

- ▶ Social inequalities in the evaluation of results and adherence to treatment.
- ▶ Infectious diseases related to drug use.
- ▶ Brief motivational intervention programs as a treatment alternative for teenage users of psychoactive substances.
- ▶ Role of the workplace in drug consumption.

## Challenges

### Epidemiology of drug consumption and patterns of use

- ▶ Determine incidence and patterns of cocaine use.
- ▶ Determine incidence and patterns of heroin use.
- ▶ Determine prevalence of cocaine, heroin and alcohol use.

### Health problems associated with drug use

- ▶ Analyse aggressive and violent attitudes and behaviour in young cocaine users.
- ▶ Assess quality of life in users with psychiatric comorbidity.
- ▶ Determine use of services among young heroin, cocaine and alcohol users.
- ▶ Analyse factors associated with retention in treatment programmes for cocaine and alco-

hol addiction.

- ▶ Assess mortality and its determinants in cohorts of alcohol and cocaine-dependent subjects.
- ▶ Analyse factors associated with acute health problems following cocaine use.
- ▶ Analyse differential social and health determinants among immigrant users of illegal drugs.

### Health policies

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



Active Grants

- ▶ MT Brugal (PI), A Guitart, JM Suelves and A Espelt, Mortality differences by gender and age in a cohort of drug and alcohol abusers admitted to treatment, P5890009C, CIBERESP No. 18, National Drugs Plan, 6 Jan 2011-31 Dec 2013, €34,000.
- ▶ MJ Bravo Portela (PI), A Espelt, A Guitart, L Sordo, Impact of the economic crisis on alcohol and other drug use and on social and healthcare coverage for certain vulnerable groups in Spain (ECRI-DROGAS), PI13/00183, CIBERESP, Carlos III Health Institute, Jan 2013-Jan 2016, €30.008.
- ▶ A Perez (PI), A Espelt, A Guitart, Factors associated with alcohol consumption in young people according to birthplace and family migration path, 2011/107, CIBERESP, National Drugs Plan, Jan 2012-Dec 2015, €74.890.
- ▶ Carmen Borrell (PI), A Espelt (associated partner), Evaluating the impact and social determinants of structural policies on health inequalities and fostering change (SOPHIE), 278173, CIBERESP 03,18,47 (EU 7FP), Oct 2011- Sept 2015, €2.535.757 (entire project)/€490,376 (ASPB).
- ▶ A Domingo-Salvany , M Torrens, J Mestre, EMCDDA insight series publication on psychiatric co-morbidity in Europe, European Monitoring Centre for Drugs and Drug Addiction, 2014, €14,900.
- ▶ G Barrio (PI), A Guitart, Problem of legal and illegal psychoactive drugs among immigrants in Spain, PI11/01396, CIBERESP No.18, Dec 2012-Dec 2015, €39,500.
- ▶ G Barrio (PI), L Sordo, A Guitart, Social inequalities in alcohol and cocaine use among Spaniards and immigrants from different origins. Identification of priority subgroups for intervention, 2011/059, CIBERESP No.18, National Drugs Plan, Jan 2012-Dec 2015, €43,915.
- ▶ L de la Fuente, G Barrio, MJ Bravo, A Sarasa, Assistance to EMCDDA to analyse recent European trends in injected drug use through existing indicator data, notably treatment demand, problem drug use indicator and other indicators, C.T.12. EPI.045.1.0, European Monitoring Centre for Drugs and Drugs Addiction, June 2012-June 2013, €6,950.

Transfer Products

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- ▶ G Barrio, A Sarasa, A Domingo-Slvany, MT Brugal, MJ Bravo, L de la Fuente, Health and social damage related to alcohol consumption in Spain, Report for the Spanish Epidemiology Society, 2013.
- ▶ Thanki D, Domingo-Salvany A, Barrio G, Sánchez-Máñez A, Llorens N, Suelves JM, Brime B, Vicente J, The choice of screening instrument matters: The case of problematic cannabis use screening in a Spanish population of adolescents, ISRN Addiction, 2013.

Collaborations

Collaborations with groups of IIB Sant Pau

- ▶ Evaluation of Public Health Policies and Programmes (Carlos Ariza)
- ▶ Health Inequalities (Carmen Borrell)

External Collaborations

- ▶ Several CIBERSAM and CIBERESP groups.

Awards

- ▶ Marina Bosque Prous, Alcohol consumption in Europe and the potential influence of contextual and individual variables (thesis supervisor, Albert Espelt), Spanish Epidemiology Society 2013 Award for the Best Thesis in Epidemiology and Public Health.

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Scientific Production

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- 01 Mestre-Pinto J.I., Domingo-Salvany A., Martin-Santos R., Torrens M. Dual diagnosis screening interview to identify psychiatric comorbidity in substance users: Development and validation of a brief instrument. (2013) Eur. Addict. Res., 20 (1), 41-48. **IF: 2.073**
- 02 Sanchez-Niubo A., Sordo L., Fortiana J.,

- Brugal M.T., Domingo-Salvany A. Incidence trends of cannabis and cocaine use from periodic Spanish general population surveys: Effect of standardizing results by age structure. (2013) Addiction, 108 (8), 1450-1458. **IF: 4.596**
- 03 Colell E., Sanchez-Niubo A., Domingo-Salvany A. Sex differences in the cumulative incidence of substance use by birth cohort. (2013) Int. J. Drug Policy, 24 (4), 319-325.

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- 04 Cuenca-Royo A.M., Torrens M., Sanchez-Niubo A., Suelves J.M., Domingo-Salvany A. Psychiatric morbidity among young-adults cannabis users [Comorbilidad psiquiátrica en jóvenes-adultos consumidores de cannabis]. (2013) Adicciones, 25 (1), 45-54. **IF: 1.167**
- 05 Cuenca-Royo A.M., Sanchez-Niubo A., Torrens M., Suelves J.M., Domingo-Sal-

\*Total Impact Factor \*\*Mean Impact Factor

# Epidemiology of Addictions

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## Scientific Production

- vany A. The Cannabis Abuse Screening Test (CAST) for psychiatric disorders diagnosis in young cannabis users [La entrevista Cannabis Abuse Screening Test (CAST) para el diagnóstico de trastornos psiquiátricos en jóvenes consumidores de cannabis]. (2013) *Adicciones*, 25 (1), 87-88.  
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- 07 Sanchez-Niubo A., Aalen O.O., Domingo-Salvany A., Amundsen E.J., Fortiana J., Roysland K. A multi-state model to estimate incidence of heroin use. (2013) *BMC Med. Res. Methodol.*, 13 (1).  
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- 08 Sordo L., Indave B.I., Degenhardt L., Barrio G., Kaye S., Ruiz-Perez I., Bravo M.J. A systematic review of evidence on the association between cocaine use and seizures. (2013) *Drug Alcohol Depend.*, 133 (3), 795-804.  
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- 10 Folch C., Casabona J., Espelt A., Majo X., Merono M., Gonzalez V., Brugal M.T. Gender differences in HIV risk behaviours among intravenous drug users in Catalonia, Spain. (2013) *Gac. Sanit.*, 27 (4), 338-343.  
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- 11 Domingo-Salvany A., Colell E., Sanchez-Niubo A., G Benavides F. [Exploration and validation of working conditions questionnaire items included in the Spanish Household Survey on Alcohol and Drugs (EDADES)]. [Exploración y validación de las preguntas relacionadas con las condiciones de empleo y trabajo incluidas en la Encuesta Domiciliaria sobre Alcohol y Drogas en España (EDADES)]. (2013) *J. Physiol. Biochem.*, 16 (3), 130-135.  
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- 12 Roncero C., Alvarez F.J., Barral C., Gomez-Baeza S., Gonzalvo B., Rodriguez-Cintas L., Brugal M.T., Jacas C., Romaguera A., Casas M. Driving and legal status of Spanish opioid-dependent patients. (2013) *Subst/Abus. Treatment Prev. Pol.*, 8 (1).  
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- 13 Benavides F.G., Ruiz-Fores N., Delclos J., Domingo-Salvany A. Consumption of alcohol and other drugs by the active population in Spain [Consumo de alcohol y otras drogas en el medio laboral en España]. (2013) *Gac. Sanit.*, 27 (3), 248-253.  
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- 14 Barrio G., Molist G., de la Fuente L., Fernandez F., Guitart A., Bravo M.J., Brugal M.T., Ambros M., Ballesta R., Bartroli M., Bilbao I., Castellano Y., Espelt A., Domingo-Salvany A., Pulido J., Sanchez-Niubo A., Santos S., Sordo L., Vallejo F. Mortality in a cohort of young primary cocaine users: Controlling the effect of the riskiest drug-use behaviors. (2013) *Addict. Behav.*, 38 (3), 1601-1604.  
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- 15 Garcia-Continente X., Perez-Gimenez A., Espelt A., Nebot Adell M. Factors associated with media use among adolescents: a multilevel approach.. (2014) *J. Afr. Earth Sci.*, 24 (1), 5-10.  
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- 16 Vecino C., Villalbi J.R., Guitart A., Espelt A., Bartroli M., Castellano Y., Brugal M.T. Safe injection rooms and police crackdowns in areas with heavy drug dealing. evaluation by counting discarded syringes collected from the public space [Apertura de espacios de consumo higiénico y actuaciones policiales en zonas con fuerte tráfico de drogas. evaluación mediante el recuento de las jeringas abandonadas en el espacio público]. (2013) *Adicciones*, 25 (4), 333-338.  
**IF: 1.167**
- 17 Ariza C., Perez A., Sanchez-Martinez F., Dieguez M., Espelt A., Paserin M.I., Suelves J.M., De la Torre R., Nebot M. Evaluation of the effectiveness of a school-based cannabis prevention program. (2013) *Drug Alcohol Depend.*, 132 (41671), 257-264.  
**IF: 3.278**
- 18 Garcia-Continente X., Perez-Gimenez A., Espelt A., Nebot Adell M. Bullying among schoolchildren: Differences between victims and aggressors. (2013) *Gac. Sanit.*, 27 (4), 350-354.  
**IF: 1.25**
- 19 Domingo-Salvany A., Bacigalupe A., Carrasco J.M., Espelt A., Ferrando J., Borrell C. Proposals for social class classification based on the Spanish National Classification of Occupations 2011 using neo-Weberian and neo-Marxist approaches [Propuestas de clase social neoweberiana y neo-marxista a partir de la Clasificación Nacional de Ocupaciones 2011]. (2013) *Gac. Sanit.*, 27 (3), 263-272.  
**IF: 1.25**
- 20 Chung H., Ng E., Ibrahim S., Karlsson B., Benach J., Espelt A., Muntaner C. Welfare state regimes, gender, and depression: A multilevel analysis of middle and high income countries. (2013) *Neonatology*, 10 (4), 1324-1341.  
**IF: 2.369**
- 21 Font-Ribera L., Garcia-Continente X., Perez A., Torres R., Sala N., Espelt A., Nebot M. Driving under the influence of alcohol or drugs among adolescents: The role of urban and rural environments. (2013) *Accid. Anal. Prev.*, 60 1-4.  
**IF: 2.571**
- 22 Espelt A., Borrell C., Palencia L., Goday A., Spadea T., Gnani R., Font-Ribera L., Kunst A.E. Socioeconomic inequalities in the incidence and prevalence of type 2 diabetes mellitus in Europe. (2013) *Gac. Sanit.*, 27 (6), 494-501.  
**IF: 1.25**
- 23 Franch-Nadal J., Martinez-Sierra M.C., Espelt A., Sagarra-Busquets E., Patitucci-Gomez F., Goday-Arno A. The diabetic immigrant: Cardiovascular risk factors and control. contributions of the IDIME study [El diabético inmigrante: factores de riesgo cardiovascular y su control. Aportaciones del estudio IDIME]. (2013) *Rev. Esp. Cardiol.*, 66 (1), 39-46.  
**IF: 3.342**

# 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.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Cardiovascular Research Centre (CSIC-ICCC): Hearts of children — the importance of a healthy lifestyle (symposium).

### External Collaborations

- ▶ FATE project (fall detection in the elderly): Technical University of Catalonia/Medical Emergencies Service/TIC Salut
- ▶ Project No. 297178, European Commission, ICT-PSP, 2011-2015.

## Awards

- ▶ Dr. Brotons, Attitudes toward preventive services and lifestyle: The views of primary care patients in Europe. The EUROPREVIEW patient study (Family Practice), IV Jornada del IIB Sant Pau.

\*TIF: 21.368 \*\*MIF: 3.561

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

01 Brotons C., Lobos J.M., Royo-Bordonada M.A., Maiques A., De Santiago A., Castellanos A., Diaz S., Obaya J.C., Pedro-Botet J., Moral I., Lizarbe V., Moreno R., Perez A., Cordero A., Fornes-Ubeda F., Serrano-Saiz B., Camafort-Babkowski M., Elosua R., Sans S., De Pablo C., Gil-Nunez A., De Alva-

ro-Moreno F., Armario P., Rico O.C., Villar F., Lizzano A. Implementation of Spanish adaptation of the European guidelines on cardiovascular disease prevention in primary care. (2013) BMC Fam. Pract., 14. **IF: 1.735**

02 Hermans M.P., Elisaf M., Michel G., Muls E., Nobels F., Vandenberghe H., Brotons C. Benchmarking is associated with improved quality of care in type 2 diabetes:

# Primary Care Research

\*TIF: 21.368 \*\*MIF: 3.561

## Scientific Production

- The OPTIMISE randomized, controlled trial. (2013) *Diabetes Care*, 36 (11), 3388-3395.  
**IF: 8.57**
- 03 Hermans M.P., Brotons C., Elisaf M., Michel G., Muls E., Nobels F. Optimal type 2 diabetes mellitus management: The randomised controlled OPTIMISE benchmarking study: Baseline results from six European countries. (2013) *Eur. J. Prev. Cardiol.*, 20 (6), 1095-1105.  
**IF: 2.675**
- 04 Reyes C., Formiga F., Coderch M., Hoyo J., Ferriz G., Casanovas J., Monteserin R., Brotons C., Rojas M., Moral I. Use of proton pump inhibitors and risk of fragility hip fracture in a Mediterranean region. (2013) *Bone*, 52 (2), 557-561.  
**IF: 4.461**
- 05 Ferreira-Gonzalez I., Pinar-Sopena J., Ribera A., Marsal J.R., Cascant P., Gonzalez-Alujas T., Evangelista A., Brotons C., Moral I., Permanyer-Miralda G., Garcia-Dorado D., Tornos P. Prevalence of calcific aortic valve disease in the elderly and associated risk factors: a population-based study in a Mediterranean area.. (2013) *Eur. J. Prev. Cardiol.*, 20 (6), 1022-1030.  
**IF: 2.675**
- 06 Royo-Bordonada M.A., Lobos J.M., Brotons C., Villar F., De Pablo C., Armario P., Cortes O., Gil Nunez A., Lizcano A., De Santiago A., Sans S. The condition of the cardiovascular prevention in Spain [El estado de la prevención cardiovascular en España]. (2014) *Med. Clin.*, 142 (1), 7-14.  
**IF: 1.252**

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Royo-Bordonada MA, Lobos Bejarano JM, Villar Alvarez F, Sans S, Perez A, Pedro-Botet J, Moreno Carriles RM, Maiques A, Lizcano A, Lizarbe V, Gil Núñez A, Fornés Ubeda F, Elosua R, de Santiago Nocito A, de Pablo Zarzosa C, Álvaro Moreno F, Cortés O, Cordero A, Camafort Babkowski M, Brotons Cuixart C, Armario P, en nombre del Comité Español Interdisciplinario para la Prevención Cardiovascular (CEIPC). Comentarios del comité español interdisciplinario de prevención cardiovascular (ceipc) a las guías europeas de prevención cardiovascular 2012 *Rev Esp Salud Pública* 2013; 87:103-120.
- ▶ Eddy L, Moral I, Frutos E, Brotons C, Calvo M, Aloy G, Grup Obescat. Avaluació de l'autoconcepte dels adolescents amb excés de pes (Estudi Obescat). *Pediatr Catalana* 2013; 73: 107-12.
- ▶ Brotons C, Cuende JI, Fernández Pardo J, Plana N y Moral I. Cardiopatía isquémica. *Clin Invest Arterioscl.* 2013;25(5):203-210.
- ▶ Fernández Valverde D, Muñoz Pena A. AINE y riesgo cardiovascular en postinfartados. *AMFJ* 2013;2(4):2.



# Evaluation of Public Health Policies and Programmes

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**Main Lines of Research**

**Evaluation of public health policies and programmes**

- ▶ Monitoring of behaviours and other health risk factors such as environmental exposure.
- ▶ Process and impact evaluation of public health programmes and services (school-based prevention programmes for obe-

- sity, smoking, alcohol and cannabis consumption, breast cancer screening programmes and memory training workshops for elderly people).
- ▶ Evaluation of ICT innovation in public health.
- ▶ Evaluation of food contaminants.

**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 evaluation of health protection interventions.
- ▶ Develop a theoretical corpus of concepts, principles, methods and examples that contribute to filling the gap in under- and postgraduate teaching regarding the design and evaluation of risk prevention and health promotion interventions.

**Active Grants**

- ▶ María José López, Measurement of exposure to environmental tobacco smoke and estimated impact on mortality in Spain, PI10/00400, FIS, Carlos III Health Institute, Jan 2011–Dec 2013, €48,521.00.
- ▶ Anna Pérez, Factors associated with alcohol consumption in young people by place of origin and family migratory path, Exp. 2011/107, National Drug Plan, Spanish Ministry of Health, Social Services and Equality, 8 Nov 2011–31 Dec 2013, €74,900.30.
- ▶ Anna Pérez, Randomized clinical trial to evaluate the effectiveness of memory training workshops for people aged 65 to 80 years, PI11/02060, FIS, Carlos III Health Institute, Jan 2012–Dec 2014, €52,937.50.

- ▶ Francesca Sánchez (Gregorio Barrio, PI), Problems of legal and illegal psychoactive drugs among immigrants in Spain: identifying priority subgroups for intervention, PI11-01396, FIS, Carlos III Health Institute, Jan 2011–Dec 2014, €7,491.
- ▶ Anna Pérez (Gregorio Barrio, PI), Social inequalities in alcohol and cocaine between native Spaniards and immigrants from diverse origins. Identification of priority subgroups for intervention, Exp. 2011/059, National Drug Plan, Spanish Ministry of Health, Social Services and Equality, 2012–2013, €43,915.00.

\*Total Impact Factor \*\*Mean Impact Factor

# Evaluation of Public Health Policies and Programmes

## Transfer Products

- ▶ **Detecció Precoç del Càncer De Mama/Early Detection of Breast Cancer (2012):** Report describing results of activities carried out under the programme in 35 basic health areas of Barcelona. The data, which show trends over the last 10 years, allow us to observe leading indicators related to participation, coverage and other aspects of the programme and to identify improvement opportunities for professionals involved. Available at: [http://www.aspb.cat/quefem/docs/butlleti\\_8\\_cancer\\_mama.pdf](http://www.aspb.cat/quefem/docs/butlleti_8_cancer_mama.pdf)
- ▶ **Informe FRESC/Risk Factors in Secondary School Students Report 2012.** Report of survey results based on data collected for risk factors for the health of a representative sample of secondary school students in Barcelona. This is the only historical record of 25 years in Spain that shows the evolution of risk behaviours related to health in young people. Available at: [http://www.aspb.cat/quefem/docs/Informe\\_FRESC\\_2012.pdf](http://www.aspb.cat/quefem/docs/Informe_FRESC_2012.pdf)
- ▶ **Qüestionaris de l'Enquesta FRESC/FRESC Suvey Questionnaires.** The FRESC questionnaires are available to any professional interested in their use, as they may serve as a basis for the design of other surveys for similar populations. Available at: [http://www.aspb.cat/quefem/docs/FRESC\\_2012\\_2n-ESO.pdf](http://www.aspb.cat/quefem/docs/FRESC_2012_2n-ESO.pdf) [http://www.aspb.cat/quefem/docs/FRESC\\_2012\\_2n-ESO.pdf](http://www.aspb.cat/quefem/docs/FRESC_2012_2n-ESO.pdf) [http://www.aspb.cat/quefem/docs/FRESC\\_2012\\_2n-batx-CF-GM.pdf](http://www.aspb.cat/quefem/docs/FRESC_2012_2n-batx-CF-GM.pdf)

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Clinical Epidemiology and Healthcare Services (Xavier Bonfill).
- ▶ Transport and Health: Injuries and Mobility (Catherine Pérez).
- ▶ Health Inequalities (Carme Borrell).
- ▶ Epidemiology of Addictions (M Teresa Brugal).

### External Collaborations

- ▶ CIBER-Epidemiology and Public Health (Group 18: Evaluation of public health policies and programmes).
- ▶ AGAUR Consolidated Research Group (Evaluation of public health policies and programmes).
- ▶ Tobacco Working Group of the Spanish Epidemiology Society.
- ▶ Social Determinants Group of the Spanish Epidemiology Society.
- ▶ Foreign universities: Johns Hopkins University, USA.
- ▶ Spanish universities: Universitat Pompeu Fabra, Universitat Ramon Llull, Universitat de Vic, Universitat Internacional de Catalunya, Universitat Oberta de Catalunya, Universidad de Santiago de Compostela.
- ▶ Primary care centres: Ciutat Meridiana, Roquetes, Sant Rafael i Sardenya (Barcelona).
- ▶ Catalan Institute of Oncology (ICO).
- ▶ Municipal bodies: Barcelona Sports Institute (IBE), Barcelona Municipal Institute of Education (IME).
- ▶ Regional bodies: Public Health Agency of Catalonia (ASPCAT) (Promoting Health through Physical Activity and Healthy Eating Plan) and Catalan Health Information and Quality Agency (AQUAS).
- ▶ Other bodies: Catalan Recreation Foundation (FCE).
- ▶ Companies: Fontvella and Danone (health affairs departments).

## Awards

- ▶ Carles Ariza (PI), POIBA project (childhood obesity prevention in Barcelona), PAAS Award 2013 (Promoting Health through Physical Activity and Healthy Eating) in the category Research Field, Public Health Agency of Barcelona.

## Doctoral Theses

- ▶ Xavier Contintente Garcia, Risk attitudes and behaviours in adolescents: FRESC survey, Public Health Agency of Barcelona, M. José López Medina (supervisor), Pompeu Fabra University (underway).
- ▶ Gemma Serral Cano, Incidence of breast cancer: the role of screening programmes, Public Health Agency of Barcelona, Rosa Puigpinós (supervisor), Pompeu Fabra University (underway).
- ▶ Núria Obradors, Health inequalities in risk behaviours of young people according to residence, Carles Ariza (supervisor), Bages University Foundation, Manresa (underway).

\*TIF: 59.587 \*\*MIF: 3.136

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Pasarin M.I., Berra S., Gonzalez A., Segura A., Tebe C., Garcia-Altes A., Vallverdu I., Starfield B. Evaluation of primary care: The "Primary Care Assessment Tools - Facility version" for the Spanish health system. (2013) *Gac. Sanit.*, 27 (1), 12-18. **IF: 1.25**
- 02 Aurrekoetxea J.J., Murcia M., Rebagliato M., Lopez M.J., Castilla A.M., Santa-Marina L., Guxens M., Fernandez-Somoano A., Espada M., Lertxundi A., Tardon A., Ballaster F. Determinants of self-reported smoking and misclassification during pregnancy, and analysis of optimal cut-off points for urinary cotinine: A cross-sectional study. (2013) *BMJ Open*, 3 (1). **IF: 2.063**
- 03 Garcia-Altes A. Systematic review of economic evaluation studies: Are vaccination programs efficient in Spain?. (2013) *Vaccine*, 31 (13), 1656-1665. **IF: 3.485**
- 04 Sousa D., Justo I., Dominguez A., Manzur A., Izquierdo C., Ruiz L., Nebot M., Bayas J.-M., Celorrio J.-M., Varona W., Llinares P., Miguez E., Sanchez E., Carratala J. Community-acquired pneumonia in immunocompromised older patients: Incidence, causative organisms and outcome. (2013) *Clin. Microbiol. Infect.*, 19 (2), 187-192. **IF: 5.197**
- 05 Garcia-Continente X., Perez-Gimenez A., Espelt A., Nebot Adell M. Bullying among schoolchildren: Differences between victims and aggressors. (2013) *Gac. Sanit.*, 27 (4), 350-354. **IF: 1.25**
- 06 Garcia-Altes A., Suelves J.M., Barberia E. Cost savings associated with 10 years of road safety policies in Catalonia, Spain [Ahorro asociado a 10 años de políticas de seguridad vial en Cataluña, España]. (2013) *Bull. World Health Organ.*, 91 (1), 28-35. **IF: 5.112**
- 07 Ariza C., Perez A., Sanchez-Martinez F., Dieguez M., Espelt A., Pasarin M.I., Suelves J.M., De la Torre R., Nebot M. Evaluation of the effectiveness of a school-based cannabis prevention program. (2013) *Drug Alcohol Depend.*, 132 (41671), 257-264. **IF: 3.278**
- 08 Chico J., Rubies A., Centrich F., Companyo R., Prat M.D., Granados M. Use of gel permeation chromatography for clean-up in the analysis of coccidiostats in eggs by liquid chromatography-tandem mass spectrometry. (2013) *Anal. Bioanal. Chem.*, 405 (14), 4777-4786. **IF: 3.578**
- 09 Lopez M.J., Fernandez E., Perez-Rios M., Martinez-Sanchez J.M., Schiaffino A., Galan I., Moncada A., Fu M., Montes A., Salto E., Nebot M. Impact of the 2011 spanish smoking ban in hospitality venues: Indoor secondhand smoke exposure and influence of outdoor smoking. (2013) *Nicotine Tob. Res.*, 15 (5), 992-996. **IF: 2.805**
- 10 Sureda X., Fernandez E., Lopez M.J., Nebot M. Secondhand tobacco smoke exposure in open and semi-open settings: A systematic review. (2013) *Environ. Health Perspect.*, 121 (7), 766-773. **IF: 7.029**
- 11 Martin-Pujol A., Fernandez E., Schiaffino A., Moncada A., Ariza C., Blanch C., Martinez-Sanchez J.M. Tobacco smoking, exposure to second-hand smoke, and asthma and wheezing in schoolchildren: A cross-sectional study. (2013) *Acta Paediatr.*, 102 (7), e305-e309. **IF: 1.842**
- 12 Kumar P., Rubies A., Centrich F., Granados M., Cortes-Francisco N., Caixach J., Companyo R. Targeted analysis with benchtop quadrupole-orbitrap hybrid mass spectrometer: Application to determination of synthetic hormones in animal urine. (2013) *Anal. Chim. Acta*, 780 65-73. **IF: 4.517**
- 13 Garcia-Continente X., Serral G., Lopez M.J., Perez A., Nebot M. Long-term effect of the influenza A/H1N1 pandemic: Attitudes and preventive behaviours one year after the pandemic. (2013) *Eur. J. Public Health*, 23 (4), 679-681. **IF: 2.459**
- 14 Gomez-Olles S., Untoria M.D., Villalbi J.R., Munoz X., Morell F., Cruz M.J. Soy aerolergens in thoracic fraction particles (PM10). (2013) *J. Invest. Allergol. Clin. Immunol.*, 23 (3), 152-158. **IF: 2.642**
- 15 Blanch C., Fernandez E., Martinez-Sanchez J.M., Ariza C., Lopez M.J., Moncada A., Schiaffino A., Rajmil L., Salto E., Pascual J.A., Nebot M. Impact of a multi-level intervention to prevent secondhand smoke exposure in schoolchildren: A randomized cluster community trial. (2013) *Prev. Med.*, 57 (5), 585-590. **IF: 2.932**
- 16 Font-Ribera L., Garcia-Continente X., Perez A., Torres R., Sala N., Espelt A., Nebot M. Driving under the influence of alcohol or drugs among adolescents: The role of urban and rural environments. (2013) *Accid. Anal. Prev.*, 60 1-4. **IF: 2.571**
- 17 Perez-Rios M., Schiaffino A., Lopez M.J., Nebot M., Galan I., Fu M., Martinez-Sanchez J.M., Moncada A., Montes A., Ariza C., Fernandez E. Questionnaire-based second-hand smoke assessment in adults. (2013) *Eur. J. Public Health*, 23 (5), 763-767. **IF: 2.459**
- 18 Vecino C., Villalbi J.R., Guitart A., Espelt A., Bartroli M., Castellano Y., Brugal M.T. Safe injection rooms and police crackdowns in areas with heavy drug dealing. evaluation by counting discarded syringes collected from the public space [Apertura de espacios de consumo higiénico y actuaciones policiales en zonas con fuerte tráfico de drogas. evaluación mediante el recuento de las jeringas abandonadas en el espacio público]. (2013) *Adicciones*, 25 (4), 333-338. **IF: 1.167**
- 19 Fu M., Martinez-Sanchez J.M., Galan I., Perez-Rios M., Sureda X., Lopez M.J., Schiaffino A., Moncada A., Montes A., Nebot M., Fernandez E. Variability in the correlation between nicotine and PM2.5 as airborne markers of second-hand smoke exposure. (2013) *Environ. Res.*, 127 49-55. **IF: 3.951**

## Other Publications

## ISI Web of Knowledge Indexed Publications without an IF

- Serral G, Puigpinós-Riera R, Maydana E, Pons-Vigués M, Borrell C. Percepción de los profesionales de salud sobre el Programa de Detección Precoz del Cáncer de Mama en Barcelona. *Revista de Calidad Asistencial*. 2013 Jul-Aug;28(4):244-53.

AREA T2

# Molecular, Genomic Kinetic-Dynamic Bases 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



# ic, Cellular and ases for Diseases nt



# Genomics of Complex Diseases

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## Main Lines of Research

### Genetic epidemiology and bioinformatics

- ▶ Algorithms for risk assessment.

### 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).

- ▶ Modelling individual risk of thrombosis in oncology (MIRTO)

### Epigenomics

- ▶ miRNAs as novel biomarkers in thromboembolic diseases.

### Pharmacogenomics

- ▶ Markers of genetic susceptibility and pharmacogenomics of cardiovascular diseases.

## Challenges

- ▶ Consolidate the epigenomic, genetic epidemiology and bioinformatics research lines.
- ▶ Obtain human and material resources to achieve goals defined for different projects.

- ▶ Coordinate an international cardiovascular genomic project.
- ▶ Establish agreements with biopharmaceutical companies.

## Transfer Products

- ▶ Agreement with Leo-Pharma: OncoThromb project.
- ▶ Agreement with FerrerinCode: ThromboinCode project.
- ▶ Agreement with Stago: GOLIATH project.

## Awards

- ▶ José Manuel Soria (PI), MIRTO project, Special Award for Basic or Clinical Research into Haemostasis, Spanish Thrombosis and Haemostasis Society (FETH), 2013.

Active Grants

- ▶ José Manuel Soria (PI), Genomics of Complex Diseases (Emerging Research Group), 2009 SGR-1240 Generalitat de Catalunya, 2009-2013, €41,600.
- ▶ Juan Carlos Souto (PI), José Manuel Soria (co-investigator), Carlos III Health Institute Cooperative Thematic Networks (RETICs): Cardiovascular Research Network (RIC), FIS call 2009, 2010-2013, €123,413.
- ▶ Jose Manuel Soria (PI), Identification of genetic determinants of the intrinsic coagulation pathway and its implications for thromboembolic disease, PI1100184, FIS, 2012-2014, €286,715.55.
- ▶ Yorgos Athanasiadis, Juan de la Cierva Postdoctoral Training Programme, JCI-2010-07202, Ministry of the Economy and Competitiveness, 2010-2013.
- ▶ Sonia López, Sara Borrell Postdoctoral Training Programme, CD8/00059, FIS, Carlos III Health Institute, 2009-2012 (extended to 2013 for personal reasons).
- ▶ Laura Martín Fernández, Predoctoral Health Research Training Grant, FI12/00322, FIS, Carlos III Health Institute, 2013.
- ▶ José Manuel Soria (HSCSP coordinator), Carlos III Health Institute Cooperative Thematic Networks (RETICs): Innovation in Medical and Healthcare Technologies (ITEMAS), FIS call 2009.
- ▶ Juan Carlos Souto (PI), Helena Brunel (co-investigator), Search for a clinical algorithm to define the individual risk profile for venous thromboembolism (RETROVE), PI12/00612, FIS, 2013-2015, €62,000.

Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Thrombosis and Haemostasis (GAIT, MIRTO, RETROVE).
- ▶ Multiorgan Damage – Internal Medicine (GAO).
- ▶ Angiology, Vascular Biology and Inflammation (TAGA and GAIT).
- ▶ Inflammation and Vascular Remodelling (TAGA).
- ▶ Metabolic Bases of Cardiovascular Risk (GAIT).
- ▶ Haematological Diagnosis (GAIT).

**External Collaborations**

- ▶ Clinical Oncology Department, Hospital Gregorio Marañón, Madrid, Spain (OncoThomb)
- ▶ Biomedical Engineering Research Centre, UPC, Barcelona, Spain (SUMMIT)
- ▶ Haematology Laboratory, Hospital Timone Marseille, France (GAIT)
- ▶ Department of Genetics, University of Geneva, Switzerland (GAIT)
- ▶ Department of Cardiology, Karolinska Institutet, Sweden (GAIT)
- ▶ INSERN UMRS 937, Université Pierre et Marie Curie, Paris (GAIT)
- ▶ Haematology Department, Karolinska Hospital, Sweden (VER-EMA)

\*TIF: 11.258 \*\*MIF: 3.753

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

01 Athanasiadis G., Sabater-Lleal M., Buil A., Souto J.C., Borrell M., Lathrop M., Watkins H., Almasy L., Hamsten A., Soria J.M. Genetic determinants of plasma  $\beta$ 2-glycoprotein I levels: A genome-wide association study in extended pedigrees from Spain. (2013) *J. Thromb. Haemost.*, 11 (3), 521-528.  
**IF: 5.55**

02 Baeza-Richer C., Blanco-Rojo R., Lopez-Parra A.M., Brichs A., Bertocini S., Perez-Granados A.M., Buil A., Soria J.M., Arroyo-Pardo E., Vaquero M.P. Identification of a novel quantitative trait nucleotype related to iron status in a calcium channel gene. (2013) *Dis. Markers*, 34 (2), 121-129.  
**IF: 2.174**

03 de la Morena-Barrio M.E., Buil A., Anton A.I., Martinez-Martinez I., Minano A., Gutierrez-Gallego R., Navarro-Fernan-

dez J., Aguila S., Souto J.C., Vicente V., Soria J.M., Corral J. Identification of Anti-thrombin-Modulating Genes. Role of LARGE, a Gene Encoding a Bifunctional Glycosyltransferase, in the Secretion of Proteins? (2013) *PLoS One*, 8 (5).  
**IF: 3.534**

# Pharmacokinetic/Pharmacodynamic Modelling and Simulation

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Maite Garrido

HSCSP RI  
HSCSP RI



## Main Lines of Research

- ▶ Population pharmacokinetic analysis aimed at establishing the pharmacokinetic characteristics of drugs and at differentiating and quantifying 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, such as categorical responses, survival, frequency and censored responses.
- ▶ Simulation of clinical trials and therapy applications aimed at assisting with the design of clinical trials to help the development new drugs (for pharmaceutical companies) and at improving the design of clinical trials (basic research and non-profit clinical studies) and to help in applications of therapeutic monitoring.

## Challenges

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

## Active Grants

- ▶ 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 2014.



Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Human experimental neuropsychopharmacology.
- ▶ Pharmacological research in humans.
- ▶ Pharmacy.
- ▶ HIV group
- ▶ Epidemiology and traumatology services

**External Collaborations**

- ▶ Lluita Contra la SIDA Foundation, Germans Trias i Pujol Hospital, Badalona, Spain.
- ▶ Pharmacy Service, Hospital Quiron, Mallorca, Spain.
- ▶ Department of Pharmacology, Liverpool University, UK.
- ▶ Anaesthesiology Service, Hospital del Mar, Barcelona, Spain.

Doctoral Theses

- ▶ Rita Moreira, Population pharmacokinetic analysis of vancomycin in neonates. Design of a new dose strategy (underway).
- ▶ Javier Estévez, Population pharmacokinetics of atazanavir: effect of ritonavir concentrations (underway).
- ▶ Maria Rosa Ballester, Development of a population pharmacokinetic/pharmacodynamic model for diazepam in healthy volunteers (underway).
- ▶ Jaume García, Use of analgesic drugs in the first day of the post-operative period (underway).
- ▶ Pedro Más, Pharmacokinetic/pharmacodynamic relationship of ertapenem in patients with cholecystitis and critically ill patients (underway).

\*TIF: 9.745 \*\*MIF: 4.873

Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

- |   |  |
|---|--|
| <p>01 Molto J, Xinarianos G., Miranda C., Pushpakom S., Cedeno S., Clotet B., Owen A., Valle M. Simultaneous pharmacogenetics-based population pharmacokinetic analysis of darunavir and ritonavir in HIV-infected patients. (2013) Clin. Pharmacokinet., 52 (7), 543-553.<br/><b>IF: 5.486</b></p> <p>02 Luque S., Grau S., Valle M., Sorli L., Horcajada J.P., Segura C., Alvarez-Lerma F. Differences in pharmacokinetics and pharmacodynamics of colistimethate sodium (CMS) and colistin between three different CMS dosage regimens in a critically ill patient infected by a multidrug-resistant Acinetobacter</p> | <p>baumannii. (2013) Int. J. Antimicrob. Agents, 42 (2), 178-181.<br/><b>IF: 4.259</b></p> <p>03 Antonijoan, RM; Morros, R; Vedia, C; Valle, M; Gich, I; Mateu, S; Fontanet, M; Delgado, C; Torrent, J, First year of general pharmacology in the bachelor degree in medicine at HSCSP teaching unit of the Autonomous University of Barcelona, SPAIN. (2013) Basic Clin. Pharmacol. Toxicol., 113 (SI), 36-37.<br/><b>IF: 2.294</b></p> |
|---|--|

# Generation of Advanced Therapy Medicines

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Noèlia Pujals BST  
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Miriam Requena BST  
Beatriz Sánchez BST



## Main Lines of Research

- ▶ Bioprocessing 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 (BST) with the structure of a pharmaceutical enterprise, capable of developing, trialling, registering and commercializing advanced therapeutic drugs.

## Active Grants

- ▶ Joan Garcia Lopez (PI), FACTOCEL – Enlargement of factory production facilities for the production of cell drugs for regenerative medicine, PLE2009-0092, Spanish Ministry of the Economy and Competitiveness, 2009-2013, €800,000.
- ▶ Joan Garcia Lopez (PI), REDONTAP — Continuous proliferation and simultaneous maturation of haematopoietic stem cells into blood cell lineages, 229328, European Commission, 2012-2014, €406,680.
- ▶ Joan Garcia Lopez (PI), MEDAVAN – Advanced cell therapies: cellular products and tissue engineering, IPT-300000-2010-17, Spanish Ministry of the Economy and Competitiveness, 2010-2013, €542,147.
- ▶ Joan Garcia Lopez (PI), Injectable bone-matching last-generation hydrogels and bioactive allogenic products for fracture treatment, IPT-2012-0745-300000, Spanish Ministry of the Economy and Competitiveness, 2013-2015, €938,390.
- ▶ Joan Garcia Lopez (PI), Incorporation in RETICS' TERCEL cell therapy network, RD12/0019/0015, Carlos III Health Institute, 2013-2016, €20,941.
- ▶ Joan Garcia Lopez (PI), Production of 100 doses of human cardiac stem cells derived from a single human cardiac stem cells clone or from a reduced number of clones, all from the same master cell stock, StemCellsOpCo, 2012-2014, €464,643.
- ▶ Enric Cáceres Palou, Hospital Vall d'Hebron,

- Joan Garcia Lopez, BST (PIs), Prospective randomized clinical trial comparing spinal fusion in patients with degenerative pathology of the lumbar spine, using autologous mesenchymal stem cells immobilized in human bone particles versus autologous iliac crest bone graft of the patient, EC10-209, Spanish Ministry of Health, Social Service and Equality, 2012-2014, €258,000.
- ▶ Santiago Suso Vergara, Hospital Clínic, Joan Garcia Lopez, BST (PIs), Allogenic cell therapy pilot clinical trial of ex-vivo expanded adult stem cells conjugated with allogenic bone scaffold for the hip fracture treatment in the elderly, EC11-158, Spanish Ministry of Health, Social Service and Equality, 2012-2014, €168,160.
- ▶ Xavier Montalbán Gairin, Hospital Vall d'Hebron, Joan Garcia Lopez, BST (PIs), Transplantation of autologous mesenchymal stem cells from bone marrow as a potential therapeutic strategy for the treatment of multiple sclerosis, EC10-266, Spanish Ministry of Health, Social Service and Equality, 2012-2014, €48,000.
- ▶ Marius Aguirre Canyadell, Hospital Vall d'Hebron, Joan Garcia Lopez, BST (PIs), Autologous mesenchymal stem cell therapy applied to the osteonecrosis of the femoral head, EC10-208, Spanish Ministry of Health, Social Service and Equality, 2012-2014, €118,560.
- ▶ Joan Carles Monllau Garcia, ICATME, Joan Garcia López, BST (PIs), A safety and effi-

Active Grants

- cacy phase I/IIa pilot clinical trial for meniscus lesion healing by means of autologous mesenchymal stem cells infiltration, EC11-436, Spanish Ministry of Health, Social Services and Equality, 2012-2014, €79,608.
- ▶ César GarcíaFontecha, Bioengineering, Orthopaedics and Paediatric Surgery, Hospital Vall d'Hebron, Margarita CodinachCreus, BST (PIs), Single-port fetoscopic repair of myelomeningocele using amniotic stem cells in sheep, P110/02466, Carlos III Health Institute, 2011-2013, €0.
  - ▶ Marius Aguirre Canyadell, Hospital Vall d'Hebron, Joaquim Vives-Armengol, Marta CaminalBobet, BST (PIs), Experimental cell therapy study for the treatment of critical size defect with "ex

vivo" expanded adult mesenchymal stem cells, P111/02231, Carlos III Health Institute, 2012-2014, €18,888.

- ▶ Joan Vidal Samsó, Institut Guttmann, Joan Garcia Lopez, BST (PIs), A phase I/IIa pilot prospective, open-label, study to assess the safety of a single-dose intrathecal injection and obtain preliminary efficacy results for allogenic stem cells from umbilical cord transplantation in patients with complete chronic traumatic spinal cord injury, 122831, Fundació la Marató de TV3, 2013-2015, €150,000.

Patents

- ▶ P200900005, operational in Spain (granted for Mexico and Colombia, filed for India).
- ▶ P200930939, operational in Spain.
- ▶ P201030238, operational in Spain (granted for Mexico, filed for Europe).
- ▶ P201130871, operational in Spain (filed for Mexico and India).
- ▶ P201131906, operational in Spain.

Doctoral theses

- ▶ Alba Casamayor, Advanced cell therapy based on expansion of the haematopoietic progenitors from umbilical cord blood, BST, Francesc Gòdia, Arnau Pla and Joan Garcia (supervisors), Chemical Engineering Department, UAB.

Collaborations

Collaborations with IIBSant Pau Groups

- ▶ Enric Cáceres Palou, Hospital Vall d'Hebron, Joan Garcia Lopez, BST (PIs), Prospective randomized clinical trial comparing spinal fusion in patients with degenerative pathology of the lumbar spine, using autologous mesenchymal stem cells immobilized in human bone particles versus autologous iliac crest bone graft from the patient, EC10-209, Spanish Ministry of Health, Social Services and Equality, 2012-2014. One of the recruiting sites is HSCSP (Dr Del Arco).

\*TIF: 2.030 \*\*MIF: 2.030

Scientific Production

ISI Web of Knowledge Indexed Publications with an IF

- 01 Callejo J, Salvador C, Gonzalez-Nunez S, Almeida L, Rodriguez L, Marques L, Valls A, Laila J.M. Live birth in a woman without ovaries after autograft of frozen-thawed ovarian tissue combined with growth factors. (2013) J. Ovarian Res., 6 (1).  
IF: 2.03

Books or Chapters

With ISBN

- ▶ Garcia J, Navarro A, Genís X. Les cèl.lules mare, el pròxim pas en el trasplantament de teixits Annals de Medicina 96; 5-8, 2013.
- ▶ Garcia J, Oliver I, Vives J, Lopez JR, Coll R, Terapia celular avanzada y su aplicación clínica (Ch. 69) in: A Cortés Buelvas, G León de González, M Muñoz Gómez, S Jaramillo Velásquez (eds), Aplicaciones y Práctica De La Medicina Transfusional: Tomo II. GCIAMT 2013.

Other Publications

ISI Web of Knowledge Indexed Publications without an IF

- ▶ Quintana S, Navarro A, Navas E, Genís X, Ferrer R. Consent to donate some but not all organs or tissues. Organs, Tissues & Cells (16), 37-39, 2013

# 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

**24** Reproductive Health

**249** Nursing Care Research

**250** Translational Molecular Oncology

**252** Molecular Physiology of the Synapse

# Emerging Processes in Prevalent Diseases

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Olga Trejo HSCSP  
Miquel Turbau HSCSP  
Esther Vendrell HSCSP



## Main Lines of Research

### Emerging processes in prevalent diseases

- ▶ 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.
- ▶ Short-stay unit. PI: JM Guardiola.

### 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: Miriam 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, M Rizzi.
- ▶ Supraventricular arrhythmias. PI: Aitor Alquézar.

### Community disorders

- ▶ Diabetes care in emergency departments. PI: I Agra.
- ▶ Infection in emergency departments. PI: JM Guardiola.
- ▶ Drug abuse and HIV
- ▶ HCV in patients with HIV. PI: JM Guardiola.
- ▶ Acute intoxication. PI: Hector Hernández.

\*TIF: 21.786 \*\*MIF: 3.112

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Carrara L., Navarro F., Turbau M., Seres M., Moran I., Quintana I., Martino R., Gonzalez Y., Brell A., Cordon O., Diestra K., Mata C., Mirelis B., Coll P. Molecular diagnosis of bloodstream infections with a new dual-priming oligonucleotide-based multiplex PCR assay. (2013) *J. Med. Microbiol.*, 62 (PART 11), 1673-1679.  
**IF: 2.266**
- 02 Garde A., Voss A., Caminal P., Benito S., Giraldo B.F. SVM-based feature selection to optimize sensitivity-specificity balance applied to weaning. (2013) *Comput. Biol. Med.*, 43 (5), 533-540.  
**IF: 1.475**
- 03 De La Torre M.C., Bolibar I., Vendrell M., De Gracia J., Vendrell E., Rodrigo M.J., Boquet X., Torreadella P., Yebenes J.-C., Serra-Prat M., Rello J., Torres A., Almirall J. Serum immunoglobulins in the infected and convalescent phases in community-acquired pneumonia. (2013) *Respir. Med.*, 107 (12), 2038-2045.  
**IF: 2.917**
- 04 Castro I., Guardiola J.M., Tuneu L., Sala M.L., Faus M.J., Mangues M.A. Drug-related visits to the emergency department in a Spanish university hospital. (2013) *Int. J. Clin. Phar.*, 35 (5), 727-735.  
**IF: 1.25**
- 05 Vendrell E., Lanau P., Salat D., Perez V., Serra-Prat M., De Gracia J., Almirall J. Influence of environmental conditions and exercise on serum immunoglobulin levels in a mushing race [Influencia del medio y del ejercicio físico sobre las inmunoglobulinas séricas durante una carrera de trineos de nieve en montaña]. (2014) *Aten. Prim.*, 31 (160), 80-84.  
**IF: 0.894**
- 06 Velilla Moliner J., Povar Marco J., Gros Baneres B., Santalo Bel M. New platelet aggregation inhibitors in acute coronary syndrome in the emergency department [Nuevos fármacos antiagregantes en el síndrome coronario agudo y su utilización en el servicio de urgencias]. (2013) *Emergencias*, 25 (1), 58-65.  
**IF: 2.583**
- 07 Berenguer J., Alvarez-Pellicer J., Carro A., Von Wichmann M.A., Lopez-Aldegue J., Mallolas J., Galindo M.J., Van Den Eynde E., Tellez M.J., Quereda C., Tural C., Sanz J., Barros C., Santos I., Pulido F., Guardiola J.M., Ortega E., Rubio R., Jusdado J.J., Montes M.L., Gaspar G., Barquilla E., Bellon J.M., Gonzalez-Garcia J. Clinical effects of viral relapse after interferon plus ribavirin in patients co-infected with human immunodeficiency virus and hepatitis C virus. (2013) *J. Hepatol.*, 58 (6), 1104-1112.  
**IF: 10.401**

## Conference Papers

- ▶ Giraldo, B.F., Tellez, J.P., Herrera, S., Benito, S., Study of the oscillatory breathing pattern in elderly patients (2013) Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, art. no. 6610727, pp. 5228-5231.
- ▶ Giraldo, B.F., Tellez, J.P., Herrera, S., Benito, S., Analysis of heart rate variability in elderly patients with chronic heart failure during periodic breathing (2013), *Computing in Cardiology*, 40, art. no. 6713546, pp. 991-994.
- ▶ Giraldo, B.F., Chaparro, J.A., Caminal, P., Benito, S., Characterization of the respiratory pattern variability of patients with different pressure support levels (2013), Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, art. no. 6610384, pp. 3849-3852.
- ▶ Giraldo, B.F., Chaparro, J.A., Caminal, P., Benito, S., Characterization of the respiratory pattern variability of patients with different pressure support levels (2013), Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, art. no. 6610384, pp. 3849-3852.
- ▶ Giraldo, B.F., Chaparro, J.A., Caminal, P., Benito, S., Characterization of the respiratory pattern variability of patients with different pressure support levels (2013), Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, art. no. 6610384, pp. 3849-3852.

## Letters

- ▶ Caballero, F., Ris, J., Puig, M., Leal, J., Benito, S. Successful kidney transplantation from a brain-dead donor with ornithine transcarbamylase deficiency (2013), *Transplantation*, 96 (8), pp. e63-e64.
- ▶ Caballero, F., Leal, J., Puig, M., Ris, J., Breda, A., Benito, S. Organ donation and Rendu-Osler-Weber syndrome (2013), *Transplantation*, 95 (7), pp. e47-e48.

## Other Publications

# Radiophysics and Radioprotection

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## Researchers

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## 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).

## Active Grants

- ▶ Montserrat Ribas Morales (PI), Dosimetric impact of respiratory motion during the administration of dynamic IMRT, PI12/00521 FIS, Carlos III Health Institute, Jan 2013-Dec 2015, €19,965.
- ▶ Pablo Carrasco (PI), In vivo dosimetry in intensity modulated radiotherapy in the treatment of breast cancer, Barcelona Board of the AECC (Spanish Cancer Association), Jan 2013-Dec 2014, €18,000.

## Collaborations

### External Collaborations

- ▶ M Ribas, P Carrasco, T Eudaldo, N Jornet, A Latorre, A Ruiz, Cytogenetic and Molecular Studies of the Effects of Ionizing Radiation, Study of in-depth molecular and genetic mechanisms involved in the response to ionizing radiation and especially the formation of chromosomal abnormalities and their evolution during the cell cycle, 2009 SGR 584, 2009–2013.

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Rafael Ruiz-Cruces, M. Luisa Ramírez, Sergio Cañete, Agustín Ruiz, Manuel Pérez-Martínez, Juan Carlos Alonso-Farto, Sonia Moreno, Natividad Ferrer, Aurora Pola, Carmen Álvarez, María Isabel Fernández-Vazquez, Juan Manuel Gil-Gahete, Manuel Rodríguez. Estimación de las dosis poblacionales en España por procedimientos diagnósticos de radiología y medicina nuclear. ALFA. Revista de Segu-

ridad Nuclear y Protección Radiológica, June 2013.

- ▶ Artur Latorre-Musoll, Nuria Jornet Sala, Pablo Carrasco de Fez, Teresa Eudaldo Puell, Agustí Ruiz Martínez, Montserrat Ribas Morales. Validación de unas pruebas de control de calidad del colimador multilamina utilizando dispositivos electrónicos de imagen portal y una aplicación comercial. Revista de Física Médica. Rev Fis Med 2013;14(2):99-110. Dec2013.



# Ophthalmology

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Fernando Rodríguez HSCSP  
Teresa Solans HSCSP  
Jesús Téllez HSCSP  
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## Technicians

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## Main Lines of Research

- ▶ Optimization of the functional rehabilitation of patients after cataract surgery using multifocal intraocular lens, and evaluation of vision quality in terms of parameters such as visual acuity, sensitivity to contrast and aberrometry.
- ▶ Comparison of the efficacy and safety of intravitreal ranibizumab compared to laser photocoagulation in patients with visual impairment secondary to diabetic macular oedema.
- ▶ Ocular repercussions of allogeneic medullary transplants and evaluation of different clinical manifestations and response to treatment in graft-versus-host disease.

## Active Grants

- ▶ Four-month, open-label, multicentre clinical trial to assess the tolerability, safety and health outcomes of fingolimod (FTY720) in patients with relapsing forms of multiple sclerosis, CF-TY720D2316, EudraCT, 2010-019029-32.
- ▶ Multicentre, open-label, single-group clinical trial evaluating the long-term safety and tolerability of 0.5 mg fingolimod (FTY720) administered orally once daily in patients with relapsing forms of multiple sclerosis, CFTY720D2399, EudraCT 2010-020515-37.
- ▶ EPOCH study: Randomized, double-blind, placebo-controlled, parallel-group study of the efficacy and safety of MK-8931 in subjects with mild to moderate Alzheimer disease, MK-8931-017-02/P07738, EudraCT, 2011-003151-20.
- ▶ 26-week extension study to evaluate the safety and efficacy of ONO-4641 in patients with relapsing-remitting multiple sclerosis, ONO-4641POU007, EudraCT, 2010-018705-11.
- ▶ Clinical trial (Siponimod BAF312). Multicentre, randomized, double-blind, parallel-group, placebo-controlled variable treatment duration study evaluating the efficacy and safety of Siponimod (BAF312) in patients with secondary progressive multiple sclerosis, protocol code: CBAF312A2304.
- ▶ Randomized, double-blind, placebo-controlled, parallel-group study of the efficacy and safety of MK-8931 in subjects with mild to moderate Alzheimer disease (Phase II/III), MK-8931-017-03 (aka SCH 900931, P07738), EudraCT, 2011-003151-20.
- ▶ Phase 2, multicentre, randomized, double-blind, parallel-group, placebo-controlled study to investigate the efficacy and safety of RO4602522 added to base treatment with acetylcholinesterase inhibitors, donepezil or rivastigmine in patients with moderate Alzheimer disease, BP28248, EudraCT, 2012-000943-29.
- ▶ Lilly BACC study: Evaluation of the safety, tolerability and pharmacodynamic effects of LY2886721 in patients with mild cognitive impairment due to Alzheimer disease or mild Alzheimer disease, I40-MC BACC, EudraCT, 2011-005217-37.
- ▶ Phase 2, multicentre, randomized, double-blind, parallel-group, placebo-controlled, dose-finding study to evaluate the safety and efficacy of three different oral doses of MT-1303 administered over a period of 24 weeks to patients with relapsing-remitting multiple sclerosis, MT-1303-E04, EudraCT, 2012-002470-31.

## Active Grants

- ▶ SARIL-NIU-SATUR (amended trial No. 1): Randomized, double-masked, placebo-controlled study to evaluate the efficacy and safety of sarilumab administered subcutaneously every two weeks in patients with non-infectious, intermediate or posterior uveitis or panuveitis, ACT13480-SARIL-NIU-SATUR, EudraCT, 2012-004845-34.
- ▶ LUMINOUS study: Observational study of the efficacy and safety of LUCENTIS through individualized patient treatment and associated results, RFB002A2406.

\*TIF: 10.245 \*\*MIF: 2.049

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Marchino T., Ibanez N., Prieto S., Novelli S., Szafranska J., Mozos A., Graell X., Buil J.A. An aggressive primary orbital natural killer/T-cell lymphoma case: Poor response to chemotherapy. (2013) *Ophthalmic Plast. Reconstr. Surg.* **IF: 0.914**
- 02 Gil M.A., Varon C., Cardona G., Vega F., Buil J.A. Comparison of far and near contrast sensitivity in patients symmetricaly implanted with multifocal and monofocal IOLs. (2014) *Eur. J. Ophthalmol.*, 24 (1), 44-52. **IF: 1.058**
- 03 Perez N.P., Diaz-Cascajosa J., Prat-Bartomeu J., Martin-Begue N., Catala-Mora J. Bilateral retinal detachment in a case of nonaccidental trauma. (2013) *Can. J. Ophthalmol.-J. Can. Ophthalmol.*, 48 (3), e44-e45. **IF: 1.299**
- 04 Garcia-De-Vicuna C., Diaz-Llopis M., Salom D., Bou R., Diaz-Cascajosa J., Cordeiro-Coma M., Ortega G., Ortego-Centeno N., Suarez-De-Figueroa M., Cruz-Martinez J., Fonollosa A., Blanco R., Garcia-Aparicio A.M., Benitez-Del-Castillo J.M., Anton J. Usefulness of adalimumab in the treatment of refractory uveitis associated with juvenile idiopathic arthritis. (2013) *Mediat. Inflamm.*, 2013. **IF: 2.417**
- 05 Marchino T., Vela J.I., Bassaganyas F., Sanchez S., Buil J.A. Acute-onset endophthalmitis caused by *alloeicoccus* otitis following a dexamethasone intravitreal implant. (2013) *J. Innate Immun.*, 4 (1), 37-41. **IF: 4.557**

## Collaborations

## Collaborations with IIB Sant Pau Groups

- ▶ Neurology (Dr Blesa).

## External Collaborations

- ▶ Phase 3, parallel-group, double-blind, multicentre clinical trial to evaluate the efficacy and safety of the administration of tocilizumab in patients diagnosed with moderate to severe or sight-threatening thyroid orbitopathy who have not adequately responded to pulse corticosteroid treatment, Dr José V Pérez-Moreiras, Ramón Rodríguez Foundation, GRC-TCL-2012.
- ▶ Phase 2 (RED-ES), controlled, open, randomized, multicentre clinical trial to compare the efficacy and safety of intravitreal ranibizumab with laser photocoagulation in patients with visual impairment secondary to diabetic macular oedema, CRFB002DES01, EudraCT, 2009-01825-37. (Collaboration with Hospital Bellvitge, IOBA, Hospital Cruces, Hospital Clinica Universitaria de Navarra, Hospital Universitario de Canarias, Hospital Universitario de Gran Canaria, Hospital Virgen de la Victoria, Hospital La Paz, Hospital Torrecárdenas, Vissum de Madrid, Hospital La Princesa, Hospital Sant Pau, Hospital La Fe, Hospital Son Llàtzer, Clínica Barraquer).

# Paediatrics

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Gemma Ginovart HSCSP  
Esther López HSCSP  
Elisenda Moliner HSCSP  
Nuria Pardo HSCSP  
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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 diagnostic and clinical monitoring network for rare anaemias due to major haemoglobinopathies
- ▶ Minimal residual disease in risk assessment in the treatment of children with 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 UAB, Barcelona)
- ▶ Apply adaptive cell immunotherapy to tumours
- ▶ Intervention in postasphyxia neuronal damage in infants with asphyxia 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
- ▶ Implement a multidisciplinary institutional massive transfusion protocol in the HSCSP.

## Active Grants

- ▶ Dr. Isabel Badell (PI), Dr Montse Torrent, Project 101731T, Telemarató TV3 2010, Creation of a Catalan network for the diagnosis and clinical management of rare anaemias due to major haemoglobinopathies, 2011-2014.
- ▶ Dr. Isabel Badell (PI), Analysis of prophylaxis with micafungin in pediatric hematology patients (multicentre study), 2013-2014, Astellas Laboratory.
- ▶ Dr. Isabel Badell (PI), The Evoltra® European Registry Programme (Paediatric ALL), CLO08708, 2013-2014, Genzyme Laboratory.
- ▶ Dr. Isabel Badell (PI), Multicentre pediatric disease registry: essential thrombocythemia, SPD422-404, 2013-2015, Pharm-Olam International.
- ▶ Gemma Carreras (PI), Coordinated study for use in Spain of the new version of EuroQol (EQ-5D): Subproject 4: The digital version of EuroQol 5D-Y and KIDSCREEN for children and adolescents, PI12/01296, FIS, 2012-2015, €52,635.
- ▶ Gemma Carreras (PI), TEENS Project: Glycaemic control and quality of life in children, adolescents and young adults with type-1 diabetes mellitus described in a worldwide cross-sectional study in 2012: impact of age-patient-related, treatment-related, behaviour and structure of care-related variables, DIREG\_C\_05444, 2012-2013, Sanofi-Aventis, €8,000.

### External Collaborations

- ▶ Eduard Carreras (PI), Sonia Brió (co-investigator), Dr Elisabeth Esteban (sponsoring investigator), Multicentre prospective using a before/after design to evaluate a knowledge-translation multiple intervention study. Evaluation of the effectiveness and efficiency of a multiple intervention aimed at improving early empirical antibiotic treatment for severe sepsis, Antibiotic Intervention in Severe Sepsis ABISS/EDUSEPSIS, FIS, Carlos III Health Institute (Surviving Sepsis Campaign/SEMICYUC), 2011-2013.
- ▶ Eduard Carreras (co-investigator), Guembe M (sponsor investigator), ECAUPE: Multicenter study of knowledge of catheters in paediatric intensive care units, 2013.
- ▶ Sonia Brió (PI), Eduard Carreras (co-investigator), VINCIP-SECIP: Multicentre study on nosocomial infection in paediatric intensive care units, 2012-2013.
- ▶ Eduard Carreras, Sonia Brió (co-investigators), Eulalia Turón (PI), ENVIPE: Study of the epidemiological and microbiological characteristics of viral encephalitis in paediatric intensive care units, 2012-2013.
- ▶ Eduard Carreras (PI), Dr Federico Martín-Torres (sponsor investigator), EUCLIDS: EU study of severe infectious diseases of childhood, 2012-2013.
- ▶ Sonia Brió (PI), Eduard Carreras (co-investigator), SPROUT: International survey on prevalence, prognosis and treatment type in severe paediatric sepsis, IRB 12-009784, 2013.
- ▶ Sonia Brió (co-investigator), EREPE: Study of the epidemiology of acute kidney injury in paediatric intensive care units in Spain, 2013-2014.
- ▶ Eduard Carreras, Sonia Brió (co-investigators), Eulalia Turón (PI), Autoimmunity study of encephalitis due to herpes simplex virus, ADEM/HSEBCN/Hospital Clínic, 2012-2014.
- ▶ Eduard Carreras (co-investigator), Sonia Brió, Eulalia Turón (PI), NEUROVRS 1: Epidemiological study to assess the severity of RSV infection in patients with severe neurological disease, Hospital Vall d'Hebrón, 2012-2014.
- ▶ Eduard Carreras, Raul Morales (co-investigators), G. Fraga (PI), DEXCAR: Administration of dexamethasone in the first episode of febrile urinary tract infection, and prevention of kidney damage (clinical trial), PI13/02557, FIS, Hospital Sant Joan de Reus (sponsor) and participating centres (HSCSP, among them)/Rovira i Virgil University, 2013.
- ▶ Isabel Vives Oños (PI), Elisenda Moliner (co-investigator), Study of the sensitivity of PCR to CMV in dried blood from a heel prick, PR(AMI)194/2012, REDICCMV Group/National Congenital CMV Network/SEIP (underway).
- ▶ Elisenda Moliner (PI), M Jose Garcia Borau, Esther López Bernal (co-investigators), CANDINEO: Epidemiological study of early diagnosis of invasive candidiasis in preterm neonates of very low birth weight. Epidemiologic, multicentre, observational, non-interventionist, case-controlled nested in a cohort, nationwide (Spain) study not tied to any drug, ASTELLAS, Nov 2011-Nov 2013.
- ▶ Elisenda Moliner, M Jose Garcia Borau, Esther López Bernal (co-investigators), ONARNI: Effectiveness of osteopathic treatment in improving the wellbeing of infants undergoing noninvasive ventilation in newborn intensive care units, Dec 2010-Dec 2013.
- ▶ Elisenda Moliner (co-investigator), EUROPAIN: European survey of sedation and analgesia practices for newborns admitted to intensive care units, Sept 2012-Dec 2013.
- ▶ Adolfo Valls (PI), Elisenda Moliner (co-investigator), EURONEOK-ISS: Evaluation of the effectiveness of a surveillance system on nosocomial infection rates in very low birth weight, PI13/00587, FIS, Carlos III Health Institute (2013 call).
- ▶ Dr M. José Mellado Peña (PI), Elisenda Moliner (co-investigator), PTB-RED: Spanish study network for child tuberculosis, PI13/12, Carlos III Health Institute (accepted).
- ▶ R. Alvarez (co-investigator), Effects of an exercise programme in paediatric patients with acute lymphoblastic leukaemia, undergoing chemotherapy and/or hematopoietic stem cell transplantation, IIBSP-EJE-2013-150.
- ▶ Dr Montse Torrent (local PI), LINES: low and intermediate risk neuroblastoma European study/SIOPEN, 2011- .
- ▶ Dr Montse Torrent (local PI), Intergroup trial for adolescent children with NHL-B or B-ALL (ALL-L3): Evaluation of the Efficacy and Safety of Rituximab for high-risk patients, INTER-B-NHL 2010, Spanish Paediatric Haematology and Oncology Society.
- ▶ Nuria Pardo (co-investigator), Multicentre, prospective, phase II trial with gemcitabine and rapamycin as second-line treatment for metastatic osteosarcoma, EC11-444 OSTEOSARC (GEIS 29).
- ▶ Nuria Pardo (co-investigator), Prospective observational study of ABCB1/P-glycoprotein expression as a factor for biological stratification of nonmetastatic osteosarcoma of the limbs, ISG-GEIS-OS-2 (GEIS 33).
- ▶ Nuria Pardo (PI), Evaluation of the efficacy and safety of tapentadol oral solution in the treatment of acute postoperative pain requiring opioid therapy in paediatric patients newborns to under 18 years), KF5503/65.
- ▶ Nuria Pardo (co-investigator), Phase II trial of R1507, a recombinant human monoclonal antibody to the insulin-like growth factor-1 receptor (DENOSUMAB) for the treatment of patients with recurrent or refractory Ewing's sarcoma, osteosarcoma, synovial sarcoma, rhabdomyosarcoma and other sarcomas, Sarcoma Alliance for Research through Collaboration (SARC), SARC/Hoffmann-La Roche Protocol SARC011/NO21157, 2009.
- ▶ Nuria Pardo (co-investigator), MobiKids Spain, Interphone: Incidence of brain tumours and mobile phones, Centre for Research in Environmental Epidemiology (CREAL), 2010.
- ▶ Nuria Pardo (PI), A randomized, controlled, multidose, multicentre, adaptive phase II/III study in infants with proliferating infantile haemangiomas requiring systemic therapy to compare 4 regimens of propranolol (1 or 3 mg/kg/day for 3 or 6 months) to placebo (double blind), V00400 SB 201, Pierre Fabre Dermatologie.
- ▶ Nuria Pardo (PI), Open-label, multicentre study of the safety of twice daily oxycodone hydrochloride controlled-release tablets in opioid-experienced children ages 6 to 16 years old, inclusive, with moderate to severe malignant and/or nonmalignant pain requiring opioid analgesics, Purdue Pharma, 2011-2013.



\*TIF: 32.154 \*\*MIF: 3.573

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Verd S., Ginovart G. Breastfeeding and bigger brains. What comes first?. (2013) *Matern. Child Nutr.*, 9 (3), 431-432.  
**IF: 2.973**
- 02 Alsina L., Gonzalez-Roca E., Giner M.T., Piquer M., Puga I., Pascal M., Ruiz-Ortiz E., Badell I., Martin-Mateos M.A., Cerutti A., Juan M., Yague J., Plaza A.M., Arostegui J.I. Massively parallel sequencing reveals maternal somatic IL2RG mosaicism in an X-linked severe combined immunodeficiency family. (2013) *J. Allergy Clin. Immunol.*, 132 (3), 741-743. e2.  
**IF: 11.248**
- 03 Rives S., Camos M., Estella J., Gomez P., Moreno M.J., Vivanco J.L., Melo M., Fernandez-Delgado R., Verdeguer A., Fernandez-Teijeiro A., Lendinez F., Lopez-Almaraz R., Uriz J.J., Badell I. Longer follow-up confirms major improvement in outcome in children and adolescents with Philadelphia chromosome acute lymphoblastic leukaemia treated with continuous imatinib and haematopoietic stem cell transplantation. Results from the Spanish Cooperative Study SHOP/ALL-2005. (2013) *Br. J. Haematol.*, 162 (3), 419-421.  
**IF: 4.959**
- 04 Sandoval J., Heyn H., Mendez-Gonzalez J., Gomez A., Moran S., Baiget M., Melo M., Badell I., Nomdedeu J.F., Esteller M. Genome-wide DNA methylation profiling predicts relapse in childhood B-cell acute lymphoblastic leukaemia. (2013) *Br. J. Haematol.*, 160 (3), 406-409.  
**IF: 4.959**
- 05 Aulinas A., Biagetti B., Vinagre I., Capel I., Ubeda J., Maria M.A., Garcia-Patterson A., Adelantado J.M., Ginovart G., Corcoy R. Gestational diabetes mellitus and maternal ethnicity: High prevalence of fetal macrosomia in non-Caucasian women [Diabetes mellitus gestacional y etnia materna: alta prevalencia de macrosomía fetal en mujeres no caucásicas]. (2013) *Med. Clin.*, 141 (6), 240-245.  
**IF: 1.252**
- 06 Prim N., Remacha A., Sanchez-Reus F., Brio S., Ayats R., Munoz C. Candidaemia detected in direct blood smears. (2013) *Eur. J. Haematol.*, 90 (6), 536-537.  
**IF: 2.414**
- 07 Verd S., Aramburu A., Carreras G. Iodine supplementation for lactation: time for tailoring treatments targeted to specific subgroups. (2013) *J. Paediatr. Child Health*, 49 (4), E353-E354.  
**IF: 1.193**
- 08 Trilla Sola C., Simo Gonzalez M., Armengol Santacreu J., Moliner Calderon E., Calaf Alsina J. Preterm premature rupture of membranes: Issues and controversies [Rotura prematura de membranas pretérmino: Consideraciones y controversias]. (2013) *Chin. J. Physiol.*, 56 (3), 159-163.  
**IF: 1.275**
- 09 Barcos-Munoz F., Moliner-Calderon E., Morales-Prieto R., Carrara-Scialpini L. Neonatal sepsis and meningitis due to *Streptococcus pneumoniae* [Sepsis y meningitis neonatal por *Streptococcus pneumoniae*]. (2014) *Enferm. Infec. Microbiol. Clin.*, 32 (1), 58-59.  
**IF: 1.881**

## Books or Chapters

## With ISBN

- ▶ Verd, S (2013), Salt, diet, and metabolic factors affecting breastfeeding, in Watson, RR, Grimble, G, Preedy, VR, Zibadi, S (eds), *Nutrition in Infancy* (Nutrition and Health Vol. 1), Springer. ISBN: 978-1-62703-223-0 (Print), 978-1-62703-224-7 (Online)
- ▶ Torrent, M, 2013, Hematología pediátrica prevalente, in Bras, J (ed), *Pediatría en Atención Primaria*, 3rd ed., Editorial Elsevier.

# Palliative Care

## Coordinator

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## Researchers

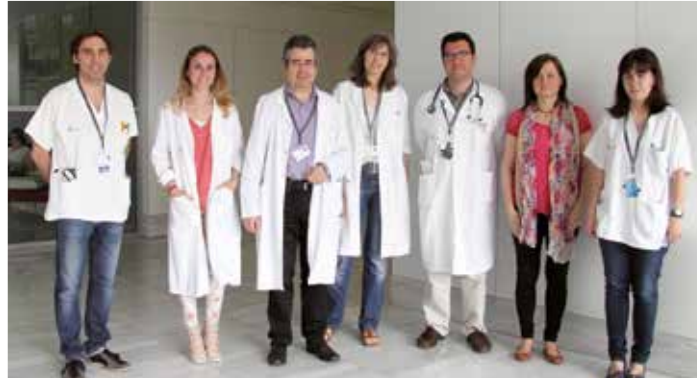
Óscar Fariñas HSCSP  
Ernest Güell HSCSP  
Adelaida Ramos HSCSP

## Technicians

Nadia Collette HSCSP

## Collaborators

María Rufino MutuaM  
Cristina Secanella HSCSP



## 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, euthanasia.
- ▶ Psychosocial care for patients and families: adaptation to the terminal situation, grief, spiritual needs.
- ▶ Training in palliative care: training needs, 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.

## Doctoral Theses

- ▶ Nadia Collette, Art therapy for terminal patients, University of Valencia, Pilar Barreto Martin (supervisor), Faculty of Psychology, University of Valencia.

\*TIF: 0.162 \*\*MIF: 0.162

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Dones Sanchez M., Bimbaum N.C., Barbero Gutierrez J., Gomis Bofill C., Balbuena Mora-Figueroa P., Benito Oliver E. How professionals perceive spiritual care in

palliative care teams in Spain? [¿Cómo percibimos los profesionales el acompañamiento espiritual en Cuidados Paliativos en España?]. (2013) Med. Paliativa. **IF: 0.162**

## Books or Chapters

### With ISBN

- ▶ Pascual A, Güell E. Anemia. En: Porta J, Gómez Batiste X, Tuca A, eds. Manual de control de síntomas en pacientes con cáncer avanzado y terminal. 3rd ed., Madrid. Enfoque Editorial 2013; pp: 269-272. ISBN 978-84-15905-03-5.

- ▶ Güell E, Pascual A. Interacciones farmacológicas. In: Porta J, Gómez Batiste X, Tuca A, eds. Manual de control de síntomas en pacientes con cáncer avanzado y terminal. 3rd ed., Madrid. Enfoque Editorial 2013; pp: 365-370. ISBN 978-84-15905-03-5.

# Nuclear Medicine

## Coordinator

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## Researchers

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Joan Duch  
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Alejandro Fernández  
Albert Flotats

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## Main Lines of Research

### Oncology

- ▶ New diagnostic methods based on the identification and visualization of molecular targets employing metabolic mechanisms, receptor systems, hypoxia, angiogenesis and apoptosis.
- ▶ New applications for sentinel node detection and radioguided surgery models.

### Cardiovascular research

- ▶ New methods for non-invasive assessment of ischaemic heart disease and heart failure.

- ▶ Cardiovascular functional studies.
- ▶ New methods for assessing cardiac innervation.

### Functional neuroimaging

- ▶ Development of new functional imaging methods for evaluating neurodegenerative diseases (Parkinson, Parkinson-Plus, Alzheimer, MCI).
- ▶ Dopaminergic system studies using IBZM and Datscan.

## Challenges

- ▶ Introduce new technologies to clinical research (given that imaging techniques are evolving very rapidly towards multimodal systems that integrate biological, molecular, anatomical and functional information in a single examination) and include these technologies, mainly PET/CT and PET/MR, in the group and hospital's research activities.

### New molecular imaging techniques

- ▶ Develop new hybrid molecular imaging

technologies, mainly PET/CT and PET/MR, building on pre-clinical and clinical molecular imaging models developed using SPECT and conventional nuclear medicine technologies.

### PET imaging biomarkers

- ▶ Develop new PET radioactive tracers to be used as biomarkers in new imaging technologies building on our experience with radioactive tracers to view in vivo diagnostic and therapeutic targets.

## Collaborations

### Collaborations with IIB Sant Pau Groups

- ▶ Neuroradiology Group: research into neurological and mental disorders and ageing (Dr Camacho, member).
- ▶ Oncology, Gynaecology, Surgery, Radiology, Radiotherapy, Nuclear Medicine and Pathology Groups: Evaluation of the usefulness of PET CT with 18F-FDG in the staging of locally advanced breast carcinoma (Dr Duch, PI).
- ▶ Cerebrovascular Diseases Group (Dr Carrió: member).

## Challenges

- ▶ Study of the predictive-diagnostic value of genetic markers ANLN, BIRC5, UBE2C, IRAK1, ZMYCD11 and CENPA in PAF and their involvement in thyroid tumour dedifferentiation, PS09/02286, FIS, 2010-2013.
- ▶ Radium-223 chloride (Alpharadin) in castration-resistant (hormone-resistant) patients with with bone metastasis, BAY 88-8223/16216, Bayer Health Care, 2012-2013.
- ▶ Phase 3, randomized, controlled study of carbozantinib (XL 184) vs. everolimus in patients with metastatic renal cell carcinoma that is refractory to or has progressed after prior VEGFR tyrosine kinase inhibitor therapy, METEOR XL184-308, Exelixis, 2013-2015.
- ▶ Deep brain stimulation in the treatment of refractory schizophrenia: a randomized, controlled, crossover pilot study, PI12/00042, FIS, 2013-2015.
- ▶ 90-week, multicentre, randomized, double-blind, placebo-controlled study in patients with mild Alzheimer disease to investigate the safety, tolerability and Abeta-specific antibody response following repeated IM injections of adjuvanted CAD106 (PET sub-study with flobetapir F18), CAD106-A2203, Novartis-Avid Radiopharmaceuticals, 2011-2013.
- ▶ Randomized double blind phase 3 efficacy and safety study of PF-00299804 versus ERLOTINIB for the treatment of advanced non-small cell lung cancer following progression after, or intolerance to, at least one prior chemotherapy, A7471009, PFIZER, 2011-2014.
- ▶ WN25203, using PET with an amyloid tracer, to assess changes in amyloid load over time in subjects with predeomal Alzheimer disease, WN25203-PET-substudy ROCHE, 2013-2016.

## Awards

- ▶ Dr. Carrió, Hybrid Imaging: The Journey from PET/CT to MR/PET, Global Grand Rounds Lecture at Harvard Medical School Department of Radiology, Massachusetts General Hospital and Brigham and Women's Hospital, 3 September 2013.
- ▶ Dr. Carrió, Brain Amyloid Imaging with PET, Lecture at The Royal College of Radiologists (RCR ASM 2013), The Barbican, London, 11 September 2013.

## Doctoral Theses

- ▶ Monica Sabaté Fernández, Selective sentinel node biopsy in differentiated thyroid cancer: diagnostic performance and clinical validation, Dr Carrió (supervisor), 10 Oct 2013.
- ▶ Fidel Núñez Marín, Patients with presenile Alzheimer's disease: study in high-field MRI (3T), Dr Carrió (supervisor), 9 Oct 2013.

\*TIF: 88.277 \*\*MIF: 9.809

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- Senior R., Moreo A., Gaibazzi N., Agati L., Tiemann K., Shivalkar B., Von Bardeleben S., Galiuto L., Lardoux H., Trocino G., Carrió I., Le Guludec D., Sambuceti G., Becher H., Colonna P., Ten Cate F., Bramucci E., Cohen A., Bezante G., Aggeli C., Kasprzak J.D. Comparison of sulfur hexafluoride microbubble (SonoVue)-enhanced myocardial contrast echocardiography with gated single-photon emission computed tomography for detection of significant coronary artery disease: A large european multicenter study. (2013) *J. Am. Coll. Cardiol.*, 62 (15), 1353-1361. **IF: 15.343**
- Estorch M., Carrió I. Future challenges of multimodality imaging. (2013) *Psychol. Learn. Motiv.*, 187, 403-415. **IF: 3.581**
- Camacho V., Estorch M., Marquie M., Domenech A., Flotats A., Fernandez A., Duch J., Geraldo L.L., Deportos J., Artigas C., Lleo A., Carrió I. Utility of early imaging of myocardial innervation scintigraphy in the diagnosis of Lewy Body Dementia [Utilidad de la imagen precoz de la gammagrafía de inervación miocárdica en el diagnóstico de la demencia con cuerpos de Lewy]. (2013) *Rev. Esp. Med. Nucl. Imagen Mol.*, 32 (2), 77-80. **IF: 0.938**
- Carrió I. EJNMMI: The European way of communicating science. (2013) *Eur. J. Nucl. Med. Mol. Imaging*, 40 (1), 1-3. **IF: 5.217**
- Carrió I. 2013: Another good year for EJNMMI. (2013) *Eur. J. Nucl. Med. Mol. Imaging*, 40 (12), 1791-1793. **IF: 5.217**
- Santapau A., Fernandez A., Artigas C., Flotats A., Estorch M., Carrió I. Palmar fasciitis polyarthritis syndrome as a paraneoplastic manifestation of lymphoma [Síndrome de fasciitis palmar con poliartritis como manifestación paraneoplásica de un linfoma]. (2013) *Rev. Esp. Med. Nucl. Imagen Mol.*, 32 (3), 196-198. **IF: 0.938**
- Sampedro F., Domenech A., Escalera S. Obtaining quantitative global tumoral state indicators based on whole-body PET/CT scans: A breast cancer case study. (2014) *Nucl. Med. Commun.*, 35 (4), 362-371. **IF: 1.371**
- Parker C., Nilsson D Heinrich S., Helle S.I., O'Sullivan J.M., Fossa S.D., Chodacki A., Wiechno P., Logue J., Seke M., Widmark A., Johannessen D.C., Hoskin P., Bottomley D., James N.D., Solberg A., Syndikus I., Kliment J., Wedel S., Boehmer S., Dall'Oglio M., Franzen L., Coleman R., Vogelzang N.J., O'Bryan-Tear C.G., Staudacher K., Garcia-Vargas J., Shan M., Bruland O.S., Sartor O. Alpha emitter radium-223 and survival in metastatic prostate cancer. (2013) *N. Engl. J. Med.*, 369 (3), 213-223. **IF: 54.42**
- Duch J. 18F-Fluorodesoxiglucose positron emission tomography/computed tomography and unknown origin primary tumor. Current usefulness and future perspectives [Tomografía computarizada/tomografía por emisión de positrones con 18F-fluorodesoxiglucosa y tumor de origen desconocido. Utilidad actual y perspectivas futuras]. (2013) *Med. Clin.*, 140 (1), 22-23. **IF: 1.252**



# Nuclear Medicine

## Books or Chapters

### With ISBN

- ▶ Carrió I, Ros P (eds), PET/MRI, Methodology and Clinical Applications, Springer-Verlag, 2013. ISBN 978-3-642-40692-8.
- ▶ Estorch M, Carrió I, Future Challenges of Multimodality Imaging, in Carrió I, Ros P (eds), Molecular Imaging in Oncology, Springer-Verlag Berlin Heidelberg, 2013. ISBN: 978-3-642-10852-5. DOI 10.1007/978-3-642-10853-2.

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Duch J, Fraile M. PET ¿Es útil en el cáncer de mama? Revista Geysalus, publicación del grupo español de investigación en cáncer de mama (GEICAM). July 2013, No. 22.

### Abstracts

- ▶ Camacho V, Fernández A, Domènech A, Lagreca M, Deportós J, Estorch M, Flotats A, Duch J, Carrió I. Onterobserver agreement in visual analysis of Florbetapir PET studies. *Eur J Nucl Med Mol Imaging* 2013;40:S254. DOI 10.1007/s00259-013-2535-3.
- ▶ Jaller R, Domènech A, Estorch M, Duch A, Montes A, Fernández A, Camacho V, Carrió I. Are standard uptake value and total lesion glycolysis of 18F-FDG PET/CT useful tools to predict neoadjuvant chemotherapy response in breast cancer? *Eur J Nucl Med Mol Imaging* 2013;40:S274. DOI 10.1007/s00259-013-2535-3.
- ▶ Duch J, Camacho V, Montes A, Achury C, Geraldo L, Deportós J, Estorch M, Carrió I. Upstaging of locally advanced breast cancer with PET/CT? *Eur J Nucl Med Mol Imaging* 2013;40:S463. DOI 10.1007/s00259-013-2535-3.
- ▶ Deportós J, Domènech A, Jaller R, Montes A, Duch J, Camacho V, Estorch M, Carrió I. Impact of 18F-fluorodesoxyglucose PET/CT on the clinical management of women with ovarian cancer. *Eur J Nucl Med Mol Imaging* 2013;40:S473. DOI 10.1007/s00259-013-2535-3.
- ▶ Achury C, Flotats A, Domènech A, Estorch M, Geraldo L, Fernández A, Romero I, Carrió I. Comparación entre la gammagrafía de ventilación pulmonar y la TC de baja dosis en el seguimiento del tromboembolismo pulmonar. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:158.
- ▶ Duch J, Moral A, Estorch M, Montes A, Achury C, Deportós J, Geraldo L, Carrió I. Ganglio centinela tras quimioterapia neoadyuvante del cáncer de mama. Resultados 3 años después de la validación de la técnica. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:159.
- ▶ Achury C, Fernández A, Córca ME, Estorch M, Geraldo L, Llobet JM, Carrió I. Patrón de captación de 18F-FDG estudios PET-TC en pacientes con diagnóstico de polimialgia reumática. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:52.
- ▶ Deportós J, Domènech A, Jaller RE, Montes A, Duch J, Camacho V,

Estorch M, Carrió I. Utilidad del PET/CT con 18F-FDG en el manejo clínico de mujeres con cáncer de ovario. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:132.

- ▶ Barcos F, Estorch M, Achury C, Camacho V, Coca E, González N, Fraga G, Carrió I. Valor predictivo de la gammagrafía renal con DMSA durante la fase aguda del primer episodio de infección febril del tracto urinario para detectar reflujo vesicoureteral de alto grado. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:173.
- ▶ Estorch M, Jaller R, Domènech A, Montes A, Deportós J, Geraldo L, Flotats A, Carrió I. Valoración de la carga metabólica tumoral mediante PET-TC en el carcinoma diferenciado de tiroides con tiroglobulina y/o sus anticuerpos positivos y rastreo con 131I negativo. *Rev Esp Med Nuc Im Mol* 2013; 32 Supl1:29.
- ▶ Deportós J, Flotats A, Jaller RE, Montes A, Duch J, Camacho V, Romero I, Carrió I. Comparación de dos sistemas diferentes de corrección de la atenuación con TC para SPECT miocárdica de perfusión. (oral communication) *Rev Esp Med Nuc Im Mol* 2013;32 (Supl. 1):14.
- ▶ Lagreca M, Saloni R, Quílez F, Vila M, Sánchez I, Montes A, Camacho V, Carrió I. Protocolo de adquisición de gating respiratorio en PET-TC con 18F-FDG. Nuestra experiencia. (oral communication) *Rev Esp Med Nuc Im Mol* 2013;32 (Supl. 1):109.
- ▶ Jaller RE, Domènech A, Camacho V, Flotats A, Geraldo L, Deportós J, Carrió I. Detección de metástasis musculares mediante PET-TC (poster) *Rev Esp Med Nuc Im Mol* 2013;32 (Supl. 1):218.
- ▶ González J, Duch J, Camacho V, Montes A, Jaller R, Tibau A, Carrió I. Análisis evolutivo del comportamiento morfometabólico de las metástasis óseas en cáncer de mama mediante PET-TC con 18F-FDG (poster) *Rev Esp Med Nuc Im Mol* 2013;32 (Supl. 1):144.
- ▶ Farré N, Rojas J, Díez L, Latorre-Musoll A, Camacho V, Fernández A, Majem M, Pallarés C, Majercakova K, Buitrago P, Giménez D, Craven-Bartle J. Role of 18F-FDG-CT for radiotherapy planning in lung cancer. Reports of practical oncology and Radiotherapy (oral communication) 2013;18:S80.
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## Other Publications

# 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.
- ▶ Extracorporeal CO<sub>2</sub> removal in ARDS patients.
- ▶ High-flow oxygen administration by nasal cannula in postextubation phase.

- ▶ Prevalence of drug interactions in critical care unit.

### New biomarkers in critically ill patients

- ▶ BNP in weaning from mechanical ventilation.
- ▶ 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.
- ▶ Haemodynamic effects of different antipyretic drugs in critically ill patients.
- ▶ Influence of position change to supine decubitus 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.

## Active Grants

- ▶ Lluís Zapata Fenor (PI), Role of echocardiography in weaning from mechanical ventilation, IIBSP-ECO-2013-159, HSCSP RI, Dec 2013-Dec 2014.
- ▶ Dr Yasser Sakr, Jena, Germany (PI), Dr Ricard Ferrer (coordinator for Spain), Dr Paula Vera (HSCSP PI), IC-GLOSSARI Study: The Intensive Care Global Study on Severe Acute Respiratory Infection, EC/13/150/3799, European Society of Intensive Care Medical Trials Group, Nov 2012-Oct 2014.
- ▶ Dr Mercedes Nieto Cabrera (national PI), Dr Paula Vera (HSCSP PI), MICA-FEM Study:
  - ▶ Observational, prospective, multicentre study in intensive care to evaluate the diagnostic reliability of PCR in patients with empirical antifungal therapy for suspected invasive candidiasis, AST-INF-2012-01, Astellas Pharma, Oct 2012-Oct 2014 (HSCSP RI funding of €200 per included, complete and evaluable patient).
  - ▶ Joan Sabater Riera (multicentre PI), Dr A.J. Betbesé (HSCSP PI), Impact of CVVHD with Increased Adsorption Membranes in Septic Acute Kidney Injury, FIS 12/01562 (NCT01790620), FIS, May 2013- Sept 2015/ Jan 2016, €23,000.

\*TIF: 174.250 \*\*MIF: 10.891

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- 01 Akoumianaki E., Lyazidi A., Rey N., Matamis D., Perez-Martinez N., Giraud R., Mancebo J., Brochard L., Richard J.-C.M. Mechanical ventilation-induced reverse-triggered breaths: A frequently unrecognized form of neuromechanical coupling. (2013) *Chest*, 143 (4), 927-938. **IF: 7.132**
- 02 Deye N., Lellouche F., Maggiore S.M., Taille S., Demoule A., L'Her E., Galia F., Harf A., Mancebo J., Brochard L. The semi-seated position slightly reduces the effort to breathe during difficult weaning. (2013) *Intensive Care Med.*, 39 (1), 85-92. **IF: 5.544**
- 03 Roche-Campo F., Thille A.W., Drouot X., Galia F., Margarit L., Cordoba-Izquierdo A., Mancebo J., D'Ortho M.-P., Brochard L. Comparison of sleep quality with mechanical versus spontaneous ventilation during weaning of critically ill tracheostomized patients. (2013) *Crit. Care Med.*, 41 (7), 1637-1644. **IF: 6.147**
- 04 Antonelli M., Bonten M., Cecconi M., Chastre J., Citerio G., Conti G., Curtis J.R., Hedenstierna G., Joannidis M., Macrae D., Maggiore S.M., Mancebo J., Mebazaa A., Preiser J.-C., Rocco P., Timsit J.-F., Wernerman J., Zhang H. Year in review in *Intensive Care Medicine* 2012. II: Pneumonia and infection, sepsis, coagulation, hemodynamics, cardiovascular and microcirculation, critical care organization, imaging, ethics and legal issues. (2013) *Intensive Care Med.*, 39 (3), 345-364. **IF: 5.544**
- 05 Carreaux G., Mancebo J., Mercat A., Dellamonica J., Richard J.-C.M., Aguirre-Bermeo H., Kouatchet A., Beduneau G., Thille A.W., Brochard L. Bedside adjustment of proportional assist ventilation to target a predefined range of respiratory effort. (2013) *Crit. Care Med.*, 41 (9), 2125-2132. **IF: 6.147**
- 06 Antonelli M., Bonten M., Cecconi M., Chastre J., Citerio G., Conti G., Curtis J.R., Hedenstierna G., Joannidis M., MacRae D., Maggiore S.M., Mancebo J., Mebazaa A., Preiser J.-C., Rocco P., Timsit J.-F., Wernerman J., Zhang H. Year in review in *Intensive Care Medicine* 2012: I. Neurology and neurointensive care, epidemiology and nephrology, biomarkers and inflammation, nutrition, experimentals. (2013) *Intensive Care Med.*, 39 (2), 232-246. **IF: 5.544**
- 07 Antonelli M., Bonten M., Cecconi M., Chastre J., Citerio G., Conti G., Curtis J.R., Hedenstierna G., Joannidis M., Macrae D., Maggiore S.M., Mancebo J., Mebazaa A., Preiser J.-C., Rocco P., Timsit J.-F., Wernerman J., Zhang H. Year in review in *Intensive Care Medicine* 2012: III. Noninvasive ventilation, monitoring and patient-ventilator interactions, acute respiratory distress syndrome, sedation, paediatrics and miscellanea. (2013) *Intensive Care Med.*, 39 (4), 543-557. **IF: 5.544**
- 08 Guerin C., Reignier J., Richard J.-C., Beuret P., Gacouin A., Boulain T., Mercier E., Badet M., Mercat A., Baudin O., Clavel M., Chatellier D., Jaber S., Rosselli S., Mancebo J., Sirodot M., Hilbert G., Bengler C., Richecoeur J., Gannier M., Bayle F., Bourdin G., Leray V., Girard R., Baboi L., Ayzac L. Prone positioning in severe acute respiratory distress syndrome. (2013) *N. Engl. J. Med.*, 368 (23), 2159-2168. **IF: 54.42**
- 09 Carrara L., Navarro F., Turbau M., Seres M., Moran I., Quintana I., Martino R., Gonzalez Y., Brell A., Cordon O., Diestra K., Mata C., Mirelis B., Coll P. Molecular diagnosis of bloodstream infections with a new dual-priming oligonucleotide-based multiplex PCR assay. (2013) *J. Med. Microbiol.*, 62 (PART 11), 1673-1679. **IF: 2.266**
- 10 Kiss T., Guldner A., Bluth T., Uhlig C., Spieth P.M., Markstaller K., Ullrich R., Jaber S., Santos J.A., Mancebo J., Camporota L., Beale R., Schettino G., Saddy F., Vallverdu I., Wiedemann B., Koch T., Schultz M.J., Pelosi P., de Abreu M.G. Rationale and study design of ViPS - variable pressure support for weaning from mechanical ventilation: Study protocol for an international multicenter randomized controlled open trial. (2013) *Trials*, 14 (1). **IF: 2.117**
- 11 Zaragoza R., Llinares P., Maseda E., Ferrer R., Rodriguez A. Épico project. Development of educational recommendations using the DELPHI technique on invasive candidiasis in non-neutropenic critically ill adult patients. (2013) *Rev. Saude Publica*, 60 (7), e1-e18. **IF: 1.219**
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- 13 Boissier F., Katsahian S., Razazi K., Thille A.W., Roche-Campo F., Leon R., Vivier E., Brochard L., Vieillard-Baron A., Brun-Buisson C., Mekontso Dessap A. Prevalence and prognosis of cor pulmonale during protective ventilation for acute respiratory distress syndrome. (2013) *Intensive Care Med.*, 39 (10), 1725-1733. **IF: 5.544**
- 14 Ehrmann S., Roche-Campo F., Sferrazza Papa G.F., Isabey D., Brochard L., Apiou-Sbirlea G. Aerosol therapy during mechanical ventilation: An international survey. (2013) *Intensive Care Med.*, 39 (6), 1048-1056. **IF: 5.544**
- 15 Cordoba-Izquierdo A., Drouot X., Thille A.W., Galia F., Roche-Campo F., Schortgen F., Prats-Soro E., Brochard L. Sleep in hypercapnic critical care patients under noninvasive ventilation: Conventional versus dedicated ventilators. (2013) *Crit. Care Med.*, 41 (1), 60-68. **IF: 6.147**
- 16 Guerin C., Reignier J., Richard J.-C., Beuret P., Gacouin A., Boulain T., Mercier E., Badet M., Mercat A., Baudin O., Clavel M., Chatellier D., Jaber S., Rosselli S., Mancebo J., Sirodot M., Hilbert G., Bengler C., Richecoeur J., Gannier M., Bayle F., Bourdin G., Leray V., Girard R., Baboi L., Ayzac L. Prone positioning in severe acute respiratory distress syndrome. (2013) *N. Engl. J. Med.*, 368 (23), 2159-2168. **IF: 54.42**

- Dr Mancebo, 2013 Award for Professional Excellence in Biomedical Research, Official College of Physicians of Barcelona (Reg. No. 201300001677).

## Doctoral Theses

- ▶ Indalecio Morán Chorro, Optimization of respiratory mechanics in the treatment of respiratory support for patients with severe acute respiratory failure, Autonomous University of Barcelona, 5 March 2013.

## Books or Chapters

### With ISBN

- ▶ López P, Morán I, Marruecos LI, Mancebo J, Tratamiento médico del paciente grave con abdomen abierto, in Trias M, Caballero F, Medrano R (eds), Abdomen Abierto y Síndrome de Hipertensión Abdominal, Marge Medica Books, Barcelona, 2013: 105-124, ISBN: 978-84-15340-90-4.
- ▶ Mancebo J, Assist-control ventilation, in Tobin MJ (ed), Principles and Practice of Mechanical Ventilation, 3rd ed, McGraw-Hill, New York, 2013: 174-191, ISBN: 978-0-07-173626-8.
- ▶ Paula Vera Artázcoz, M. Isabel Quintana Tort-Martorell, Juan Carlos Suárez Montero, Paula López Garzón (HSCSP) and other authors (p.86), Informe Anual del Estudio Nacional de Vigilancia de Infección Nosocomial en Servicios de Medicina Intensiva, EN-VIN-HELICS, 2013, ISBN: 978-84-940824-5-0.

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ López P, Cuartero M, Suárez JC, Garrido A, Sierra J, Mancebo J, Morán I, Necesidad de la ventilación mecánica y mortalidad de los pacientes hematológicos ingresados en un servicio de Medicina Intensiva, 33rd Meeting of the Catalan Medicine Society, 30th Intensive and Critical Nursing Seminar, Barcelona, 7 March 2013.
- ▶ Suárez JC, López P, Cabello B, Mancebo J, Morán I, Influencia del tipo de humidificación en la resistencia al flujo aéreo del tubo endotraqueal y el fracaso de la extubación, 33rd Meeting of the Catalan Medicine Society, 30th Intensive and Critical Nursing Seminar, Barcelona, 7 March 2013.
- ▶ Cuartero M, López P, Suárez J.C., Garrido A, Sierra J, Mancebo J, Morán I, Necesidad de ventilación mecánica y mortalidad de los pacientes hematológicos ingresados en un Servicio de Medicina Intensiva, 68th Nacional Congress of the Spanish Intensive, Critical and Coronary Medicine Society (SEMYCIUC), Med. Intensiva 2013; 37: 193.
- ▶ Italiano S, Roche F, Gimenez S, Clos S, Aguirre H, Grandjean J, Maraffi T, Parrilla F, Mancebo J.
- ▶ Comparison of sleep quality in mechanically-ventilated ICU patients: PSV VS. NAVA
- ▶ Intensive Care Med. 2013; 39 (Suppl. 2): S339.
- ▶ Akoumianaki E, Lyazidi A, Mancebo J, Cordioli R, Rey N, Richard J.C.M., Brochard L, Accuracy of work of breathing display during proportional assist ventilation with load adjustable gain factors, Intensive Care Med. 2013; 39 (Suppl. 2): S378.
- ▶ Maraffi T, Parrilla F, Italiano S, Aguirre H, Roche F, Mancebo J, Time course of electrical activity of the diaphragm (EADI) in the post-extubation period in difficult to wean patients: extubation success and failure, Intensive Care Med. 2013; 39 (Suppl. 2): S425.



# 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: patient blood management.
- ▶ 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 requiring senile femoral neck fracture treatment, 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.
- ▶ Patient blood management.
- ▶ Perioperative medicine.
- ▶ Development of new health service systems.
- ▶ Clinical and preclinical research into physiology, pharmacology and anaesthetic/analgesic techniques.

## Collaborations with IIB Sant Pau Groups

## Cochrane Centre

- ▶ SIRS (steroids in cardiac surgery) randomized clinical trial.
- ▶ POISE (perioperative ischemic study evaluation) randomized clinical trial.
- ▶ Systematic review: effectiveness of calcitonin and bisphosphonates in bone metastasis pain.

## European Society of Anaesthesiology

- ▶ ETPOS (European transfusion practice and outcomes of surgery): multicentre observational study.
- ▶ PROVHILO (protective ventilation with high or low positive end-expiratory pressure): multicentre observational study.
- ▶ LAS VEGAS (local assessment of ventilatory management during general anaesthesia for surgery and effects on postoperative complications): prospective observational international multi-centre cohort study.

\*TIF: 13.623 \*\*MIF: 1.703

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Leal-Noval S.R., Munoz M., Asuero M., Contreras E., Garcia-Erce J.A., Llau J.V., Moral V., Paramo J.A., Quintana M. Spanish consensus statement on alternatives to allogeneic blood transfusion: The 2013 update of the "Seville Document". (2013) *Blood Transf.*, 11 (4), 585-610.  
**IF: 1.901**
- 02 Cegarra-Sanmartin V., Paniagua P., Galan J., Munoz C., Moral M.V. Fondaparinux as an alternative anticoagulant in heparin-induced thrombocytopenia in the patient with a ventricular assist device [Fondaparinux como alternativa a la anticoagulación en una paciente con dispositivo de asistencia ventricular y trombocitopenia inducida por heparina]. (2013) *Rev. Saude Publica*, 60 (9), 531-534.  
**IF: 1.219**
- 03 Moral V., Aldecoa C., Asuero M.S. Tetrastarch solutions: Are they definitely dead?. (2013) *Br. J. Anaesth.*, 111 (3), 324-327.  
**IF: 4.354**
- 04 Garcia V.M., De Bernabe Sala M.A.G., Kinast N.D., Pericas B.C., Nebot A.G. Anemia as a surgical risk factor [La anemia como factor de riesgo quirúrgico]. (2013) *Med. Clin.*, 141 (SUPPL.1), 47-54.  
**IF: 1.252**
- 05 Garutti I., Paniagua P., Cruz P., Maestre M.L., Fernandez-Riveira C., Alonso-Coello P., Paniagua P., Maestre M.L., Alonso-Coello P., de Antonio M., Gonzalez R., Font A., Martinez C., Mirabet S., Pelaez X., Santalo M., Villamor J.M., Garutti I., Cruz P., Fernandez-Riveira C., Palencia M., Pineiro P., Varela A., Diaz S., Del Castillo T., de Miguel A., Munoz M., del Barrio M., Cusati G., Fernandez A., Jose Membrillo M., Juan E.S., Torre M., Garcia M., Puertas C., Bueno H., Sanchez P.L. Analytic comments of the initial results of the VISION (Vascular events In noncardiac Surgery patients cOhort evaluationN): Association between troponin T and mortality at 30 days in noncardiac surgery patients [Comentarios analíticos del estudio VISION (evaluación de cohorte de eventos vasculares en pacientes de cirugía no cardiaca): Asociación entre la troponina T y la mortalidad a los 30 días en pacientes de cirugía no cardiaca]. (2013) *Rev. Saude Publica*, 60 (6), 304-307.  
**IF: 1.219**
- 06 Leal-Noval S.R., Munoz M., Asuero M., Contreras E., Garcia-Erce J.A., Llau J.V., Moral V., Paramo J.A., Quintana M., Basora M., Bautista-Paloma F.J., Bisbe E., Boveda J.L., Castillo-Munoz A., Colomina M.J., Fernandez C., Fernandez-Mondejar E., Ferrandiz C., Garcia de Lorenzo A., Gomar C., Gomez-Luque A., Izuel M., Jimenez-Yuste V., Lopez-Briz E., Lopez-Fernandez M.L., Martin-Conde J.A., Montoro-Ronsano B., Paniagua C., Romero-Garrido J.A., Ruiz J.C., Salinas-Argente R., Sanchez C., Torradella P., Arellano V., Candela A., Fernandez J.A., Fernandez-Hinojosa E., Puppo A. The 2013 Seville Consensus Document on alternatives to allogenic blood transfusion. An update on the Seville Document [2013. Documento Sevilla de Consenso sobre Alternativas a la Transfusión de Sangre Alogénica. Actualización del Documento Sevilla]. (2013) *Rev. Saude Publica*, 60 (5), 263.e1-263.e25.  
**IF: 1.219**
- 07 Bausili M., Revuelta M., Ferrandiz M., Catala E. Incidental finding of a Tarlov cyst during fluoroscopic guided caudal infiltration [Hallazgo accidental de un quiste de Tarlov durante una infiltración caudal guiada por escopia]. (2013) *Rev. Saude Publica*, 60 (5), 299-300.  
**IF: 1.219**
- 08 Leal-Noval S.R., Munoz M., Asuero M., Contreras E., Garcia-Erce J.A., Llau J.V., Moral V., Paramo J.A., Quintana M., Basora M., Bautista-Paloma F.J., Bisbe E., Boveda J.L., Castillo-Munoz A., Colomina M.J., Fernandez C., Fernandez-Mondejar E., Ferrandiz C., Garcia de Lorenzo A., Gomar C., Gomez-Luque A., Izuel M., Jimenez-Yuste V., Lopez-Briz E., Lopez-Fernandez M.L., Martin-Conde J.A., Montoro-Ronsano B., Paniagua C., Romero-Garrido J.A., Ruiz J.C., Salinas-Argente R., Sanchez C., Torradella P., Arellano V., Candela A., Fernandez J.A., Fernandez-Hinojosa E., Puppo A. The 2013 Seville Consensus Document on alternatives to allogenic blood transfusion. An update on the Seville Document [2013. Documento Sevilla de Consenso sobre Alternativas a la Transfusión de Sangre Alogénica. Actualización del Documento Sevilla]. (2013) *Med. Intensiv.*, 37 (4), 259-283.  
**IF: 1.24**

# Pharmacy

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## Main Lines of Research

- ▶ Pharmaceutical care.
- ▶ Artificial nutrition.
- ▶ Oncohaematology.
- ▶ Independent clinical trials.

## Transfer Products

- ▶ Alopurinol 3% cream for palmar-plantar erythrodysesthesia secondary to capecitabine treatment (in collaboration with IIB Sant Pau—Dermatology).

## 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.

## Awards

- ▶ M. Antonia Mangués and coworkers, Guarantee, Solvency and Sustainability of the Spanish National Health System: Qualitative Analysis from the Hospital Pharmacy, award from the Gaspar Casal Foundation.
- ▶ M. Antonia Mangués, Best Ideas in Health Award, Diario Médico, 2013.
- ▶ MA Mangués, A Feliu, M Riba, Jan T de Pourcq, Catalan Health Service programme to harmonize hospital outpatient medication dispensing, Award for the Best 2020 Initiative, Spanish Hospital Pharmacy Society (SEFH), 2013.

## Collaborations

### Collaboration with other IIB Sant Pau Groups

- ▶ Oncogenes and Antitumour Drugs.
- ▶ Spanish Hospital Pharmacy Society (SEFH).
- ▶ Intensive Care.
- ▶ Clinical Haematology.
- ▶ Dermatology.
- ▶ Orthopaedics and Traumatology.
- ▶ Digestive Diseases.
- ▶ Edurne Fernández de Gamarra (PI), Drug interactions in patients in an intensive medical

service of a university hospital, HSCSP Intensive Care Group, 2013 (non-funded).

### External Collaborations

- ▶ Delgado O, Genúa MI, Ibarra O, Morillo R. Madrid (coordinators), Montse Masip (collaborator),
- ▶ SEFH model for the selection and pharmaceutical care of chronic patients, Spanish Hospital Pharmacy Society (SEFH), 2013.
- ▶ M. Antonia Mangués, Oncogenesis and Antitumour Drugs Consolidated Research Group, Generalitat de Catalunya (AGAUR) 2009-SGR-1437, HSCSP RI, 2009-2013.

## Active Grants

- ▶ Ana Juanes Borrego (PI), 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 Grant), 2012-2014, €18,000.
- ▶ Daniel Serrano Barrena (PI), Clinical and economic impact of the systematic review of pharmacological treatment of chronic complex and fragile patients, IIBSP-REV-2013-73, HSCSP RI (MIA grants), 2013-2014, €55,000.
- ▶ Daniel Cardona (PI), Comparative study of the impact of two lipid emulsions, one formulated with MCT, LCT, olive oil and omega 3 fatty acids versus another lipid emulsion formulated with MCT or LCT parenterally administered in the clinical course of severe acute pancreatitis, 2007-005611-26, Fresenius SENPE grant, 2007-2014, €6,000.
- ▶ Isabel Castro Cels (co-investigator), Randomized double-blind study of the efficacy of the administration of somatostatin followed by a short intravenous infusion for prophylaxis of acute pancreatitis after performing endoscopic retrograde cholangiopancreatography, EudraCT 2008-003338-41, FIS, Carlos III Health Institute, 2009-2013.
- ▶ Ainhoa Rodríguez-Arias (co-investigator), Multicentre, randomized, double-blind, placebo-controlled trial to prevent progression of portal hypertension in compensated cirrhosis using selective hepatic vasodilators, EudraCT 2010-021593-11, FIS, Carlos III Health Institute, 2011-.
- ▶ Elena Juanes Borrego, Laura Tuneu Valls (co-investigators), Double-blind study of preventive treatment with allopurinol 3% cream versus placebo of palmoplantar erythrodysesthesia secondary to treatment with capecitabine, EudraCT2010-022095-31, FIS, Carlos III Health Institute, 2011-.
- ▶ Ainhoa Rodríguez-Arias (co-investigator), Prevention of postoperative bleeding in massive bone tumour resection surgery: multicentre, randomized, open, parallel clinical trial with three treatment arms evaluating the efficacy of topical tranexamic acid versus topical Evicel and normal haemostasis (Tranextum), IIBSP-EVI-2011 (independent clinical research), 2011-.
- ▶ Ainhoa Rodríguez-Arias (co-investigator), Prevention of postoperative bleeding: multicentre, randomized, controlled clinical trial evaluating the efficacy of fibrin glue and tranexamic acid in patients with subcapital femur fracture, IIBSP-FAT-2011-103 (independent clinical research), Ministry of Health and Social Policy, 2011-.
- ▶ Monterde, J (PI), Mangues, MA (co-investigator), EPIMED study: Drug utilization in Spanish hospitals. Implementation of the tool, P111\_01197, FIS, Carlos III Health Institute, 2012-.
- ▶ Borràs, JM (PI), Moreno, ME (co-investigator), Prospective study of adherence to oral therapy in patients diagnosed with cancer, FIS (Carlos III Health Institute), Oncology Master Plan (Generalitat de Catalunya), 2011-2013.
- ▶ Torres, O (PI), Sala, ML (co-investigator), Study of the misuse of drugs in elderly patients hospitalized in internal medicine departments in Spanish hospitals (independent clinical research), Ministry of Health and Social Policy, 2010-2013.
- ▶ Brunet, S (PI), Moreno, ME (co-investigator), Treatment of de novo acute myeloid leukaemia with a combination of increasing doses of idarubicin, cytarabine and priming with G-CSF. Prospective phase I/II study of toxicity and efficacy, EC11-364, FIS, Carlos III Health Institute, 2012-2014.
- ▶ Mangues, R (PI), Feliu, A (co-investigator), Models of metastatic colon cancer for tumour recurrence study, P112/01861, FIS, Carlos III Health Institute, 2013-2015.
- ▶ Tuneu L (Pharmacy), KNOW Alzheimer, Diario Médico, 2012-2013.

## Books or Chapters

## With ISBN

- ▶ Cardona D, Soporte nutricional (pp. 154-170), in M. Trías, F. Caballero, R. Medrano (eds), *Abdomen Abierto y Síndrome de Hipertensión Abdominal*, Marge Mèdica, Barcelona, 2013, ISBN: 978-84-15340-90 4
- ▶ Mangues MA, Abad R, de la Rubia

A. Salas, E, Red Española de Agencias de Evaluación de Tecnologías Sanitarias y Prestaciones del Sistema Nacional de Salud (Ch. 3, pp. 35-40), in *Garantía, Solvencia y Sostenibilidad del Sistema Nacional de Salud Español: Análisis Cualitativo desde la Farmacia Hospitalaria*, Fundación Gaspar Casal, ISBN: 84-695-7549-X.

## Other Publications

- ▶ Mangues MA, Monitorización de niveles de fármacos (Ch. 4, pp. 14-18), in *MEDIMECUM. Guía de Terapia Farmacológica*, Adis, 2013, ISBN 978-84-936524-7-0.
- ▶ Monterde Junyent, Josep [et al] (Mangues, MA), *EPIMED 2013: Medicamentos y ca suística en hospitales españoles*, Euromedice, Badalona, ISBN: 978-84-16269-02-0.

\*TIF: 19.678 \*\*MIF: 3.935

## Scientific Production

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Castro I., Guardiola J.M., Tuneu L., Sala M.L., Faus M.J., Mangues M.A. Drug-related visits to the emergency department in a Spanish university hospital. (2013) *Int. J. Clin. Phar.*, 35 (5), 727-735.  
**IF: 1.25**
- 02 Cardona D., Nadal M., Estelrich J., Mangues M.A. Review of drug stability in parenteral nutrition admixtures. (2013) *Oral Surg. Oral Med. Oral Pathol. Oral Radiol.*, 8 (4), e135-e140.  
**IF: 1.265**
- 03 Barcelo M., Torres O., Mascaró J., Francia E., Cardona D., Ruiz D. Assessing nutritional status in the elderly; Evaluation of Chumlea's equations for weight [Valoración del estado nutricional en el anciano; Evaluación de las ecuaciones de chumlea para el cálculo del peso]. (2013) *Nutr. Hosp.*, 28 (2), 314-318.  
**IF: 1.25**
- 04 García-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. (2013) *Biol. Blood Marrow Transplant*, 19 (3), 435-439.  
**IF: 3.348**
- 05 Estevez J.A., Molto J., Tuneu L., Cedeno S., Antonijoan R.M., Mangues 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. (2012) *J. Antimicrob. Chemother.*, 67 (8), 2013-2019.  
**IF: 5.439**
- 06 Tellez-Gabriel M., Arroyo-Solera I., Leon X., Gallardo A., Lopez M., Cespedes M.V., Casanova I., Lopez-Pousa A., Quer M., Mangues M.A., Barnadas A., Mangues R., Pavon M.A. High RAB25 expression is associated with good clinical outcome in patients with locally advanced head and neck squamous cell carcinoma. (2013) *Toxicol. Res.*, 2 (6), 950-963.  
**IF: 3.273**
- 07 Crespo C., Moreno E., Sierra J., Serip S., Rubio M. Cost-effectiveness analysis of azacitidine in the treatment of high-risk myelodysplastic syndromes in Spain. (2013) *ChemistryOpen*, 3 (1), 28.  
**IF: 2.938**



# Andrology

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## Researchers

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## Collaborators

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## Main Lines of Research

- ▶ Genetics applied to male infertility.
- ▶ Optimisation of preimplantation genetics diagnosis and in vitro fertilization techniques.
- ▶ Clinical research into new surgical procedures, drugs and medical devices applied

to andrological diseases and conditions (male sexual dysfunction, hypogonadism, Peyronie disease, premature ejaculation, sexually transmitted diseases).

## Challenges

- ▶ Our multidisciplinary team of professionals develops translational research in the field of diagnosis and treatment of andrological disorders. To improve our knowledge and thereby improve healthcare for patients, we seek to continue active projects, develop new lines of investigation,

increase the number of international publications, train professionals and enhance collaboration with hospital and university groups inside and outside the IIB Sant Pau.

## Active Grants

- ▶ Krausz, C, X-linked copy variations and spermatogenesis candidate genes in male infertility, PI11/02254, Carlos III Health Institute, 2012-2014, €94,380.

## Transfer Products

- ▶ Active participation in the International Network for Young Researchers in Male Fertility (INRMY) in scientific divulgation.

## Patents

- ▶ Dr Lluís Bassas, Dr Sara Larriba (inventors), IDIBELL and Puigvert Foundation (co-titleholders), In vitro method for predicting fecundity of semen, PCT/ES2012/070268.

## Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Nephrology Group.

**External Collaborations****National**

- ▶ Medical and Molecular Genetics Centre (RI)-IDIBELL: genetics applied to infertility.
- ▶ Cellular Biology and Medical Genetics Unit-UAB: preimplantation genetic diagnosis techniques.

**International**

- ▶ Mario Serio Experimental and Clinical Biomedical Sciences Unit, University of Florence: genetics applied to male infertility.
- ▶ Reproductive Genomics Laboratory, Human Genetics Centre (KU Leuven): genetics applied to male infertility.
- ▶ New England Research Institutes: hypogonadism.
- ▶ European Academy of Andrology: radiology examinations of the male genital tract.

**Private**

- ▶ Participation in clinical studies including clinical trials and post-authorization studies sponsored by national and international pharmaceutical companies.

## Doctoral Theses

- ▶ Deborah Grazia Lo Giacco, Genetics of male infertility: molecular study of non-syndromic cryptorchidism and spermatogenic impairment, Autonomous University of Barcelona, C Krausz (co-supervisor), Puigvert Foundation.

\*TIF: 12.532 \*\*MIF: 4.177

## Scientific Production

**ISI Web of Knowledge Indexed Publications with an IF**

01 Degl'Innocenti S., Filimberti E., Magini A., Krausz C., Lombardi G., Fino M.G., Rastrelli G., Maggi M., Baldi E. Semen cryopreservation for men banking for oligospermia, cancers, and other pathologies: Prediction of post-thaw outcome using basal semen quality. (2013) Fertil. Steril., 100 (6), 1555-1663.e3.

**IF: 4.295**

02 Chianese C., Lo Giacco D., Tuttelmann F., Ferlin A., Ntostis P., Vinci S., Balercia G., Ars E., Ruiz-Castane E., Giglio S., Forti G., Kliesch S., Krausz C. Y-chromosome microdeletions are not associated with SHOX haploinsufficiency. (2013) Hum. Reprod., 28 (11), 3155-3160.

**IF: 4.585**

03 Daina G., Ramos L., Obradors A., Rius M.,

Martinez-Pasarell O., Polo A., del Rey J., Obradors J., Benet J., Navarro J. First successful double-factor PGD for Lynch syndrome: Monogenic analysis and comprehensive aneuploidy screening. (2013) Clin. Genet., 84 (1), 70-73.

**IF: 3.652**

## Books or chapters

**With ISBN**

- ▶ Ll Bassas, S Larriba, El espermatozoide maduro, in: A Romeu Pedro, J Fernández, Bases Genéticas y Moleculares de la Fecundación Humana, Ed. Médica, Madrid, pp. 77-108, ISBN: 978-84-616-4788-0

# Urology

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Fèlix Millán Puigvert Foundation  
Joan Palou Puigvert Foundation  
Óscar Rodríguez Puigvert Foundation  
Ferran Rousaud Puigvert Foundation

## Technicians

Sheila Fernández Puigvert Foundation

## Collaborators

Marco Cosentino Puigvert Foundation



## Main Lines of Research

- ▶ Tissue engineering applied to urological oncology and congenital urogenital malformations.
- ▶ Genetic and immunohistochemistry analyses applied to urological cancers (diagnostic and prognostic biomarkers in urine, blood and tissues).
- ▶ Clinical research of new surgical procedures, drugs and medical device products applied to urological oncology, kidney

transplantation and benign urogenital pathology (e.g. incontinence, benign hyperplasia of the prostate, lithiasis).

## Challenges

- ▶ Translational research in the field of diagnosis and treatment of urological disorders. We seek to continue active projects, develop new lines of investigation, increase the number of international publications, train professionals and increase collaboration with hospital and university groups to improve our knowledge about kidney disorders and thereby improve healthcare for patients.

## International guidelines

- 01 Babjuk, M; Burger, M; Zigeuner, R; Shariat, S; Van Rhijn, Bas WG; Compérat, E; Sylvester, R; Kaasinen, E; Bohle, A; Palou, J; Rouprêt, M. EAU Guidelines on Non-Muscle-Invasive Urothelial Carcinoma of the Bladder: Update 2013. *Eur Urol* 2013, 64(4): 639-653.  
**IF: 12.480.**
- 02 Delahunt B, Cheville JC, Martignoni G, Humphrey PA, Magi-Galluzzi C, McKenney J, Egevad L, Algaba F, Moch H, Grignon DJ, Montironi R, Srigley JR; Members of the ISUP Renal Tumour Panel. The International Society of Urological Pathology (ISUP) grading system for renal cell carcinoma and other prognostic parameters. *Am J Surg Pathol.* 2013 Oct;37(10):1490-504. doi: 10.1097/PAS.0b013e318299f0fb. PubMed PMID: 24025520.  
**IF: 4.592.**
- 03 Egevad L, Ahmad AS, Algaba F, Berney DM, Boccon-Gibod L, Compérat E, Evans AJ, Griffiths D, Grobholz R, Kristiansen G, Langner C, Lopez-Beltran A, Montironi R, Moss S, Oliveira P, Vainer B, Varma M, Camparo P. Standardization of Gleason grading among 337 European pathologists. *Histopathology.* 2013 Jan;62(2):247-56. doi: 10.1111/his.12008. PubMed PMID: 23240715.  
**IF: 3.301.**
- 04 Palou, J; Wood, D; Bochner, BH; Van Der Poel, H; Al-ahmadie, H Yossepowitch, O; Soloway, M; Jenkins, LC. ICUD-EAU International Consultation on Bladder Cancer 2012: Urothelial Carcinoma of the Prostate. *Eur Urol* 2013, 63(1): 81-87.  
**IF: 12.480.**
- 05 Rouprêt, M; Babjuk, M; Comperat, E; Zigeuner, R; Sylvester, R; Burger, M; Cowan, N; Böhle, A; Van Rhijn, Bas WG; Kaasinen, E; Palou, J; Shariat, SF. European Guidelines on Upper Tract Urothelial Carcinomas: 2013 Update. *Eur Urol* 2013, 63(6): 1059-1071

## National guidelines

01 Fernández-Gómez, JM; Carballido, J; Cózar, JM; Palou, J; Solsona, E; Unda, M. Treatment of Non Muscle Invasive Bladder Tumour Related to the Problem of Bacillus Calmette-Guerin Availability. Consensus of a Spanish Expert's Panel. *Actas Urol Esp* 2013, 37(7): 387-394.  
**IF: 1.148**

02 Villavicencio, H; Hernández, C; Gómez, A; Cozar, JM; Rodríguez-Antolín, A; Prieto, L; Arrabal, M; Server, G; Solsona, E; Miguelez, C; Gutiérrez, E; Elizalde, A; Mateos, J; Cruz, N; Ozonas, M; Caffaratti, J; Esteban, M; Unda, M; Reina, C; Álvarez-Ossorio, J. Treatment of prostate and renal cancer with oral drugs (abiraterone and antiangiogenic agents): positioning statement from the Spanish Association of Urology. *Actas Urol Esp* 2013, 37(6): 321-323.

## Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Nephrology: genetic predisposition to prostate cancer.
- ▶ Clinical Epidemiology and Healthcare: epidemiological studies of urological cancers.
- ▶ Clinical Oncology: detection of prognosis biomarkers for drug response in kidney cancer.

**External Collaborations****National academic**

- ▶ IDIBELL Molecular Genetics Laboratory: cystine lithiasis.
- ▶ CNIO: biomarkers in bladder cancer.

- ▶ National scientific societies (Spanish Urology Association, etc): clinical studies.

**International academic**

- ▶ Aarhus University Molecular Genetics Department: bladder cancer.
- ▶ International Robotic Cystectomy Consortium: robotic cystectomy.
- ▶ International Renal Cell Carcinoma-Venous Thrombus Consortium: renal-cava thrombus in kidney cancer.

**Private national and international collaborations**

- ▶ Clinical trials and postauthorization studies promoted by national and international pharmaceutical companies.

## Awards

- ▶ Palou J, Breda A, Prostate health index (PHI) and %p2PSA for prediction of prostate cancer in men younger than 60 years of age. A nested-case control study from the pro-PSA multicentric European study (PROMetheuS project), Best Poster, 28th Annual European Association of Urology Congress.
- ▶ Palou J, Clinical performance of serum isoform [-2]pro-PSA (p2PSA) and its derivatives, namely %p2PSA and the prostate health index (PHI) in men with a family history of prostate cancer. Results from a multicentric European study (PROMetheuS project), Best Poster, 28th Annual European Association of Urology Congress.

- ▶ Breda A, Living-donor renal transplantation. Experience in our centre, Best Oral Communication, 29th Annual Meeting of the Catalan Nephrology Society.
- ▶ Caffaratti J, Villavicencio H, Robotics diverticulectomy in a paediatric patient with paraurethral diverticulum, Best Presentation, 28th National Meeting of the European Association of Urology Uropaediatrics Group.

## Doctoral Theses

- ▶ Marco Cosentino, Radical cystectomy and urinary diversion: is there a role for the bowel in the future? Autonomous University of Barcelona, Palou, J (supervisor), Autonomous University of Barcelona-Hospital del Mar Teaching Unit.



## Urology

\*TIF: 108.933 \*\*MIF: 3.756

## ISI Web of Knowledge Indexed Publications with an IF

- 01 Brookman-May S., Minervini A., Volpe A., Ficarra V., Salagierski M., Marszalek M., Roscigno M., Akdogan B., Vandromme A., Langenhuisen H., Rodriguez-Faba O., Joniau S. Robot-assisted partial nephrectomy in patients with recurrent disease: Fiction or fact?. (2013) *BJU Int.*, 111 (5), 692-694.  
**IF: 3.13**
- 02 Alberice J.V., Amaral A.F.S., Armitage E.G., Lorente J.A., Algaba F., Carrilho E., Marquez M., Garcia A., Malats N., Barbas C. Searching for urine biomarkers of bladder cancer recurrence using a liquid chromatography-mass spectrometry and capillary electrophoresis-mass spectrometry metabolomics approach. (2013) *J. Chromatogr. A*, 1318, 163-170.  
**IF: 4.258**
- 03 Bozzini G., Picozzi S., Gadda F., Colombo R., DeCobelli O., Palou J., Colpi G., Carmignani L. Long-term follow-up using testicle-sparing surgery for leydig cell tumor. (2013) *Clin. Genitourin. Cancer*, 11 (3), 321-324.  
**IF: 1.693**
- 04 Barwari K., Kummerlin I.P., ten Kate F.J., Algaba F., Trias I., Wijkstra H., De la Rosette J.J., Laguna P. What is the added value of combined core biopsy and fine needle aspiration in the diagnostic process of renal tumours?. (2013) *World J. Urol.*, 31 (4), 823-827.  
**IF: 3.423**
- 05 Borque A., Del Amo J., Esteban L.M., Ars E., Hernandez C., Planas J., Arruza A., Llarena R., Palou J., Herranz F., Raventos C.X., Tejedor D., Artieda M., Simon L., Martinez A., Carceller E., Suarez M., Allue M., Sanz G., Morote J. Genetic predisposition to early recurrence in clinically localized prostate cancer. (2013) *BJU Int.*, 111 (4), 549-558.  
**IF: 3.13**
- 06 Algaba F. Progress in the pathologic study of small renal masses. Can diagnostic accuracy be improved? [Progresos en la patología de las masas renales pequeñas. ¿puede mejorarse la precisión diagnóstica?]. (2013) *Arch. Surg.*, 66 (1), 16-22.  
**IF: 4.297**
- 07 Cicione A., Autorino R., Breda A., De Sio M., Damiano R., Fusco F., Greco F., Carvalho-Dias E., Mota P., Nogueira C., Pinho P., Mirone V., Correia-Pinto J., Rassweiler J., Lima E. Three-dimensional vs standard laparoscopy: Comparative assessment using a validated program for laparoscopic urologic skills. (2013) *Urology*, 82 (6), 1444-1450.  
**IF: 2.132**
- 08 Comperat E., Egevad L., Lopez-Beltran A., Camparo P., Algaba F., Amin M., Epstein J.I., Hamberg H., Hulsbergen-van de Kaa C., Kristiansen G., Montironi R., Pan C.-C., Heloir F., Treurniet K., Sykes J., Van der Kwast T.H. An interobserver reproducibility study on invasiveness of bladder cancer using virtual microscopy and heatmaps. (2013) *Histopathology*, 63 (6), 756-766.  
**IF: 3.301**
- 09 Cosentino M., Breda A., Sanguedolce F., Landman J., Stolzenburg J.-U., Verze P., Rassweiler J., Van Poppel H., Klingler H.C., Janetschek G., Celia A., Kim F.J., Thalmann G., Nagele U., Mogorovich A., Bolenz C., Knoll T., Porpiglia F., Alvarez-Maestro M., Francesca F., Deho F., Eggener S., Abbou C., Meng M.V., Aron M., Laguna P., Mladenov D., D'Addessi A., Bove P., Schiavina R., De Cobelli O., Merseburger A.S., Dalpiaz O., D'Ancona F.C.H., Polascik T.J., Muschter R., Leppert T.J., Villavicencio H. The use of mannitol in partial and live donor nephrectomy: An international survey. (2013) *World J. Urol.*, 31 (4), 977-982.  
**IF: 3.423**
- 10 Cosentino M., Caffaratti J., Bujons A., Garat J.M., Villavicencio H. Vesico-ureteral reflux, endoscopic management [Reflujo vesicoureteral. Tratamiento endoscópico]. (2013) *Arch. Argent. Pediatr.*, 111 (4), 349-352.  
**IF: 0.291**
- 11 Brookman-May S., Marszalek M., Joniau S., Minervini A., Langenhuisen J.F., Ficarra V., Salagierski M., Roscigno M., Akdogan B., Vandromme A., Rodriguez-Faba O., Volpe A. Role of carbonic anhydrase IX (CAIX) in patients with renal cell carcinoma: Can we currently assess its definitive value in prognosis, prediction to treatment response and diagnosis, and as a therapeutic approach?. (2013) *BJU Int.*, 111 (7), 1015-1017.  
**IF: 3.13**
- 12 Caballero F., Leal J., Puig M., Ris J., Breda A., Benito S. Organ donation and Rendu-Osler-Weber syndrome. (2013) *Transplantation*, 95 (7), e47-e48.  
**IF: 3.535**
- 13 Cosentino M., Palou J., Gaya J.M., Breda A., Rodriguez-Faba O., Villavicencio-Mavrich H. Upper urinary tract urothelial cell carcinoma: Location as a predictive factor for concomitant bladder carcinoma. (2013) *World J. Urol.*, 31 (1), 141-145.  
**IF: 3.423**
- 14 Guru K.A., Peabody J.O., Ahmed K., Kibel A., Weizer A., Hayn M., Johar R., Agarwal P., Balbay M., Hemal A., Muhletaler F., Nepple K., Pattaras J., Redorta J., Rha K.-H., Richstone L., Saar M., Schanne F., Scherr D., Siemer S., Stoekle M., Wilson T., Woods M., Yuh B., Wiklund P. Reply from Authors re: Manfred P. Wirth, Johannes Huber. What really matters is rarely measured: Outcome of routine care and patient-reported outcomes. *Eur Urol* 2013;64:58-9: Robot-assisted Versus Open Radical Cystectomy: Beating a Dead Horse. (2013) *Eur. Urol.*, 64 (1), 60-61.  
**IF: 12.48**
- 15 Johar R.S., Hayn M.H., Stegemann A.P., Ahmed K., Agarwal P., Balbay M.D., Hemal A., Kibel A.S., Muhletaler F., Nepple K., Pattaras J.G., Peabody J.O., Palou Redorta J., Rha K.-H., Richstone L., Saar M., Schanne F., Scherr D.S., Siemer S., Stokle M., Weizer A., Wiklund P., Wilson T., Woods M., Yuh B., Guru K.A. Complications after robot-assisted radical cystectomy: Results from the international robotic cystectomy consortium. (2013) *Eur. Urol.*, 64 (1), 52-57.  
**IF: 12.48**
- 16 Lazzeri M., Haese A., Abrate A., De La Taille A., Redorta J.P., McNicholas T., Lughezzani G., Lista G., Larcher A., Bini V., Cestari A., Buffi N., Graefen M., Bosset O., Corvoisier P.L., Breda A., De La Torre P., Fowler L., Roux J., Guazzoni G. Clinical performance of serum prostate-specific antigen isoform [-2]proPSA (p2PSA) and its derivatives, %p2PSA and the prostate health index (PHI), in men with a family history of prostate cancer: Results from a multicentre European study, the PROMetheuS project. (2013) *BJU Int.*, 112 (3), 313-321.  
**IF: 3.13**
- 17 Lazzeri M., Haese A., De La Taille A., Palou Redorta J., McNicholas T., Lughezzani G., Scattoni V., Bini V., Freschi M., Sussman A., Ghaleb B., Le Corvoisier P., Alberola Bou J., Esquena Fernandez S., Graefen M., Guazzoni G. Serum isoform [-2]proPSA derivatives significantly improve prediction of prostate cancer at initial biopsy in a total PSA range of 2-10 ng/ml: A multicentric european study. (2013) *Eur. Urol.*, 63 (6), 986-994.  
**IF: 12.48**
- 18 Frstrup N., Birkenkamp-Demtroder K., Reinert T., Sanchez-Carbayo M., Segersten U., Malmstrom P.-U., Palou J., Alvarez-Mugica M., Pan C.-C., Ulhøi B.P., Borre M., Orntoft T.F., Dyrskjot L. Multi-

\*TIF: 108.933 \*\*MIF: 3.756

center validation of cyclin D1, MCM7, TRIM29, and UBE2C as prognostic protein markers in non-muscle-invasive bladder cancer. (2013) *Am. J. Pathol.*, 182 (2), 339-349.

**IF: 4.602**

- 19 Grau L., Luque-Garcia J.L., Gonzalez-Peramato P., Theodorescu D., Palou J., Fernandez-Gomez J.M., Sanchez-Carbayo M. A Quantitative Proteomic Analysis Uncovers the Relevance of CUL3 in Bladder Cancer Aggressiveness. (2013) *PLoS One*, 8 (1).  
**IF: 3.534**
- 20 Cozar J.M., Minana B., Gomez-Veiga F., Rodriguez-Antolin A., Villavicencio H., Cantalapiedra A., Pedrosa E. National prostate cancer registry 2010 in Spain [Registro nacional de cáncer de próstata 2010 en España]. (2013) *Actas Urol. Esp.*, 37 (1), 12-19.  
**IF: 1.148**
- 21 Lopez V., Gonzalez-Peramato P., Suela J., Serrano A., Algaba F., Cigudosa J.C., Vidal A., Bellmunt J., Heredero O., Sanchez-Carbayo M. Identification of prefol-din amplification (1q23.3-q24.1) in bladder cancer using comparative genomic hybridization (CGH) arrays of urinary DNA. (2013) *J. Transl. Med.*, 11 (1).  
**IF: 3.991**
- 22 Pena J.A., Oliveira M., Ochoa D.C., Santillana J.M., Skrobot S.A., Castellarnau S., Breda A., Palou J., Villavicencio H. The road to real zero ischemia for partial nephrectomy. (2013) *J. Endourol.*, 27 (7), 936-942.  
**IF: 2.095**
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- 25 Rodriguez O., Breda A., Esquena S., Villavicencio H. Surgical aspects of living donor nephrectomy [Aspectos quirúrgicos actuales de la nefrectomía de donante vivo]. (2013) *Actas Urol. Esp.*, 37 (3), 181-187.  
**IF: 1.148**
- 26 Palou J., Angulo J.C., Ramon De Fata F., Garcia-Tello A., Gonzalez-Enguita C., Boada A., Sanz M. Randomized comparative study for the assessment of a new therapeutic schedule of fosfomicin trometamol in postmenopausal women with uncomplicated lower urinary tract infection [Estudio comparativo aleatorizado para la evaluación de un nuevo esquema terapéutico de fosfomicina trometamol en mujeres posmenopáusicas con infección no complicada del tracto urinario inferior]. (2013) *Actas Urol. Esp.*, 37 (3), 147-155.  
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- 27 Palou J., Oliveira M., Pardo P., Pena J.A., Rodriguez O., Rosales A., Villavicencio H. Combined approach of laparoscopic and open surgery for complex renal lesions [Abordaje combinado para la nefrectomía parcial en lesiones renales complejas]. (2013) *Actas Urol. Esp.*, 37 (2), 120-126.  
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**IF: 3.423**
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**IF: 3.13**
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- 32 Varma M., Berney D.M., Algaba F., Camparo P., Comperat E., Griffiths D.F.R., Kristiansen G., Lopez-Beltran A., Montironi R., Egevad L. Prostate needle biopsy processing: A survey of laboratory practice across Europe. (2013) *J. Clin. Pathol.*, 66 (2), 120-123.  
**IF: 2.551**

# Urology

## Books or Chapters

### With ISBN

- ▶ Urology Department (all urologists in the group are included), Pautas de Actuación Clínica en Urología, Grupo Acción Médica, SA, ISBN: 978-84-15226-27-7.
- ▶ Babjuk M, Burger M, Zigeuner R, Shariat S, Van Rhijn B, Compérat E, Sylvester R, Kaasinen E, Böhle A, Palou J, Roupret M, Non-muscle-invasive (Ta, T1 and Cis) bladder cancer (chapter), in European Association of Urology Guidelines, EAU Guidelines Office, ISBN: 978-90-79754-71-7.
- ▶ Albers P, Albrecht W, Algaba F, Bokemeyer C, Cohn-Cedermark G, Fizazi K, Horwich A, Laguna MP, Testicular cancer(chapter), in European Association of Urology Guidelines, EAU Guidelines Office, ISBN: 978-90-79754-71-7.
- ▶ Pizzocaro G, Algaba F, Solsona E, Tana S, Van Der Poel H, Watkin N, Horenblas S, Penile cancer (chapter), in European Association of Urology Guidelines, EAU Guidelines Office, ISBN: 978-90-79754-71-7.

## Other Publications

### ISI Web of Knowledge Indexed Publications without an IF

- ▶ Babjuk, M; Burger, M; Zigeuner, R; Shariat, S; Van Rhijn, BWG; Compérat, E; Sylvester, R; Kaasinen, E; Böhle, A; Palou, J; Rouprêt, M. Recommendations on the treatment of non-muscle invasive bladder cancer. *Egypt J Urol* 2013, 19(2): 58-62.
- ▶ Gavrilov, P; Emiliani, E; Wong, A; Santillana, JM; Sánchez-Martín, F; Millán, F; Villavicencio, H. Injury to the colon as a complication of percutaneous nephrolithotomy. *Actas de la Fundació Puigvert* 2013, 32 (1): 5- 9.
- ▶ Nervo, N; Kanashiro, A; Salas, D; Breda, A; Villavicencio, H. Living donor kidney trasplantation. A clinical case. *Actas de la Fundació Puigvert* 2013, 32 (1): 20-25.
- ▶ Salas, D; Capell, M; Kanashiro, A; Nervo, N; Villavicencio, H. Renal colic secondary to testicular tumor: report of a case. *Actas de la Fundació Puigvert* 2013, 32 (1): 26-31.
- ▶ Emiliani, E; Gavrilov, P; Breda, A; Rodríguez-Faba, O; Sánchez-Martín, F; Palou, J; Villavicencio, H. Conservative management of upper urinary tract tumors. A review. *Actas de la Fundació Puigvert* 2013, 32 (2): 41-47.
- ▶ Salas, D; Ponce de León, J; Montlleó, M; Kanashiro, A; Nervo, N; Caparrós, J; Villavicencio, H. Encrusted proposititis: a case report. *Actas de la Fundació Puigvert* 2013, 32 (2): 48-52.
- ▶ Sánchez-Martín, FM; Monllau, JM; Santillana, JM; Kanashiro, A; Wong, A; Angerri, O; Millán, F; Villavicencio, H. Choloria and pigmenturia. *Actas de la Fundació Puigvert* 2013, 32 (2): 53-58.
- ▶ Rodríguez-Faba, O; Palou, P; Breda, A; Wong, A; Kanashiro, A; Villavicencio, H. Renal failure after nephroureterectomy due to urothelial carcinom of the upper urinary tract. *Actas de la Fundació Puigvert* 2013, 32 (2): 59-64.
- ▶ Moncada, E; Schwartzmann, I; Juárez del Dago, P; Rodríguez-Faba, O; Breda, A; Villavicencio, H. Renal transplantation and hereditary adult polycystic kidney disease. Surgical considerations. *Actas de la Fundació Puigvert* 2013, 32 (2): 65-70.
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- ▶ Segarra, J; Sánchez-Martín, J; Millán, F; Caparrós, J; Villavicencio, H. Urethral trauma in polytraumatized patients. *Actas de la Fundació Puigvert* 2013, 32 (3):98 -108.
- ▶ Wong, A; Santillana, JM; Gavrilov, P; Emiliani, E; Ochoa, C; Kanashiro, A; Angerri, O; Sánchez-Martín, F; Millán, F; Villavicencio, H. Laparoscopic ureterolihotomy in proximal urthelial litiasis of great size. *Actas de la Fundació Puigvert* 2013, 32 (3):109 -114.
- ▶ Palou, J; Rodríguez-Faba, O; Emiliani, E; Esquena, S; Gaya, JM; Villavicencio, H. Urinary derivation in elderly patients treated with radical cystectomy: how to choose well. *Actas de la Fundació Puigvert* 2013, 32 (3):115 -120.
- ▶ Kanashiro, A; Nervo, N; Salas, D; Wong, A; Capell, M; Younes, S; Villavicencio, H. Retention of urine in pregnancy and postpartum. *Actas de la Fundació Puigvert* 2013, 32 (3):121 -126.
- ▶ Sánchez-Martín, FM; Santillana, JM; Angerri, O; Gracia, S; Kanashiro, A; Salas, D; Rousaud, F; Millán, F; Villavicencio, H. Dietary recommendations in calcium oxalate lithiasis. *Actas de la Fundació Puigvert* 2013, 32 (4):137 -142.
- ▶ Algaba, F; Arce, Y. Pathogenic hypothesis of angiomyolipoma. Its relationship with other injuries. *Actas de la Fundació Puigvert* 2013, 32 (4):143 -148.
- ▶ Algaba, F; Arce, Y. Multifocality of renal cancer renal: histologic subtype, tumour size and nuclear grade. *Actas de la Fundació Puigvert* 2013, 32 (4):149 -154.
- ▶ Sánchez-Martín, F; Farré, L; Millán, F; Villavicencio, H. Leadership in medicine: general keys. *Actas de la Fundació Puigvert* 2013, 32 (4):155 -173.

# Multiple Sclerosis and Epilepsy Research

## Coordinator

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## Researchers

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Mariana López HSCSP RI  
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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 cognitive evoked potentials in early detection of cognitive impairment in patients with radiologically isolated syndrome, clinically isolated syndrome and newly diagnosed multiple sclerosis.
- ▶ Study the effects of immunomodulatory and immunosuppressive treatments on the cognitive functions of patients with multiple sclerosis.
- ▶ Determine pharmacogenetic variations involving different responses to antiepileptic treatment.
- ▶ Study neuropsychological alterations in patients diagnosed with juvenile myoclonic epilepsy.

\*TIF: 2.486 \*\*MIF: 2.486

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Munoz D., Escartin A., Dapena D., Coret F., Fernandez-Uria D., Perez D., Casanova B., Guijarro-Castro C., Munteis E., del-Campo Amigo M., Pego R., Calles C., Garcia-Rey C., Monsalve N., Sanchez-Matienzo D. Adverse events during the titration phase of interferon-beta in remitting-relapsing multiple sclerosis are not predicted by body mass index nor by pharmacodynamic biomarkers. (2013) BMC Neurol., 13.  
**IF: 2.486**



# Translational Molecular Oncology

## Coordinator

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## Collaborators

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Virginia Gómez UB



## Main Lines of Research

- ▶ In vitro and in vivo studies by genetic manipulation of putative biomarkers of prognosis in squamous cell carcinoma (SCC) in tumour progression and as potential therapeutic targets.
- ▶ Preclinical cancer 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 through collaboration with internal and external research groups.
- ▶ Improve a mouse model of cancer, based on implantation of human primary tumour.

## Active Grants

- ▶ Parreño, M (PI). Title: Study of molecular markers of poor prognosis in head and neck squamous cell carcinomas (HNSCC) and searching of therapeutic alternatives. Financing entity: Institut de Salut Carlos III. Fondos de Investigación Sanitaria (FIS). Period: January 2010-Setembre 2014. Expedient #: PI09/0334. Total amount: 183315€

## Collaborations

### Collaboration with other IIB Sant Pau Groups

- ▶ Josep F Nomdedeu of Diagnostic Hematologic Group, IIB Sant Pau in establishment of "in vivo" model of leukomogenesis.
- ▶ Xavier Leon from ORL Cancer group, IIB Sant Pau in studies of HNSCC.

### External Collaborations

- ▶ Alberto Villanueva of the Translational Research Laboratory of the Catalan Institute of Oncology (ICO) - IDIBELL in studies of orthotopic tumor models.

# Radiation Oncology

## Coordinator

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## Main Lines of Research

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.

### Modulation of radiosensitivity

- ▶ 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

- ▶ Stereotactic body radiotherapy techniques in

radical treatment of patients with early-stage non-surgical lung cancer and selected patients with non-surgical oligometastases.

### Radiation therapy based on PET/CT functional imaging of tumours

- ▶ Implementation of planning techniques for radiotherapy treatment with PET/CT for chest locations and head and neck tumours squamous cell tumours.
- ▶ Image-guided radiotherapy and respiratory movement control.
- ▶ Salvage brachytherapy for local recurrence after external beam radiotherapy in prostate cancer.
- ▶ Hypofractionated intensity-modulated GRT in prostate cancer.

## Challenges

- ▶ Establish relatively radioresistant cell lines compared with the parental cells from which they derive (by clonal selection).
- ▶ Determine the resistant phenotype in cultures and xenografts.
- ▶ Determine molecular radioresistance.
- ▶ Evaluate the effect on carcinomas of SRC and HMG-CoA reductase inhibitors in combination with anti-EGFR.
- ▶ Explore signal transduction changes in the EGFR-MAPK pathway and SRC-EGFR/SRC-STAT3 cooperation induced by SRC and HMG-CoA reductase inhibitors.

\*TIF: 9.991 \*\*MIF: 3.330

## Scientific Production

### ISI Web of Knowledge Indexed Publications with an IF

- 01 Ferrer M., Guedea F., Suarez J.F., De Paula B., Macias V., Marino A., Hervas A., Herruzo I., Ortiz M.J., Ponce De Leon J., Sancho G., Boladeras A., Ayala A., Craven-Bratle J., Avila M., Cunillera O., Pardo Y., Alonso J., Aguilo F. Quality of life impact of treatments for localized prostate cancer: Cohort study with a 5 year follow-up. (2013) *Radiother. Oncol.*, 108 (2), 306-313.  
**IF: 4.857**
- 02 Henriquez-Hernandez L.A., Valenciano A., Foro-Arnalot P., Alvarez-Cubero M.J., Cozar J.M., Suarez-Novo J.F., Castells-Esteve M., Ayala-Gil A., Fernandez-Gonzalo P., Ferrer

- M., Guedea F., Sancho-Pardo G., Craven-Bartle J., Ortiz-Gordillo M.J., Cabrer-Roldan P., Herrera-Ramos E., Lara P.C. Polymorphisms in DNA-Repair Genes in a Cohort of Prostate Cancer Patients from Different Areas in Spain: Heterogeneity between Populations as a Confounding Factor in Association Studies. (2013) *PLoS One*, 8 (7).  
**IF: 3.534**
- 03 De Llobet L.I., Baro M., Figueras A., Modolell I., Da Silva M.V., Munoz P., Navarro A., Mesia R., Balart J. Development and characterization of an isogenic cell line with a radioresistant phenotype. (2013) *Clin. Transl. Oncol.*, 15 (3), 189-197.  
**IF: 1.6**

# Nursing Care Research

## Coordinator

?

## Nursing researchers

Laura López	HSCSP
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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 analyses of text and discourse as tools in health science research.
- ▶ Create the synergies necessary to consolidate the group's activities.

# Nursing Care Research

## Patents

- ▶ Robleda G, Post-resuscitation lemon ice with saccharin for patients with dry mouth, IIB Sant Pau Transfer and Innovation Unit, start date Oct 2013.

## Awards

- ▶ Berga Congost G, Murillo Miranda P, Márquez López A, Casajús Pérez G, Vascular complications in patients undergoing percutaneous cardiovascular procedures, Best Oral Communication, 2nd place, 34th National Congress of the Spanish Association of Cardiology Nursing, May 2013.
- ▶ Iris Viñoles Soria; Monica De San Nicolas de San Francisco; Ines Loder; Teresa Pujol Serra; M. Angels Sendra Lluís; Marta Navarro Colom; Ana Castillo Masa; Ferran Roche Campo; Gemma Robleda Font, How do intensive care service professionals treat fever?, Best Poster Award,
- ▶ HSCSP Nursing Workshop, Spanish Society of Intensive and Coronary Nursing (SEIUC).
- ▶ Robleda, G, Special studies in teaching and research into pain in critical care, School of Nursing, University of California, San Francisco, USA (BEQUES MIA predoctoral funding for a 1-month stay at a centre of excellence), HSCSP Healthcare Management Foundation, 2013-2014.

## Doctoral Theses

- ▶ Carme Jover Sancho.
- ▶ Gemma Robleda Font.

## Other Publications

- ▶ Berga Congost G, Murillo Miranda P, Márquez López A, Casajús Pérez G. Complicaciones vasculares en el paciente sometido a procedimientos cardiovasculares percutáneos. *Enferm Cardiol.* 2013;20(58-59):56-61. | Best Oral Communication, 2nd place, 34th National Congress of the Spanish Association of Cardiology Nursing, Girona 8-10 May 2013.



# Molecular Physiology of the Synapse

## Coordinator

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Rita Reig HSCSP RI

## Research Students

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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.
- ▶ 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, Proteomic and bioinformatic studies of synaptic function and dysfunction in the context of human intellectual disabilities, BFU2012-34398, Programme to Support Non-Oriented Research Projects, Spanish Ministry of Economy and Competitiveness, 2013-2015, €150,000 (including salary for a doctoral student).
- ▶ Bayés A, Molecular analysis of synaptic dysfunctions underlying human intellectual disabilities, 304111, European Commission, 7FP Career Integration Grant, 2012-2016, €100,000.
- ▶ Bayés A, Proteomic and bioinformatic studies of synaptic function in the context of human mental and behavioural disorders, Start-up associated with Ramon y Cajal Career Development Fellowship, RYC-2011-08391, Spanish Ministry of Economy and Competitiveness, 2012-2017, €15,000.

## Collaborations

**Collaborations with IIB Sant Pau Groups**

- ▶ Neurobiology of Dementias

**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 Richard Emes, University of Nottingham, UK.

- ▶ Dr Nael Nadif-Kasri, Radboud University, The Netherlands
- ▶ Prof Jesus Giraldo, Universitat Autònoma de Barcelona, Spain.
- ▶ Dr Montserrat Milà, Hospital Clínic de Barcelona, Spain.
- ▶ Dr Angels García-Cazorla, Hospital Sant Joan de Déu, Barcelona, Spain.
- ▶ Dr Maria Pilar Armengol, Germans Trias i Pujol Research Institute, Badalona, Spain.

Books  
or  
Chapters**With ISBN**

- ▶ Josep Vendrell, Francesc X Aviles, Àlex Bayés, Insect gut carboxypeptidase-3 (Ch. 36), in Neil D. Rawlings and Guy Salvesen (eds), Handbook of Proteolytic Enzymes (3rd ed), Academic Press, ISBN: 978-0-12-382219-2.



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