

2014

# Annual scientific report

Institut d'Investigació Biomèdica de Girona  
Dr. Josep Trueta



**IdIB**  
**Gi**

Institut  
d'Investigació  
Biomèdica  
de Girona  
Dr. Josep Trueta

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HEALTH PSYCHOLOGY  
MICELAB - MODELLING, IDENTIFICA-  
TION AND CONTROL ENGINEERING  
PROTEIN ENGINEERING  
STATISTICS AND DATA ANALYSIS  
STATISTICS, ECONOMETRICS AND  
HEALTH (GRECS)

# PRESENTATION

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The Girona Biomedical Research Institute (IDIBGI) is a public research centre that aims to be at the centre of translational biomedical and health research in the province of Girona. The IDIBGI belongs to the Catalan Network of Research Centres of the Generalitat de Catalunya (CERCA).

The mission of the IDIBGI is to support and develop quality research in biomedical and health sciences, promoting its translation into everyday practice with the objective of responding to the health needs of the community. For this reason we aspire to having a significant impact on the health and quality of life of the members of our society, producing and transferring an excellent standard of knowledge that will enable us to become a leading player in biomedical research.

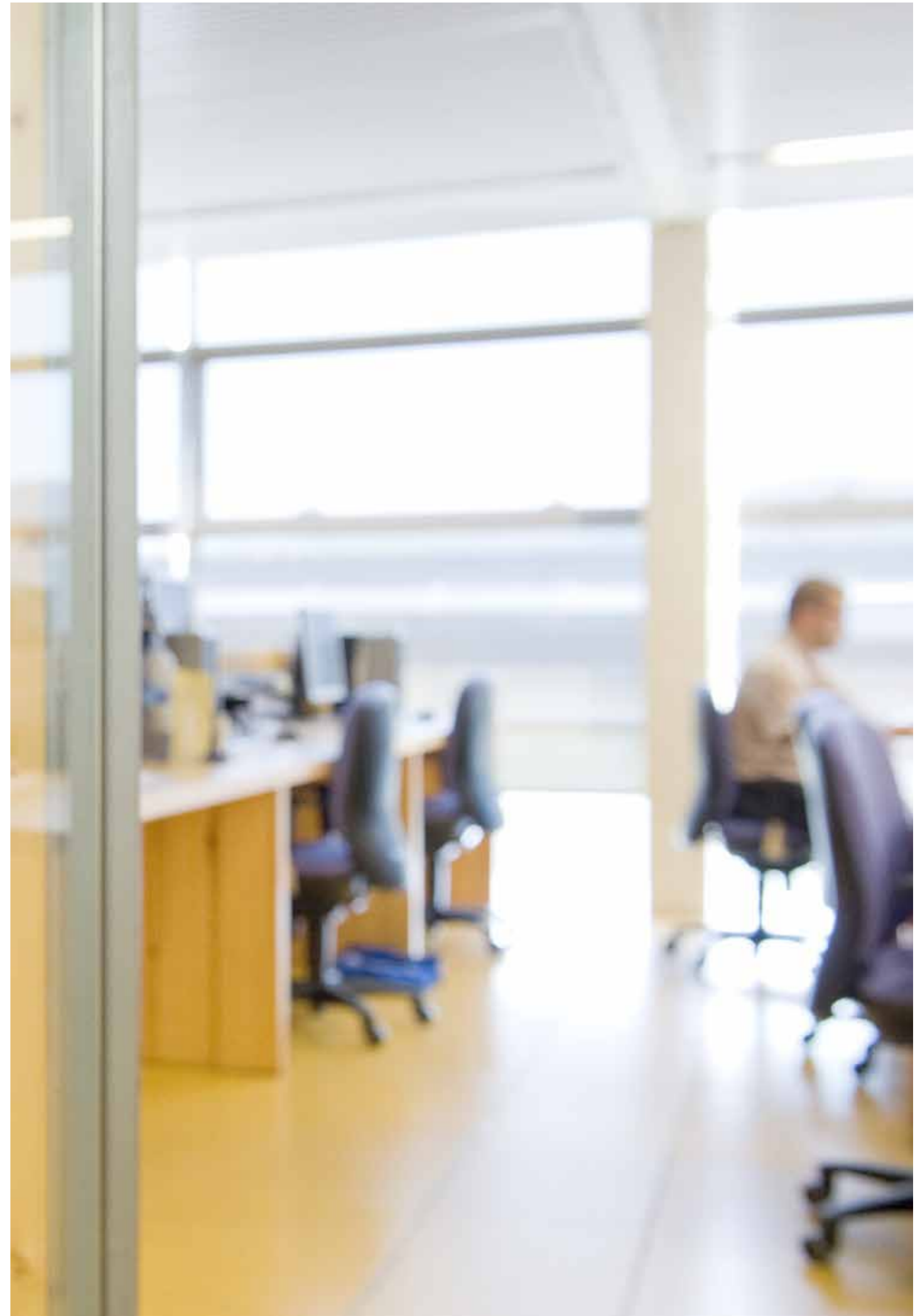
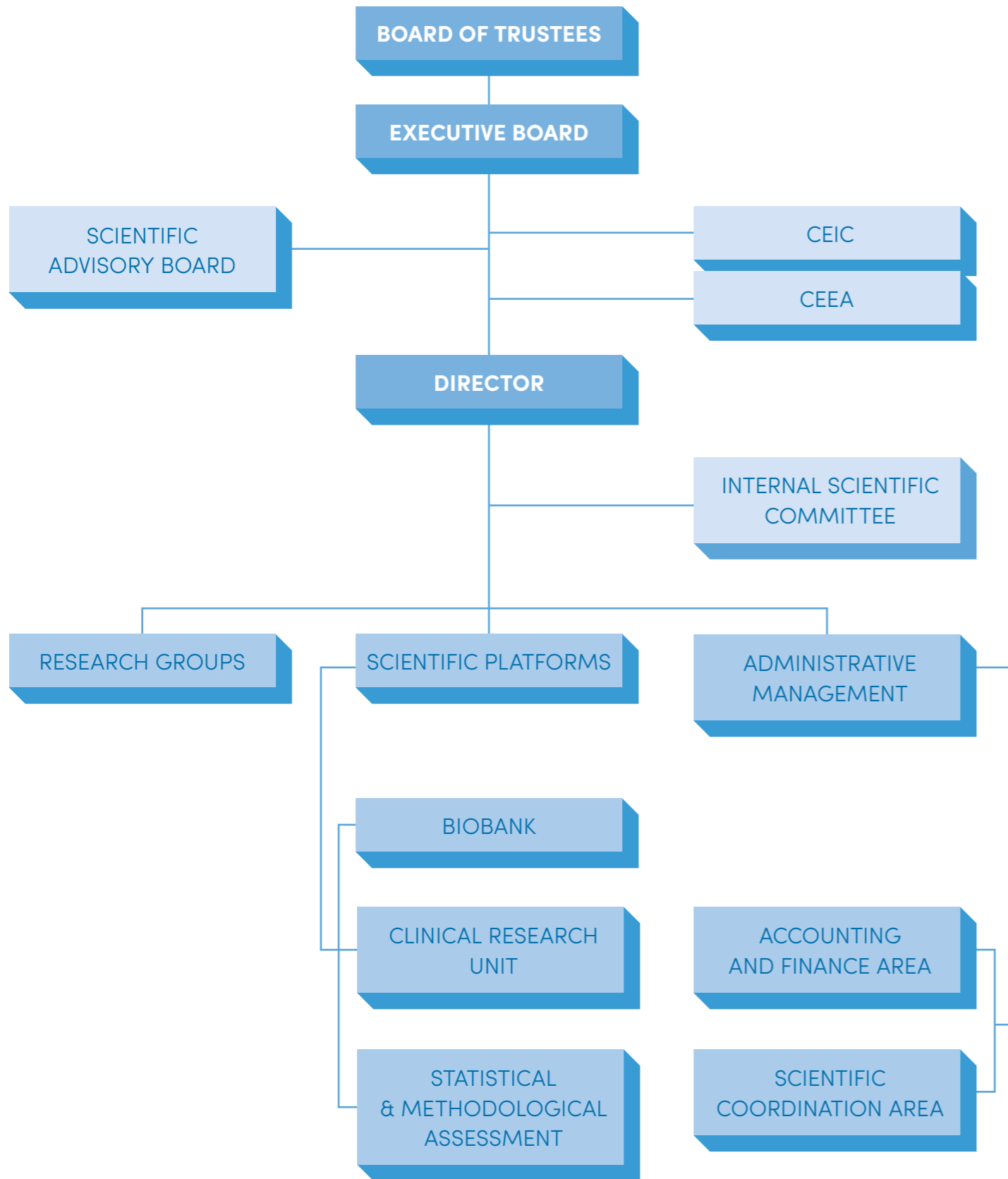
The IDIBGI is the cornerstone of health research in Girona and works with investigators from different institutions: the University of Girona, the ICS - Dr. Josep Trueta University Hospital, the Health Care Institute (IAS), the Catalan Institute of Oncology (ICO), the Institute of Diagnostic Imaging (IDI), and the Institute of Primary Care (IAP).

The activity of the IDIBGI's investigators is organised in four areas or programmes (cardiovascular, inflammation and metabolism, neurosciences, and onco-hematology) bringing together 15 research groups. The IDIBGI has a staff of 80 people and works with around 250 investigators from the different collaborating institutions, each of which is committed to research. The IDIBGI is currently managing 52 national and international research projects, has more than 266 clinical research studies in progress, participates in different scientific networks, and forms part of the biobank platform of the Instituto de Salud Carlos III. In the last three years it has published 609 papers in international journals with an average impact factor of 4.59 and 51,07 % in the first quartile of the specialty.

The combination of investigators with different expertise and backgrounds enables the creation of powerful synergies and the creation of multidisciplinary teams focused on searching for solutions to the main health problems of our day and to train new professionals for the future. This enriching combination makes it possible to face new and future health challenges and positions Girona and the IDIBGI for the undertaking of innovative research in a translational biomedical research continuum that ranges from the community to proteins and from the patient to the gene.



# IDIBGI ORGANIZATION



# BOARD OF TRUSTEES

## President

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Minister for Health – Catalan Government

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Catalan Health Institute (ICS) Regional Manager for Girona

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Manager of the University of Girona

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Vice-Dean for Planning, Innovation and Business at the University of Girona

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**Mike Pringle**

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## INTERNAL SCIENTIFIC COMMITTEE

## PRESIDENT

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## MEMBERS

## IAS

**Jordi Cid**

Mental Health Group Leader

**Josep Garre**

Aging and Health Group Leader

## ICS

**José Manuel Fernández-Real**

Nutrition, Eumetabolism and Health Group Leader

**Rafel Ramos**

Girona Heart Registry Group Leader

**Joaquín Serena**

Cerebrovascular Pathology Researcher

**Pilar Sole**

Coordinator of Research in Nursing of the University Hospital of Girona

**Montserrat Vendrell**

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## ICO

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**Rafel Marcos-Gragera**

Descriptive epidemiology, genetics and cancer prevention Group Leader

**Begoña Martín**

ICO Clinical Research Unit Coordinator

**Javier Menéndez**

Molecular Oncology Group Leader

## IDI

**Salvador Pedraza**

Medical Imaging Group Leader

## UdG

**Ramon Brugada**

Cardiovascular Genetics Group Leader

**Dolors Juvinyà**

Health and Health Care Group Leader

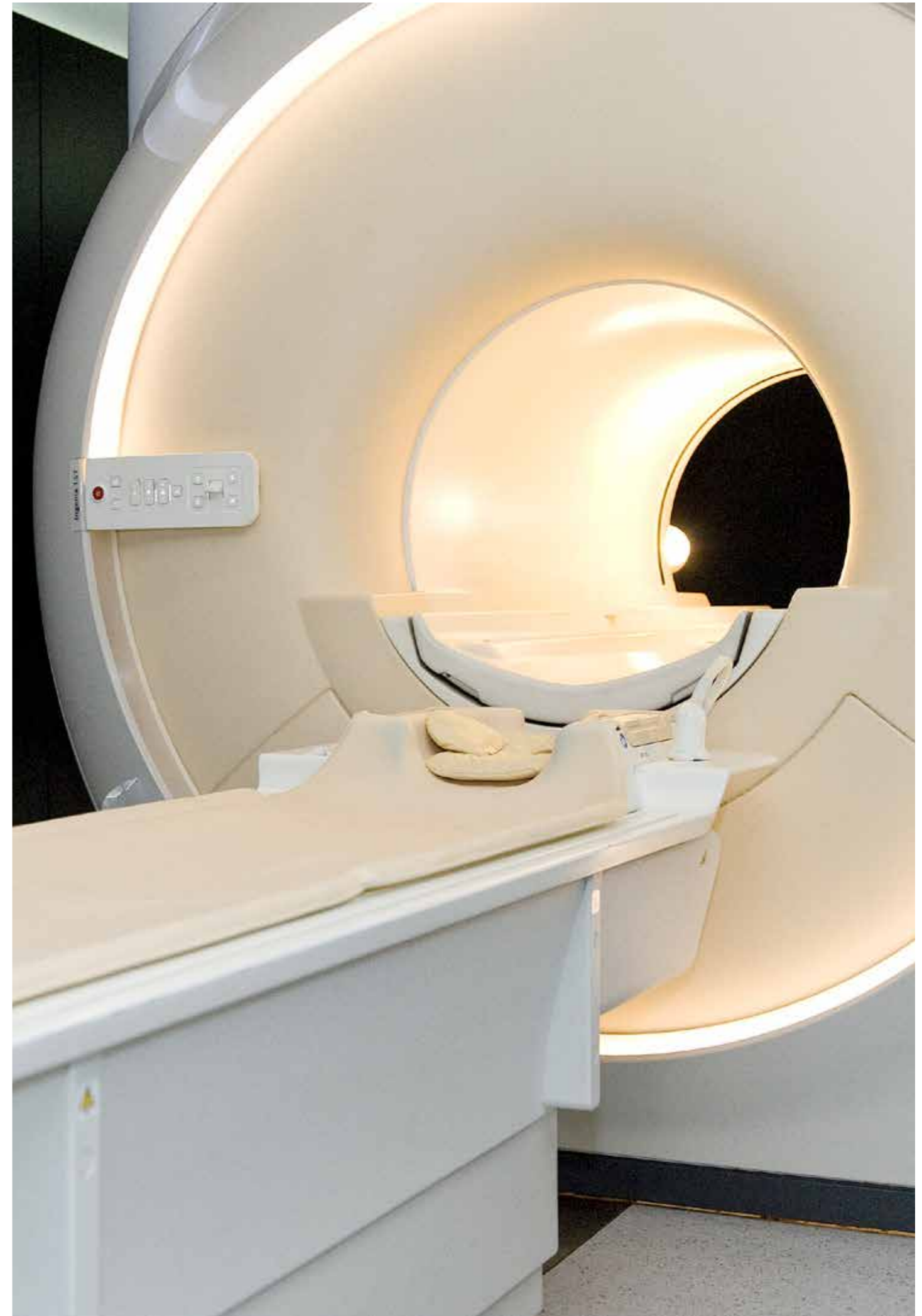
## SECRETARY

**Guillem Pérez Sánchez**

Scientific Coordinator



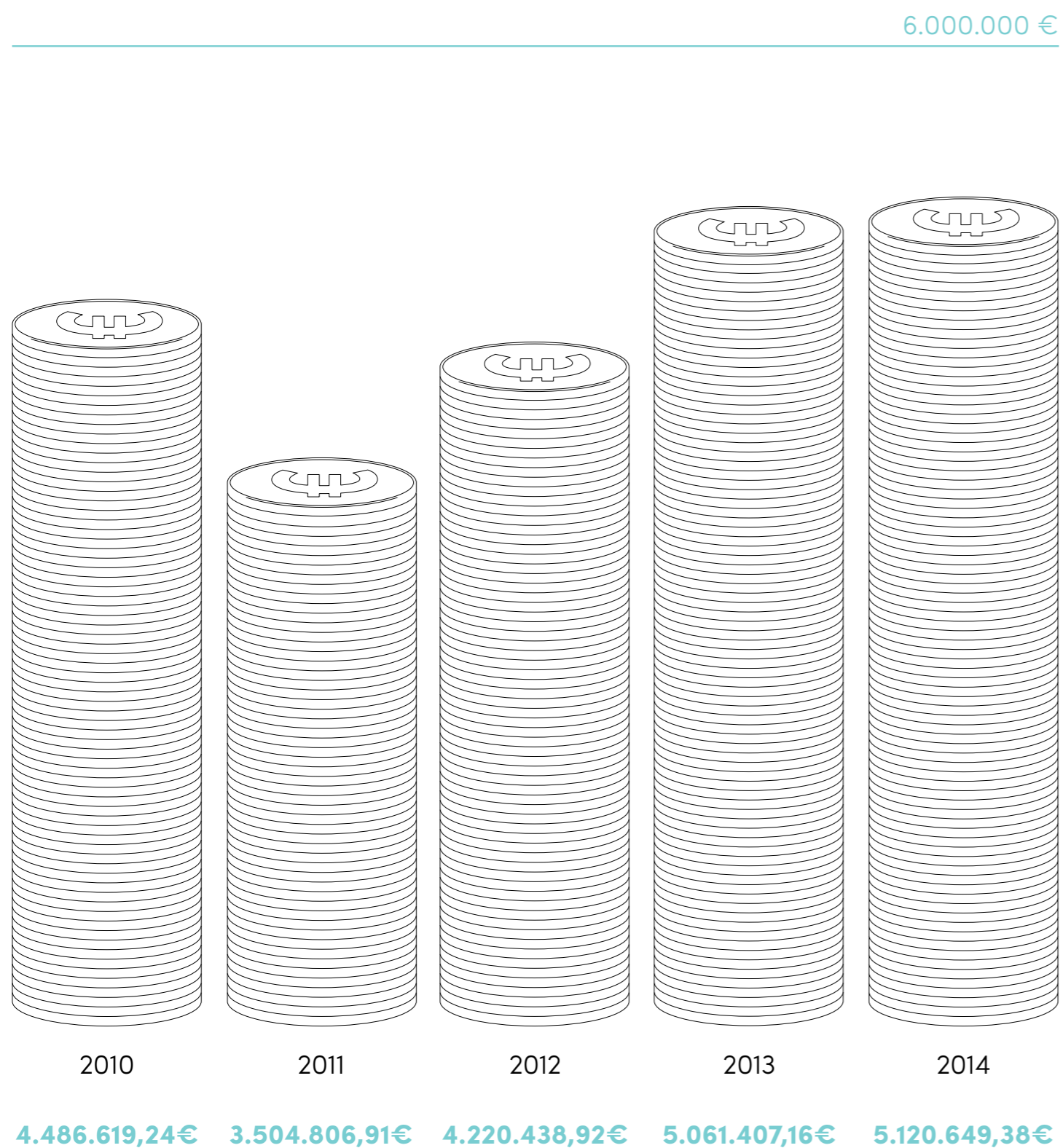
# Facts and figures





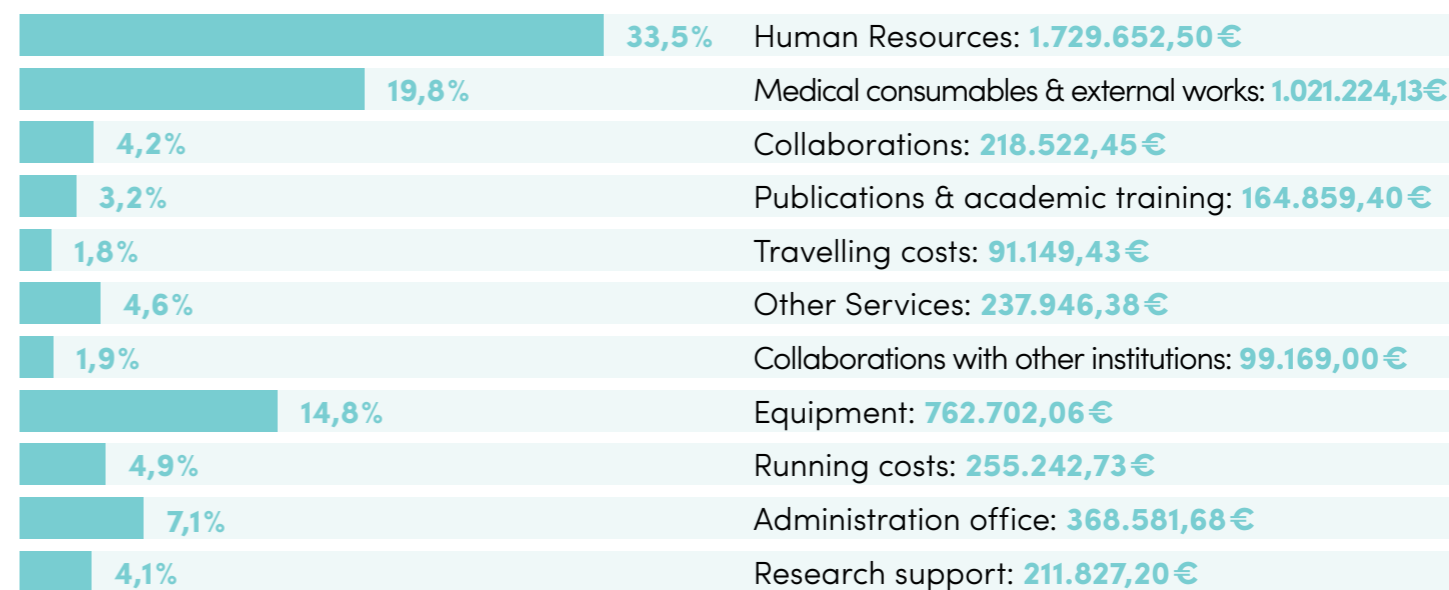
# MANAGEMENT REPORT

## ANNUAL BUDGET

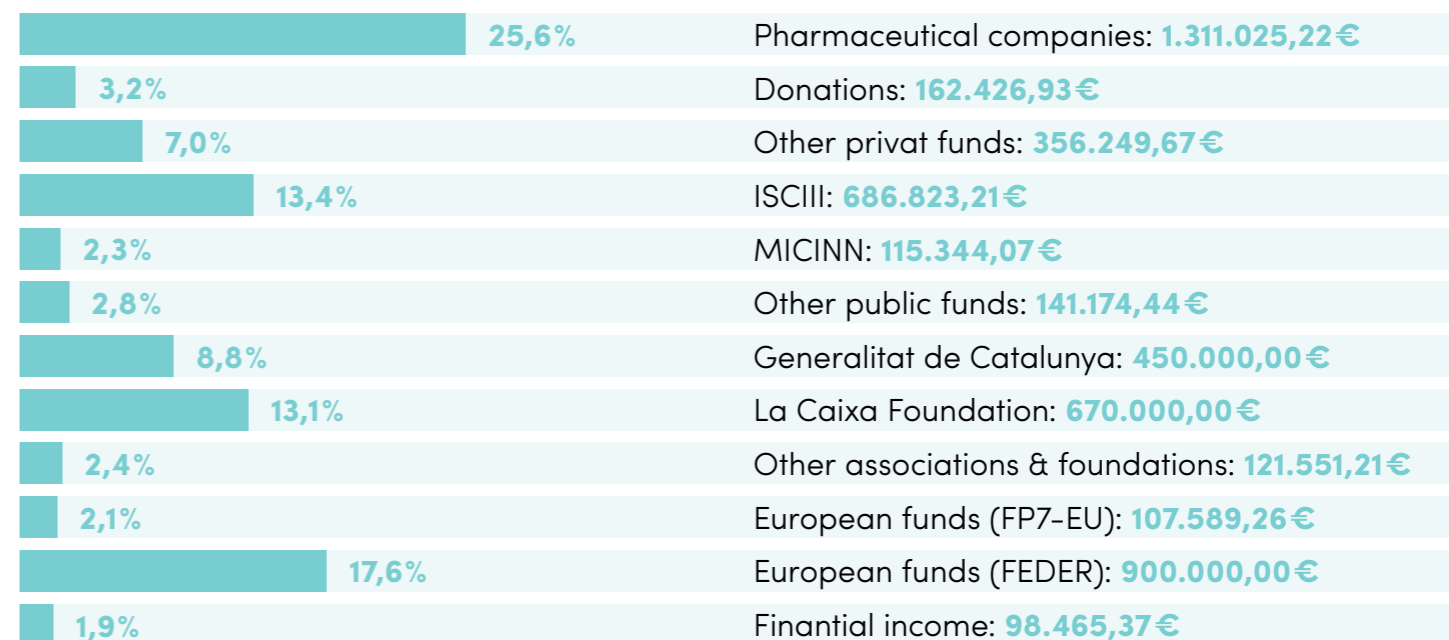


## FUNDS SOURCES AND EXPENSES

### 2014 Expenses

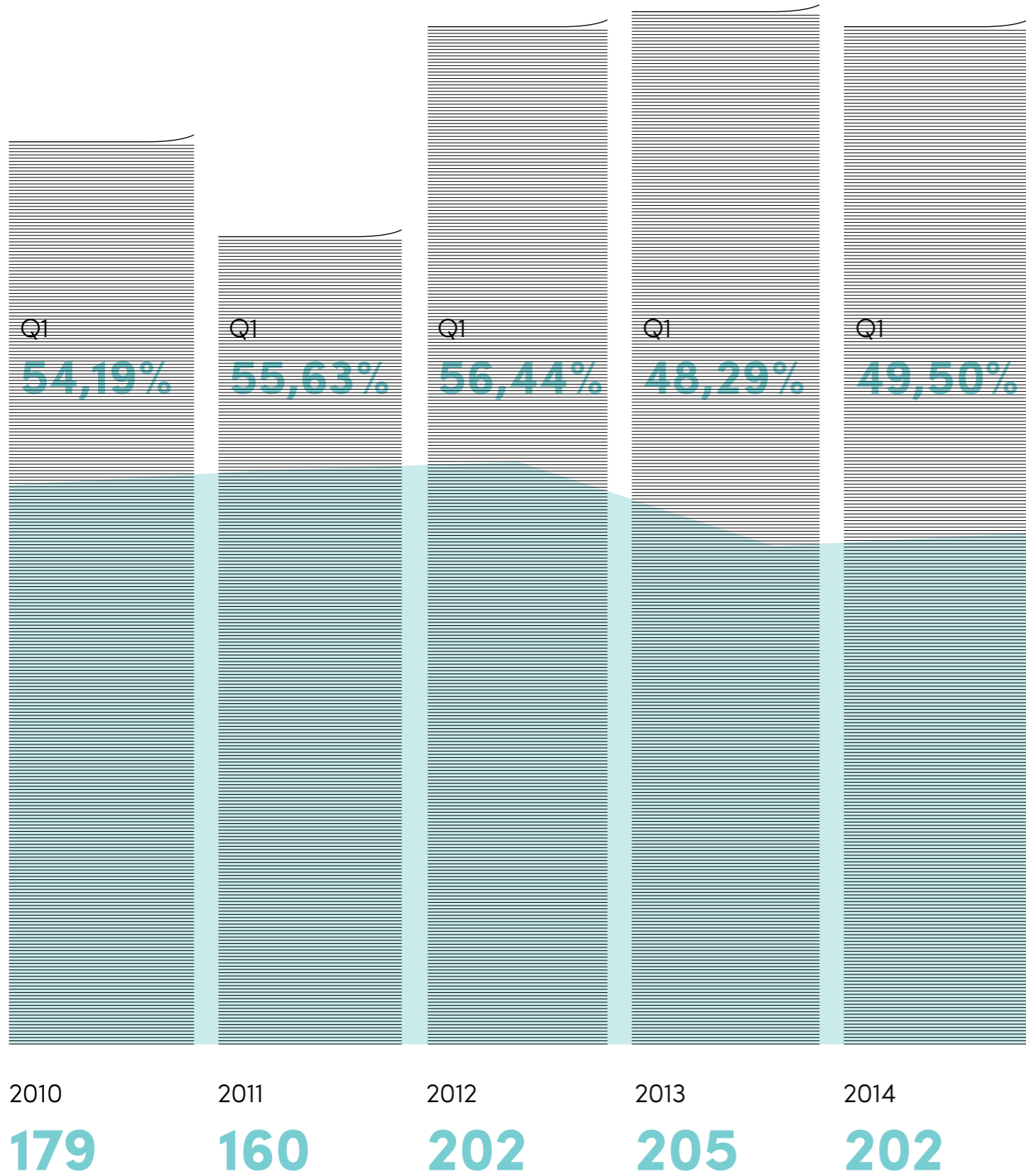


### 2014 Funds Origin

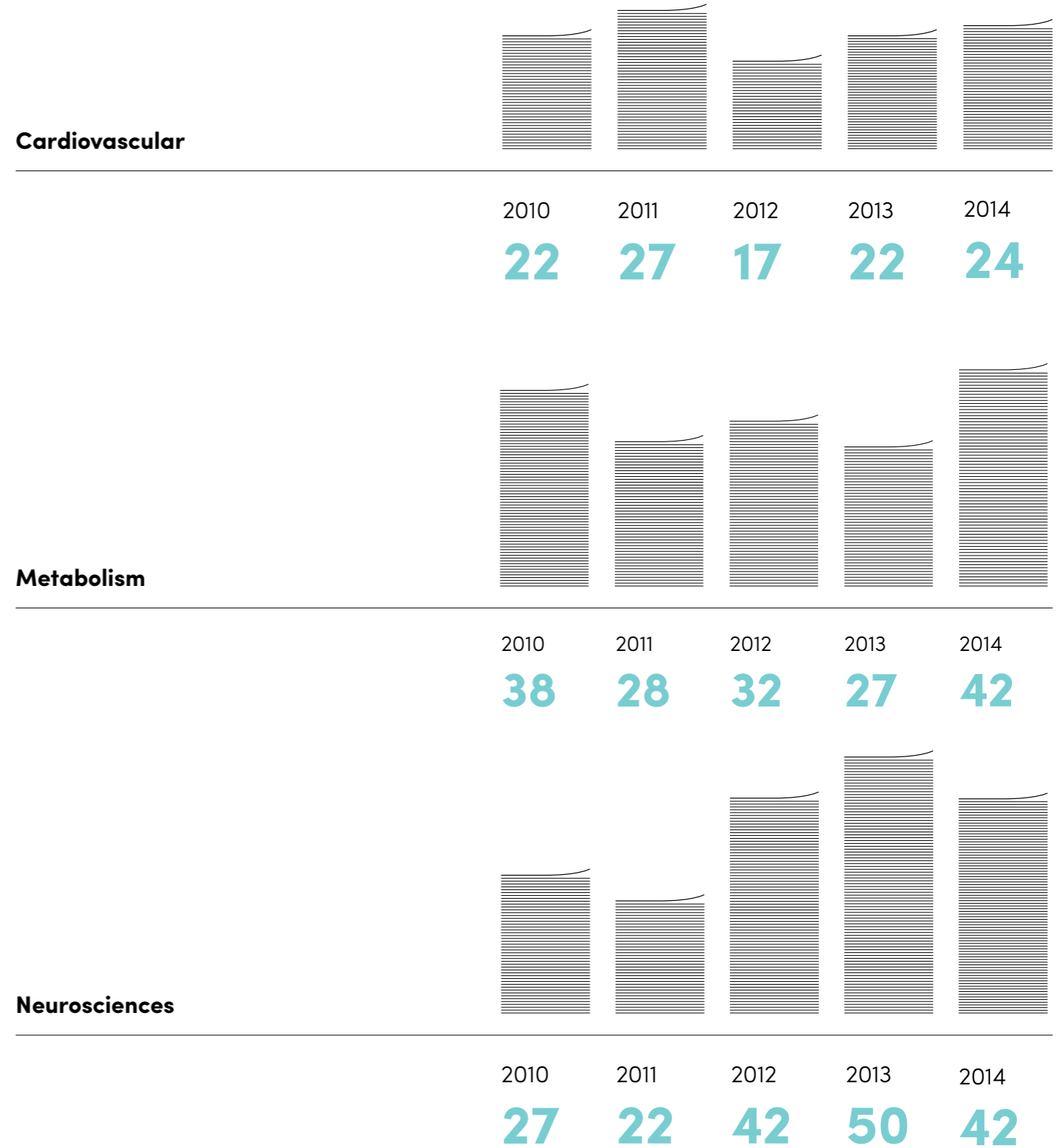


# SCIENTIFIC REPORT

NUMBER OF ARTICLES

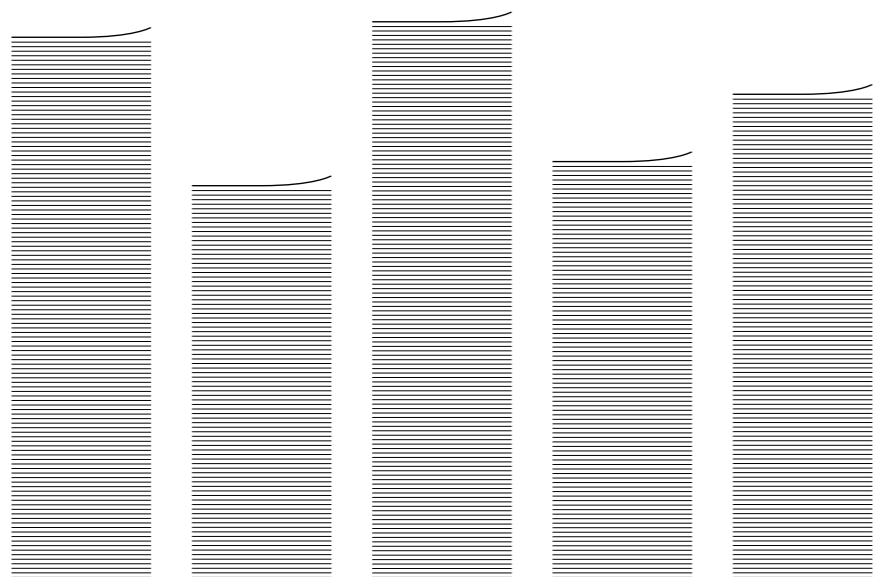


ARTICLES BY AREA



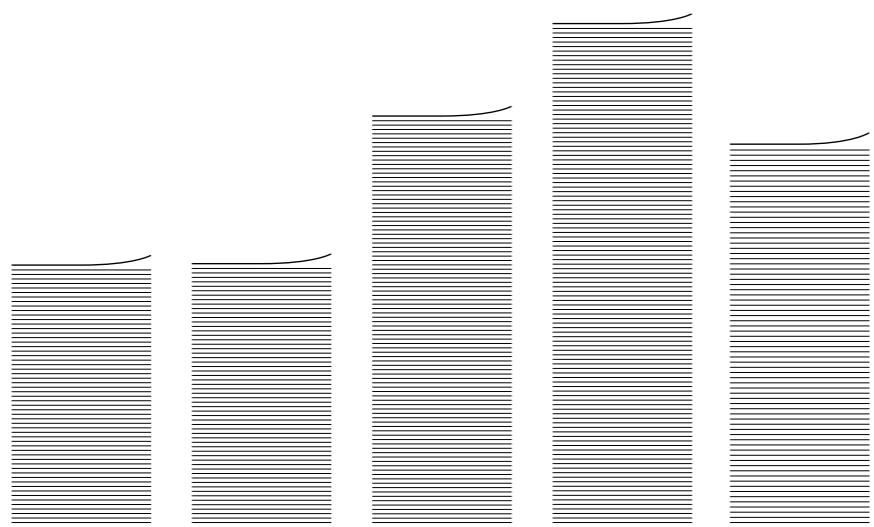
ARTICLES BY AREA

Oncology



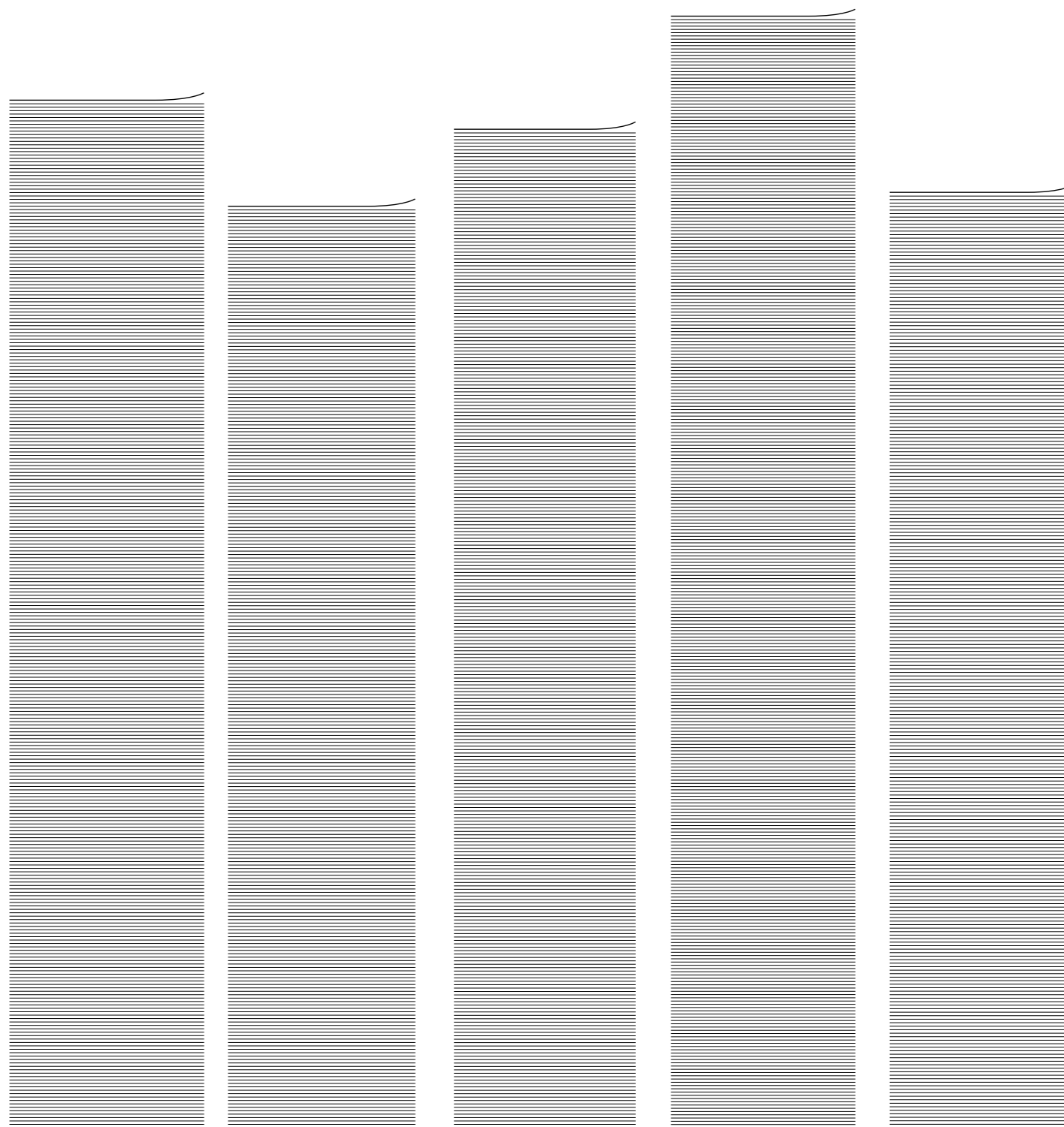
2010 **69** 2011 **50** 2012 **71** 2013 **53** 2014 **62**

Others



2010 **33** 2011 **33** 2012 **52** 2013 **64** 2014 **48**

IMPACT FACTOR PER ARTICLE



2010 > 179 **4,64** 2011 > 160 **4,16** 2012 > 202 **4,51** 2013 > 205 **5,02** 2014 > 202 **4,20**

## CLINICAL IMPACT

**“Estrategia en diabetes del Sistema Nacional de Salud- Visión esquemática de la actualización de 2012”** *Informes, Estudios e Investigación 2014*. Ministerios de Sanidad, Servicios Sociales e Igualdad. Wifredo Ricart.

Alonso de Leciana M, Egido JA, Casado I, Ribó M, Dávalos A, Masjuan J, Caniego JL, Martínez Vila E, Díez Tejedor E; ad hoc committee of the SEN Study Group for Cerebrovascular Diseases, Fuentes B, Álvarez-Sabin J, Arenillas J, Calleja S, Castellanos M, Castillo J, Díaz-Otero F, López-Fernández JC, Freijo M, Gállego J, García-Pastor A, Gil-Núñez A, Gilo F, Irimia P, Lago A, Maestre J, Martí-Fàbregas J, Martínez-Sánchez P, Molina C, Morales A, Nombela F, Purroy F, Rodríguez-Yañez M, Roquer J, Rubio F, Segura T, Serena J, Simal P, Tejada J, Vivancos J. **“Guidelines for the treatment of acute ischaemic stroke”**. *Neurologia*. 2014; 29:102–22. PMID: 22152803. I.F.: 1.35.

Vivancos J, Gilo F, Frutos R, Maestre J, García-Pastor A, Quintana F, Roda JM, Ximénez-Carrillo A; por el Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN; Díez Tejedor E, Fuentes B, Alonso de Leciana M, Álvarez-Sabin J, Arenillas J, Calleja S, Casado I, Castellanos M, Castillo J, Dávalos A, Díaz-Otero F, Egido JA, Fernández JC, Freijo M, Gállego J, Gil-Núñez A, Irimia P, Lago A, Masjuan J, Martí-Fàbregas J, Martínez-Sánchez P, Martínez-Vila E, Molina C, Morales A, Nombela F, Purroy F, Ribó M, Rodríguez-Yañez M, Roquer J, Rubio F, Segura T, Serena J, Simal P, Tejada J. **“Guía de actuación clínica en la hemorragia subaracnoidea. Sistemática diagnóstica y tratamiento”**. *Neurologia*. 2014;29:353–70. PMID: 23044408. I.F.: 1.35.

Fuentes B, Gállego J, Gil-Núñez A, Morales A, Purroy F, Roquer J, Segura T, Tejada J, Lago A, Díez-Tejedor E; por el Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN; Alonso de Leciana M, Álvarez-Sabin J, Arenillas J, Calleja S, Casado I, Castellanos M, Castillo J, Dávalos A, Díaz-Otero F, Egido JA, López-Fernández JC, Freijo M, García Pastor A, Gilo F, Irimia P, Maestre J, Masjuan J, Martí-Fàbregas J, Martínez-Sánchez P, Martínez-Vila E, Molina C, Nombela F, Ribó M, Rodríguez-Yañez M, Rubio F, Serena J, Simal P, Vivancos J; Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN. **“Guidelines for the preventive treatment of ischaemic stroke and TIA (II). Recommendations according to aetiological subtype”**. *Neurologia*. 2014;29:168–83. PMID: 21937151. I.F.: 1.35

## THESES

**Title**  
"El paper de les subunitats beta en la regulació del canal de sodi cardíac associat a la mort sobtada"

**Doctorate Thesis Reader**  
Helena Riuró

**University**  
Universitat de Girona

**Title**  
“Determinació del patró de miRNA en líquid cefaloraquídi de pacients amb esclerosi múltiple (Estudi miEM)”

**Doctorate Thesis Reader**  
Lluís Ramió i Torrentà

**University**  
Universitat de Girona

**Title**  
“Temporal trends of incidence and survival of myeloid malignancies in Girona: A population-based study during the recent fifteen years”

**Doctorate Thesis Reader**  
Gemma Osca

**University**  
Universitat de Girona

**Title**  
Diffusion tensor imaging in acute ischemic stroke: the role of anisotropy in determining the time of onset and predicting long-term motor outcome

**Doctorate Thesis Reader**  
Josep Puig Alcántara

**University**  
Universitat de Girona

**Title**  
Análisis de la aplicación de los criterios de activación del código ictus en Cataluña

**Doctorate Thesis Reader**  
Estela Sanjuan

**University**  
Universitat de Girona

**Title**  
Estudi de l'hemodinàmica intrarenal mitjançant l'índex de resistivitat com a marcador d'afectació renal, risc cardiovascular i rigidesa vascular

**Doctorate Thesis Reader**  
Jordi Calabia

**University**  
Universitat de Girona

**Title**  
Identificación y validación de una firma de expresión de 21 proteínas predictiva en el cáncer gástrico mediante técnicas oncoproteómicas basadas en micromatrices de anticuerpos

**Doctorate Thesis Reader**  
Manel Puig

**University**  
Universitat Autònoma de Barcelona

**Title**  
Gràfic de control T2 de Hotelling per a dades composicionals

**Doctorate Thesis Reader**  
Marina Vives Mestres (Group Statistics and Data Analysis)

**University**  
Universitat de Girona

**Title**  
Análisis de la vehiculización de compuestos metálicos como agentes antitumorales y de la familia HER-EGF en la resistencia a los tratamientos oncológicos

**Doctorate Thesis Reader**  
María Dolores Carrión

**University**  
Universitat de Girona  
Facultat de Ciències

**Title**  
Regulation and function of sialyltransferases in pancreatic cancer

**Doctorate Thesis Reader**  
Sònia Bassagaña (Grup de Bioquímica del Càncer)

**University**  
Universitat de Girona  
Facultat de Ciències

**Title**  
Molecular mechanism of PE5-induced cytotoxicity and generation of new cytotoxic nuclear-directed ribonuclease variants

**Doctorate Thesis Reader**  
Anna Vert (Grup de Enginyeria de Proteïnes)

**University**  
Universitat de Girona

**Title**  
Estudis cinètics i estructurals de la transinteiina Npu DnaE de Nostoc Punctiforme

**Doctorate Thesis Reader**  
David Soler (Grup de Enginyeria de Proteïnes)

**University**  
Universitat de Girona

**Title**  
Esclerosi múltiple i brots: estrès, afrontament i curs de la malaltia.

**Doctorate Thesis Reader**  
Laura Fàbregas (Directora de tesis M. Planas-Grup Psicologia de la Salut)

**University**  
Universitat de Girona

**Title**  
Automated detection of new multiple sclerosis lesions in longitudinal magnetic resonance imaging

**Doctorate Thesis Reader**  
Onur Ganiler

**University**  
Universitat de Girona (Escola Politècnica Superior)

**Title**  
Automatic change detection in multiple pigmented skin lesions

**Doctorate Thesis Reader**  
Konstantin Koroktov

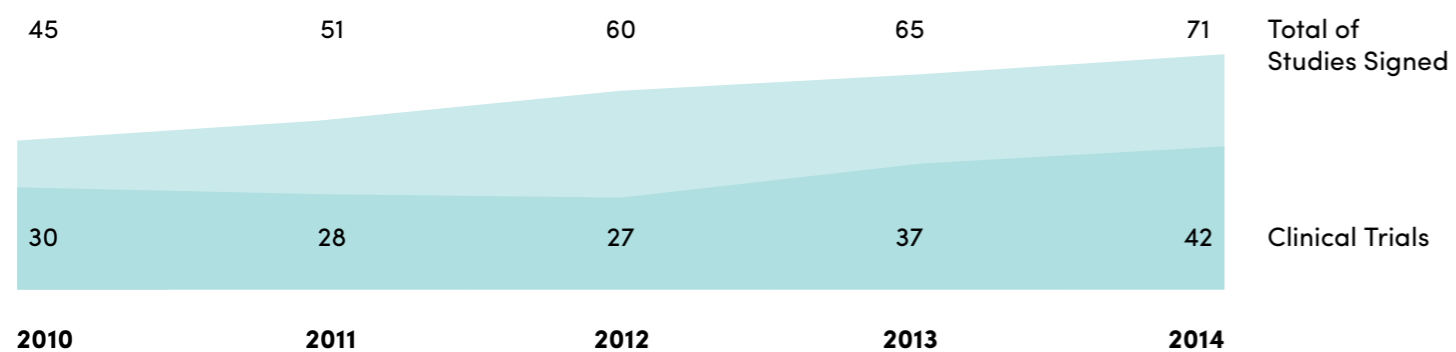
**University**

**Title**  
Computer-aided lesion detection and segmentation on breast ultrasound images

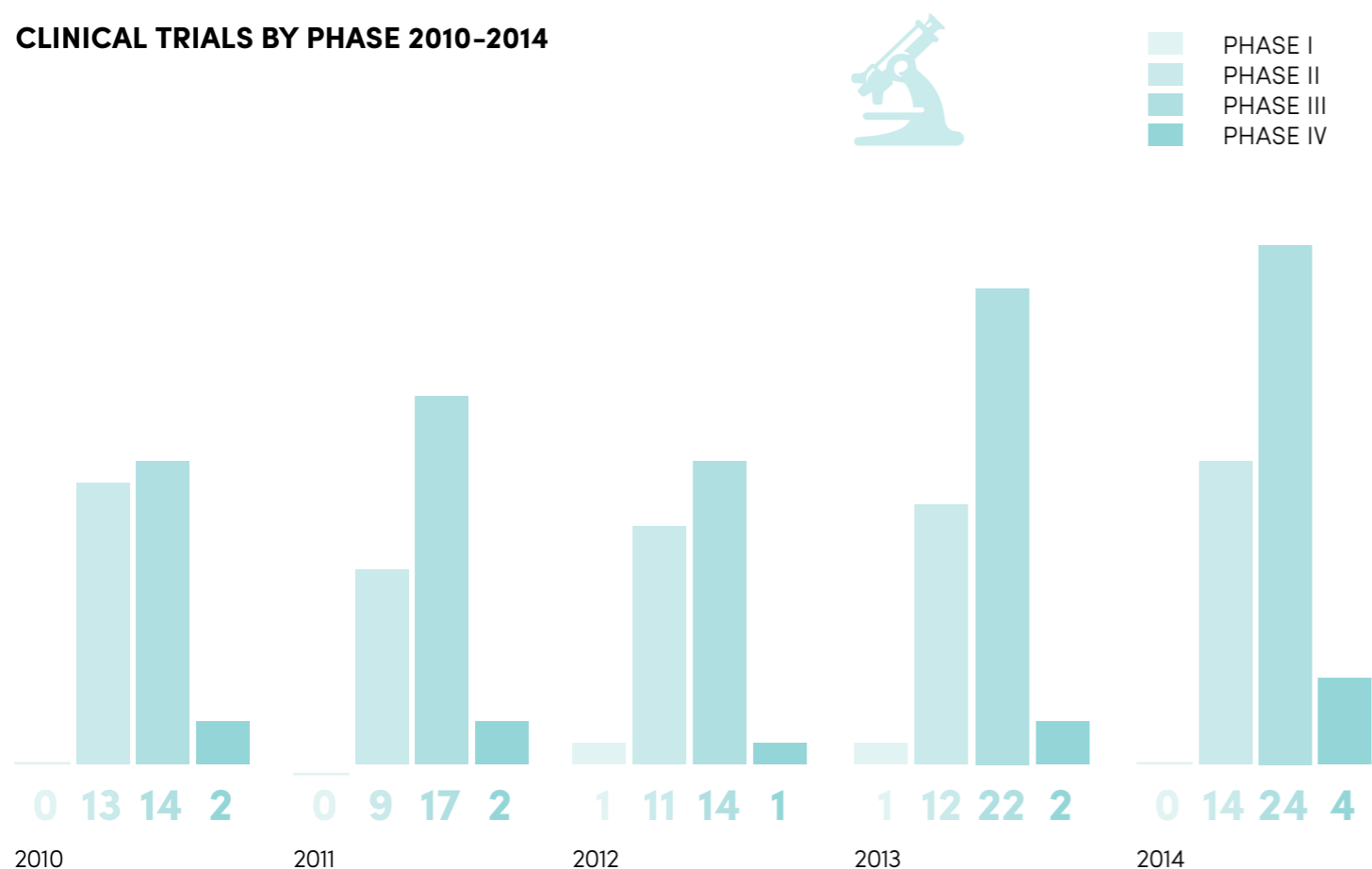
**Doctorate Thesis Reader**  
Gerard Pons Rodríguez

**University**  
Universitat de Girona (Escola Politècnica Superior)

### CLINICAL TRIALS APPROVED AND SIGNED IN 2014



### CLINICAL TRIALS BY PHASE 2010-2014



This list reflects all the journals in which investigators of the IDIBGI have published articles during 2014. The journals on Decile 1 are highlighted.

JOURNAL	IF	Total Articles Published	QUARTILE
Acta Gastroenterologica Latinoamericana	-	1	
Aging	4,89	1	2
American Journal of Computational Mathematics	-	1	
American Journal of Geriatric Psychiatry	3,52	1	1
American Journal of Hypertension	3,40	1	2
Anales de Psicología	0,55	1	3
Annals of Hematology	2,40	1	3
Anticancer Research	1,87	1	3
Appetite	2,52	1	2
Atherosclerosis	3,97	1	1
Biology of the Cell	3,87	1	2
Biomedical Signal Processing and Control	1,53	2	3
Biopolymers	2,29	1	3
<b>Blood</b>	<b>9,78</b>	<b>1</b>	<b>1</b>
BMC Cancer	3,32	1	2
BMC Pregnancy and Childbirth	2,15	1	2
BMC Public Health	2,32	1	2
BMC Systems Biology	2,85	1	1
Brain Pathology	4,35	1	1
Breast Cancer Research	5,88	1	1
Cancer Epidemiology	2,56	2	2
Cardiology Journal	1,22	1	3
Cell Cycle	5,01	3	2
Cerebrovascular Diseases	3,70	2	1
Channels	2,32	1	3
<b>Circulation-Cardiovascular Imaging</b>	<b>6,75</b>	<b>1</b>	<b>1</b>
Cirugía Española	0,89	4	3
Clínica e Investigación en Arteriosclerosis	-	1	
Clinical & Translational Oncology	1,60	1	4
Clinical and Applied Thrombosis-Hemostasis	1,58	1	3
Clinical and Translational Oncology	1,60	4	4
<b>Clinical Journal of the American Society of Nephrology</b>	<b>5,25</b>	<b>1</b>	<b>1</b>
Computer Methods and Programs in Biomedicine	1,09	2	2
Computers in Biology and Medicine	1,48	1	2
Corporate Social Responsibility and Environmental Management	2,05	1	1
<b>Critical Reviews in Food Science and Nutrition</b>	<b>5,55</b>	<b>1</b>	<b>1</b>
Cytotherapy	3,10	1	2
<b>Diabetes</b>	<b>8,47</b>	<b>2</b>	<b>1</b>
<b>Diabetes Care</b>	<b>8,57</b>	<b>3</b>	<b>1</b>
<b>Diabetologia</b>	<b>6,88</b>	<b>1</b>	<b>1</b>
Emergency Medicine Journal	1,78	1	2
Enfermería Intensiva	-	1	
Environmental and Ecological Statistics	0,97	1	2
<b>Environmental Health Perspectives</b>	<b>7,03</b>	<b>3</b>	<b>1</b>
Environmental Research	3,95	1	1
Epilepsia	4,58	1	1
Europace	3,05	1	2
European Eating Disorders Review	-	1	
European Journal of Investigation in Health, Psychology and Education	-	1	
European Journal of Nutrition	3,84	1	1
<b>European Respiratory Journal</b>	<b>7,13</b>	<b>1</b>	<b>1</b>

JOURNAL	IF	Total Articles Published	QUARTILE
Expert Review of Clinical Immunology	3,34	1	2
Expert Systems with Applications	1,97	1	1
<b>FASEB Journal</b>	<b>5,48</b>	<b>2</b>	<b>1</b>
<b>Food Chemistry</b>	<b>3,26</b>	<b>1</b>	<b>1</b>
Forensic Science International	2,12	2	2
Frontiers in Oncology	-	2	
General Hospital Psychiatry	2,90	1	2
<b>Heart</b>	<b>6,02</b>	<b>1</b>	<b>1</b>
Heart Rhythm	4,92	2	1
Hormone Research in Paediatrics	1,71	1	2
International Journal of Endocrinology	1,52	1	4
International Journal of Health Geographics	1,97	1	1
International Journal of Legal Medicine	2,60	1	1
International Journal of Medical Microbiology	3,42	1	2
<b>International Journal of Obesity</b>	<b>5,39</b>	<b>3</b>	<b>1</b>
International Journal of Stroke	4,03	1	1
Journal of Alzheimers Disease	3,61	2	2
Journal of Cardiovascular Medicine	1,41	1	3
Journal of Cell Communication and Signaling	-	1	
Journal of Cellular and Molecular Medicine	3,70	1	1
Journal of Clinical Endocrinology & Metabolism	6,31	1	1
Journal of Clinical Hypertension	2,96	2	2
Journal of Clinical Microbiology	4,23	1	1
<b>Journal of Clinical Oncology</b>	<b>17,96</b>	<b>1</b>	<b>1</b>
Journal of Crohns & Colitis	3,56	2	2
Journal of Epidemiology and Community Health	3,29	1	1
Journal of Geriatric Psychiatry and Neurology	1,63	1	3
Journal of Gerontological Nursing	0,62	1	4
Journal of Molecular and Cellular Cardiology	5,22	1	1
Journal of Neuroimmunology	2,79	1	2
Journal of Neurology	3,84	1	1
Journal of Neuroscience Methods	1,96	1	3
Journal of Nursing Management	1,14	1	2
Journal of Nursing Research	0,84	1	3
Journal of Process Control	2,18	1	1
Journal of Science Education and Technology	-	1	
Journal of the American Medical Directors Association	4,78	1	1
Journal of the American Society of Hypertension	2,68	1	2
Journal of the Clinical Endocrinology and Metabolism	6,31	1	1
Journal of the European Academy of Dermatology and Venereology	3,11	1	1
Journal of the National Cancer Institute. Monographs	-	1	
Journal of Vascular Surgery	2,98	1	1
<b>Lancet Diabetes and Endocrinology</b>	<b>9,19</b>	<b>1</b>	<b>1</b>
<b>Lancet Neurology</b>	<b>21,82</b>	<b>2</b>	<b>1</b>
<b>Lancet Oncology</b>	<b>24,73</b>	<b>4</b>	<b>1</b>
<b>Lancet Respiratory Medicine</b>	<b>9,63</b>	<b>1</b>	<b>1</b>
Langenbeck's Archives of Surgery	2,16	1	2
<b>Leukemia</b>	<b>9,38</b>	<b>1</b>	<b>1</b>
Leukemia and Lymphoma	2,61	1	2
Lung Cancer	3,74	1	1
Medical Oncology	2,06	1	3

JOURNAL	IF	Total Articles Published	QUARTILE
Medicina Clínica	1,25	4	3
Menopause	2,81	1	1
Metabolism	3,61	1	2
Metas de Enfermería	-	1	
<b>Molecular Nutrition &amp; Food Research</b>	<b>4,91</b>	<b>1</b>	<b>1</b>
<b>Nature Genetics</b>	<b>29,65</b>	<b>1</b>	<b>1</b>
<b>Nature Reviews Endocrinology</b>	<b>12,96</b>	<b>2</b>	<b>1</b>
Neonatology	2,37	1	1
Neuroimage:clinical	-	1	
Neuroinformatics	3,10	1	1
Neurologia	1,29	3	4
Neurological sciences	1,50	1	3
<b>Neurology</b>	<b>8,30</b>	<b>2</b>	<b>1</b>
Neuromolecular medicine	3,89	2	2
Neuroradiology	2,37	1	2
Neuroscience	3,33	2	2
Nutrition, Metabolism and Cardiovascular Diseases	3,88	1	1
<b>Oncotarget</b>	<b>6,63</b>	<b>4</b>	<b>1</b>
Organic & Biomolecular Chemistry	3,49	1	1
Pancreas	3,01	1	2
Pediatric Obesity	2,42	2	1
Pediatric Research	2,84	1	1
Physics in Medicine and Biology	2,92	2	1
Plos One	3,53	8	1
Preventive Medicine	2,93	1	1
Quality of Life Research	2,86	1	1
Rehabilitation Nursing	0,85	1	3
Revista Clínica Española	1,31	1	2
Revista de Neurologia	0,93	3	4
Safety Science	1,67	1	2
Science of the Total Environment	3,16	1	1
Scientific Reports	5,08	1	1
Sort-Statistics and Operations Research Transactions	0,96	1	2
Spatial and Spatio-Temporal Epidemiology	-	1	
<b>Stochastic Environmental Research and Risk Assessment</b>	<b>2,67</b>	<b>1</b>	<b>1</b>
<b>Stroke</b>	<b>6,02</b>	<b>5</b>	<b>1</b>
Thrombosis Research	2,43	1	3
Tourism Management	2,38	1	1
Ultrasound in Medicine and Biology	2,10	1	1
Vascular Medicine	1,73	1	3
World Journal of Surgery	2,35	2	2

# NEWS 2014

JANUARY 2014

**El doctor Manuel M. Morente, un dels màxims experts europeus en biobancs, analitzarà el seu paper en l'àmbit de la recerca**



*Morente és president de la Societat Europea de Biobancs (ESBB) i coordinador de la Red Nacional de Biobancos Hospitalarios – Instituto de Salud Carlos III*

BioBanc IDIBGI

Principals mitjans: El Punt Avui, Diari de Girona, Diario Médico...

FEBRUARY 2014

**Un estudi de l'IDIBGI demostra que els nens que dormen poc estan més predisposats a ser obesos**



*Es demostra que dormir menys de 10 hores en edat escolar pot activar els gens responsables de l'obesitat.*

Grup d'Endocrinologia Pediàtrica

Principals mitjans: Ara Girona, Diari de Girona, El Punt/Avui, TV3, Cadena SER, Telecinco, RAC1, Catalunya Ràdio, El 9 Diari, La Vanguardia, El País, El Periódico, ACN, vilaweb, L'Empordà, Crónica Norte, El Médico Interactivo, 20 minutos, Al día, La Información, La Razón, Girona Noticias, Siete días médicos, Antena 3, EFE Salud, Gaceta Médica, ABC...

MARCH 2014

**L'IDIBGI reforma l'edifici de la Mancomunitat del Parc Hospitalari Martí i Julià per consolidar la recerca biomèdica i en salut de Girona**



*El projecte de rehabilitació i adequació de l'immoble, que s'ha presentat avui, permetrà ampliar els espais destinats a investigació a la demarcació.*

Principals mitjans: TV Girona, Informativos Telecinco, 20 minutos, Diari de Girona, El Confidencial, El Economista, Europa Press, La Vanguardia, El Periódico, ABC, LA Razón, Canarias 7, Gente Digital, Interbusca, La información, MedicinaTV, Redacción Médica, Salud Digestivo, Siete días Médicos, Siglo XXI, Agència Catalana de Notícies (ACN), Catalunya Ràdio, Cadena SER, TVE, TV3, El Punt/Avui, RAC1...

MAY 2014

**Cada any es donen cinquanta casos nous de tumors glials a les comarques gironines**



*Així ho conclou un estudi de l'Institut Català d'Oncologia i el Pla Director d'Oncologia publicat a Cancer Epidemiology, que també mostra l'augment de supervivència en glioblastomes que va suposar la introducció, el 2005, d'un nou fàrmac contra la malaltia.*

Europa Press, Al dia.cat, Ara, Diari de Girona, El Punt/Avui, ACN (Agència Catalana de Notícies), Diario Médico...

JUNE 2014

**El doctor Rafael Ramos, premi a la Trajectòria Investigadora a l'Atenció Primària de l'ICS**



Grup d'Epidemiologia i Investigació en Salut Vascolar

Principals mitjans: El Punt Avui, Diari de Girona

JUNE 2014

**L'empresa gironina GoodGut SL. desenvolupa un sistema de detecció de càncer de colon pioner a l'Estat espanyol**



*GoodGut SL., capdavantera a nivell estatal en el disseny de sistemes de suport al diagnòstic i al tractament en base a la microbiota intestinal, és la tercera empresa spin-off biotecnològica de la Universitat de Girona*

Principals mitjans: Diari de Girona, El Punt/Avui

JULY 2014

**Un estudi amb participació gironina demostra que les teràpies diana milloren la supervivència de les neoplàsies hematològiques**



*L'estudi, que fa un anàlisi de casos des de 1997 a 2008, ha estat publicat avui per la prestigiosa revista científica The Lancet Oncology*

Grup d'Epidemiologia i Investigació en Salut Vascolar

Principals mitjans: Diari de Girona, El Punt/Avui, Europa Press, presspeople, TV3...

JULY 2014

**La jove científica Mireia Alcalde, del Centre de Genètica Cardiovascular UdG-IDIBGI, guanya una de les beques Daniel Bravo**



*Farà una estada de 6 mesos a la Universitat de Califòrnia per participar en projectes punters de recerca cardiovascular*

Centre de Genètica Cardiovascular

Principals mitjans: Tot Girona

JULY 2014

### La Jornada Científica 2014 de l'IDIBGI potencia la col·laboració multidisciplinària per afrontar els reptes de salut del futur



Les institucions destaquen la importància de l'IDIBGI per vertebrar i potenciar la recerca en biomedicina i salut a les comarques de Girona

Principals mitjans: Diari de Girona, El Punt/ Avui, SER Girona...

JULY 2014

### L'estudi sobre mort sobtada a Catalunya revela que les malalties genètiques són responsables d'un terç de les morts sobtades inexplicades en la gent jove



L'estudi MOSCAT (mort sobtada a Catalunya) liderat pel Dr. Ramon Brugada es va posar en marxa el 2012 amb l'objectiu d'investigar si darrere les morts sobtades inexplicades en la gent jove, amb autòpsia normal, hi podia haver una causa hereditària que podria posar en risc altres membres de la família.

Principals mitjans: Crónica de Cantabria, El Economista.es, Europa Press, Telecinco, Infosalus.com, Jano.es, La Vanguardia, La Voz Libre, La Información, MedicinaTV.com, presspeople.com, Reus Directe, Diario Siglo XXI, Teinteresa.es, YahooNews.es, ara, El Punt / Avui, La Razón, La Vanguardia, Siete Días Médicos...

OCTOBER 2014

### Inicien les obres pel trasllat de la recerca biomèdica a Salt



Comencen els treballs de rehabilitació de l'antic manicomí saltenc per acollir la nova seu de l'IDIBGI

Principals mitjans: Diari de Girona

OCTOBER 2014

### Un estudi assegura que la supervivència al càncer canvia segons el país d'origen del malalt

L'estudi CONCORD-2, publicat a la prestigiosa revista *The Lancet Oncology*, és el més complet fet fins ara amb dades de registres de 67 països d'arreu del món. Hi ha participat el Dr. Rafael Marcos-Gragera, de l'IDIBGI i l'Institut Català d'Oncologia



Principals mitjans: ABC, El Comercio, El Punt/Avui, Europa Press, El País, 3/24, TV3, Diari de Girona, Regió 7, La Verdad, La Nueva España, IntraMed, Gaceta Médica, Reporte Indigo, Qué es?, BBC News Mundo, Cadena SER, Catalunya Ràdio, RAC1, Divulgación Médica; Siete Días Médicos, Canarias 7, Ediciones Médicas, Diario Médico...

OCTOBER 2014

### La supervivència dels pacients amb leucèmia mieloide crònica quasi es duplica en els darrers quinze anys



Així ho conclou un estudi que ha analitzat l'evolució de la incidència i supervivència de les neoplàsies mieloides a les comarques gironines durant quinze anys. La supervivència en leucèmia mieloide crònica a 5 anys ha passat del 43.5% al 78.1%

Principals mitjans: Diari de Girona, El Punt/Avui, Al dia, Revista de Nefrologia...

OCTOBER 2014

### Els malalts de càncer de pròstata que fan exercici físic tenen una millor qualitat de vida



Aquesta és la principal conclusió d'un estudi elaborat per investigadors de la Universitat de Girona (UdG) i de l'Institut Català d'Oncologia, i que ha estat publicat en portada en l'edició del mes de juny de la prestigiosa revista especialitzada *'Journal of Gerontological Nursing'*.

Principals mitjans: Diari de Girona, El Punt/Avui, Nació digital, Al dia, L'econòmic, Racó.cat...

NOVEMBER 2014

### Els doctors Salvador Pedraza i Josep Puig, radiòlegs de l'IDIBGI, reben els premis a la trajectòria d'investigació en radiologia i al millor treball publicat el 2013



Al Dr. Salvador Pedraza se li reconeix la seva trajectòria liderant diferents projectes de recerca en el camp de la validació del Biomarcadors per imatge i en educació mèdica. L'article premiat del Dr. Puig, "L'augment de l'anisotropia fraccional del tracte corticoespinal permet discriminar l'inici de l'ictus dins les primeres 4,5 hores", es va publicar a la prestigiosa revista *Stroke*.

Grup d'Imatge Mèdica

Principals mitjans: Diari de Girona, El Punt/Avui...

DECEMBER 2014

### La UdG i el Trueta reben 400.000 € per investigar en el diagnòstic de l'esclerosi



L'institut de recerca i la universitat treballaran en un "software" per detectar i avaluar les lesions i atrofies del cervell

Principals mitjans: Diari de Girona



# Cardio-vascular Area

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CARDIOVASCULAR GENETICS  
EPIDEMIOLOGY AND RESEARCH IN VASCULAR HEALTH



The investigators at Gencardio we have actively participated in the field of Sudden Cardiac death (SCd) for more than 20 years through clinical research as well as basic research in genetics, molecular biology, biophysics and biochemistry. Our expertise in all clinical aspects of SCd and arrhythmias has enabled our group to lead some of the most important discoveries in this field.



## CARDIOVASCULAR GENETICS

Recognised as a consolidated research group - 2014SGR2  
Team involved in "Red de Enfermedades Cardiovasculares"

### Group members

Group Leader: **Ramon Brugada**

#### Post-doctorate researchers

- Catarina Allegue
- Pedro Beltrán
- Oscar Campuzano
- Sara Pagans
- Guillermo Pérez
- Helena Riuró
- Fabiana Scornik
- Elisabet Selga
- Marcel Verges

#### Post-graduate researchers

- Mireia Alcalde
- Cristina Bosch
- Mònica Coll
- Jesus Matés
- Javier Moncayo
- Olallo Sánchez
- Anna Tarradas

#### Technicians

- Irene Mademont
- Alexandra Pérez
- Ferran Picó

#### Support

- Anna Iglesias

### Strategic objectives

Reference centre on a Spanish level for genetic research and analysis of pathologies associated with Sudden Cardiac Death.

### Main line of research

Genetic and molecular basis of Sudden Cardiac Death.

## Publications

### Multicentric (I.F.: 4.92):

Lemaitre RN, Johnson CO, Hesselson S, Sotoodhenia N, McKnight B, Sittani CM, Rea TD, King IB, Kwok PY, Mak A, Li G, Brody J, Larson E, Mozaffarian D, Psaty BM, Huertas-Vazquez A, Tardif JC, Albert CM, Lyytikäinen LP, Arking DE, Kääh S, Huikuri HV, Krijthe BP, Eijgelsheim M, Wang YA, Reinier K, Lehtimäki T, Pulit SL, Brugada R, Müller-Nurasyid M, Newton-Cheh CH, Karhunen PJ, Stricker BH, Goyette P, Rotter JL, Chugh SS, Chakravarti A, Jouven X, Siscovick DS. "Common variation in fatty acid metabolic genes and risk of incident sudden cardiac arrest". *Heart Rhythm*. 2014;11:471-7. PMID: 24418166. I.F.: 4.92. doi: 10.1016/j.hrthm.2014.01.008.

### Originals (I.F.: 32.94):

Campuzano O, Berne P, Selga E, Allegue C, Iglesias A, Brugada J, Brugada R. "Brugada syndrome and p.E61X\_RANGRF". *Cardiology Journal*. 2014;21:121-7. PMID: 24142675. I.F.: 1.21. doi: 10.5603/CJ.a2013.0125

Campuzano O, Allegue C, Sarquella-Brugada G, Coll M, Mates J, Alcalde M, Ferrer-Costa C, Iglesias A, Brugada J, Brugada R. "The role of clinical, genetic and segregation evaluation in sudden infant death". *Forensic Science International*. 2014;242:9-15. PMID: 25016126. I.F.: 2.12. doi: 10.1016/j.forsciint.2014.06.007.

Alcalde M, Campuzano O, Berne P, García-Pavía P, Doltra A, Arbelo E, Sarquella-Brugada G, Iglesias A, Alonso-Pulpon L, Brugada J, Brugada R. "Stop-Gain Mutations in PKP2 Are Associated with a Later Age of Onset of Arrhythmogenic Right Ventricular Cardiomyopathy". *PLoS One*. 2014;9:e100560. PMID: 24967631. I.F.: 3.53. doi: 10.1371/journal.pone.0100560.

Jeppesen J, Fuglsang-Frederiksen A, Brugada R, Pedersen B, Rubboli G, Johansen P, Beniczky S. "Heart rate variability analysis indicates preictal parasympathetic overdrive preceding seizure-induced cardiac dysrhythmias leading to sudden unexpected death in a patient with epilepsy". *Epilepsia*. 2014;55:e67-71. PMID: 24701979. I.F.: 4.58. doi: 10.1111/epi.12614.

Riuró H, Campuzano O, Arbelo E, Iglesias A, Batlle M, Pérez-Villa F, Brugada J, Pérez GJ, Scornik FS, Brugada R. "A missense mutation in the sodium channel  $\beta 1b$  subunit reveals SCN1B as a susceptibility gene underlying long QT syndrome". *Heart Rhythm*. 2014;11:1202-9. PMID: 24662403. I.F.: 4.92. doi: 10.1016/j.hrthm.2014.03.044.

Serra G, Baranchuk A, Bayés-De-Luna A, Brugada J, Goldwasser D, Capulzini L, Arazo D, Boraita A, Heras ME, Gar-

cía-Niebla J, Elosua R, Brugada R, Brugada P. "New electrocardiographic criteria to differentiate the Type-2 Brugada pattern from electrocardiogram of healthy athletes with r'-wave in leads V1/V2". *Europace*. 2014;16:1639-45. PMID: 24603955. I.F.: 3.05. doi:10.1093/europace/euu025.

Bosch Calero C, Selga E, Brugada R, Scornik FS, Pérez GJ. "The smooth muscle-type  $\beta 1$  subunit potentiates activation by DiBAC4(3) in recombinant BK channels". *Channels (Austin)*. 2014;8:95-102. PMID: 24299688. I.F.: 2.32. doi: 10.4161/chan.27212.

Campuzano O, Sánchez-Molero O, Allegue C, Coll M, Mademont-Soler I, Selga E, Ferrer-Costa C, Mates J, Iglesias A, Sarquella-Brugada G, Cesar S, Brugada J, Castellà J, Medallo J, Brugada R. "Post-mortem genetic analysis in juvenile cases of sudden cardiac death". *Forensic Science International*. 2014;245C:30-37. PMID: 25447171. I.F.: 2.12. doi: 10.1016/j.forsciint.2014.10.004.

Beltran-Alvarez P, Tarradas A, Chiva C, Pérez-Serra A, Batlle M, Pérez-Villa F, Schulte U, Sabidó E, Brugada R, Pagans S. "Identification of N-terminal protein acetylation and arginine methylation of the voltage-gated sodium channel in end-stage heart failure human heart". *Journal of Molecular and Cellular Cardiology*. 2014;76:126-9. PMID: 25172307. I.F.: 5.22. doi: 10.1016/j.yjmcc.2014.08.014.

Mellado M, Cuartero Y, Brugada R, Verges M. "Subcellular localisation of retromer in post-endocytic pathways of polarised Madin-Darby canine kidney cells". *Biology of the Cell*. 2014;106:377-93. PMID: 25081925. I.F.: 3.87. doi: 10.1111/boc.201400011.

### Reviews (I.F.: 3.85):

Campuzano O, Allegue C, Partemi S, Iglesias A, Oliva A, Brugada R. "Negative autopsy and sudden cardiac death". *International Journal of Legal Medicine*. 2014;128:599-606. PMID: 24532175. I.F.: 2.60. doi: 10.1007/s00414-014-0966-4.

Campuzano O, Allegue C, Brugada R. "Genetics of sudden unexplained death". *Medicina Clínica (Barc)*. 2014;142:265-9. PMID: 24018251. I.F.: 1.25. doi: 10.1016/j.medcli.2013.06.015.

## Grants for research in progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya  
Reference: 2014 SGR 2  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Ramon Brugada

- Red de Enfermedades Cardiovasculares  
Reference: RD12/0042/0059  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2013 - 2014  
Ramon Brugada

- Muerte súbita infantil: diagnóstico genético mediante tecnología de ultrasecuenciación (next generation sequencing, NGS)  
Grant: Convocatoria ayudas 2012 - Fundación Eugenio Rodríguez Pascual  
Duration: 01/03/2013 - 01/03/2014  
Ramon Brugada

- Sudden cardiac death: Translating basic science into clinical care  
Grant: CNIC-TRANSLATIONAL 2008  
Duration: 2009 - 2014  
Ramon Brugada

- Genotipado de alto rendimiento en el diagnóstico genético del síndrome de Brugada. PI11/01826  
Sponsored by: Instituto de Salud Carlos III  
Duration: 01/01/2012 - 31/12/2014  
Ramon Brugada

- Ayudas predoctorales de formación en investigación en salud. FI10/00453  
Sponsored by: Instituto de Salud Carlos III  
Duration: 01/09/2010 - 31/12/2014  
Ramon Brugada  
Beneficiary: Cristina Bosch

- Mort sobtada infantil: diagnòstic genètic mitjançant tecnologia d'ultrasecuenciació (next generation sequencing, NGS)  
Sponsored by: Societat Catalana Cardiologia  
Duration: 16/07/2012 - 16/07/2014  
Ramon Brugada

- Contrato postdoctoral Sara Borrell (CD10/00275)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 01/01/2011 - 31/12/2014  
Ramon Brugada  
Beneficiary: Pedro Beltran

- Mort Sobtada Inexplicada a Catalunya: valoració clínica i genètica.  
Sponsored by: Fundació Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears.  
Duration: 2013-2014  
Ramon Brugada

- Estudio de los mecanismos moleculares que regulan la expresión y función de SCN5A (SAF2011-27627)  
Sponsored by: Ministerio de Economía y Educación. Investigación fundamental no orientada  
Duration: 2012 - 2014  
Sara Pagans

- Ayudas predoctorales de formación en investigación en salud (FI12/00540)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2012 - 2016  
Ramon Brugada  
Beneficiary: Jesús Mates

- Síndromes hereditarios en la muerte súbita inexplicada. Estudio genético. (PI14/01773)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2014 - 2017  
Ramon Brugada

The main line of research of the group is to improve the detection and control of patients with intermediate cardiovascular risk and the detection of CV disease in the asymptomatic phase and analyse the cost effectiveness of the actions taken for the prevention of cardiovascular disease.



## EPIDEMIOLOGY AND RESEARCH IN VASCULAR HEALTH

Team involved in "Red de Investigación en Actividades Preventivas y Promoción de la Salud" (rediAPP)  
Recognised as a consolidated research group - 2014SGR902

### Group members

Group Leader: **Rafael Ramos**

#### Post-graduate researchers

- Jaime Aboal
- Xavier Albert
- Elisabet Balló
- Daniel Bosch
- Carlos Cerezo
- Pablo de Loma-Osorio
- Miquel Quesada
- Pascual Solanas

#### Medical researchers

- Maria del Mar Garcia

#### Technicians

- Ruth Martí
- Anna Ponjoan

### Strategic objectives

1. Analyse the role of emerging risk factors and asymptomatic atherosclerosis as well as the co-morbidity of the patient in the prediction of cardiovascular risk.
2. Develop cardiovascular risk functions adapted to specific subpopulation groups (diabetes, patients with a family history of vascular disease, obesity).
3. Evaluate the effectiveness and efficiency of different actions for the prevention and control of atherosclerotic disease in Primary Healthcare using the Information System for the Development of Research in Primary Care (SIDIAP).
4. Analyse the role of CV risk factors and their control in the incidence of dementias.

### Main line of research

The main line of research of the group is to improve the detection and control of patients with intermediate cardiovascular risk and the detection of CV disease in the asymptomatic phase and analyse the cost effectiveness of the actions taken for the prevention of cardiovascular disease.

## Publications

### Multicentric (I.F.: 38.60):

Wood AR, Esko T, Yang J, Vedantam S, Pers TH, Gustafsson S, Chu AY et al. MI Gene Consortium [Ramos R]. "Defining the role of common variation in the genomic and biological architecture of adult human height" *Nature Genetics*. 2014; 46:1173–86. doi: 10.1038/ng.3097. PMID: 25282103. I.F.: 29.65

Marti-Soler H, Gubelmann C, Aeschbacher S, Alves L, Bobak M, Bongard V, Clays E, de Gaetano G, Di Castelnuovo A, Elosua R, Ferrieres J, Guessous I, Igland J, Jørgensen T, Nikitin Y, O'Doherty MG, Palmieri L, Ramos R, Simons J, Sulo G, Vanuzzo D, Vila J, Barros H, Borglykke A, Conen D, De Bacquer D, Donfrancesco C, Gaspoz JM, Giampaoli S, Giles GG, Iacoviello L, Kee F, Kubinova R, Maljutina S, Marrugat J, Prescott E, Ruidavets JB, Scragg R, Simons LA, Tamosiunas A, Tell GS, Vollenweider P, Marques-Vidal P. "Seasonality of cardiovascular risk factors: an analysis including over 230 000 participants in 15 countries". *Heart*. 2014;100:1517–23. PMID: 24879630. I.F.: 5.23. doi: 10.1136/heartjnl-2014-305623.

Marrugat J, Subirana I, Ramos R, Vila J, Marín-Ibáñez A, Guembe MJ, Rigo F, Tormo Díaz MJ, Moreno-Iribas C, Cabré JJ, Segura A, Baena-Díez JM, de la Cámara AG, Lapetra J, Grau M, Quesada M, Medrano MJ, González Diego P, Frontera G, Gavrila D, Aicua EA, Basora J, García JM, García-Lareo M, Gutierrez JA, Mayoral E, Sala J, D'Agostino R, Elosua R; FRESCO Investigators. "Derivation and validation of a set of 10-year cardiovascular risk predictive functions in Spain: the FRESCO Study". *Preventive Medicine*. 2014;61:66–74. PMID: 24412897. I.F.: 2.93. doi: 10.1016/j.ypmed.2013.12.031.

### Originals (I.F.: 37.11):

Foraster M, Künzli N, Aguilera I, Rivera M, Agis D, Vila J, Bouso L, Deltell A, Marrugat J, Ramos R, Sunyer J, Elosua R, Basagaña X. "High Blood Pressure and Long-Term Exposure to Indoor Noise and Air Pollution from Road Traffic". *Environmental Health Perspectives*. 2014; 122:1193–200 PMID: 25003348. I.F.: 7.03. doi: 10.1289/ehp.1307156.

Grau M, Subirana I, Vila J, Elosua R, Ramos R, Sala J, Dégano IR, Tresserras R, Bielsa O, Marrugat J. "Validation of a population coronary disease predictive system: the CASSANDRA model". *Journal of Epidemiology and Community Health* 2014;68):1012–9. PMID: 24619990. I.F.: 3.29. doi: 10.1136/jech-2013-203516.

Foraster M, Basagaña X, Aguilera I, Rivera M, Agis D, Bouso

L, Deltell A, Marrugat J, Ramos R, Sunyer J, Vila J, Elosua R, Künzli N. "Association of long-term exposure to traffic-related air pollution with blood pressure and hypertension in an adult population-based cohort in Spain (the REGICOR study)". *Environmental Health Perspectives*. 2014;122:404–11. PMID: 24531056. I.F.: 7.03. doi: 10.1289/ehp.1306497.

Schröder H, Ramos R, Baena-Díez JM, Mendez MA, Canal DJ, Fito M, Sala J, Elosua R. "Determinants of the transition from a cardiometabolic normal to abnormal overweight/obese phenotype in a Spanish population". *European Journal of Nutrition*. 2014; 53:1345–53. PMID: 24322835. I.F.: 3.84. doi: 10.1007/s00394-013-0635-2.

Gómez M, Molina L, Bruguera J, Sala J, Masià R, Muñoz-Aguayo D, Tomás M, Heredia S, Blanchart G, Gaixas S, Vila J, Fitó M. "Oxidized low-density lipoprotein antibodies in myocardial infarction patients without classical risk factors". *Journal of Cardiovascular Medicine (Hagerstown)*. 2014;15:417–22. PMID: 23877206. I.F.: 1.41. doi: 10.2459/JCM.0b013e3283638d79.

García-Gil M, Elorza JM, Banque M, Comas-Cufí M, Blanch J, Ramos R, Méndez-Boo L, Hermosilla E, Bolibar B, Prieto-Alhambra D. "Linking of Primary Care Records to Census Data to Study the Association between Socioeconomic Status and Cancer Incidence in Southern Europe: A Nation-Wide Ecological Study". *PLoS One*. 2014;9:e109706. PMID: 25329578. I.F.: 3.53. doi: 10.1371/journal.pone.0109706.

Ponjoan A, García-Gil MM, Martí R, Comas-Cufí M, Alves-i-Cabratosa L, Sala J, Marrugat J, Elosua R, de Tuero GC, Grau M, Ramos R. "Derivation and validation of BOREAS, a risk score identifying candidates to develop cold-induced hypertension". *Environmental research*, 2014; 132:190–196. PMID: 24792416. I.F.:3.95. doi: 10.1016/j.envres.2014.03.039.

Rivera M, Basagaña X, Aguilera I, Foraster M, Agis D, de Groot E, Pérez L, Mendez MA, Bouso L, Targa J, Ramos R, Sala J, Marrugat J, Elosua R, Künzli N. "The association between air pollution and subclinical atherosclerosis: Rivera et al. respond". *Environmental Health Perspectives*. 2014; 122:A8–9. PMID: 24380888. I.F.:7.03. doi: 10.1289/ehp.1307403R.

## Grants for research in progress:

– Efectividad del Inicio del Tratamiento Antihipertensivo en la Prevención Primaria de Eventos Cardiovasculares. Proyecto EITEC. (PI12/00052)

Sponsored by: Instituto de Salud Carlos III

Duration: 2012 – 2014

Mar García

– Red de Investigación en Actividades Preventivas y Promoción de la Salud: redIAPP (RD12/0005/0002)

Sponsored by: Instituto de Salud Carlos III

Duration: 2013 – 2015

Rafel Ramos

– Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 902)

Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2014 – 2016

Rafel Ramos

– Coste-efectividad y seguridad de la aspirina en la prevención de enfermedad vascular, cáncer y mortalidad en España. Estudio JOANA (Joint of data on Aspirin and heAlth outcomes).

Sponsored by: Instituto de Salud Carlos III.

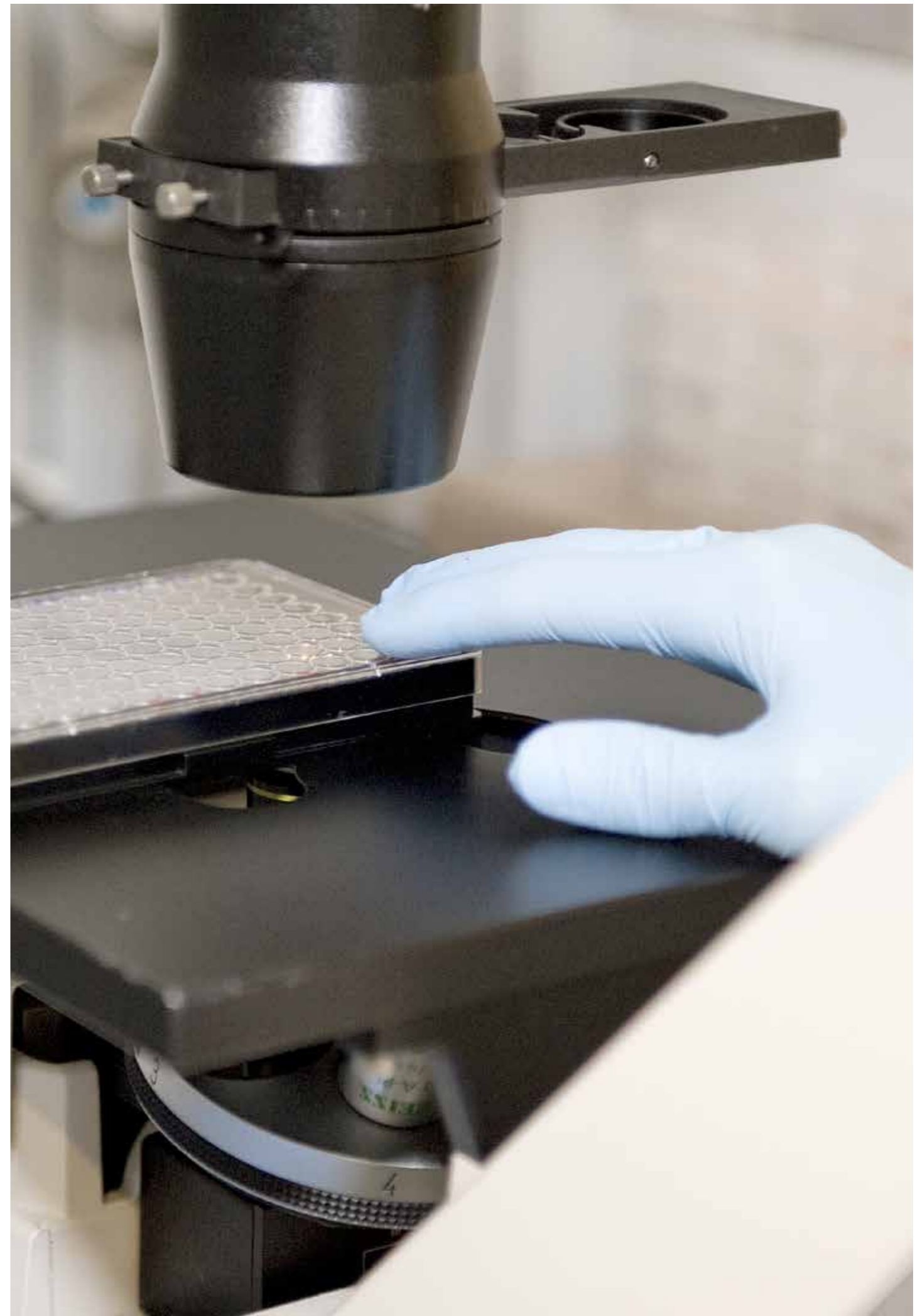
Duration: 2014 – 2016.

Rafel Ramos

# Metabolism and Inflammation Area

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BRONCHIECTASIS  
MICROBIOLOGY OF THE INTESTINAL  
DISEASE  
NUTRITION, EUMETABOLISM AND HEALTH  
PEDIATRIC ENDOCRINOLOGY



The incidence of bronchiectasis has increased in recent years resulting in greater costs, including periods of hospitalization and the prescription of drugs.

We study how the ELTGOL technique (Slow Expiration With Glottis Opened in Lateral Posture) improves mucociliary clearance in adult patients with bronchiectasis.



## BRONCHIECTASIS

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### Group members

Group Leader: **Montserrat Vendrell**

### Post-graduate researchers

– **Gerard Muñoz**

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### Strategic objectives

Research in the field of bronchiectasis of various etiologies, including cystic fibrosis, in terms of etiology, diagnosis and treatment.

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### Main line of research

Bronchiectasis. Physiotherapy. Primary immunodeficiencies.

## Publications

### Multicentrics:

Barker AF, O'Donnell AE, Flume P, Thompson PJ, Ruzi JD, de Gracia J, Boersma WG, De Soyza A, Shao L, Zhang J, Haas L, Lewis SA, Leitzinger S, Montgomery AB, McKeivitt MT, Gossage D, Quittner AL, O'Riordan TG. "Aztreonam for inhalation solution in patients with non-cystic fibrosis bronchiectasis (AIR-BX1 and AIR-BX2): two randomised double-blind, placebo-controlled phase 3 trials". *The Lancet Respiratory Medicine*. 2014;2:738-49. doi: 10.1016/S2213-2600(14)70165-1. PMID: 25154045. doi: 10.1016/S2213-2600(14)70165-1.I.F.: 9.63.

### Originals (I.F.: 14.40):

Martínez-García MA, de Gracia J, Vendrell M, Girón R, Mází L, de la Rosa D, Oliveira C. "Multidimensional approach to non-cystic fibrosis bronchiectasis. The FACED score". *European Respiratory Journal*. 2014; 43:1357-67. PMID: 24232697. I.F.: 7.13. doi: 10.1183/09031936.00026313.

Oliveira C, Oliveira G, Espildora F, Giron R, Muñoz G, Quittner A, Martínez-García MA. "Validation of a patient-reported outcome measure for bronchiectasis: Psychometric analyses of the Spanish QOLB-V3.0". *Quality of Life Research*. 2014; 23:1279-92. PMID: 24142190. I.F.: 2.86. doi: 10.1007/s11136-013-0560-0

Oliveira C, Oliveira G, Espildora F, Girón R, Vendrell M, Dorado A, Martínez-García MA. "Mediterranean diet is associated on symptoms of depression and anxiety in patients with bronchiectasis". *General Hospital Psychiatry* 2014;36: 277-283. PMID: 24602964. I.F.: 2.90. doi: 10.1016/j.genhosppsych.2014.01.010.

Castillo D, Martín-Arroyo I, Moreno A, Balcells E, Villar A, Vicens V, Vendrell M, Belda S, Portillo K, Kettou D, Aparicio F, Molina M; en nombre del grupo CRAMPID. "Histiocitosis pulmonar de células de Langherhans en adultos: Aproximación a la realidad española". *Medicina Clínica*. 2014;143:433-9. doi: 10.1016/j.medcli.2013. PMID: 24726261. I.F.: 2.90. doi: 10.1016/j.medcli.2013.11.039.

### Books:

Chapter 18. Bronchiectasis  
By Montserrat Vendrell, Gerard Muñoz, and Javier de Gracia  
Published in 2014 in Pulmonary Complications of HIV. ERS Monographs.  
DOI: 10.1183/2312508X.10003114  
ISBN (electronic): 978-1-84984-055-2

### Grants for research in progress:

- Estudio randomizado controlado con placebo para evaluar la eficacia de la técnica de drenaje de secreciones ELTGOL en pacientes con bronquiectasias. (PI12/01551)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2013 - 2015  
Montserrat Vendrell

- Estudio randomizado controlado con placebo para evaluar la eficacia de la técnica de drenaje de secreciones ELTGOL en pacientes con bronquiectasias. (R01/12)  
Sponsored by: Col legi Fisioterapeutes Catalunya  
Duration: 2013 - 2015  
Montserrat Vendrell





# MICROBIOLOGY OF THE INTESTINAL DISEASE

## Group members

Group Leaders: **Xavier Aldeguer** and **Jesús García-Gil**

### Post-graduate researchers

- Anna Bahí
- Mariona Serra

### Post-graduate researchers

- David Busquets
- Mireia López
- Josep Oriol Miquel
- Sílvia Viroles

### Collaborators

- Carles Abellà
- Margarita Martínez

### Nursing Staff

- René Freddy Louvreix

## Publications

### Multicentric (I.F.: 3.56):

Calvet X, Panés J, Alfaro N, Hinojosa J, Sicilia B, Gallego M, Pérez I, Lázaro y de Mercado P, Gomollón F; Members of Consensus Group, Aldeguer X, Alós R, Andreu M, Barreiro M, Bermejo F, Casis B, Domènech E, Espín E, Esteve M, García-Sánchez V, López-Sanromán A, Martínez-Montiel P, Luis Mendoza J, Gisbert JP, Vera M, Dosal A, Sánchez E, Marín L, Sanromán L, Pinilla P, Murciano F, Torrejón A, Ramón García J, Ortega M, Roldán J. "Delphi consensus statement: Quality Indicators for Inflammatory Bowel Disease Comprehensive Care Units". *Journal of Crohns & Colitis*. 2014;8:240-51. doi: 10.1016/j.crohns.2013.10.010. PMID: 24295646. IF: 3.56.

### Original (I.F.: 3.42):

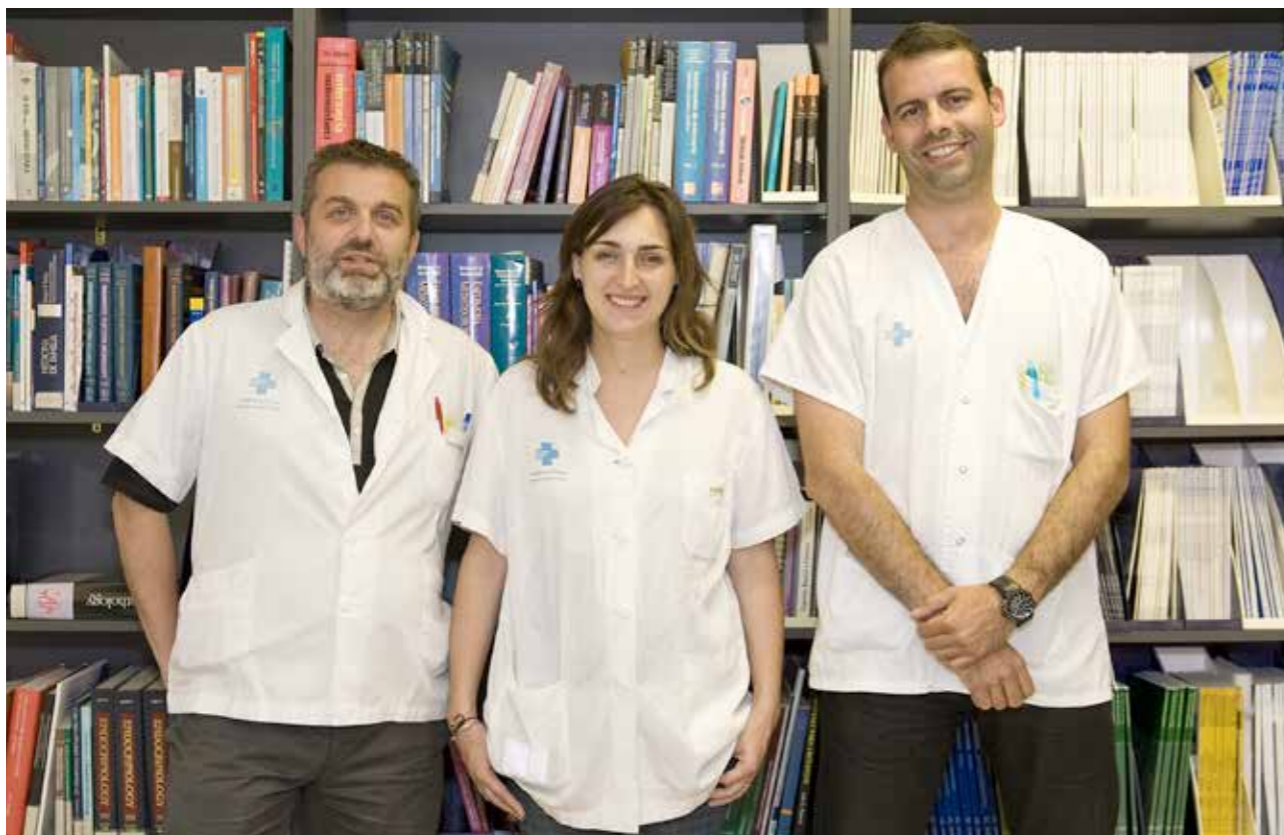
López-Siles M, Martínez-Medina M, Busquets D, Sabat-Mir M, Duncan SH, Flint HJ, Aldeguer X, García-Gil LJ. "Mucosa-associated Faecalibacterium prausnitzii and Escherichia coli co-abundance can distinguish Irritable Bowel Syndrome and Inflammatory Bowel Disease phenotypes". *International Journal of Medical Microbiology*. 2014;304:464-75. PMID: 24713205. IF: 3.42. doi: 10.1016/j.ijmm.2014.02.009.

### Review (I.F.: 3.56):

Magro F, Peyrin-Biroulet L, Sokol H, Aldeguer X, Costa A, Higgins PD, Joyce JC, Katsanos KH, Lopez A, de Xaxars TM, Toader E, Beaugerie L. "Extra-intestinal malignancies in inflammatory bowel disease: results of the 3rd ECCO Pathogenesis Scientific Workshop (III)". *Journal of Crohns & Colitis*. 2014; 8:31-44. PMID: 23721759. IF: 3.56 doi:10.1016/j.crohns.2013.04.006

## Patents:

– Authors: Xavier Aldeguer Manté; Mariona Serra Pagès; Jesús García-Gil; Teresa Mas de Xaxars  
 Title: Method for diagnosing colorectal cancer from a human feces sample by quantitative PCR, primers and kit  
 Patent number: PXEP1522/2013  
 Date granted: 04/03/2014  
 Corporation: Institut d'Investigació Biomèdica de Girona | Universitat de Girona  
 Spin-Off: GOODGUT SL



The idea is to reach to a critical combination of probiotics, prebiotics and innate immune proteins as therapeutic tools that will help in the prevention of type 2 diabetes and other obesity-associated metabolic complications. The increase in bacterial biodiversity could also result in weight loss.



## NUTRITION, EUMETABOLISM AND HEALTH

Recognised as a consolidated research group - 2014 SGR1480

Team involved in:



### Group members

Group Leader: **José-Manuel Fernández-Real**

#### Post-doctorate researchers

- José María Moreno (CIBERObn)
- Francisco José Ortega (CIBERObn)
- María Moreno (CIBERObn)
- Mar Rodríguez

#### Post-graduate researchers

- Emili Loshuertos
- Gemma Xifra

#### Medical researchers

- Josefina Biarnés
- Elisabet Costa
- Eduardo Esteve
- Merçè Fernández
- Gemma Gifre
- Sílvia Mauri
- David Pérez
- Inmaculada Recas
- Mònica Recasens
- Wifredo Ricart
- Lúdia Sojo

#### Collaborators

- Cristina Martínez

#### Technicians

- Isabel Alonso (CIBERObn)
- Mònica Sabater

#### Nursing staff

- Oscar Rovira (CIBERObn)

#### Dietitian

- Cristina Planella

### Strategic objectives

- Microbiome Signature of metabolic diseases:
  - Obesity
  - Type-2 diabetes
  - NASH
- Circulating microRNA profile of metabolic diseases
- Epigenomic Signature of metabolic diseases

### Main line of research

- Inflammation and insulin resistance.
- Proteomics of the adipose tissue.
- Metabolism of iron and insulin resistance.
- Biomarkers for obesity, insulin resistance and Type-2 diabetes.
- Bone as an endocrine organ.
- Vascular disease and inflammation.

## Publications

### Editorial (I.F.: 3.61):

Boström PA, Fernández-Real JM, Mantzoros C. "Irisin in humans: recent advances and questions for future research". *Metabolism*. 2014;63:178–80. PMID: 24342075. I.F.: 3.61.

### Multicentric (I.F.: 3.88):

Vázquez C, Botella-Carretero JI, Corella D, Fiol M, Lage M, Lurbe E, Richart C, Fernández-Real JM, Fuentes F, Ordóñez A, de Cos AI, Salas-Salvadó J, Burguera B, Estruch R, Ros E, Pastor O, Casanueva FF; WISH-CARE Study Investigators. "White fish reduces cardiovascular risk factors in patients with metabolic syndrome: the WISH-CARE study, a multicenter randomized clinical trial". *Nutrition, Metabolism and Cardiovascular Diseases*. 2014;24:328–35. PMID: 24462043. I.F.: 3.88. doi: 10.1016/j.numecd.2013.09.018.

### Originals (I.F.: 150.26):

Guzmán-Ruiz R, Ortega F, Rodríguez A, Vázquez-Martínez R, Díaz-Ruiz A, García-Navarro S, Giral M, García-Ríos A, Cobo-Padilla D, Tinahones FJ, López-Miranda J, Villarroja F, Frühbeck G, Fernández-Real JM, Malagón MM. "Alarmin high-mobility group B1 (HMGB1) is regulated in human adipocytes in insulin resistance and influences insulin secretion in  $\beta$ -cells". *International Journal of Obesity*. 2014;38:1545–54. PMID: 24577317. I.F.: 5.39. doi: 10.1038/ijo.2014.36.

Serrano M, Moreno M, Ortega FJ, Xifra G, Ricart W, Moreno-Navarrete JM, Fernández-Real JM. "Adipose tissue  $\mu$ -Crystallin is a thyroid hormone-binding protein associated with systemic insulin sensitivity". *Journal of Clinical Endocrinology & Metabolism* 2014;99:E2259–68. PMID: 25057873. I.F.: 6.31. doi: 10.1210/jc.2014-1327.

Moreno-Navarrete JM, Ortega F, Moreno M, Ricart W, Fernández-Real JM. "Fine-tuned iron availability is essential to achieve optimal adipocyte differentiation and mitochondrial biogenesis". *Diabetologia*. 2014;57:1957–67. PMID: 24973963. I.F.: 6.88. doi: 10.1007/s00125-014-3298-5.

Bassols J, Moreno-Navarrete J, Carreras-Badosa G, Díaz M, Prats-Puig A, Palomer AM, de Zegher F, Ibáñez L, Fernández-Real JM, López-Bermejo A. "Placental Sprouty 2 (SPRY2): Relation to Placental Growth and Maternal Metabolic Status". *Neonatology*. 2014; 106:120–125. PMID: 24969401. I.F.: 2.37. doi: 10.1159/000362783.

Camargo A, Rangel-Zuñiga OA, Haro C, Meza-Miranda ER,

Peña-Orihuela P, Meneses ME, Marín C, Yubero-Serrano EM, Pérez-Martínez P, Delgado-Lista J, Fernández-Real JM, Luque de Castro MD, Tinahones FJ, Lopez-Miranda J, Pérez-Jiménez F. "Olive oil phenolic compounds decrease the postprandial inflammatory response by reducing postprandial plasma lipopolysaccharide levels". *Food Chemistry*. 2014;162:161–71. PMID: 24874372. I.F.: 3.26.

Moreno M, Puig J, Serrano M, Moreno-Navarrete JM, Ortega F, Ricart W, Fernández-Real JM. "Circulating tryptase as a marker for subclinical atherosclerosis in obese subjects". *PLoS One*. 2014;9:e97014. PMID: 24830464. I.F.: 3.53. doi: 10.1016/j.foodchem.2014.04.047.

Fernández-Real JM, Manco M. "Effects of iron overload on chronic metabolic diseases". *Lancet Diabetes and Endocrinology*. 2014;2:513–26. PMID: 24731656. doi: 10.1016/S2213-8587(13)70174-8. I.F.:9.19.

Moreno-Navarrete JM, Ortega F, Moreno M, Serrano M, Ricart W, Fernández-Real JM. "Lactoferrin gene knockdown leads to similar effects to iron chelation in human adipocytes". *Journal of Cellular and Molecular Medicine* 2014;18:391–5. PMID: 24571258. I.F.: 3.70. doi: 10.1111/jcmm.12234.

Moreno-Navarrete JM, Novelle MG, Catalán V, Ortega F, Moreno M, Gómez-Ambrosi J, Xifra G, Serrano M, Guerra E, Ricart W, Frühbeck G, Diéguez C, Fernández-Real JM. "Insulin resistance modulates iron-related proteins in adipose tissue". *Diabetes Care*. 2014;37:1092–100. PMID: 24496804. I.F.: 8.57. doi: 10.2337/dc13-1602.

Ortega FJ, Mercader JM, Moreno-Navarrete JM, Rovira O, Guerra E, Esteve E, Xifra G, Martínez C, Ricart W, Rieusset J, Rome S, Karczewska-Kupczewska M, Straczkowski M, Fernández-Real JM. "Profiling of circulating microRNAs reveals common microRNAs linked to type 2 diabetes that change with insulin sensitization". *Diabetes Care*. 2014;37:1375–83. PMID: 24478399. I.F.: 8.57. doi: 10.2337/dc13-1847.

Fabrizi M, Marchetti V, Mavilio M, Marino A, Casagrande V, Cavalera M, Moreno-Navarrete JM, Mezza T, Sorice GP, Fiorentino L, Menghini R, Lauro R, Monteleone G, Giaccari A, Fernández-Real JM, Federici M. "IL-21 is a major negative regulator of IRF4-dependent lipolysis affecting Tregs in adipose tissue and systemic insulin sensitivity". *Diabetes*. 2014;63:2086–96. PMID: 24430438. I.F.: 8.47. doi: 10.2337/db13-0939.

Villarejo C, Jiménez-Murcia S, Álvarez-Moya E, Granero R, Penelo E, Treasure J, Vilarrasa N, Gil-Montserrat de Bernabé M, Casanueva FF, Tinahones FJ, Fernández-Real

JM, Frühbeck G, de la Torre R, Botella C, Agüera Z, Menchón JM, Fernández-Aranda F. "Loss of control over eating: a description of the eating disorder/obesity spectrum in women". *European Eating Disorders Review*. 2014;22:25–31. PMID: 24338827. doi: 10.1002/erv.2267. I.F.: ---

Jové M, Moreno-Navarrete JM, Pamplona R, Ricart W, Portero-Otín M, Fernández-Real JM. "Human omental and subcutaneous adipose tissue exhibit specific lipidomic signatures". *FASEB Journal*. 2014;28:1071–81. PMID: 24265485. I.F.: 5.48. doi: 10.1096/fj.13-234419.

Boström PA, Fernández-Real JM. "Metabolism: Irisin, the metabolic syndrome and follistatin in humans". *Nature Reviews Endocrinology*. 2014;10:11–2. PMID: 24247218. I.F.: 12.96. doi: 10.1038/nrendo.2013.230.

Marino A, Menghini R, Fabrizi M, Casagrande V, Mavilio M, Stoehr R, Candi E, Mauriello A, Moreno-Navarrete JM, Gómez-Serrano M, Peral B, Melino G, Lauro R, Fernández Real JM, Federici M. "ITCH deficiency protects from diet-induced obesity." *Diabetes*. 2014;63:550–61. PMID: 24170694. I.F.: 8.47. doi: 10.2337/db13-0802.

Moreno-Navarrete JM, Ortega F, Serrano M, Rodríguez-Hermosa JI, Ricart W, Mingrone G, Fernández-Real JM. "CIDEC/FSP27 and PLIN1 gene expression run in parallel to mitochondrial genes in human adipose tissue, both increasing after weight loss." *International Journal of Obesity*. 2014;38:865–72. PMID: 24126816. I.F.: 5.39. doi: 10.1038/ijo.2013.171.

Ortega FJ, Moreno-Navarrete JM, Mayas D, Serino M, Rodríguez-Hermosa JI, Ricart W, Luche E, Burcelin R, Tinahones FJ, Frühbeck G, Mingrone G, Fernández-Real JM. "Inflammation and insulin resistance exert dual effects on adipose tissue tumor protein 53 expression". *International Journal of Obesity*. 2014; 38:737–45. PMID: 23999197. I.F.: 5.39. doi: 10.1038/ijo.2013.163.

Blasco G, Puig J, Daunis-I-Estadella J, Molina X, Xifra G, Fernández-Aranda F, Pedraza S, Ricart W, Portero-Otín M, Fernández-Real JM. "Brain Iron Overload, Insulin Resistance and Cognitive Performance in Obese Subjects: A Preliminary MRI Case-Control Study". *Diabetes Care*. 2014;37:3076–83. PMID: 25125507. I.F.: 8.57. doi: 10.2337/dc14-0664.

Fernández-Aranda F, Sauchelli S, Pastor A, González ML, de la Torre R, Granero R, Jiménez-Murcia S, Baños R, Botella C, Fernández-Real JM, Fernández-García JC, Frühbeck G, Gómez-Ambrosi J, Rodríguez R, Tinahones FJ, Arcelus J, Fagundo AB, Agüera Z, Miró J, Casanueva FF. "Moderate-vigorous physical activity across body mass index in females:

moderating effect of endocannabinoids and temperament". *PLoS One*. 2014;9:e104534. PMID: 25101961. I.F.: 3.53. doi: 10.1371/journal.pone.0104534.

Pardo M, Crujeiras AB, Amil M, Agüera Z, Jiménez-Murcia S, Baños R, Botella C, de la Torre R, Estivill X, Fagundo AB, Fernández-Real JM, Fernández-García JC, Frühbeck G, Gómez-Ambrosi J, Rodríguez R, Tinahones FJ, Fernández-Aranda F, Casanueva FF. "Association of irisin with fat mass, resting energy expenditure, and daily activity in conditions of extreme body mass index". *International Journal of Endocrinology*. 2014;2014:857270. PMID: 24864142. I.F.: 1.52. doi: 10.1155/2014/857270.

Pérez-Díaz S, Johnson LA, DeKroon RM, Moreno-Navarrete JM, Alzate O, Fernández-Real JM, Maeda N, Arbones-Mainar JM. "Polymerase I and transcript release factor (PTRF) regulates adipocyte differentiation and determines adipose tissue expandability". *FASEB Journal*. 2014;28:3769–79. PMID: 24812087. I.F.: 5.48. doi: 10.1096/fj.14-251165. Epub 2014 May 8.

Baños RM, Cebolla A, Moragrega I, Van Strien T, Fernández-Aranda F, Agüera Z, de la Torre R, Casanueva FF, Fernández-Real JM, Fernández-García JC, Frühbeck G, Gómez-Ambrosi J, Jiménez-Murcia S, Rodríguez R, Tinahones FJ, Botella C. "Relationship between eating styles and temperament in an Anorexia Nervosa, Healthy Control, and Morbid Obesity female simple". *Appetite* 2014;76:76–83. PMID: 24480670. I.F.: 2.52. doi: 10.1016/j.appet.2014.01.012.

Castinetti F, Qi XP, Walz MK, Maia AL, Sansó G, Peczkowska M, Hasse-Lazar K, Links TP, Dvorakova S, Toledo RA, Mian C, Bugalho MJ, Wohllk N, Kollyukh O, Canu L, Loli P, Bergmann SR, Biarnes Costa J, Makay O, Patocs A, Pfeifer M, Shah NS, Cuny T, Brauckhoff M, Bausch B, von Dobschuetz E, Letizia C, Barczynski M, Alevizaki MK, Czertwertynska M, Ugurlu MU, Valk G, Plukker JT, Sartorato P, Siqueira DR, Barontini M, Szperl M, Jarzab B, Verbeek HH, Zelinka T, Vlcek P, Toledo SP, Coutinho FL, Mannelli M, Recasens M, Demarquet L, Petramala L, Yaremchuk S, Zabolotnyi D, Schiavi F, Opocher G, Raczy K, Januszewicz A, Weryha G, Henry JF, Brue T, Conte-Devolx B, Eng C, Neumann HP. "Outcomes of adrenal-sparing surgery or total adrenalectomy in pheochromocytoma associated with multiple endocrine neoplasia type 2: an international retrospective population-based study". *Lancet Oncology*. 2014;15:648–55. PMID: 24745698. I.F.: 24.73. doi: 10.1016/S1470-2045(14)70154-8.

**Reviews (I.F.: 3.34):**

Moreno-Navarrete JM, Fernández-Real JM. "The possible role of antimicrobial proteins in obesity-associated immunologic alterations". *Expert Review of Clinical Immunology*. 2014;10:855-66. PMID: 24758485. I.F.: 3.34. doi: 10.1586/1744666X.2014.911088.

Moreno M, Moreno-Navarrete JM, Fernández-Real JM. "Irisin: a messenger from the gods?". *Clínica e Investigación en Arteriosclerosis*. 2014;26:140-6. PMID: 24332558. doi: 10.1016/j.arteri.2013.11.002. I.F.: ---

**Grants for research in progress:**

- Grup de Recerca Reconegut per la Generalitat de Catalunya  
Reference: 2014 SGR 1480  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
J.M. Fernández-Real

- MicroRNA circulantes y en tejido adiposo como biomarcadores metabólicos (PI11/00214)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2012 - 2015  
J.M. Fernández-Real

- The role of intestinal microflora in non-alcoholic fatty liver disease (FLORINASH)  
Sponsored by: European Commission. Seventh framework programme.  
Duration: 2010 - 2014  
J.M. Fernández-Real (leader WP1)

- CIBERobn. Centro de Investigación Biomédica en Red-Fisiopatología de la Obesidad y Nutrición.  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2006 -----  
J.M. Fernández-Real

- Estudio del posible rol del hierro en la fisiología del tejido adiposo humano en asociación con obesidad y resistencia a la insulina.  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2012 - 2015  
José Maria Moreno-Navarrete

- Circulating microRNAs in prepubertal children as biomarkers of metabolic diseases as type 2 diabetes

Sponsored by: European Association for the Study of Diabetes  
Duration: 2013 - 2014  
Francisco Ortega

**Patents:**

- Authors: José Manuel Fernández-Real, Wifredo Ricart, Antonio Zorzano, Joan Vendrell, Abel López-Bermejo.  
Title: Use of soluble CD14 for treatment of diseases  
Patent number: PCT/EP2004/ 050189  
Date granted: 2004  
Corporation: Mellitus S.L.

- Authors: José Manuel Fernández-Real, Wifredo Ricart, Antonio Zorzano, Joan Vendrell, Abel López-Bermejo.  
Title: Method for detecting a predisposition to develop gestational diabetes mellitus and treatment for this disease.  
Patent number: PCT/EP2004/104777.0 Data de prioritat: 2004  
Corporation: Mellitus S.L.

- Authors: José Manuel Fernández-Real, Wifredo Ricart, Antonio Zorzano, Joan Vendrell, Abel López-Bermejo.  
Title: Use of BPI protein for the treatment of diseases.  
Patent number: EP05106245.3  
Corporation: Mellitus S.L.

- Authors: Francisco José Ortega Delgado, José Manuel Fernández-Real, Gemma Frühbeck, Josep Maria Mercader, Wifredo Ricart  
Title: Método para el diagnóstico y/o pronóstico de obesidad mórbida  
Patent number: ES2654.4  
Corporation: CIBERobn, IDIBGI, Clínica Universidad de Navarra, Barcelona Supercomputing Center.

- Authors: José Maria Moreno Navarrete, José Manuel Fernández-Real, Francesc Villarroya, Wifredo Ricart, Gemma Frühbeck  
Title: MOLÉCULAS ÚTILES PARA EL TRATAMIENTO Y/O PREVENCIÓN DE TRASTORNOS METABÓLICOS ASOCIADOS A OBESIDAD Y RESISTENCIA A INSULINA  
Patent number: ES2654.7  
Corporation: CIBERobn, IDIBGI, Clínica Universidad de Navarra, Barcelona Supercomputing Center.



**Our research is aimed at identifying newer markers for early detection of metabolic abnormalities as a result of prenatal programming. We are studying current strategies based on epigenetic markers that may help design novel strategies to prevent MS early in life.**



## PEDIATRIC ENDOCRINOLOGY

### Group members

Group Leader: **Abel López Bermejo**

### Post-doctorate researchers

- Judit Bassols
- Anna Prats

### Post-graduate researchers

- Alexandra Bonmatí
- Gemma Carreras
- Montserrat Gipsert-Sauch
- Inés Osiniri
- Pilar Soriano

### Medical researchers

- Cristina Armero

### Collaborators

- Cristina Casas
- Lourdes Ibáñez
- Lluís Mayol
- Patrícia Reyner
- Montserrat Ros
- Joan Carles Vilanova
- Francis de Zegher

### Technicians

- Estíbaliz Platero

### Nursing staff

- Ferran Díaz

## Publications

### Originals (I.F.: 35.00):

Díaz M, Aragonés G, Sánchez-Infantes D, Bassols J, Pérez-Cruz M, de Zegher F, López-Bermejo A, Ibáñez L. "Mitochondrial DNA in placenta: associations with fetal growth and superoxide dismutase activity". *Hormone Research in Paediatrics*. 2014;82:303-9. PMID: 25247554. I.F.: 1.71. doi: 10.1159/000366079.

de Zegher F, Pérez-Cruz M, Díaz M, Gómez-Roig MD, López-Bermejo A, Ibáñez L. "Less myostatin and more lean mass in large-born infants from nondiabetic mothers". *Journal of the Clinical Endocrinology and Metabolism*. 2014;99:E2367-71. PMID: 25140402. I.F.: 6.31. doi: 10.1210/jc.2014-2334.

Bassols J, Moreno-Navarrete J, Carreras-Badosa G, Díaz M, Prats-Puig A, Palomer AM, de Zegher F, Ibáñez L, Fernández-Real JM, López-Bermejo A. "Placental Sprouty 2 (SPRY2) : Relation to Placental Growth and Maternal Metabolic Status". *Neonatology*. 2014;106:120-125. PMID: 24969401. I.F.:2.37. doi: 10.1159/000362783.

Ibáñez L, Ong KK, López-Bermejo A, Dunger DB, de Zegher F. "Hyperinsulinaemic androgen excess in adolescent girls". *Nature Reviews. Endocrinology*. 2014; 10:499-508. PMID: 24776733. I.F.: 12.96. doi: 10.1038/nrendo.2014.58.

Prats-Puig A, Soriano-Rodríguez P, Carreras-Badosa G, Riera-Pérez E, Ros-Miquel M, Gomila-Borja A, de Zegher F, Ibáñez L, Bassols J, López-Bermejo A. "Balanced duo of anti-inflammatory SFRP5 and proinflammatory WNT5A in children". *Pediatric Research*. 2014; 75:793-7. PMID: 24603290. I.F.: 2.84. doi: 10.1038/pr.2014.29.

Prats-Puig A, Osiniri I, Soriano-Rodríguez P, Carreras-Badosa G, Buñuel-Álvarez JC, Vila-Pablos C, de Zegher F, Ibáñez L, Bassols J, López-Bermejo A. "Undercarboxylated osteocalcin relates to cardiovascular risk markers in offspring of families with metabolic syndrome". *Atherosclerosis*. 2014; 233:272-7. PMID: 24529156. I.F.: 3.97. doi: 10.1016/j.atherosclerosis.2014.01.002.

Bassols J, Prats-Puig A, Gispert-Sauch M, Crehuet-Almirall M, Carreras-Badosa G, Díaz-Roldán F, Montesinos-Costa M, de Zegher F, Ibáñez L, López-Bermejo A. "Increased serum IgG and IgA in overweight children relate to a less favourable metabolic phenotype". *Pediatric Obesity*. 2014;9:232-8. PMID: 23554403. I.F.: 2.42. doi: 10.1111/j.2047-6310.2013.00160.x.

Sanz N, Díaz M, López-Bermejo A, Sierra C, Fernández A, de Zegher F, Ibáñez L. "Newborns with lower levels of circulating

polyunsaturated fatty acids (PUFA) are abdominally more adipose". *Pediatric Obesity*. 2014;9:e68-72. PMID: 24311559. I.F.: 2.42. doi: 10.1111/j.2047-6310.2013.00200.x.

### Grants for Research in Progress:

- Efectos endocrino-metabólicos, sobre la adiposidad visceral y parámetros de riesgo cardiovascular de la administración de metformina en niños prepuberales con obesidad y marcadores de riesgo para el síndrome metabólico. EC10/252  
Sponsored by: Ministerio de Sanidad y Política Social  
Duration: 2011 - 2014  
Abel López Bermejo

- Plasticidad del desarrollo de obesidad abdominal y riesgo cardiovascular en la infancia.  
Sponsored by: Nutribén  
Duration: 2012 - 2015  
Abel López Bermejo

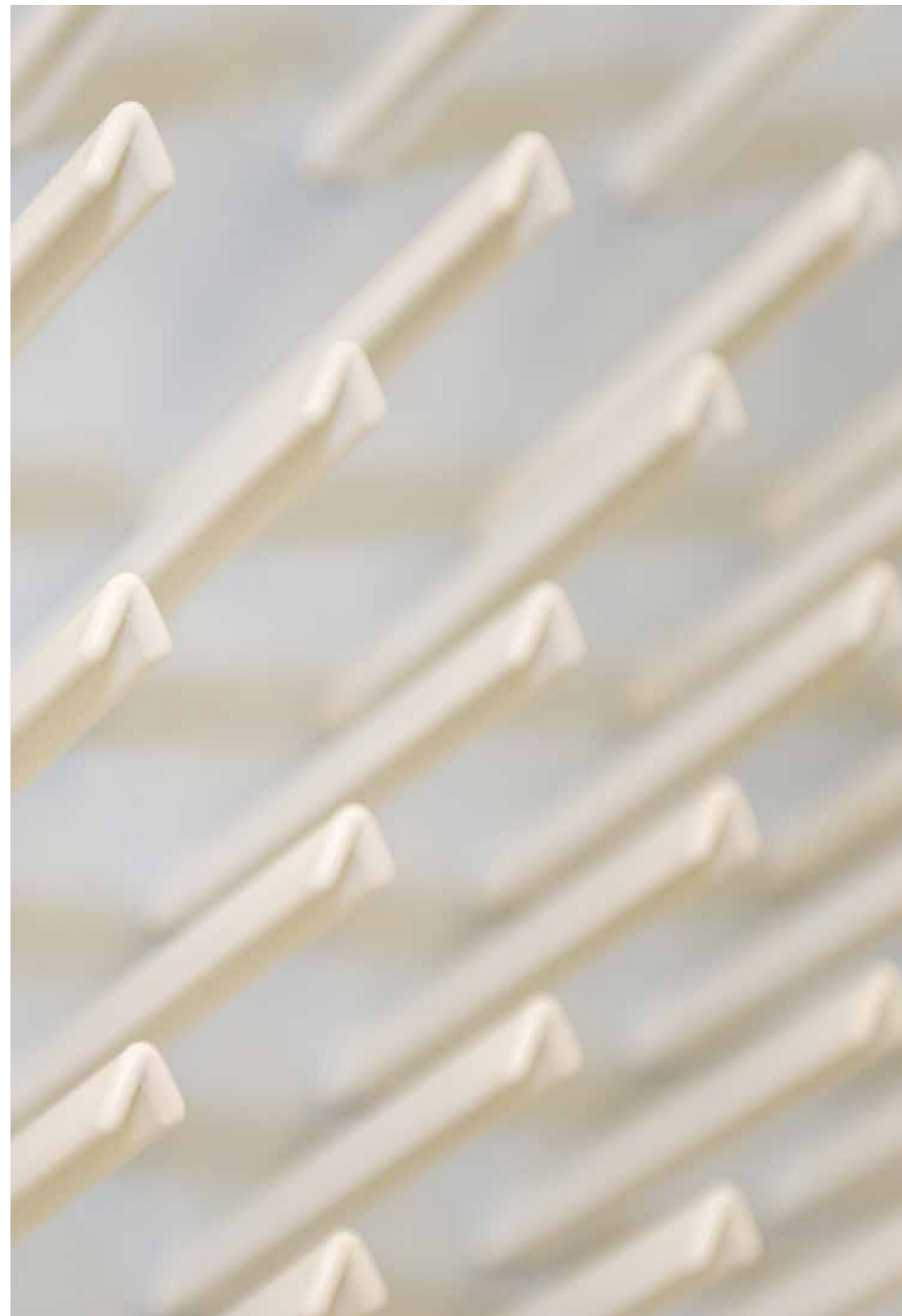
- MoSHCA - My Mobile and Smart Health Care Assistant. ITEA 2 -ip11027  
Sponsored by: Ministerio de Economía y Competitividad  
Duration: 2012 - 2015  
Abel López Bermejo

- Marcas epigenéticas del desarrollo prenatal: Asociación con parámetros de riesgo cardiometabólico en pediatría. (PI13/01257)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2014 - 2016  
Abel López Bermejo

- Els microRNAs com a nous biomarcadors del creixement pre i postnatal.  
Sponsored by: Agrupació de Ciències Mèdiques de Girona  
Duration: 2014  
Abel López Bermejo

- Génesis, genética y neuroendocrinología de la talla baja. Estudio internacional de vigilancia post autorización.  
Sponsored by: Lilly S.A.  
Duration: 2002 -  
Abel López Bermejo

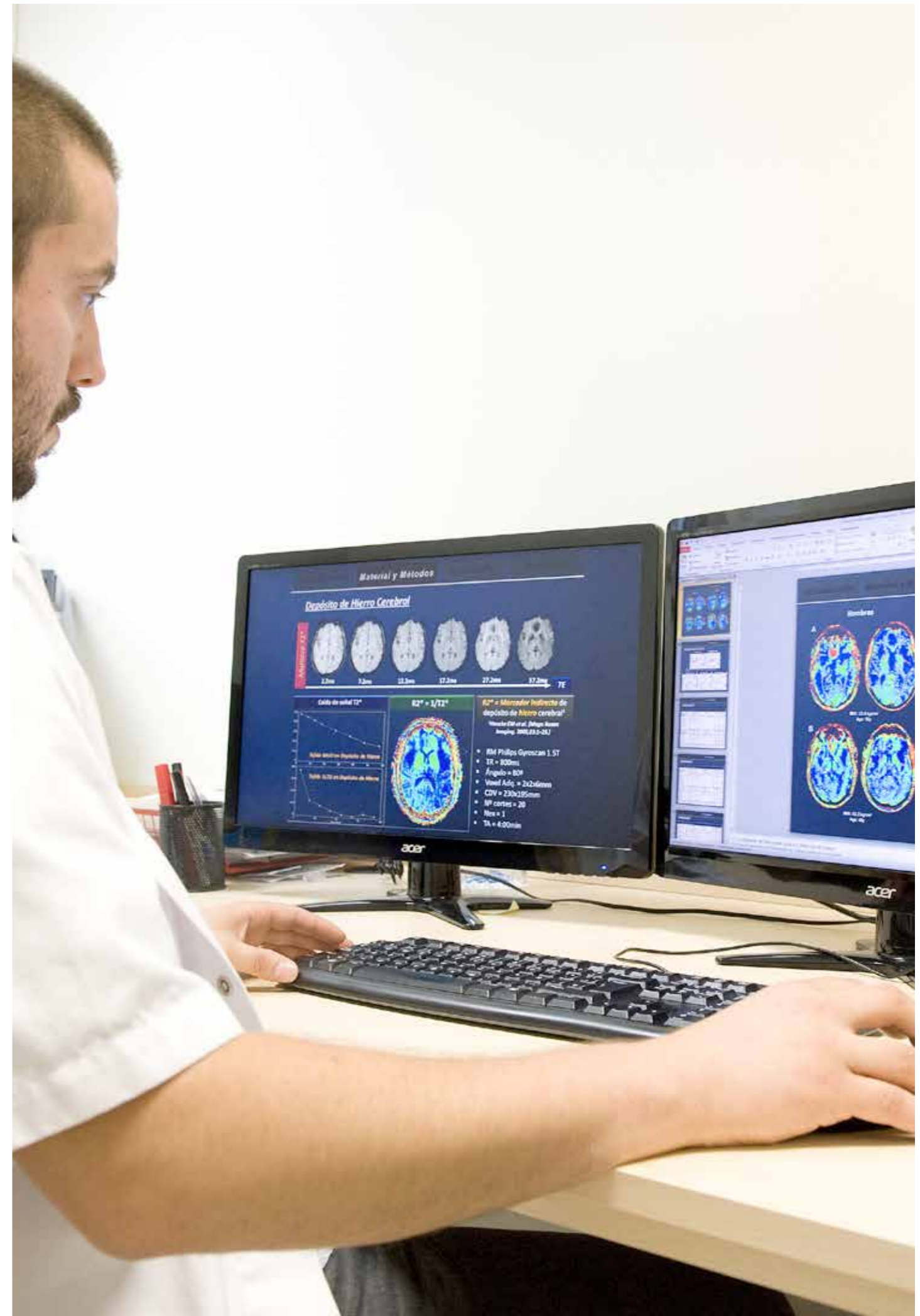
- Identification of circulating micrnas in short children born gestational age: relationship with pre- and postnatal growth and metabolic parameters.  
Sponsored by: Pfizer  
Duration: 2013 - 2015  
Abel López Bermejo



# Neuroscience Area

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AGING, DISABILITY AND HEALTH  
CEREBROVASCULAR PATHOLOGY  
MEDICAL IMAGING  
NEURODEGENERATION  
AND NEUROINFLAMMATION



**Normal and pathological aging.  
Dementia and Alzheimer's /  
Neuropsychology / Psychopathology  
of aging and dementia.  
Adaptation and validation of  
psychometric instruments in the field  
of aging, disability and mental health.  
Epidemiology of aging: frailty,  
disability and dependence.**



## AGING, DISABILITY AND HEALTH

Recognised as a consolidated research group - 2014SGR390

### Group members

Group Leader:  
**Josep Garre-Olmo**

#### Post-doctorate researchers

– Laia Calvó

#### Post-graduate researchers

– Oriol Turró

#### Medical researchers

– Josep Lluís Conde  
– Manuel de Gracia  
– Jordi Llinàs  
– Secundí López-Pousa  
– Joan Vilalta-Franch

#### Collaborators

– Marta Hernández  
– Dagmar Keller  
– Manoli Lonzano

#### Nursing staff

– M<sup>a</sup> Ángeles Lacarra  
– Ivana Trastámara

### Strategic objectives

Consolidation as a reference group in the field of normal and pathological aging

### Main line of research

1. Normal and pathological aging
2. Dementia and Alzheimer's / neuropsychology / psychopathology of aging and dementia
3. Adaptation and validation of psychometric instruments in the field of aging, disability and mental health
4. Epidemiology of aging: frailty, disability and dependency



## Publications

### Originals (I.F.: 18.41):

Conde-Sala JL, Turró-Garriga O, Calvó-Perxas L, Vilalta-Franch J, López-Pousa S, Garre-Olmo J. "Three-year trajectories of caregiver burden in Alzheimer's disease". *Journal of Alzheimers Disease*. 2014;42:623-33. PMID: 24919767. I.F.: 3.61. doi: 10.3233/JAD-140360.

Turró-Garriga O, Garre-Olmo J, López-Pousa S, Vilalta-Franch J, Reñé-Ramírez R, Conde-Sala JL. "Abridged scale for the screening anosognosia in patients with dementia". *Journal of the Geriatric Psychiatry and Neurology*. 2014;27:220-6. PMID: 24700707. I.F.: 1.63. doi: 10.1177/0891988714527515.

Conde-Sala JL, Turró-Garriga O, Garre-Olmo J, Vilalta-Franch J, Lopez-Pousa S. "Discrepancies Regarding the Quality of Life of Patients with Alzheimer's Disease: A Three-Year Longitudinal Study". *Journal of Alzheimers Disease*. 2014;39:511-25. PMID: 24217273. I.F.: 3.61. doi: 10.3233/JAD-131286.

Turró-Garriga O, Conde-Sala JL, Reñé-Ramírez R, López-Pousa S, Gascón-Bayarri J, Garre-Olmo J. "Prevalence of anosognosia in Alzheimer's disease". *Medicina Clínica*. 2014;143:13-9. PMID: 23830548. I.F.: 1.25. doi: 10.1016/j.medcli.2013.04.043.

Conde-Sala JL, Reñé-Ramírez R, Turró-Garriga O, Gascón-Bayarri J, Campdelacreu-Fumadó J, Juncadella-Puig M, Rico-Pons I, Garre-Olmo J. "Severity of Dementia, Anosognosia, and Depression in Relation to the Quality of Life of Patients With Alzheimer Disease: Discrepancies Between Patients and Caregivers". *American Journal of Geriatric Psychiatry*. 2014;22:138-4. PMID: 23567444. I.F.: 3.52. doi: 10.1016/j.jagp.2012.07.001.

Calvó-Perxas L, Turró-Garriga O, Aguirregomez M, Bisbe J, Hernández E, López-Pousa S, Manzano A, Palacios M, Pericot-Nierga I, Perkal H, Ramió L, Vilalta-Franch J, Garre-Olmo J; Registry of Dementias of Girona Study Group (ReDeGi Study Group). "Psychotropic drugs in patients with Alzheimer's Disease: a longitudinal study by the Registry of Dementias of Girona (ReDeGi) in Catalonia, Spain". *Journal of the American Medical Directors Association*. 2014;15:497-503. PMID: 24637090. I.F.: 4.78. doi: 10.1016/j.jamda.2014.02.003.

## Grants for Research in Progress:

- Projecte AD-retina. Estudi de les troballes fundoscòpiques i tomogràfiques a la retina de pacients amb malaltia d'Alzheimer.

Sponsored by: Instituto de Salud Carlos III. Fondo de Investigación Sanitaria

Duration: 2012 - 2014

Miguel Ángel Zapata Victori

- Estudi Multidisciplinar sobre la Maduresa i l'Envel·liment Satisfactori a Girona (MESGI 50).

Sponsored by: Dipsalut

Duration: 2013 - 2014

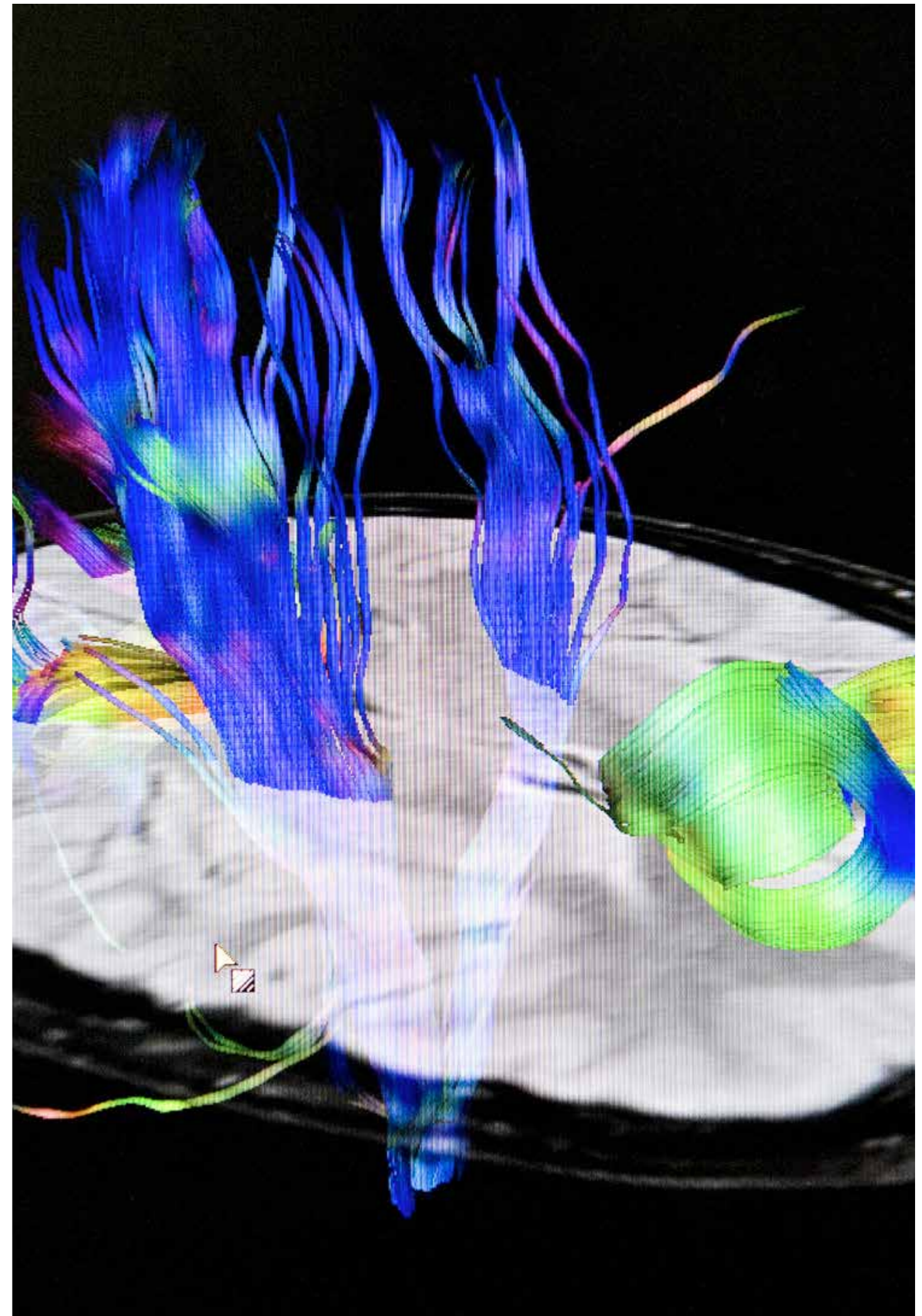
Josep Garre Olmo

- Estudi multicèntric d'adaptació i validació de la frontotemporal dementia rating scale.

Sponsored by: Agrupació Ciències Mèdiques de Girona

Duration: 2013 - 2014

Oriol Turró Garriga



# Study of biomarkers predicting progress of ischemic lesions. Prediction of clinical evaluation in patients with cerebral hemorrhage through the study of image markers based on magnetic resonance imaging tractography.



## CEREBROVASCULAR PATHOLOGY

Team involved in "Red de Enfermedades Vasculares Cerebrales (RED INVICTUS)"  
Recognised as a consolidated research group - 2014SGR1198

### Group members

Group Leader:  
**María del Mar Castellanos**

### Post-doctorate researchers

- Gemma Huguet
- Elisabet Kádár
- Juan Manuel Sánchez

### Post-graduate researchers

- Carme Gubern
- Mikel Terceño
- Cecile Van Eendenburg

### Medical researchers

- Joaquín Serena
- Yolanda Silva

### Nursing staff

- Berta Jordan
- Laura Pardo

### Strategic objectives

1. Increase the number of publications as first / last author.
2. Strengthening the critical mass of group in the section on basic research within the institution.
3. Mantein the collaboration with other groups national and international in the same main line of investigation.

### Main lines of research

Study of predictive biomarkers for the evolution of ischemic and hemorrhagic brain injury

## Publications

### Multicentrics (I.F.: 41.29):

Chamorro A, Amaro S, Castellanos M, Segura T, Arenillas J, Martí-Fàbregas J, Gállego J, Krupinski J, Gomis M, Cánovas D, Carné X, Deulofeu R, Román LS, Oleaga L, Torres F, Planas AM; URICO-ICTUS Investigators. "Safety and efficacy of uric acid in patients with acute stroke (URICO-ICTUS): a randomised, double-blind phase 2b/3 trial". *Lancet Neurology*. 2014;13:453-60. PMID: 24703208. I.F.:21.82. doi: 10.1016/S1474-4422(14)70054-7.

Pergola PE, White CL, Szychowski JM, Talbert R, Brutto OD, Castellanos M, Graves JW, Matamala G, Pretell EJ, Yee J, Rebello R, Zhang Y, Benavente OR; SPS3 Investigators. "Achieved Blood Pressures in the Secondary Prevention of Small Subcortical Strokes (SPS3) Study: Challenges and Lessons Learned". *American Journal of Hypertension*. 2014;27:1052-60. PMID: 24610884. I.F.: 3.40. doi: 10.1093/ajh/hpu027.

Abilleira S, Cardona P, Ribó M, Millán M, Obach V, Roquer J, Cánovas D, Martí-Fàbregas J, Rubio F, Álvarez-Sabin J, Dávalos A, Chamorro A, de Miquel MA, Tomasello A, Castaño C, Macho JM, Ribera A, Gallofré M; Catalan Stroke Code and Reperfusion Consortium. "Outcomes of a contemporary cohort of 536 consecutive patients with acute ischemic stroke treated with endovascular therapy". *Stroke*. 2014;45:1046-52. PMID: 24595590. I.F.: 6.02. doi: 10.1161/STROKEAHA.113.003489.

Elkind MS, Luna JM, McClure LA, Zhang Y, Coffey CS, Roldan A, Del Brutto OH, Pretell EJ, Pettigrew LC, Meyer BC, Tapia J, White C, Benavente OR; LIMITS Investigators. "C-reactive protein as a prognostic marker after lacunar stroke: levels of inflammatory markers in the treatment of stroke study". *Stroke*. 2014;45:707-16. PMID: 24523037. I.F.: 6.02. doi: 10.1161/STROKEAHA.113.004562.

Thomalla G, Fiebach JB, Østergaard L, Pedraza S, Thijs V, Nighoghossian N, Roy P, Muir KW, Ebinger M, Cheng B, Galinovic I, Cho TH, Puig J, Boutitie F, Simonsen CZ, Endres M, Fiehler J, Gerloff C; WAKE-UP investigators. "A multicenter, randomized, double-blind, placebo-controlled trial to test efficacy and safety of magnetic resonance imaging-based thrombolysis in wake-up stroke (WAKE-UP)". *International Journal of Stroke*. 2014;9:829-36. PMID: 23490032. I.F.: 4.03. doi: 10.1111/ijvs.12011.

### Originals (I.F.: 65.77):

Abilleira S, Ribera A, Dávalos A, Ribó M, Chamorro A, Cardona P, Molina CA, Martínez-Yélamos A, Urrea X, Dorado L, Roquer J, Martí-Fàbregas J, Aja L, Tomasello A, Castaño C, Blasco J, Cánovas D, Castellanos M, Krupinski J, Guimaraens L, Perendreu J, Ustrell X, Purroy F, Gómez-Choco M, Baiges JJ, Cocho D, Saura J, Gallofré M. "Functional Outcome After Primary Endovascular Therapy or IV Thrombolysis Alone for Stroke. An Observational, Comparative Effectiveness Study". *Cerebrovascular Diseases*. 2014;38:328-336. PMID: 25428822. I.F.: 3.70. doi: 10.1159/000368433.

Mallolas J, Rodríguez R, Gubern C, Camós S, Serena J, Castellanos M. "A Polymorphism in the Promoter Region of the Survivin Gene is Related to Hemorrhagic Transformation in Patients with Acute Ischemic Stroke". *Neuromolecular Medicine*. 2014;16:856-61. PMID: 25344020. I.F.: 3.89. doi: 10.1007/s12017-014-8333-7.

Bustamante A, Sobrino T, Giralt D, García-Berrocoso T, Llombart V, Ugarriza I, Espadaler M, Rodríguez N, Sudlow C, Castellanos M, Smith CJ, Rodríguez-Yáñez M, Waje-Andreassen U, Tanne D, Oto J, Barber M, Worthmann H, Wartenberg KE, Becker KJ, Chakraborty B, Oh SH, Whiteley WN, Castillo J, Montaner J. "Prognostic value of blood interleukin-6 in the prediction of functional outcome after stroke: A systematic review and meta-analysis". *Journal of Neuroimmunology*. 2014;274:215-24. PMID: 25091431. I.F.:2.79. doi: 10.1016/j.jneuroim.2014.07.015.

Besalú E, Castellanos M, Sanchez JM. "Sequential discriminant classification of environments with different levels of exposure to tobacco smoke". *Science of the Total Environment*. 2014;490:899-904. PMID: 24908649. I.F.: 3.16. doi: 10.1016/j.scitotenv.2014.05.093.

Calvó-Perxas L, Turró-Garriga O, Aguirregomozcorta M, Bisbe J, Hernández E, López-Pousa S, Manzano A, Palacios M, Pericot-Nierga I, Perkal H, Ramió L, Vilalta-Franch J, Garre-Olmo J; Registry of Dementias of Girona Study Group (ReDeGi Study Group). "Psychotropic drugs in patients with Alzheimer's Disease: a longitudinal study by the Registry of Dementias of Girona (ReDeGi) in Catalonia, Spain". *Journal of the American Medical Directors Association*. 2014;15:497-503. PMID: 24637090. I.F.: 4.78. doi: 10.1016/j.jamda.2014.02.003.

Camós S, Gubern C, Sobrado M, Rodríguez R, Romera VG, Moro MÁ, Lizasoain I, Serena J, Mallolas J, Castellanos M. "Oct-2 transcription factor binding activity and expression up-regulation in rat cerebral ischaemia is associated with a diminution of neuronal damage in vitro". *Neuromolecular Medicine*. 2014;16:332-49. PMID: 24282026. I.F.: 3.89. doi:

10.1007/s12017-013-8279-1.

Thaler DE, Ruthazer R, Weimar C, Mas JL, Serena J, Di Angelantonio E, Papetti F, Homma S, Mattle HP, Nedeltchev K, Mono ML, Jaigobin C, Michel P, Elkind MS, Di Tullio MR, Lutz JS, Griffith J, Kent DM. "Recurrent stroke predictors differ in medically treated patients with pathogenic vs other PFOs". *Neurology*. 2014;83:221-6. PMID:24928123. I.F.: 8.30. doi: 10.1212/WNL.0000000000000589.

Wessler BS, Thaler DE, Ruthazer R, Weimar C, Di Tullio MR, Elkind MS, Homma S, Lutz JS, Mas JL, Mattle HP, Meier B, Nedeltchev K, Papetti F, Di Angelantonio E, Reisman M, Serena J, Kent DM. "Transesophageal echocardiography in cryptogenic stroke and patent foramen ovale: analysis of putative high-risk features from the risk of paradoxical embolism database". *Circulation-Cardiovascular Imaging*. 2014;7:125-31. PMID: 24214884. I.F.: 6.75. doi: 10.1161/CIRCIMAGING.113.000807.

Rodríguez-Luna D, Dowlatshahi D, Aviv RI, Molina CA, Silva Y, Dzialowski I, Lum C, Czlonkowska A, Boulanger JM, Kase CS, Gubitz G, Bhatia R, Padma V, Roy J, Stewart T, Huynh TJ, Hill MD, Demchuk AM; PREDICT/Sunnybrook ICH CTA Study Group. "Venous phase of computed tomography angiography increases spot sign detection, but intracerebral hemorrhage expansion is greater in spot signs detected in arterial phase". *Stroke*. 2014;45:734-9. PMID: 24481974. I.F.: 6.02. doi: 10.1161/STROKEAHA.113.003007.

Thaler DE, Ruthazer R, Weimar C, Serena J, Mattle HP, Nedeltchev K, Mono ML, Di Angelantonio E, Elkind MS, Di Tullio MR, Homma S, Michel P, Meier B, Furlan AJ, Lutz JS, Kent DM. "Determinants of antithrombotic choice for patent foramen ovale in cryptogenic stroke". *Neurology*. 2014;83:1954-7. PMID: 25339209. I.F.: 8.30. doi: 10.1212/WNL.0000000000001007.

Camós S, Gubern C, Sobrado M, Rodríguez R, Romera VG, Moro MA, Lizasoain I, Serena J, Mallolas J, Castellanos M. "The high-mobility group I-Y transcription factor is involved in cerebral ischemia and modulates the expression of angiogenic proteins". *Neuroscience*. 2014;269:112-30. PMID: 24680881. I.F.: 3.33. doi: 10.1016/j.neuroscience.2014.03.036.

Gubern C, Camós S, Hurtado O, Rodríguez R, Romera VG, Sobrado M, Cañadas R, Moro MA, Lizasoain I, Serena J, Mallolas J, Castellanos M. "Characterization of Gcf2/Lrrfip1 in experimental cerebral ischemia and its role as a modulator of Akt, mTOR and  $\beta$ -catenin signaling pathways". *Neuroscience*. 2014;268:48-65. PMID: 24637094. I.F.: 3.33. doi: 10.1016/j.neuroscience.2014.02.051.

Millán M, Aleu A, Almendrote M, Serena J, Castaño C, Roquer J, Pérez de la Ossa N, Gomis M, Dorado L, López-Cancio E, García-Bermejo P, Hernández-Pérez M, Dávalos A. "Safety and effectiveness of endovascular treatment of stroke with unknown time of onset". *Cerebrovascular Diseases*. 2014;37:134-40. PMID: 24481476. I.F.: 3.70. doi: 10.1159/000357419.

Purroy F, Jiménez Caballero PE, Gorospe A, Torres MJ, Alvarez-Sabin J, Martínez-Sánchez P, Cánovas D, Freijo M, Egido JA, Ramírez-Moreno JM, Alonso-Arias A, Rodríguez-Campello A, Casado-Naranjo I, Martí-Fàbregas J, Silva Y, Cardona P, Morales A, García-Pastor A, Arenillas JF, Segura T, Jiménez C, Masjuán J. "How predictors and patterns of stroke recurrence after a TIA differ during the first year of follow-up". *Journal Neurology*.2014;261:1614-21. PMID: 24912470. I.F.: 3.84. doi: 10.1007/s00415-014-7390-z.

### Reviews (I.F.: 3.87):

Alonso de Leciñana M, Egido JA, Casado I, Ribó M, Dávalos A, Masjuan J, Caniego JL, Martínez Vila E, Díez Tejedor E; ad hoc committee of the SEN Study Group for Cerebrovascular Diseases, Fuentes B, Álvarez-Sabin J, Arenillas J, Calleja S, Castellanos M, Castillo J, Díaz-Otero F, López-Fernández JC, Freijo M, Gállego J, García-Pastor A, Gil-Núñez A, Gilo F, Irimia P, Lago A, Maestre J, Martí-Fàbregas J, Martínez-Sánchez P, Molina C, Morales A, Nombela F, Purroy F, Rodríguez-Yañez M, Roquer J, Rubio F, Segura T, Serena J, Simal P, Tejada J, Vivancos J. "Guidelines for the treatment of acute ischaemic stroke". *Neurología*. 2014; 29:102-22. PMID: 22152803. I.F.: 1.35. doi: 10.1016/j.nrl.2011.09.012.

Fuentes B, Gállego J, Gil-Núñez A, Morales A, Purroy F, Roquer J, Segura T, Tejada J, Lago A, Díez-Tejedor E; por el Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN; Alonso de Leciñana M, Alvarez-Sabin J, Arenillas J, Calleja S, Casado I, Castellanos M, Castillo J, Dávalos A, Díaz-Otero F, Egido JA, López-Fernández JC, Freijo M, García Pastor A, Gilo F, Irimia P, Maestre J, Masjuan J, Martí-Fàbregas J, Martínez-Sánchez P, Martínez-Vila E, Molina C, Nombela F, Ribó M, Rodríguez-Yañez M, Rubio F, Serena J, Simal P, Vivancos J; Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN. "Guidelines for the preventive treatment of ischaemic stroke and TIA (II). Recommendations according to aetiological sub-type". *Neurología*. 2014;29:168-83. PMID: 21937151. I.F.: 1.35. doi: 10.1016/j.nrl.2011.06.003.

Vivancos J, Gilo F, Frutos R, Maestre J, García-Pastor A, Quintana F, Roda JM, Ximénez-Carrillo A; por el Comité ad hoc del Grupo de Estudio de Enfermedades Cerebrovasculares de la SEN; Díez Tejedor E, Fuentes B,

Alonso de Leciana M, Álvarez-Sabin J, Arenillas J, Calleja S, Casado I, Castellanos M, Castillo J, Dávalos A, Díaz-Otero F, Egido JA, Fernández JC, Freijo M, Gállego J, Gil-Núñez A, Irimia P, Lago A, Masjuan J, Martí-Fàbregas J, Martínez-Sánchez P, Martínez-Vila E, Molina C, Morales A, Nombela F, Purroy F, Ribó M, Rodríguez-Yáñez M, Roquer J, Rubio F, Segura T, Serena J, Simal P, Tejada J. "Guía de actuación clínica en la hemorragia subaracnoidea. Sistemática diagnóstica y tratamiento". *Neurología*. 2014;29:353-70. PMID: 23044408. I.F.: 1.35. doi: 10.1016/j.nrl.2012.07.009

### Grants for research in progress:

- Red de Enfermedades Vasculares Cerebrales (ICTUS): RED INVICTUS (RD12/0014/0010).

Sponsored by: Instituto de Salud Carlos III

Duration: 2013 - 2015

Mar Castellanos

- Transformación hemorrágica en isquemia cerebral tras administracion de RT-PA: Participación de biomarcadores endoteliales y endotelio-protección mediante administracion de peptidos (PI13/02258).

Sponsored by: Instituto de Salud Carlos III

Duration: 2014 - 2016

Mar Castellanos

- Grup de Recerca Reconegut per la Generalitat de Catalunya.

Reference: 2014 SGR 1198

Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2014 - 2016

Mar Castellanos



The research of the group has been focused on the validation and qualification of Imaging Biomarkers on Medicine. We have published relevant papers mainly on Stroke and Brain tumors imaging. The group is international leader in the research about the utility of Diffusion Tensor Imaging (DTI) in the management of stroke patients to predict the clinical outcome.



## MEDICAL IMAGING

### Group members

Group Leader: **Salvador Pedraza**

#### Post-graduate researchers

- Elda Balliu
- Brigitte Beltran
- Gerard Blasco
- Jorge Guibernau
- Elsa Pérez
- Josep Puig
- Laia Valls

#### Medical researchers

- Arantxa Gelabert
- Eva Gómez
- Gemma Laguillo
- Albert Maroto

#### Collaborators

- Josep Daunis
- Francisco Reina

#### Technicians

- Joan Banyos

#### Nursing staff

- Javier Molina

### Strategic objectives

Validation of Imaging Biomarkers.

### Main line of research

Validation of the usefulness of Diffusion Tensor in the management and prognosis of stroke patients.  
 Validation of the usefulness of Diffusion Tensor in the assessment of the evolution time of stroke.  
 Validation of the usefulness of the Diffusion/FLAIR mismatch in the treatment of patients with wake-up stroke.  
 Validation of perfusion CT in the diagnosis of stroke.  
 Usefulness of the study of arterial wall elasticity in the prediction of cardiovascular risk.  
 Usefulness of intravascular contrast in defining the real extension of aggressive brain tumors.  
 Usefulness of the Diffusion Tensor in the assessment of lumbar disc degeneration.  
 Validation of echographic biomarkers (mean intima-media index degree d; hepatic steatosis) on estimating the metabolic syndrome in obese patients.  
 Usefulness of Diffusion Tensor in the management of patients with hydrocephaly.

## Publications

### Multicentric (I.F.: 4.03):

Thomalla G, Fiebach JB, Ostergaard L, Pedraza S, Thijs V, Nighoghossian N, Roy P, Muir KW, Ebinger M, Cheng B, Galinovic I, Cho TH, Puig J, Boutitie F, Simonsen CZ, Endres M, Fiehler J, Gerloff C; WAKE-UP investigators. "A multicenter, randomized, double-blind, placebo-controlled trial to test efficacy and safety of magnetic resonance imaging-based thrombolysis in wake-up stroke (WAKE-UP)." *International Journal of Stroke*. 2014;9:829-36. PMID: 23490032. I.F.: 4.03. doi: 10.1111/ijis.12011.

### Originals (I.F.: 24.14):

Blasco G, Puig J, Daunis-I-Estadella J, Molina X, Xifra G, Fernández-Aranda F, Pedraza S, Ricart W, Portero-Otín M, Fernández-Real JM. "Brain Iron Overload, Insulin Resistance and Cognitive Performance in Obese Subjects: A Preliminary MRI Case-Control Study". *Diabetes Care*. 2014;37:3076-83. PMID: 25125507. I.F.: 8.57. doi: 10.2337/dc14-0664

Cheng B, Forkert ND, Zavaglia M, Hilgetag CC, Golsari A, Siemonsen S, Fiehler J, Pedraza S, Puig J, Cho TH, Alawneh J, Baron JC, Ostergaard L, Gerloff C, Thomalla G. "Influence of stroke infarct location on functional outcome measured by the modified rankin scale". *Stroke*. 2014;45:1695-702. PMID: 24781084. I.F.: 6.02. doi: 10.1161/STROKEAHA.114.005152

Galovic I, Puig J, Neeb L, Guibernau J, Kemmling A, Siemonsen S, Pedraza S, Cheng B, Thomalla G, Fiehler J, Fiebach JB. "Visual and region of interest-based inter-rater agreement in the assessment of the diffusion-weighted imaging-fluid-attenuated inversion recovery mismatch". *Stroke*. 2014;45:1170-2. PMID: 24558091. I.F.: 6.02. doi: 10.1161/STROKEAHA.113.002661.

Moreno M, Puig J, Serrano M, Moreno-Navarrete JM, Ortega F, Ricart W, Fernandez-Real JM. "Circulating tryptase as a marker for subclinical atherosclerosis in obese subjects". *PLoS One*. 2014;9:e97014. PMID: 24830464. I.F.: 3.53. doi: 10.1371/journal.pone.0097014

## Grants for Research in Progress:

- Efficacy and safety of MRI-based thrombolysis in wake-up stroke: a randomised, double-blind, placebo-controlled trial (HEALTH-F2-2011- 278276).

Grant: European Comission  
Duration: 2011-2016  
Salvador Pedraza

- Desarrollo de un biomarcador radiológico basado en el análisis de la conectividad estructural y funcional en pacientes con infarto cerebral agudo para la predicción de la recuperación funcional (PI13/02545).

Grant: Instituto de Salud Carlos III  
Duration: 2014-2016  
Salvador Pedraza



**Multiple Sclerosis (MS) currently lacks a clear prognosis as to the clinical evolution on diagnosis. Our multidisciplinary research group consisting aims to respond to the different challenges presented by MS, broaden our knowledge of the disease, and to transfer this knowledge to the society.**



## NEURODEGENERATION AND NEUROINFLAMMATION

Team involved in "Red Española de Esclerosis Múltiple (REEM)"  
Recognised as a consolidated research group - 2014SGR627

### Group members

Group Leader: **Lluís Ramió**

#### Post-doctorate researchers

- Jordi Gich
- Ester Quintana

#### Medical researchers

- David Genís
- Fabian Márquez
- Ana Quiles
- René Robles

#### Collaborators

- Brigitte Beltrán
- Laura Fábregas
- Pepi López
- Hector Perkal

#### Technicians

- Judith Oriol
- Neus Pueyo

#### Nursing staff

- Judit Guerrero
- Miguel Merchan
- Miguel Ángel Robles

### Strategic objectives

- Be the reference group in the province of Girona for research and education in multiple sclerosis and other neurodegenerative diseases.
- Have a national and international presence in the field of research into multiple sclerosis.
- Consolidate clinical research in multiple sclerosis.
- Initiate and consolidate basic research into multiple sclerosis.
- Promote and lead research into new treatments for multiple sclerosis.
- Initiate clinical research into other neurodegenerative diseases (Parkinson's disease).
- Consolidate clinical research into hereditary ataxia.
- Establish research collaboration with other national and international groups working on multiple sclerosis.
- Promote research into multiple sclerosis in nursing and neuropsychology.
- Promote training and education in multiple sclerosis for healthcare professionals, specialists and affected patients and their family.

### Main lines of research

#### Priority clinical-healthcare lines:

1. Study of neuropsychological disorders and cognitive rehabilitation in multiple sclerosis.
2. Study of the emotional impact, ability to cope, and adaptation to the diagnosis of multiple sclerosis.
3. Study of fatigue in multiple sclerosis.
4. Improve compliance with immunomodulatory treatment in multiple sclerosis.
5. Application of new brain MRI techniques as prognosis markers in multiple sclerosis.
6. Computer-based organisation of lesions detected by brain MRI in patients with multiple sclerosis.

#### Priority lines in basic research:

1. Study of the gene expression in demyelinating diseases including multiple sclerosis.
2. Study of the molecular expression in multiple sclerosis as a model of chronic inflammatory disease.
3. Determination of biological prognosis factors in cerebrospinal fluid and serum for the evolution of multiple sclerosis (genetic factors, biochemical factors, environmental factors such as vitamin D, virus and others).
4. Determination of biological response factors (genetic and biochemical) to immunomodulatory treatments in multiple sclerosis.
5. Bank of DNA, CSF and serum samples of neuroimmunological diseases.

## Publications

### Multicentric (I.F.: 21.82):

Confavreux C, O'Connor P, Comi G, Freedman MS, Miller AE, Olsson TP, Wolinsky JS, Bagulho T, Delhay JL, Dukovic D, Truffinet P, Kappos L; TOWER Trial Group. "Oral teriflunomide for patients with relapsing multiple sclerosis (TOWER): a randomised, double-blind, placebo-controlled, phase 3 trial". *Lancet Neurology*. 2014;13:247-56. PMID: 24461574. I.F.: 21.82. doi: 10.1016/S1474-4422(13)70308-9.

### Originals (I.F.: 20.25):

Roura E, Oliver A, Cabezas M, Vilanova JC, Rovira A, Ramió-Torrentà L, Lladó X. "MARGA: Multispectral Adaptive Region Growing Algorithm for brain extraction on axial MRI". *Computer Methods and Programs in Biomedicine*. 2014;113:655-73. PMID: 24380649. I.F.: 1.09. doi: 10.1016/j.cmpb.2013.11.015.

Diez Y, Oliver A, Cabezas M, Valverde S, Martí R, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X. "Intensity Based Methods for Brain MRI Longitudinal Registration. A Study on Multiple Sclerosis Patients". *Neuroinformatics*. 2014;12:365-79. PMID: 24338728. I.F.: 3.10. doi: 10.1007/s12021-013-9216-z.

Balasa M, Gelpi E, Rey M, Vila J, Ramió-Torrentà L, Quiles Granado AM, Molina Latorre R, Lepidi H, Raoult D, Saiz A. "Clinical And Neuropathological Variability In Clinically Isolated Central Nervous System Whipple's Disease". *Brain Pathology*. 2014;24:230-8. PMID: 24320005. I.F.: 4.35. doi: 10.1111/bpa.12113.

Robles-Cedeño R, Fures JF, Molins A, Muñoz LM, Ramió-Torrentà L. "A Moroccan patient with Vogt-Koyanagi-Harada syndrome and bilateral Adie's pupils". *Neurological Sciences*. 2014;35:483-5. PMID: 24162178. I.F.: 1.50. doi: 10.1007/s10072-013-1567-6.

Calvó-Perxas L, Turró-Garriga O, Aguirregomozcorta M, Bisbe J, Hernández E, López-Pousa S, Manzano A, Palacios M, Pericot-Nierga I, Perkal H, Ramió-Torrentà L, Vilalta-Franch J, Garre-Olmo J; Registry of Dementias of Girona Study Group (ReDeGi Study Group). "Psychotropic drugs in patients with Alzheimer's Disease: a longitudinal study by the Registry of Dementias of Girona (ReDeGi) in Catalonia, Spain". *Journal of the American Medical Directors Association*. 2014;15:497-503. PMID: 24637090. I.F.: 4.78. doi: 10.1016/j.jamda.2014.02.003.

Cabezas M, Oliver A, Valverde S, Beltran B, Freixenet J, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X.

"BOOST: a supervised approach for multiple sclerosis lesion segmentation". *Journal of Neuroscience Methods*. 2014;237:108-17. PMID: 25194638. I.F.: 1.96. doi: 10.1016/j.jneumeth.2014.08.024.

Cabezas M, Oliver A, Roura E, Freixenet J, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X. "Automatic multiple sclerosis lesion detection in brain MRI by FLAIR thresholding". *Computer Methods and Programs in Biomedicine*. 2014;115:147-61. PMID: 24813718. I.F.: 1.09. doi: 10.1016/j.cmpb.2014.04.006.

Ganiler O, Oliver A, Diez Y, Freixenet J, Vilanova JC, Beltran B, Ramió-Torrentà L, Rovira A, Lladó X. "A subtraction pipeline for automatic detection of new appearing multiple sclerosis lesions in longitudinal studies". *Neuroradiology*. 2014;56:363-74. PMID: 24590302. I.F.: 2.37. doi: 10.1007/s00234-014-1343-1.

### Reviews (I.F.: 2.78):

Fernández O, Álvarez-Cermeno JC, Arnal-García C, Arroyo-González R, Brieva L, Calles-Hernández MC, Casanova-Estruch B, Comabella M, García-Merino JA, Izquierdo G, Meca-Lallana JE, Mendibe-Bilbao MM, Muñoz-García D, Olascoaga J, Oliva-Nacarino P, Oreja-Guevara C, Prieto JM, Ramió-Torrentà L, Romero-Pinel L, Saiz A, Rodríguez-Antigüedad A, Grupo Post-Ectrimis GP. "Review of the novelties presented at the 29th congress of the european committee for treatment and research in multiple sclerosis (ECTRIMS) (I)". *Revista de Neurología*. 2014;59:269-80. PMID: 25190340. I.F.: 0.93

Fernández Ó, Álvarez-Cermeño JC, Arnal-García C, Arroyo-González R, Brieva L, Calles-Hernández MC, Casanova-Estruch B, Comabella M, García-Merino JA, Izquierdo G, Meca-Lallana JE, Mendibe-Bilbao Mdel M, Muñoz-García D, Olascoaga J, Oliva-Nacarino P, Oreja-Guevara C, Prieto J, Ramió-Torrentà L, Romero-Pinel L, Saiz A, Rodríguez-Antigüedad A; Grupo Post-ECTRIMS. "Review of the novelties presented at the 29th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) (II)". *Revista de Neurología*. 2014;59:307-16. PMID: 25245875. I.F.: 0.93

Fernández Ó, Álvarez-Cermeño JC, Arnal-García C, Arroyo-González R, Brieva L, Calles-Hernández MC, Casanova-Estruch B, Comabella M, García-Merino JA, Izquierdo G, Meca-Lallana J, Mendibe-Bilbao Mdel M, Muñoz-García D, Olascoaga J, Oliva-Nacarino P, Oreja-Guevara C, Prieto J, Ramió-Torrentà L, Romero-Pinel L, Saiz A, Rodríguez-Antigüedad A, Grupo Post-ECTRIMS. "Review of the novelties presented at the 29th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) (III)". *Revista de Neurología*. 2014;59:371-9. PMID: 25297480. I.F.: 0.93.

## Grants for research in progress:

- Red Española de Esclerosis Múltiple (REEM) (RD07/0060/0022)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2008 - 2014  
Lluís Ramió

- Grup de Recerca Reconegut per la Generalitat de Catalunya  
Reference: 2014 SGR 627  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Jordi Gich

- Papel de los miRNA en la esclerosis múltiple. Estudio de miRNAs en líquido cefalorraquídeo específicos para cada uno de los subtipos clínicos y de la respuesta a tratamiento. (PI13/01782)  
Sponsored by: Instituto de Salud Carlos III  
Duration: 2014 - 2016  
Lluís Ramió

- Connectivity in multiple sclerosis. Quantifying imaging biomarkers involved in cognitive dysfunction in multiple sclerosis based on structural and functional connectivity (CONNECTIMS).  
Sponsored by: Novartis  
Duration: 2014 - --  
Lluís Ramió

- Determinacion en LCR de miRNAs implicados en las lesiones cerebrales activas de esclerosis multiple.  
Sponsored by: Fundación Genzyme  
Duration: 2014 - 2017  
Lluís Ramió



# Oncology and hematology Area



**HEPATOBIILIARY & PANCREATIC SURGERY AND ONCOLOGY**  
**DESCRIPTIVE EPIDEMIOLOGY, GENETICS AND CANCER PREVENTION**  
**HEMATOLOGY**  
**MOLECULAR ONCOLOGY**



# HEPATOBILIARY & PANCREATIC SURGERY AND ONCOLOGY

## Group members

Group Leader: **Joan Figueras**

### Post-doctorate researchers

- M<sup>re</sup> José Ferri
- Rosa Peracaula

### Pre-doctorate researchers

- Margarida Casadevall
- Júlia Gil
- Cristina Meléndez
- Helena Salvador

### Medical researchers

- Maite Albiol
- Adelaida García
- Raquel Guardado
- Xavi Hernández
- Santiago López-Ben
- Bernat Queralt
- Jordi Soriano



## Strategic objectives

Clinical research on liver cancer, biliary tract and pancreas

## Main lines of research

Liver metastases of colon cancer  
 Biochemical markers of pancreatic cancer  
 Surgical technique of pancreatic tumors and periampullar area  
 Development of minimally invasive oncologic surgery for pancreatic and liver tumors

## Publications

### Editorial (I.F.: 2.35):

Figueras J, Belghiti J. "The ALPPS approach: should we sacrifice basic therapeutic rules in the name of innovation?" *World Journal of Surgery*. 2014; 38:1520-1. PMID: 24756547. I.F.: 2.35. doi: 10.1007/s00268-014-2540-0.

### Originals (I.F.: 12.31):

Bassagañas S, Carvalho S, Dias AM, Pérez-Garay M, Ortiz MR, Figueras J, Reis CA, Pinho SS, Peracaula R. "Pancreatic cancer cell glycosylation regulates cell adhesion and invasion through the modulation of  $\alpha 2\beta 1$  integrin and E-cadherin function". *PLoS One*. 2014;9:e98595. PMID: 24878505. I.F.: 3.53. doi: 10.1371/journal.pone.0098595.

Badia JM, Nve E, Jimeno J, Guirao X, Figueras J, Arias-Díaz J. "Surgical management of acute cholecystitis. Results of a nation-wide survey among Spanish surgeons". *Cirugía Española*. 2014;92:517-24. PMID: 24857607. I.F.: 0.89. doi: 10.1016/j.ciresp.2014.01.014.

Nari GA, Palacios RO, Russo N, López BS, Albiol M, Falgueras L, Castro E, Codina-Barreras A, Figueras J. "Liver resections as radical surgery for hepatic hydatidosis: results in 50 patients". *Acta Gastroenterológica Latinoamericana*. 2014;44:39-44. PMID: 24847628. I.F.: - - -

López-Ben S, Palacios O, Codina-Barreras A, Albiol MT, Falgueras L, Castro E, Figueras J. "Pure laparoscopic liver resection reduces surgical site infections and hospital stay. Results of a case-matched control study in 50 patients". *Langenbeck's Archives of Surgery*. 2014;399:307-14. PMID: 24526221. I.F.: 2.16. doi: 10.1007/s00423-014-1169-7.

Nari GA, Palacios OG, Lopez-Ben S, Albiol M, Falgueras L, Castro-Gutiérrez E, Figueras J. "Hilar cholangiocarcinoma: The number of positive nodes and positive node/total node ratio is a significant prognostic factor for survival". *Cirugía Española*. 2014;92:247-53. PMID: 24314612. I.F.: 0.89. doi: 10.1016/j.ciresp.2013.07.015.

Ramía JM, Bernardo C, Valdivieso A, Dopazo C, Jover JM, Albiol MT, Pardo F, Fernández Aguilar JL, Gutiérrez Calvo A, Serrablo A, Díez Valladares L, Pereira F, Sabater L, Muffak K, Figueras J. "Multicentre study on hepatic adenomas". *Cirugía Española*. 2014;92:120-5. PMID: 23827931. I.F.: 0.89. doi: 10.1016/j.ciresp.2012.12.003.

Vera R, Gómez Dorransoro M, López-Ben S, Viudez A, Queralt B, Hernández I, Ortiz-Duran MR, Zazpe C, Soriano

J, Amat I, Herrera Cabezon J, Díaz E, Codina-Barreras A, Hernández-Yagüe X, Quera A, Figueras J. "Retrospective analysis of pathological response in colorectal cancer liver metastases following treatment with bevacizumab". *Clinical and Translational Oncology*. 2014;16:739-45. PMID: 24338508. I.F.: 1.60. doi: 10.1007/s12094-013-1142-x.

Ramía JM, Serrablo A, De la Plaza R, Esarte J, Gijón L, Sarria L, Figueras J, García-Parreño J. "Is Radical Surgery Feasible in Liver Hydatid Cysts in Contact with the Inferior Vena Cava?" *World Journal of Surgery*. 2014;38:2940-5. PMID: 24889413. I.F.: 2.35. doi: 10.1007/s00268-014-2658-0.

### Review (I.F.: 0.89):

Ramía JM, Fabregat J, Pérez-Miranda M, Figueras J. "Disconnected pancreatic duct syndrome". *Cirugía Española*. 2014;92:4-1. PMID: 23845879. I.F.: 0.89. doi: 10.1016/j.ciresp.2013.02.024.

### Grants for research in progress:

- Ventajas hemodinámicas y metabólicas del pinzamiento hilar selectivo en las resecciones hepáticas segmentarias frente al pinzamiento hilar completo (PI11/01269). Sponsored by: Instituto de Salud Carlos III Duration: 2012 - 2016  
Joan Figueras Felip



**Cancer registries are the key component of a knowledge management system for cancer, contributing to:**

- **Scientific research into causes and management**
- **An evidence base for policy making**
- **The monitoring of policy implementation**



## DESCRIPTIVE EPIDEMIOLOGY, GENETICS AND CANCER PREVENTION

### Group members

Group Leader: **Rafael Marcos Gragera**

#### Post-doctorate researchers

- Sonia del Barco
- Rafael Fuentes
- Adelaida García-Velasco
- Gemma Osca
- Bernat Serdà
- Neus Vilar

#### Post-graduate researchers

- Monserrat Puig

#### Medical researchers

- Carme Carmona
- Angel Izquierdo
- Jordi Rubió
- Loreto Vilardell

#### Technicians

- Anna Vidal

#### Nursing Staff

- Montse Puigdemont

#### Documentalist

- Martí Rispu

#### Collaborators

- Judit Moreno

#### Secretary

- Joana Fuentes

### Strategic objectives

#### 1. Descriptive and analytical epidemiology of cancer

- Population-based cancer registry in the province of Girona (national and international collaborations).
  - a) Incidence and prevalence of cancer
  - b) Population Cancer Survivorship (International collaborations: EURO CARE studies and CONCORD).
- Study of the prognostic factors both genetic and molecular in breast cancer and hematologic tumors.
- Study of environmental and genetic factors of risk in breast cancer and chronic lymphocytic leukemia.

#### 2. Cancer prevention

- Assessment of the screening program for breast cancer and colon cancer.
- Benefits and adverse effects of screening for breast cancer: methods to improve the measurement of results of early detection.
- Assessment interval cancer rate and its determinants in the program of early detection of breast cancer the Girona Health Region.
- Evaluation of opportunistic screening program for cervical cancer.
- Determination of the sensitivity and specificity of cervical cytology.
- Evaluation of the effectiveness of HPV vaccines.

#### 3. Genetics (Cancer Genetic Epidemiology)

- Assessment of the risk of developing cancer
- Study of the genetic risk factors for cancer
- Genetic Predisposition of cancer

#### Main lines of research

Descriptive and analytic epidemiology of cancer

## Publications

### Case Report (I.F.: 3.74):

Bosch-Barrera J, Sais E, Lorencio C, Porta R, Izquierdo A, Menéndez JA, Brunet J, Sirvent JM, Rosell R. "Successful empirical erlotinib treatment of a mechanically ventilated patient newly diagnosed with metastatic lung adenocarcinoma". *Lung Cancer*. 2014;86:102-104. PMID: 25097032. I.F.: 3.74. doi: 10.1016/j.lungcan.2014.07.010.

### Multicentrics (I.F.: 90.23):

Sant M, Minicozzi P, Mounier M, Anderson LA, Brenner H, Holleccek B, Marcos-Gragera R, Maynadié M, Monnereau A, Osca-Gelis G, Visser O, De Angelis R; EUROCORE-5 Working Group. "Survival for haematological malignancies in Europe between 1997 and 2008 by region and age: results of EUROCORE-5, a population-based study". *Lancet Oncology*. 2014;15:931-42. PMID: 25030467. I.F.: 24,73. doi: 10.1016/S1470-2045(14)70282-7.

Vilaprinyo E, Forné C, Carles M, Sala M, Pla R, Castells X, Domingo L, Rue M; Interval Cancer (INCA) Study Group. "Cost-effectiveness and harm-benefit analyses of risk-based screening strategies for breast cancer". *PLoS One*. 2014;9:e86858. PMID: 24498285. I.F.: 3.53. doi: 10.1371/journal.pone.0086858.

Domingo L, Salas D, Zubizarreta R, Baré M, Sarriguarte G, Barata T, Ibáñez J, Blanch J, Puig-Vives M, Fernández A, Castells X, Sala M; INCA Study Group. "Tumor phenotype and breast density in distinct categories of interval cancer: results of population-based mammography screening in Spain". *Breast Cancer Research*. 2014;16:R3. PMID: 24410848. I.F.: 5.88. doi: 10.1186/bcr3595.

Gatta G, Botta L, Rossi S, Aareleid T, Bielska-Lasota M, Clavel J, Dimitrova N, Jakab Z, Kaatsch P, Lacour B, Mallone S, Marcos-Gragera R, Minicozzi P, Sánchez-Pérez MJ, Sant M, Santaquilani M, Stiller C, Tavilla A, Trama A, Visser O, Peris-Bonet R; EUROCORE Working Group. "Childhood cancer survival in Europe 1999-2007: results of EUROCORE-5--a population-based study". *Lancet Oncology*. 2014;15:35-47. PMID: 24314616. I.F.: 24.73. doi: 10.1016/S1470-2045(13)70548-5.

De Angelis R, Sant M, Coleman MP, Francisci S, Baili P, Pierannunzio D, Trama A, Visser O, Brenner H, Ardanaz E, Bielska-Lasota M, Engholm G, Nennecke A, Siesling S, Berrino F, Capocaccia R; EUROCORE-5 Working Group. "Cancer survival in Europe 1999-2007 by country and age: results of EUROCORE--5-a population-based study". *Lancet Oncology*. 2014;15:23-34. PMID: 24314615. I.F.: 24.73

Arnold M, Holterhues C, Hollestein LM, Coebergh JW, Nijsten T, Pukkala E, Holleccek B, Tryggvadóttir L, Comber H, Bento MJ, Diba CS, Micallef R, Primic-Žakelj M, Izarzugaza MI, Perucha J, Marcos-Gragera R, Galceran J, Ardanaz E, Schaffar R, Pring A, de Vries E. "Trends in incidence and predictions of cutaneous melanoma across Europe up to 2015". *Journal of the European Academy of Dermatology and Venereology*. 2014;28:1170-8. PMID: 23962170. I.F.: 3.11. doi: 10.1016/S1470-2045(13)70546-1.

Blanch J, Sala M, Ibáñez J, Domingo L, Fernández B, Otegi A, Barata T, Zubizarreta R, Ferrer J, Castells X, Rué M, Salas D; INCA Study Group. (Marcos-Gragera R, Puig-Vives M). "Impact of risk factors on different interval cancer subtypes in a population-based breast cancer screening programme". *PLoS One*. 2014 Oct 21;9(10):e110207. PMID: 25333936. IF:3.53. doi: 10.1371/journal.pone.0110207.

### Originals (I.F.: 34.77):

Renart-Vicens G, Puig-Vives M, Albanell J, Castañer F, Ferrer J, Carreras M, Tarradas J, Sala M, Marcos-Gragera R. "Evaluation of the interval cancer rate and its determinants on the Girona health region's early breast cancer detection program". *BMC Cancer*. 2014;14:558. PMID: 25085350. I.F.: 3.32. doi: 10.1186/1471-2407-14-558.

Fuentes-Raspall R, Puig-Vives M, Guerra-Prio S, Pérez-Bueno F, Marcos-Gragera R. "Population-based survival analyses of central nervous system tumors from 1994 to 2008. An updated study in the temozolomide-era". *Cancer Epidemiology*. 2014;38:244-7. PMID: 24794586. I.F.: 2.56. doi: 10.1016/j.canep.2014.03.014.

Serdà Ferrer BC, Valle AD, Marcos-Gragera R. "Prostate cancer and quality of life: analysis of response shift using triangulation between methods". *Journal of Gerontological Nursing*. 2014;40:32-41. PMID: 24529387. I.F.: 0.62. doi: 10.3928/00989134-20140211-01.

Puig-Vives M, Osca-Gelis G, Camprubí-Font C, Vilardell ML, Izquierdo A, Marcos-Gragera R. "Proportion of breast cancer in women aged 50 to 69 years from Girona according to detection method". *Medicina Clínica*. 2014;143:300-302. PMID: 24378145. I.F.: 1.25. doi: 10.1016/j.medcli.2013.09.042

Ribes J, Esteban L, Clèries R, Galceran J, Marcos-Gragera R, Gispert R, Ameijide A, Vilardell ML, Borrás J, Puigdefabregas A, Buxó M, Freitas A, Izquierdo A, Borrás JM. "Cancer incidence and mortality projections up to 2020 in Catalonia by means of Bayesian models". *Clinical and Translational Oncology*. 2014;16:714-24. PMID: 24338506. I.F.: 1.60. doi: 10.1007/s12094-013-1140-z.

Rubió-Casadevall J, Borrás JL, Carmona C, Ameijide A, Osca G, Vilardell L, Izquierdo A, Galceran J, Marcos-Gragera R. "Temporal trends of incidence and survival of sarcoma of digestive tract including Gastrointestinal Stromal Tumours (GIST) in two areas of the north-east of Spain in the period 1981-2005: a population-based study". *Clinical and Translational Oncology*. 2014;16:660-7. PMID: 24248893. I.F.: 1.60. doi: 10.1007/s12094-013-1131-0.

Clèries R, Esteban L, Borrás J, Marcos-Gragera R, Freitas A, Carulla M, Buxó M, Puigdefabregas A, Izquierdo A, Gispert R, Galceran J, Ribes J. "Time trends of cancer incidence and mortality in Catalonia during 1993-2007". *Clinical and Translational Oncology*. 2014;16:18-28. PMID: 23740137. I.F.: 1.60. doi: 10.1007/s12094-013-1060-y.

Stiller CA, Trama A, Brewster DH, Verne J, Bouchardy C, Navarro C, Chirlaque MD, Marcos-Gragera R, Visser O, Serraino D, Weiderpass E, Dei Tos AP, Ascoli V; RARECARE Working Group. "Descriptive epidemiology of Kaposi sarcoma in Europe. Report from the RARECARE project". *Cancer Epidemiology*. 2014;38:670-8. PMID: 25454979. I.F.: 2.56. doi: 10.1016/j.canep.2014.09.009.

Renart Vicens G, Zafra MS, Moreno-Crespi J, Ferrer BC, Marcos-Gragera R. "Incidence variation of prostate and cervical cancer according to socioeconomic level in the Girona Health Region". *BMC Public Health*. 2014;14:1079. PMID: 25325921. I.F.: 2.32. doi: 10.1186/1471-2458-14-1079.

Mbulaiteye SM, Morton LM, Sampson JN, Chang ET, Costas L, de Sanjosé S, Lightfoot T, Kelly J, Friedberg JW, Cozen W, Marcos-Gragera R, Slager SL, Birmann BM, Weisenburger DD. "Medical history, lifestyle, family history, and occupational risk factors for sporadic Burkitt lymphoma/leukemia: the Interlymph Non-Hodgkin Lymphoma Subtypes Project". *Journal of the National Cancer Institute Monographs*. 2014;2014:106-14. doi: 10.1093/jncimonographs/lgu003. PMID: 25174031. I.F.: --

Serdà BC, Marcos-Gragera R. "Urinary Incontinence and Prostate Cancer: A Progressive Rehabilitation Program Design". *Rehabilitation Nursing*. 2014;39:271-80. PMID: 23780825. I.F.: 0.85. doi: 10.1002/rnj.110.

Ruano MA, López-Bonet E, Buxó M, Tuca-Rodríguez F, Vila-Camps E, Alvarez E, Martín-Castillo B, Menendez JA. "An improved axillary staging system using the OSNA assay does not modify the therapeutic management of breast cancer patients". *Scientific Reports*. 2014;4:5743. PMID: 25034150. I.F.: 5.08. doi: 10.1038/srep05743.

Travier N, Fonseca-Nunes A, Javierre C, Guillamo E, Arribas L, Peiró I, Buckland G, Moreno F, Urruticoechea A, Oviedo GR, Roca A, Hurtós L, Ortega V, Muñoz M, Garrigós L, Cirauqui B, Del Barco S, Arcusa A, Seguí MA, Borrás JM, Gonzalez CA, Agudo A. "Effect of a diet and physical activity intervention on body weight and nutritional patterns in overweight and obese breast cancer survivors". *Medical Oncology*. 2014;31:783. PMID: 24310809. IF: 2.06. doi: 10.1007/s12032-013-0783-5.

Roso-Llorach A, Forné C, Macià F, Galceran J, Marcos-Gragera R, Rué M. "Assessing the impact of early detection biases on breast cancer survival of Catalan women". *SORT journal*. 2014; 38:139-160. IF: 0.96.

Ibáñez R, Autonell J, Sardà M, Crespo N, Pique P, Pascual A, Martí C, Fibla M, Gutiérrez C, Lloveras B, Moreno-Crespi J, Torrent A, Baixeras N, Alejo M, Bosch FX, de Sanjosé S. "Protecting the underscreened women in developed countries: the value of HPV test". *BMC Cancer*. 2014;14:574. PMID: 25102758. I.F.: 3.32. doi: 10.1186/1471-2407-14-574.

Ibáñez R, Félez-Sánchez M, Godínez JM, Guardiola C, Caballero E, Juve R, Combalia N, Bellosillo B, Cuevas D, Moreno-Crespi J, Pons L, Autonell J, Gutierrez C, Ordi J, de Sanjosé S, Bravo IG. "Interlaboratory reproducibility and proficiency testing within the human papillomavirus cervical cancer screening program in Catalonia, Spain". *Journal of Clinical Microbiology*. 2014;52:1511-8. PMID: 24574284. IF: 4.23. doi: 10.1128/JCM.00100-14.

Serdà i Ferrer BC, del Valle A. "A rehabilitation program for Alzheimer's disease". *Journal of Nursing Research*. 2014; 22:192-9. doi: 10.1097/jnr.000000000000046. PMID: 25111112. IF: 0.84.

Bernat-Carles Serdà Ferrer. "Calidad de Vida y Gerontología: Descripción de una línea de investigación". *European Journal of Investigation in Health, Psychology and Education*. 2014; 4: 301-308. doi: 10.1989/ejihpe.v4i3.77.

### Review (I.F.: 1.60):

Gil-Gil MJ, Martínez-García M, Sierra A, Conesa G, Del Barco S, González-Jiménez S, Villà S. "Breast cancer brain metastases: a review of the literature and a current multidisciplinary management guideline". *Clinical & Translational Oncology*. 2014;16:436-46. PMID: 24277572. IF: 1.60. doi: 10.1007/s12094-013-1110-5.

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**Grants for research in progress:**

- Estudio multicaso-control de base poblacional (cáncer de mama y leucemia linfática crónica) (PI11/02213).

Sponsored by: Instituto de Salud Carlos III. Fondo de Investigación Sanitaria (FIS)

Duration: 01/01/2012 - 31/12/2014

Beneficiary: Loreto Vilardell Gil

- Evaluación del efecto del programa de detección precoz del cáncer de mama de la "Regió Sanitaria de Girona" mediante el cruce con Registro Poblacional de Cáncer de Girona.

Sponsored by: Ministerio de Educación. Programa de Formación del Profesorado Universitario (FPU).

Duration: 2010 - 2014

Beneficiary: Rafael Marcos-Gragera / Marc Sáez

Beneficiary: Montserrat Puig

- Epidemiologia de les neoplasies hematològiques.

Sponsored by: Agaur. Programa de Formació d'investigadors (FI)

Duration: 2010 - 2014

Beneficiary: Rafael Marcos-Gragera / Marc Sáez

Beneficiary: Gemma Osca



**Our group has been investigating the impact of mHAg mismatches on clinical outcome after allogeneic hematopoietic stem cell transplantation from an HLA-identical sibling donor. Currently, we have DNA samples and clinical information from more than 1700 patient/donor pairs ready to analyse the correlation between genotype and clinical outcome.**



## HEMATOLOGY

Team involved in "Red Temática de Investigación Cooperativa en Cáncer (RTICC)"  
Recognised as a consolidated research group - 2014SGR21

### Group members

Group Leader: **David Gallardo Giralt**

### Post-doctorate researchers

- Anna Bosch
- Nazly Santos

### Technicians

- Rocío Rodríguez

### Collaborators

- Rosa Coll
- Cristalina Fernández
- Yolanda González
- Ramon Guardia
- Nichollas Kelleher
- Natàlia Lloveras
- Josep M<sup>a</sup> Roncero
- Esperanza Tuset

### Publications

#### Multicentric (I.F.: 27.74):

Mateos MV, Oriol A, Martínez-López J, Teruel AI, López de la Guía A, López J, Bengoechea E, Pérez M, Martínez R, Palomera L, de Arriba F, González Y, Hernández JM, Granell M, Bello JL, Bargay J, Peñalver FJ, Martín-Mateos ML, Paiva B, Montalbán MA, Bladé J, Lahuerta JJ, San-Miguel JF. "Update of the GEM2005 trial comparing VMP/VTP as induction in elderly multiple myeloma patients: do we still need alkylators?" *Blood*. 2014;124:1887-93. PMID: 25102853. I.F.: 9.78

Ribera JM, Oriol A, Morgades M, Montesinos P, Sarrà J, González-Campos J, Brunet S, Tormo M, Fernández-Abellán P, Guàrdia R, Bernal MT, Esteve J, Barba P, Moreno MJ, Bermúdez A, Cladera A, Escoda L, García-Boyeró R, Del Potro E, Bergua J, Amigo ML, Grande C, Rabuñal MJ, Hernández-Rivas JM, Feliu E. "Treatment of high-risk Philadelphia chromosome-negative acute lymphoblastic leukemia in adolescents and adults according to early cytologic response and minimal residual disease after consolidation assessed by flow cytometry: final results of the PETHEMA ALL-AR-03 trial". *Journal of Clinical Oncology*. 2014;32:1595-604. PMID: 24752047. I.F.: 17.88. doi: 10.1200/JCO.2013.52.2425.

#### Originals (I.F.: 17.48):

Xicoy B, Jiménez MJ, García O, Bargay J, Martínez-Robles V, Brunet S, Arilla MJ, Pérez de Oteyza J, Andreu R, Casaño FJ, Cervero CJ, Bailén A, Díez M, González B, Vicente AI, Pedro C, Bernal T, Luño E, Cedena MT, Palomera L, Simiele A, Calvo JM, Marco V, Gómez E, Gómez M, Gallardo D, Muñoz J, de Paz R, Grau J, Ribera JM, Benlloch LE, Sanz G. "Results of treatment with azacitidine in patients aged  $\geq 75$  years included in the Spanish Registry of Myelodysplastic Syndromes". *Leukemia and Lymphoma*. 2014;55:1300-3. PMID: 23952246. I.F.: 2.61. doi: 10.3109/10428194.2013.834532

Motlló C, Sancho JM, Grifols JR, Juncà J, Morgades M, Ester A, Rodríguez I, Vives S, Batlle M, Guardia R, Ferrà C, Gallardo D, Millà F, Feliu E, Ribera JM. "Mobilization and engraftment of peripheral blood stem cells in healthy related donors  $>55$  years old". *Cytotherapy*. 2014;16:406-11. PMID: 24176544. I.F.: 3.10. doi: 10.1016/j.jcyt.2013.08.005.

Rozman M, Navarro JT, Arenillas L, Aventin A, Giménez T, Alonso E, Perea G, Camós M, Navarrete M, Tuset E, Florensa L, Millà F, Nomdedéu J, de la Banda E, Díaz-Beyá M, Pratcorona M, Garrido A, Navarro B, Brunet S, Sierra J, Esteve J; on behalf of Grup Català de Citologia Hematològica and Spanish CETLAM Group (Grupo Cooperativo Para el Estudio y Tratamiento de las Leucemias Agudas Mieloblásticas). "Multilineage dysplasia is associated with a poorer prognosis

in patients with de novo acute myeloid leukemia with intermediate-risk cytogenetics and wild-type NPM1". *Annals of Hematology*. 2014;93:1695-70. PMID: 24824767. I.F.: 2.39. doi: 10.1007/s00277-014-2100-6.

Díaz-Beyá M, Brunet S, Nomdedéu J, Tejero R, Díaz T, Pratcorona M, Tormo M, Ribera JM, Escoda L, Duarte R, Gallardo D, Heras I, Queipo de Llano MP, Bargay J, Monzo M, Sierra J, Navarro A, Esteve J. "MicroRNA expression at diagnosis adds relevant prognostic information to molecular categorization in patients with intermediate-risk cytogenetic acute myeloid leukemia". *Leukemia*. 2014;28:804-12. PMID: 24072101. I.F.: 9.38. doi: 10.1038/leu.2013.281.

#### Grants for research in progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 21).

Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2014 - 2016

David Gallardo

- Biobanco de aloTPH del GETH. Polimorfismos en antígenos menores de histocompatibilidad y genes moduladores de respuesta inmune como predictores de alorreactividad (PI11/01690).

Sponsored by: Instituto de Salud Carlos III

Duration: 2012 - 2014

David Gallardo

- Minor Histocompatibility antigens as mediators of immune alloreactivity in human transplantation.

Sponsored by: Fundació Marató TV3.

Duration: 2013 - 2015

David Gallardo





**Bioenergetic metabolism of tumour stem cells.**  
**Molecular and pre-clinical basis for the metabolic treatment of cancer.**  
**Autophagy and Cancer.**  
**Autophagy in tumor stem cells.**  
**Autophagy and resistance to cancer treatments.**



## MOLECULAR ONCOLOGY

Recognised as a consolidated research group - 2014SGR229

### Group members

Group Leader: **Javier A. Menéndez**

### Post-doctorate researchers

– **Elisabet Cuyàs**

### Post-graduate researchers

– **Bruna Corominas**

### Collaborators

– **Joaquim Bosch**  
 – **Eugeni López**  
 – **Begoña Martín**

### Strategic objectives

1. Definition of a new intrinsic characteristic ("hallmark") of cancer: "METABO-STEMNESS" (the bioenergetic metabolism as a causal mechanism of the properties of self-renovation, immortality and pluripotency of tumor stem cells).
2. Treatment of cancer through strategies to reprogram the tumor metabolism: Repositioning of anti-metabolic drugs from other diseases to increase and diversify the arsenal of anti-tumor drugs.

### Main lines of research

#### Metabolism and cancer

Bioenergetic metabolism of tumour stem cells.  
 Molecular and pre-clinical basis for the metabolic treatment of cancer.  
 Autophagy and Cancer.  
 Autophagy in tumor stem cells.  
 Autophagy and resistance to cancer treatments.

#### Bioenergetic Metabolism, Autophagy And Aging

Biocompounds: Anti-Tumor And Anti-Aging Activity.  
 Repositioning Of Anti-Metabolic Drugs For The Metabolic Treatment Of Cancer

## Publications

### Case Report (I.F.: 5.61):

Bosch-Barrera J, Sais E, Lorenzo C, Porta R, Izquierdo A, Menéndez JA, Brunet J, Sirvent JM, Rosell R. "Successful erlotinib treatment of a mechanically ventilated patient newly diagnosed with metastatic lung adenocarcinoma". *Lung Cancer*. 2014;86:102-104. PMID: 25097032. I.F.: 3.74. doi: 10.1016/j.lungcan.2014.07.010.

Bosch-Barrera J, Corominas-Faja B, Cuyàs E, Martín-Castillo B, Brunet J, Menéndez JA. "Silibinin administration improves hepatic failure due to extensive liver infiltration in a breast cancer patient". *Anticancer Research*. 2014;34:4323-7. PMID: 25075066. I.F.: 1.87

### Originals (I.F.: 63.68):

Ruano MA, López-Bonet E, Buxó M, Tuca-Rodríguez F, Vila-Camps E, Álvarez E, Martín-Castillo B, Menéndez JA. "An improved axillary staging system using the OSNA assay does not modify the therapeutic management of breast cancer patients". *Scientific Reports*. 2014;4:5743. PMID: 25034150. I.F.: 5.08. doi: 10.1038/srep05743.

Cuyàs E, Corominas-Faja B, Menéndez JA. "The nutritional phenome of EMT-induced cancer stem-like cells". *Oncotarget*. 2014;5:3970-82. PMID: 24994116. I.F.: 6.63.

Menéndez JA, Quirantes-Piné R, Rodríguez-Gallego E, Cufí S, Corominas-Faja B, Cuyàs E, Bosch-Barrera J, Martín-Castillo B, Segura-Carretero A, Joven J. "Oncobiguanides: Paracelsus' law and nonconventional routes for administering diabetobiguanides for cancer treatment". *Oncotarget*. 2014;5:2344-8. PMID: 24909934. I.F.: 6.63.

Puig-Costa M, Codina-Cazador A, Cortés-Pastoret E, Oliveras-Ferreros C, Cufí S, Flaquer S, Llopis-Puigmartí F, Pujol-Amado E, Corominas-Faja B, Cuyàs E, Ortiz R, López-Bonet E, Queralt B, Guardado R, Martín-Castillo B, Roig J, Joven J, Menéndez JA. "Discovery and validation of an Inflammatory PROtein-driven Gastric cancer Signature (INPROGAS) using antibody microarray-based oncoproteomics". *Oncotarget*. 2014;5:1942-54. PMID: 24722433. I.F.: 6.63.

Joven J, March I, Espinel E, Fernández-Arroyo S, Rodríguez-Gallego E, Aragonès G, Beltrán-Debón R, Alonso-Villaverde C, Rios L, Martín-Paredero V, Menéndez JA, Micol V, Segura-Carretero A, Camps J. "Hibiscus sabdariffa extract lowers blood pressure and improves endothelial function". *Molecular Nutrition & Food Research*. 2014;58:1374-8. PMID: 24668839.

I.F.: 4.91. doi: 10.1002/mnfr.201300774  
Oliveras-Ferreros C, Vazquez-Martín A, Cuyàs E, Corominas-Faja B, Rodríguez-Gallego E, Fernández-Arroyo S, Martín-Castillo B, Joven J, Menéndez JA. "Acquired resistance to metformin in breast cancer cells triggers transcriptome reprogramming toward a degradome-related metastatic stem-like profile". *Cell Cycle*. 2014;13:1132-44. PMID: 24553122. I.F.: 5.01. doi: 10.4161/cc.27982.

Menéndez JA, Alarcón T, Joven J. "Gerometabolites: the pseudohypoxic aging side of cancer oncometabolites". *Cell Cycle*. 2014;13:699-709. PMID: 24526120. I.F.: 5.01. doi: 10.4161/cc.28079.

Joven J, Micol V, Segura-Carretero A, Alonso-Villaverde C, Menéndez JA. "Polyphenols and the modulation of gene expression pathways: can we eat our way out of the danger of chronic disease?" *Critical Reviews in Food Science and Nutrition*. 2014;54:985-1001. PMID: 24499117. I.F.: 5.55. doi: 10.1080/10408398.2011.621772.

Menéndez JA, Alarcón T, Corominas-Faja B, Cuyàs E, López-Bonet E, Martín AG, Vellon L. "Xenopatients 2.0: reprogramming the epigenetic landscapes of patient-derived cancer genomes". *Cell Cycle*. 2014;13:358-70. PMID: 24406535. I.F.: 5.01. doi: 10.4161/cc.27770.

Espinoza I, Menéndez JA, Kvp CM, Lupu R. "CCN1 promotes vascular endothelial growth factor secretion through  $\alpha\beta$ 3 integrin receptors in breast cancer". *Journal of Cell Communication and Signaling*. 2014;8:23-7. PMID: 24338441. doi: 10.1007/s12079-013-0214-6. I.F.: - - -

Iglesias JM, Leis O, Pérez Ruiz E, Gumuzio Barrie J, García-García F, Aduriz A, Belouqui I, Hernández-García S, López-Mato MP, Dopazo J, Pandiella A, Menéndez JA, Martín AG. "The Activation of the Sox2 RR2 Pluripotency Transcriptional Reporter in Human Breast Cancer Cell Lines is Dynamic and Labels Cells with Higher Tumorigenic Potential". *Frontiers in Oncology*. 2014;4:308. PMID: 25414831. doi: 10.3389/onc.2014.00308. I.F.: - - -

Rull A, Hernández-Aguilera A, Fibla M, Sepulveda J, Rodríguez-Gallego E, Riera-Borrull M, Sirvent JJ, Martín-Paredero V, Menéndez JA, Camps J, Joven J. "Understanding the role of circulating chemokine (C-C motif) ligand 2 in patients with chronic ischemia threatening the lower extremities". *Vascular Medicine*. 2014;19:442-51. PMID: 25336430. I.F.: 1.73. doi: 10.1177/1358863X14554034.

Menéndez JA, Alarcón T. "Metabostemness: a new cancer hallmark". *Frontiers in Oncology*. 2014;4:262. PMID: 25325014. doi: 10.3389/onc.2014.00262. I.F.: - - -

Corominas-Faja B, Santangelo E, Cuyàs E, Micol V, Joven J, Ariza X, Segura-Carretero A, García J, Menéndez JA. "Computer-aided discovery of biological activity spectra for anti-aging and anti-cancer olive oil oleuropeins". *Aging*. 2014;6:731-41. PMID: 25324469. I.F.: 4.89

Corominas-Faja B, Cuyàs E, Gumuzio J, Bosch-Barrera J, Leis O, Martín ÁG, Menéndez JA. "Chemical inhibition of acetyl-CoA carboxylase suppresses self-renewal growth of cancer stem cells". *Oncotarget*. 2014;5:8306-16. PMID: 25246709. I.F.: 6.63

### Books:

Barrajón-Catalán E, Herranz-López M, Joven J, Segura-Carretero A, Alonso-Villaverde C, Menéndez JA, Micol V. "Molecular promiscuity of plant polyphenols in the management of age-related diseases: far beyond their antioxidant properties". *Advances in Experimental Medicine and Biology*. 2014;824:141-59. PMID: 25038998.

Menéndez JA, Joven J. "Energy metabolism and metabolic sensors in stem cells: the metabostem crossroads of aging and cancer". *Advances in Experimental Medicine and Biology*. 2014;824:117-40. PMID: 25038997.

Joven J, Guirro M, Mariné-Casadó R, Rodríguez-Gallego E, Menéndez JA. "Autophagy is an inflammation-related defensive mechanism against disease". *Advances in Experimental Medicine and Biology*. 2014;824:43-59. PMID: 25038993.

Cuyàs E, Corominas-Faja B, Joven J, Menéndez JA. "Cell cycle regulation by the nutrient-sensing mammalian target of rapamycin (mTOR) pathway". *Methods in Molecular Biology*. 2014;1170:113-44. PMID: 24906312.

### Grants for research in progress:

- Ensayo en fase II, aleatorizado, abierto, multicéntrico de tratamiento neoadyuvante con quimioterapia y trastuzumab con o sin la adición de metformina en mujeres diagnosticadas de cáncer de mama primario HER2/ErbB2 positivo. (EC10-125)  
Sponsored by: Ministerio de Sanidad.  
Duration: 2010 - 2015  
Begoña Martín Castillo (Javier A. Menéndez, Investigador Colaborador-Coordinador Científico del Proyecto)

- Metabolismo bioenergético y autofagia en las células madre tumorales: bases moleculares para la definición de subtipos metabolo-genómicos intrínsecos del cáncer de mama. (SAF2012-38914)

Sponsored by: Ministerio de Economía y Competitividad  
Duration: 2013 - 2015  
Javier A. Menéndez

- Análisis del papel de las proteínas ID (Inhibitor of Differentiation) en el mecanismo de resistencia a erlotinib mediante la transición epitelio-mesénquima (EMT) en cáncer de pulmón con mutación activadora del EGFR (Epidermal Growth Factor Receptor).  
Sponsored by: Spanish Society of Medical Oncology (SEOM)  
Duration: 2013 - 2014  
Joaquim Bosch y Javier A. Menéndez

- Formación de personal investigador FPI-MICINN 2010 (BES-2010-032066).  
Sponsored by: MICINN  
Javier A. Menéndez  
Beneficiario: Sílvia Cufí

### Patents:

- Authors: Javier A. Menéndez, Eugeni López Bonet  
Title: *Método para la determinación del grado histológico en el cáncer de mama mediante el conteo de actividad mitótica con un anticuerpo dirigido contra la forma fosforilada de la proteína AMPK en el residuo Thr178*  
Corporation: IDIBGI-ICO

- Authors: Javier A. Menéndez, Antonio Segura Carretero  
Title: *Compound for use in the treatment of cancer and aging diseases*  
Corporation: IDIBGI-ICO-UGR

### Others:

PROGRAMA BIOEMPREDOR XXI (7ª EDICIÓN)  
Proyecto METABOSTEM -New metabolic therapies for cancer stem cells  
Javier A. Menéndez

CROSS-BORDER DOCTORIALS 2014  
Palma de Mallorca. Date: December, 8 - 13  
Representant: Sílvia Cufí

# Groups associated with the IdIBGi

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ICS

**INTERNAL MEDICINE**

**MICROBIOLOGY AND INFECTIONS IN THE CRITICAL PATIENT**

**NEPHROLOGY**

UNIVERSITY OF GIRONA

**BIOCHEMISTRY OF CANCER**

**BIOPHARMACEUTICAL RESEARCH**

**COMPUTER VISION AND ROBOTICS**

**CONTROL ENGINEERING AND INTELLIGENT SYSTEMS**

**HEALTH AND HEALTHCARE**

**HEALTH PSYCHOLOGY**

**MICELAB - MODELLING, IDENTIFICATION AND CONTROL ENGINEERING**

**PROTEIN ENGINEERING**

**STATISTICS AND DATA ANALYSIS**

**STATISTICS, ECONOMETRICS AND HEALTH (GRECS)**



# ICS

## INTERNAL MEDICINE

### Group members

Group Leader: **Ferran García-Bragado**

### Publications

#### Originals (I.F.: 8.30):

Ballesteros AL, Oriol J, Francisco I, Fernández S, García Bragado F, Vinyes A. "Clinical characteristics of tuberculosis in immigrants and autochthonous populations, in 2 hospitals of Catalonia". *Revista Clínica Española*. 2014;214:445-452. PMID: 25193789. I.F.: 1.31. doi: 10.1016/j.rce.2014.07.007

Cote LP, Greenberg S, Caprini JA, Stone J, Arcelus JL, López-Jiménez L, Rosa V, Schellong S, Monreal M; RIETE Investigators. "Outcomes in neurosurgical patients who develop venous thromboembolism: a review of the RIETE registry". *Clinical and Applied Thrombosis-Hemostasis*. 2014;20:772-8. PMID: 24798686. I.F.: 1.58. doi: 10.1177/1076029614532008.

Lozano F, Trujillo-Santos J, Barrón M, Gallego P, Babalis D, Santos M, Falgá C, Monreal M; RIETE Investigators. "Home versus in-hospital treatment of outpatients with acute deep venous thrombosis of the lower limbs". *Journal of Vascular Surgery*. 2014;59:1362-7.e1. PMID: 24439322. I.F.: 2.98. doi: 10.1016/j.jvs.2013.11.091.

Maestre A, Trujillo-Santos J, Visoná A, Lobo JL, Grau E, Malý R, Duce R, Monreal M; RIETE Investigators. "D-dimer levels and 90-day outcome in patients with acute pulmonary embolism with or without cancer". *Thrombosis Research*. 2014;133:384-9. PMID: 24438941. I.F.: 2.43. doi: 10.1016/j.thromres.2013.12.044.

# MICROBIOLOGY AND INFECTIONS

## IN THE CRITICAL PATIENT

### Group members

Group Leader: **Josep Maria Sirvent**

#### Collaborators

- Anna Baró
- Carolina Lorencio
- Cristina Murcia
- Patricia Ortiz
- Abdó Taché

#### Nursing staff

- Aaron Castanera
- Ana Lobo
- Susanna Martín

### Strategic objectives

More than 10 years ago a research group was created in the IdIBGi called "Microbiology and inflammation". This group included all projects on infections of the University Hospital of Girona Doctor Josep Trueta (HUGDJT) as well as a group from the University of Girona working in conjunction with them. The leaders of this group were Dr. Josep Maria Sirvent (HUGDJT) and Prof. Jesús García-Gil (UdG).

Over the last three years collaborative research has not been very frequent and, in fact, there is only scientific production in one group and always in reference to infectious diseases in the critically ill patient. It should also be mentioned that Dr. Josep Maria Sirvent forms part of a CIBER respiratory Group, Group 14-Dr. Antoni Torres of Hospital Clínic. [http://www.ciberes.org/index.php?option=com\\_personal&view=personal&grupo\\_id=14&Itemid=77](http://www.ciberes.org/index.php?option=com_personal&view=personal&grupo_id=14&Itemid=77) In order to update the group and suitably redefine the projects and research staff actively involved, we will create an internal specific, dynamic group for the study of infectious diseases in the critically ill patient: Group for Studies of Microbiology and Infections in Critically ill Patients (GMIC-ICU).

### Main lines of research

- Studies of Microbiology and Infections in the critically ill patient
- Study of sepsis
- Study of community-acquired pneumonia

### Publications

#### Case Report (I.F.: 3.74):

Bosch-Barrera J, Sais E, Lorencio C, Porta R, Izquierdo A, Menéndez JA, Brunet J, Sirvent JM, Rosell R. "Successful empirical erlotinib treatment of a mechanically ventilated patient newly diagnosed with metastatic lung adenocarcinoma". *Lung Cancer*. 2014;86:102-4. PMID: 25097032. I.F.: 3.74. doi: 10.1016/j.lungcan.2014.07.010.

# NEPHROLOGY

## Group members

Group Leader: **Martí Vallès Prats**

### Post-doctorate researchers

– Jordi Calabia

### Post-graduate researchers

– Xoana Barros  
– Isabel García  
– Nàdia Martín

### Medical researchers

– Isabel García  
– Pere Torguet

### Nursing staff

– Jennifer Moreno  
– Montse Jubany

### Collaborators

– Christian Cordoba  
– Maria Cufí  
– Cristina Martínez  
– Cristina Noboa

## Strategic objectives

Consolidate the method for studying cardiovascular risk and the atheroma burden in patients with chronic kidney disease, high blood pressure and Diabetes Mellitus with diabetic nephropathy.

Consolidating the methodology for the study of stiffness and vascular calcification in patients with chronic kidney disease.

## Main lines of research

Study of the macro and microvascular affectation of inflammatory markers and bone-mineral metabolism markers in chronic kidney disease and their most frequent pathologies: high blood pressure and diabetic nephropathy.

## Publications

### Multicentrics (I.F.: 5.25):

Walsh M, Faurischou M, Berden A, Flossmann O, Bajema I, Hoglund P, Smith R, Szpirt W, Westman K, Pusey CD, Jayne DR; European Vasculitis Study Group. "Long-term follow-up of cyclophosphamide compared with azathioprine for initial maintenance therapy in ANCA-associated vasculitis". *Clinical Journal of the American Society of Nephrology*. 2014;9:1571-6. PMID: 24970876. I.F.: 5.25. doi: 10.2215/CJN.00100114.

### Original (I.F.: 2.96):

Calabia J, Torguet P, García I, Martín N, Mate G, Marín A, Molina C, Vallès M. "The relationship between renal resistive index, arterial stiffness, and atherosclerotic burden: the link between macrocirculation and microcirculation". *Journal of Clinical Hypertension*. 2014;16:186-91. PMID: 24548343. I.F.: 2.96. doi: 10.1111/jch.12248.

# UNIVERSITY OF GIRONA BIOCHEMISTRY OF CANCER

Recognised as a consolidated research group - 2014SGR229

## Group members

Group Leaders: **Rafael de Llorens** and **Rosa Peracaula**

### Senior researchers

– Rosa Nuria Aleixandre  
– Silvia Barrabés  
– Josep Comet  
– M<sup>a</sup> José Ferri  
– Esther Llop  
– M<sup>a</sup> Ángeles Martínez  
– Anna Massaguer

### Medical researcher:

– Manel Ramírez

### Post-graduate researchers

– Mertixell Balmaña  
– Montserrat Ferrer  
– Eva Plà

## Strategic objectives

Early diagnosis of cancer and its treatment.

## Main lines of research

1. Tumor markers: Abnormal Glycosylation of several proteins as potential tumor markers. Currently focused on prostate and pancreatic tumors, particularly in abnormal glycosylation of human pancreatic ribonuclease, acute phase proteins and PSA (prostate specific antigen). Extensible to other glycoproteins.

2. Molecular mechanisms responsible for changes in glycosylation in tumors:  
· Expression studies of glycosyltransferases responsible for the biosynthesis of antigens associated to tumors  
· Determination of their involvement in various stages of tumor progression and the factors that regulate their expression

3. Mechanisms of tumoral resistance.  
· Molecular and cellular mechanisms determining the resistance of tumors to current therapies.  
· Studies of the mechanisms of resistance to new agents for the emergence of ligand autocrine loop via the EGF / ErbB.

4. New anti-tumor agents.  
· EGF analogues as anti-tumor agents. Antitumor effects of EGF truncated derivatives.  
· Obtaining new derivatives as cytotoxic vehicles.  
· Studies combined with other therapeutic agents such as those derived from metals: cisplatin, ruthenium and copper.

## Publications

### Originals (I.F.: 10.03):

Bassagañas S, Carvalho S, Dias AM, Pérez-Garay M, Ortiz MR, Figueras J, Reis CA, Pinho SS, Peracaula R. "Pancreatic cancer cell glycosylation regulates cell adhesion and invasion through the modulation of  $\alpha 2\beta 1$  integrin and E-cadherin function". *PLoS One*. 2014;9:e98595. PMID: 24878505. I.F.: 3.53. doi: 10.1371/journal.pone.0098595.

Bassagañas S, Pérez-Garay M, Peracaula R. "Cell surface sialic acid modulates extracellular matrix adhesion and migration in pancreatic adenocarcinoma cells". *Pancreas*. 2014;43:109-17. PMID: 23921962. I.F.: 3.01. doi: 10.1097/MPA.0b013e31829d9090.

Soler M, González-Bártulos M, Soriano-Castell D, Ribas X, Costas M, Tebar F, Massaguer A, Feliu L, Planas M. "Identification of BP16 as a non-toxic cell-penetrating peptide with highly efficient drug delivery properties". *Organic & Biomolecular Chemistry*. 2014;12:1652-63. PMID: 24480922. I.F.: 3.49. doi: 10.1039/c3ob42422g.

**Grants for Research in Progress:**

– Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 229).

Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2014 - 2016

R. de Llorens

– Accions Singulares.

Sponsored by: Universitat de Girona

Duration: 2013 - 2014

A. Massaguer

– Estudio de los patrones de glicosilación del Antígeno prostático específico (PSA).

Sponsored by: CDTI (Ministeri d'Industria) concedit a l'Empresa Roche-Diagnostic SL

Duration: 2013 fins a: 2015

R. de Llorens i R. Peracaula

**Patents:**

– Authors: Ferri M<sup>a</sup>J, Sáez M, Figueras J, Fort E, Sabat M, López-Ben B, de Llorens R, Aleixandre RN, Peracaula R.

Title: *Improved pancreatic adenocarcinoma diagnosis through the combination of routine clinical markers associated to pancreatic adenocarcinoma pathophysiology*

Patent number: P-2014-31022

Corporation: Universitat de Girona (Espanya)

**BIOPHARMACEUTICAL RESEARCH****Group members**

Group Leader: **Maria Teresa Puig**

**Post-doctorate researchers**

– **Rut Porta**

**Post-graduate researchers**

– **Zeus Aranda**  
 – **Adriana Blancafort**  
 – **Ariadna Giró**  
 – **Sònia Palomeras**  
 – **Ferran Pérez**  
 – **Marc Rabionet**  
 – **Gemma Viñas**

**Publications****Originals (I.F.: 2.81):**

Porta R, Blancafort A, Casòliva G, Casas M, Dorca J, Buxo M, Viñas G, Oliveras G, Puig T. "Fatty acid synthase expression is strongly related to menopause in early-stage breast cancer patients". *Menopause*. 2014;21:188-91. PMID: 23982110. I.F.: 2.81. doi: 10.1097/GME.0b013e31829d17dc.

# COMPUTER VISION AND ROBOTICS

Recognised as a consolidated research group - 2014SGR1056

## Group members

Group Leader: **Joan Martí**

### Post-doctorate researchers

- Oliver Díez
- Yago Díez
- Jordi Freixenet
- Rafael García
- Xavier Lladó
- Robert Martí
- Arnau Oliver

### Post-graduate researchers

- Sonia Durand
- Onur Ganiler
- Eloy García
- Albert Gubern
- Muhammad Habib
- Konstantin Korotkov
- Guillaume Lemaître
- Gerard Pons
- Mojdeh Rastgoo

- Eloy Roura
- Sergi Valverde

## Publications

### Originals (I.F.: 22.57):

Roura E, Oliver A, Cabezas M, Vilanova JC, Rovira A, Ramió-Torrentà L, Lladó X. "MARGA: Multispectral Adaptive Region Growing Algorithm for brain extraction on axial MRI". *Computer Methods and Programs in Biomedicine*. 2014;113:655-73. PMID: 24380649. I.F.: 1.09. doi: 10.1016/j.cmpb.2013.11.015.

Díez Y, Oliver A, Cabezas M, Valverde S, Martí R, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X. "Intensity Based Methods for Brain MRI Longitudinal Registration. A Study on Multiple Sclerosis Patients". *Neuroinformatics*. 2014;12:365-79. PMID: 24338728. I.F.: 3.10. doi: 10.1007/s12021-013-9216-z.

Cabezas M, Oliver A, Valverde S, Beltran B, Freixenet J, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X. "BOOST: a supervised approach for multiple sclerosis lesion segmentation". *Journal of Neuroscience Methods*. 2014;237:108-17. PMID: 25194638. I.F.: 1.96. doi: 10.1016/j.jneumeth.2014.08.024.

Cabezas M, Oliver A, Roura E, Freixenet J, Vilanova JC, Ramió-Torrentà L, Rovira A, Lladó X. "Automatic multiple sclerosis lesion detection in brain MRI by FLAIR thresholding". *Computer Methods and Programs in Biomedicine*. 2014;115:147-61. PMID: 24813718. I.F.: 1.09. doi: 10.1016/j.cmpb.2014.04.006.

Ganiler O, Oliver A, Díez Y, Freixenet J, Vilanova JC, Beltran B, Ramió-Torrentà L, Rovira A, Lladó X. "A subtraction pipeline for automatic detection of new appearing multiple sclerosis lesions in longitudinal studies". *Neuroradiology*. 2014;56:363-74. PMID: 24590302. I.F.: 2.37. doi: 10.1007/s00234-014-1343-1.

Valverde S, Oliver A, Lladó X. "A white matter lesion-filling approach to improve brain tissue volume measurements". *Neuroimage: Clinical*. 2014 Aug 23;6:86-92. PMID: 25379419. doi: 10.1016/j.nicl.2014.08.016. I.F.: ---

Elangovan P; Warren L; Rashidnasab A; Díaz O; Dance DR; Young KC; Bosmans H; Strudley C; Well K. "Development and validation of a modelling framework for simulating 2D-mammography and breast tomosynthesis images". *Physics in Medicine and Biology*. 2014;59:4275-93. PMID: 25029333. doi: 10.1088/0031-9155/59/15/4275. I.F.: 2.92

Díaz O; Dance DR; Young KC; Elangovan P; Bakic PR; Well K. "Estimation of scattered radiation in digital breast tomosynthesis" *Physics in Medicine and Biology*. 2014; 59:4375-4390. PMID: 25049201. doi: 10.1088/0031-9155/59/15/4375. I.F.: 2.92

Tortajada, M; Oliver, A; Martí, R; Ganau, S; Tortajada, L; Sentís, M; Freixenet, J; Zwiggelaar, R. "Breast peripheral area correction in digital mammograms". *Computers in Biology and Medicine*. 2014; 50:32-40. PMID: 24845018. doi: 10.1016/j.compbimed.2014.03.010. I.F.: 1.48

Pons, G; Martí, R; Ganau, S; Sentís, M; Martí, J.

"Computerized Detection of Breast Lesions Using Deformable Part Models in Ultrasound Images". *Ultrasound in Medicine and Biology*. 2014;40:2252-2264. PMID: 24912370. doi: 10.1016/j.ultrasmedbio.2014.03.005. I.F.: 2.10

Gubern, A; Kallenberg, M; Platel, B; Mann, RM; Martí, R; Karssemeijer, N. "Volumetric Breast Density Estimation from Full-Field Digital Mammograms: A Validation Study". *PLoS One*.2014;9:1-8. PMID: 24465808. doi: 10.1371/journal.pone.0085952. I.F.: 2.10

## Grants for research in progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 1056).  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Joan Martí

- ASSURE: Personalised Breast Cancer Screening.  
Sponsored by: European Commission - 7th Framework Program - HEALTH 2012  
Duration: 2012 - 2015  
Robert Martí

- IA-BIOBREAST.  
Sponsored by: MINECO  
Duration: 2013 - 2015  
Joan Martí

# CONTROL ENGINEERING AND INTELLIGENT SYSTEMS - MEDICINE AND HEALTH

## Group members

Group Leader: **Beatriz López**

### Seniors

- Bianca Innocenti
- Joaquim Meléndez
- Carles Pous

### Post-doctorate researchers

- Andrés El Fakid
- Francisco I. Gamero
- Albert Pla

### Technicians

- Jordi Coll
- Natalia Mordvaniuk
- Roberto Petite

### Post-graduate researchers

- Pablo Gay

## Strategic objectives

The research group eXiT (Control Engineering and Intelligent Systems, GRTC 61 at the University of Girona) focuses its work on decision support systems, case-based reasoning, machine learning and optimization.

One line of research is improving the quality of healthcare through innovative applications of artificial intelligence. All this research activity is collected <http://exit.udg.edu/health/>

eXiT is also working on research projects and technology transfer working closely with clinicians and health service providers.

## Main lines of research

During 2014, eXiT-Health is working intensively on two activities:

- Development of systems to support decision making for monitoring premature babies at home
- Development a learning pattern that will help with the rehabilitation of patients after a hip operation.

## Publications

### Originals (I.F.: 1.97):

El-Fakdi A, Gamero F, Meléndez J, Auffret V, Haigron P. "eXiTCDSS: A framework for a workflow-based CBR for interventional Clinical Decision Support Systems and its application to TAVI". *Expert Systems with Applications*. 2014; 41: 284–294. doi:10.1016/j.eswa.2013.05.067. I.F.: 1.97

### Grants for research in progress:

– MoSHCA - My Mobile and Smart Health Care Assistant. ITEA 2 -ip11027  
Sponsored by: Ministerio Economía y Competitividad  
Duration: 2012 - 2015  
Beatriz López

– BENEFIT: Better Effectiveness aNd Efficiency by measuring and modelling of Interventional Therapy  
Sponsored by: Ministerio de Industria, Turismo y Comercio (Ref. Eureka ITEA 3 no 13031 i TSI-100103-2014-89)  
Duration: 2014 - 2016  
Joaquim Meléndez

# HEALTH AND HEALTHCARE

Recognised as a consolidated research group - 2014SGR1393

## Group members

Group Leader: **Dolors Juvinyà**

### Post-doctorate researchers

- Carme Bertran
- Concepció Fuentes
- Bernat Carles Serdà
- Rosa Sunyer

### Post-graduate researchers

- David Ballester
- Neus Brugada
- Almerinda Domingo
- Maria del Carme Malagon
- Josep Olivet
- Marta Vilanova

### Secretary

- Cristina Vilarò

## Strategic objectives

The group's objectives for the next three years are:

1. Consolidate and pursue research in health promotion in hospitals and health centers.
2. Evaluate the implementation of health promotion at the University.
3. Spreading literacy in health in different environments.
4. Promote the health and quality of life in the aging process.
5. Promote health and quality of life for people with cancer, stroke or in critical condition.
6. Development of a map of institutions working in health promotion in the region.
7. To promote networking with individuals, groups and institutions of Mediterranean countries.
8. Promote the incorporation of a gender perspective in all activities in which the group participates.
9. Continue with the training and skills assessment in emergency situations.

## Main lines of research

The research being carried out by the Group is organized into four major areas of work: Health Promotion in the field of health services, mental health and elderly, as well as in emergencies and health in women, gender and health.

### Health promotion

Research in Health Promotion covers a wide range of actions

in several areas:

Health institutions: quality evaluation both in the organization and in the care; as well as assessing the skills of health professionals.

Educational institutions such as schools and universities.

Community collectives of users of health services

Strategies: health literacy

Health care and quality of life of people in critical condition; with neurological problems; with mental health problems or with cancer.

### Seniors and carers

In this research is carried out in the framework of care for the elderly dependency and fragile population. We will like to point out the research aimed at improving the quality of life of informal carers and the development of tools for the assessment of dependence in general.

### Women, Gender and Health

The research developed in this area is designed to provide the scientific knowledge needed to develop interventions that revert elements discriminators existing in health care and affect the health professions, health professionals and users themselves.

### Health emergencies

The work done in this field has to do with the assessment of skills in the framework of basic and advanced resuscitation and the creation of new tools for assessing professional competence. This activity takes place in the group laboratory in the Science Park.



## Publications

### Originals (I.F.: 6.45):

Schröder H, Ramos R, Baena-Díez JM, Méndez MA, Canal DJ, Fito M, Sala J, Elosua R. "Determinants of the transition from a cardiometabolic normal to abnormal overweight/obese phenotype in a Spanish population". *European Journal of Nutrition*. 2014;53:1345-53. PMID: 24322835. I.F.: 3.84. doi: 10.1007/s00394-013-0635-2.

Romero-Collado A, Homs-Romero E, Zabaleta-del-Olmo E, Juvinyà-Canal D. Nurse prescribing in primary care in Spain: legal framework, historical characteristics and relationship to perceived professional identity. *Journal of Nursing Management* 2014; 22: 394-404. PMID: 24192249. doi: 10.1111/jonm.12139. I.F.: 1.14.

Serdà B.C., Valle A. "A Rehabilitation Program in Alzheimer Disease". *Journal of Nursing Research*. 2014; 22:192-199. PMID: 25111112. doi: 10.1097/jnr.0000000000000046. I.F.: 0.84

Gelabert-Vilella S., Bonmatí-Tomás A., Bosch-Farré C, Malagón-Aguilera M. C., Fuentes-Pumarola; David Ballester-Ferrando. "Mental health nursing practicum: student and mentor perspectives on stress and satisfaction". *Journal of Science Education and Technology*. 2014; 4: 79-88.

Serdà BC, Valle A, Marcos-Gragera, R. "Prostate cancer and quality of life: Analysis of response shift using triangulation between methods". *Journal of Gerontological Nursing*. 2014; 40: 32 - 41. PMID: 24529387. doi: 10.3928/00989134-20140211-01. I.F.: 0.62

Martínez-Gangoso L, Fuentes-Pumarola C. Hyperglycemia in critically ill patients. Sample of choice, controls and values. *Enfermería Intensiva*. 2014; 25: 146-163. PMID: 25457697.

Puig Congost, M., González González, C., Luna Pérez C., Iglesias Carrión, C., Malagón Aguilera, M.C. "Plan estratégico para mejorar la accesibilidad de una Área Básica de Salud". *Metas de Enfermería*. 2014; 17

### Books:

Ballester-Ferrando D; Garre-Olmo J; López-Pousa S; Juvinyà-Canal D; Vilalta-Franch J; Fuentes-Pumarola C. Demencias avanzadas, calidad de vida y mortalidad. Dins: XXXI Congreso Nacional de Enfermería de Salud Mental. Espanya; 2014

Juvinyà-Canal, D.; Vilanova-Vila, M., Bonmatí-Tomás, A. (Ed.). Promoción de la salud en el Arco Mediterráneo - Health

Promotion in the Mediterranean Arc. Girona: Documenta Universitaria; 2014.

Suñer-Soler R; Santiñà M. Alfabetització per a la Salut: Definicions, conceptes i la seva relació amb la Salut. Dins: Suñer-Soler R, Santiñà Vila M (eds). Alfabetització per a la Salut. Estàndards i recomanacions per als professionals de la Salut. Girona: Documenta Universitària; 2014. pp.11-26.

Valls Guallar C, Vilardell Bergada J; Suñer-Soler R. Efectivitat dels programes d'educació per a la salut dirigits a persones amb baixos nivells d'alfabetització per a la salut. Dins: Suñer-Soler R, Santiñà Vila M (eds). Alfabetització per a la Salut. Estàndards i recomanacions per als professionals de la Salut. Girona: Documenta Universitària; 2014. pp.107-114.

Suñer-Soler R; Rodrigo J; Salvat M; Pujiula J; Reverté S; Sanjuan E; Kazimierczak M. Enfermedad cerebrovascular: cuidados a los enfermos en la fase aguda y crónica. Dins: Suñer Soler R. Tratado de enfermería neurológica. La persona, la enfermedad y los cuidados. 3ª edición, (Espanya): ELSEVIER, 2013. pp. 55 - 68.

Pérez Moltó C, Suñer-Soler R. Repercusiones de las enfermedades neurológicas. Repercusiones en la familia. Dins: Suñer Soler R. Tratado de enfermería neurológica. La persona, la enfermedad y los cuidados. 3ª edición, (Espanya): ELSEVIER, 2013. pp. 33 - 35.

## Grants for Research in Progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 1393).  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Dolors Juvinyà

- Tallers demostratius i carpes del programa 'Girona, territori cardioprotegit'.  
Sponsored by: Organisme de Salut Pública de la Diputació de Girona (DIPSALUT)  
Duration: from 08/07/2014 to 07/01/2016  
Dolors Juvinyà

- L'Educació per a la salut des de l'Hospital Transfronterer de la Cerdanya  
Sponsored by: Departament de la Presidència de la Generalitat de Catalunya  
Duration: from 01/01/2014 to 15/11/2014  
Dolors Juvinyà

Recerca bibliogràfica i fonamentació científica vinculada als programes de Promoció de la Salut.  
Sponsored by: Diputació de Girona  
Duration: from 20/06/2014 to 19/09/2014  
Dolors Juvinyà

Guia metodològica d'aplicació i interpretació dels qüestionaris de Sentit de Coherència d'Antonovsky.  
Sponsored by: Diputació de Girona  
Duration: from 30/12/2013 to 29/03/2014  
Dolors Juvinyà

Revisió i actualització de la Guia d'Associacions de Salut.  
Sponsored by: Diputació de Girona  
Duration: from 24/10/2013 fins to 23/01/2014  
Dolors Juvinyà

Estudio de la eficacia de un programa intensivo de cesación tabáquica en pacientes con diagnóstico de ictus agudo.  
Sponsored by: Instituto de Salud Carlos III  
Duration: from 2013 to 2016  
Rosa Suñer Soler

# HEALTH PSYCHOLOGY

Recognised as a consolidated research group - 2014SGR322

## Group members

Group Leaders: **M. Eugènia Gras** and **Montserrat Planes**

### Post-doctorate researchers

- Maria Aymerich
- Natàlia Cebrián
- Mònica Cunill
- Sílvia Font-Mayolas
- Armand Grau
- Josefina Patiño
- Rosa Suñer
- Maria Carme Timoneda

### Post-graduate researchers

- Anna Belén Gómez
- Francesc Prat

## Main lines of research

The research lines of the group are included in the field of health psychology. The perspective is, therefore, biopsychosocial. The priority lines of research are:

- Sexual behaviour of risk and prevention of AIDS, other STD and unwanted pregnancies.
- Behaviour of risk and prevention for users of motor vehicles and pedestrians.
- Substance dependence.
- Stress, pain and quality of life.
- Quality of life during aging.
- Processes of loss and mourning.
- Research in education in Health Psychology.

## Publications

### Originals (I.F.: 2.22):

González-Iglesias B, Gómez-Fraguela JA, Gras ME, Planes M. "Búsqueda de sensaciones y consumo de alcohol: El papel mediador de la percepción de riesgos y beneficios". *Anales de Psicología*. 2014; 30:1061-1068. IF: 0.55

Gras ME, Font-Mayolas S, Planes M, Sullman MJM. "The impact of penalty point system on the behaviour of young drivers and passengers in Spain". *Safety Science*. 2014;70: 270-275. IF: 1.67

Cabañete D, Aymerich M, Falgàs M, Gras ME. "Metodologías docentes. Motivación y aprendizaje percibidos por los estudiantes universitarios". *Educar*. 2014; 50: 427-441. IF: ---

Suñer-Soler R, Grau-Martín A, Flichtentrei D, Prats M, Braga F, Font-Mayolas S, Gras ME. "The consequences of burnout syndrome among healthcare professionals in Spain and Spanish speaking Latin American countries". *Burnout Research*. 2014;1:82-89. IF: ---

### Books:

Casas, F. i Planes, M. (2014). The IRQV (Research Institute of Quality of Life, University of Girona, Spain). In A.C. Michalos (ed.). *Encyclopedia of Quality of Life Research* (pp. 3389-3392). The Netherlands: Springer. Doi: 10.1007/978-94-007-0753-5

Malo, S., González, M., Casas, F., Viñas, F., Gras, M.E. i Bataller, S. (2014). *Adaptación al catalán del AF-5 en una muestra de niños y adolescentes*. Madrid: TEA Ediciones.

## Grants for Research in Progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 322)
- Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)
- Duration: 2014 - 2016
- Montserrat Planes

# MICELAB - MODELLING, IDENTIFICATION AND CONTROL ENGINEERING

Recognised as a consolidated research group - 2014SGR1052

## Group members

Group Leader: **Josep Vehí**

### Senior researchers

- Joaquim Armengol
- Remei Calm
- Francisco Llaneras
- Ningsu Luo

### Post-doctorate researchers

- Ivan Contreras

### Technicians

- Aleix Beneyto
- Anna Carreras
- Anna Comas

## Strategic Objectives

The group Modelling, Identification and Control Engineering (MiceLab), led by Dr. Josep Vehí is a multidisciplinary research group within the Institute of Informatics and Applications at the University of Girona. The group was founded in 2000 and since 2005 is recognized by the Generalitat of Catalonia as a "consolidated research group."

MiceLab has been researching new technologies for diabetes since 2004, reaching more than two million euros in funding thanks to various competitive projects. The group has worked on modeling and control diabetes; glucose prediction including the uncertainty and variability intra-patient; optimization of insulin therapy; identifying models of gastric emptying and absorption of carbohydrates; algorithms for calibration of continuous monitors glucose; developing closed-loop control algorithms for type 1 diabetic patients, for critical patients and detection of failures in insulin pumps and continuous monitors.

## Main lines of research

### Continuous Glucose Monitoring

- Calibration algorithms
- Detection of wrong measurements

### Modelling and simulation

- Intra-patient variability modelled using interval models
- Posprandial response for mixed meals. Mixed meal library
- Generation of virtual patients representing real cohorts
- Lifestyle simulation, including exercise

### Open-loop glucose control

- Algorithms for postprandial hypoglycaemia risk assessment
- SAFE: open-loop control algorithms for insulin pumps

### Artificial pancreas

- Closed loop posprandial control. Enhanced and safer algorithms
- Fault detection and supervision: fault detection for insulin pumps. Monitoring of patient condition

## Publications

### Originals (I.F.: 8.10):

Laguna AJ; Rossetti P; Ampudia-Blasco FJ; Vehí J; Bondia J. "Identification of intra-patient variability in the postprandial response of patients with type 1 diabetes". *Biomedical Signal Processing and Control*. 2014; 12:39-46. doi:10.1016/j.bspc.2013.07.003. I.F.: 1.53

Laguna AJ; Rossetti P; Ampudia-Blasco FJ; Vehí J; Bondia J. "Postprandial performance of Dexcom SEVEN® PLUS and Medtronic® Paradigm® Veo™: Modeling and statistical analysis" *Biomedical Signal Processing and Control*. 2014; 10:322-331. I.F.: 1.53

Laguna AJ; Rossetti P; Ampudia-Blasco FJ; Vehí J; Bondia J. "Experimental blood glucose interval identification of patients with type 1 diabetes" *Journal of Process Control*. 2014; 24:171-181. I.F.: 2.18

Morales Y; Tortajada M; Picó j; Vehí J; Llaneras F. "Validation of an FBA model for *Pichia pastoris* in chemostat cultures" *BMC Systems Biology*. 2014;8:1-17. doi: 10.1186/s12918-014-0142-y. I.F.: 8.53

Ferrer-Mallorquí I; Vehí J. "Combining Symbolic tools with interval analysis. An application to solve robust control problems" *American Journal of Computational Mathematics*. 2014; 4:183-196.

### Books:

MA Sainz, J Armengol, R Calm, P Herrero, L Jorba, J Vehí; Modal Interval Analysis. Lecture Notes in Mathematics 2091; ISBN 978-3-319-01721-1, 2014

## Grants for Research in Progress:

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 1052)  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Josep Vehí

- VITALITY: Monitoring & Managing your Health and Well-being  
Sponsored by: Ministerio de Economía y Competitividad  
Duration: 2011 - 2014  
Josep Vehí

- New strategies for post-prandial glycaemic control using insulin pump therapy in type 1 diabetes (CLOSEDLOOP4MEAL)  
Sponsored by: Ministerio de Economía y Competitividad  
Duration: 2011 - 2015  
Josep Vehí

- Control de la glucemia en el periodo postprandial en la Diabetes tipo 1. Seguridad y eficacia de un nuevo algoritmo en lazo cerrado (páncreas artificial).  
Sponsored by: Ajuts a la Recerca Josep Font  
Duration: 2014 - 2016  
Ignacio Conget

- Nuevos métodos para la eficiencia y seguridad del páncreas artificial domiciliario (SAFE-AP)  
Sponsored by: Ministerio de Economía y Competitividad  
Duration: 2014 - 2016  
Josep Vehí

## Patents:

Authors: Bondia Company Jorge; Barceló Rico Fátima; Díez Ruano José Luis; Rossetti Paolo; Vehí Casellas Josep; Leal Moncada Yenny Teresa  
Title: System and method for estimating blood glucose in plasma  
Patent number: WO 2012/156568 (Patent internacional PCT)  
Corporation: Universidad Politécnica de Valencia (83%), Universitat de Girona (17%)

# PROTEIN ENGINEERING

Recognised as a consolidated research group - 2014SGR70

## Group members

Group Leaders: **Antoni Benito** and **Marc Ribó**

### Senior researchers

– **Maria Vilanova**

### Post-doctorate researchers

– **Jessica Castro**

– **Anna Vert**

### Post-graduate researchers

– **Mariona Callís**

– **Glòria García**

– **Veronica Gordo**

– **Santiago Ruiz**

– **David Soler**

## Strategic Objectives

- To give solutions to two major health challenges for the European population:  
No-mutagenic and most effective new drugs for the treatment of cancer  
Deepen in the mechanism of neurodegenerative diseases caused by protein aggregation processes with the ultimate goal to achieve in future potential inhibitors of these pathological processes.
- Technology transfer: patents of improved forms of antitumor drugs.

## Main lines of research

- Development of antitumor drugs not mutagenic for the treatment of ovarian cancer and non-microcitic lung cancer.
- Study of structural and aggregation determinants of the proteins Apoptin and TDP-43, using nuclear magnetic resonance and isotope labeling of the fragments involved in the aggregation processes that lead to apoptosis.

**Publications:****Originals (I.F.:2.29):**

Kurpiewska K, Torrent G, Ribó M, Loch JJ, Vilanova M, Lewiński K. "Investigating the effects of double mutation C30A/C75A on onconase structure: Studies at atomic resolution". *Biopolymers*. 2014;101:454–60. PMID: 23996687. I.F.: 2.29

**Grants for Research in Progress:**

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 70).  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Antoni Benito

- Microscopio Láser Espectral Confocal (UNGI10-4E-471).  
Sponsored by: Ministerio de Ciencia y Innovación.  
Convocatoria de Infraestructura Científico Tecnológica  
Duration: 2012 - 2016  
Marc Ribó

- Ribonucleasas e inteínas como herramientas moleculares para el desarrollo de fármacos antitumorales y estudio de proteinopatías. Referencia: BIO2013-43517-R.  
Sponsored by: Ministerio de Economía i Competitividad (MINECO)  
Duration: 2014 - 2016  
Marc Ribó and Antoni Benito

**Patents:**

- Authors: Vilanova, M.; Benito, A.; Ribó, M; Castro, J; Tubert, P; Vert, A.  
Title: Proteínas recombinantes con efecto antitumoral (referencia P1857ES00).  
Patent number: PCT/ES2012/07015  
Corporation: Universitat de Girona

# STATISTICS AND DATA ANALYSIS

Recognised as a consolidated research group - 2014SGR551

**Group members**

Group Leader: **Josep Antoni Martín**

**Post-doctorate researchers**

- **Carles Barceló**  
- **Josep Daunis**  
- **Santiago Thió Fernández**  
- **M. Gloria Mateu**  
- **Vera Pawlowsky**

**Post-graduate researchers**

- **Marc Comas**  
- **Iván Galván**  
- **Marina Vives**

**Publications****Originals (I.F.:16.06):**

Blasco G, Puig J, Daunis-I-Estadella J, Molina X, Xifra G, Fernández-Aranda F, Pedraza S, Ricart W, Portero-Otín M, Fernández-Real JM. "Brain iron overload, insulin resistance, and cognitive performance in obese subjects: a preliminary MRI case-control study". *Diabetes Care*. 2014;37:3076–83. PMID: 25125507. I.F.: 8.57. doi: 10.2337/dc14-0664.

García-Gil M, Elorza JM, Banque M, Comas-Cufí M, Blanch J, Ramos R, Méndez-Boo L, Hermosilla E, Bolibar B, Prieto-Alhambra D. "Linking of Primary Care Records to Census Data to Study the Association between Socioeconomic Status and Cancer Incidence in Southern Europe: A Nation-Wide Ecological Study". *PLoS One*. 2014;9:e109706. PMID: 25329578. I.F.: 3.53. doi: 10.1371/journal.pone.0109706.

Ponjoan A, García-Gil MM, Martí R, Comas-Cufí M, Alves-i-Cabratosa L, Sala J, Marrugat J, Elosua R, de Tuero GC, Grau M, Ramos R. "Derivation and validation of BOREAS, a risk score identifying candidates to develop cold-induced hypertension". *Environmental research*, 2014; 132:190-196. PMID: 24792416. I.F.:3.95. doi: 10.1016/j.envres.2014.03.039.

**Grants for research in progress:**

- Grup de Recerca Reconegut per la Generalitat de Catalunya (2014 SGR 551).  
Sponsored by: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)  
Duration: 2014 - 2016  
Josep Antoni Martín

- Statistical MEthods in resTRICTed spaceS (METRICS: MÉTODOS ESTADÍSTICOS en ESPACIOS RESTRINGIDOS).  
Sponsored by: Ministerio de Ciencia e Innovación (MICINN) / MTM2012-33236  
Duration: 2013 -  
Josep Antoni Martín

# STATISTICS, ECONOMETRICS AND HEALTH (GRECS)

Team involved in "Centro de Investigación Biomédica en Red en Epidemiología y Salud Pública" (CIBEResp)



## Group members

Group Leader: **Marc Sáez**

### Post-doctorate researchers

- **María Antònia Barceló**
- **Germà Coenders**
- **Lluís Coromina**
- **Berta Ferrer**
- **Laia Maynou**
- **Gemma Osca**
- **Montserrat Puig**
- **Gemma Renart**
- **Carme Saurina**
- **Laura Serra**
- **Laura Vall-Ilosera**

### Post-graduate researchers

- **Elena Arroyo**
- **Basili Bragulat**
- **Carme Cañizares**

## Main lines of research

The central area of research is statistical modeling in different areas.

The first is **Health Econometrics**. It could be defined as the application of econometrics and other quantitative approaches in Health Economics. But it is not just the mere application of econometric instruments to some data from the field of health sciences, but it has developed specific new statistical tools to analyze emerging issues. That's why this field contains theoretical-methodological research, and applied research such as:

1. Use of health services.
2. Personal and territorial inequalities in health.
3. Management of health services.
4. Analysis of the relationship between employment and temporary disability.
5. Prescription, utilization and cost reduction in the treatment of hypertension.
6. Estimated costs of diseases.

Regarding methodological issues:

1. Generalized Linear Models.
2. Nonparametric statistics.
3. Mixed Models.
4. Longitudinal models.

5. Multivariate survival analysis.
6. Spatial Statistics.
7. Geographic Analysis.
8. Meta-analysis.

The second area, in order of importance, is **Statistics, Econometrics and Data Quality Survey**, which is developed from a more theoretical and methodological aspect. First, the structural equation models with latent variables, where it is estimated relationships between variables measured with error. Our research aims at extending the methodology to treat as ordinal scales, the missing data, hierarchical structures and nonlinear relationships. This line of work leads to a more general improvement of the design and analysis of questionnaires, which we recently applied to measure quality of life, quality of products and services, and social networks (type and intensity of links between people or institutions) values and welfare of children, and the economic evaluation of diseases.

Among the applications of this line of research will indicate, among others:

1. Short-term effects of air pollution and other environmental factors on health.
2. Analysis of the factors that determine the occurrence of bacterial resistance.
3. Measurement of quality in the services sector.
4. Capital and performance.

## Publications

### Multicentrics (I.F.: 24.73):

Sant M, Minicozzi P, Mounier M, Anderson LA, Brenner H, Hollecsek B, Marcos-Gragera R, Maynadié M, Monnereau A, Osca-Gelis G, Visser O, De Angelis R, the EURO CARE-5 Working Group. "Survival for haematological malignancies in Europe between 1997 and 2008 by region and age: results of EURO CARE-5, a population-based study". *Lancet Oncology*. 2014; 15:931-942. PMID: 25030467. I.F.: 24.73. doi: 10.1016/S1470-2045(14)70282-7.

### Originals (I.F.:21.93):

Coll-de-Tuero G, González-Vázquez S, Rodríguez-Poncelas A, Barceló MA, Barrot-de-la Puente J, Penedo MG, Pose-Reino A, Pena-Seijo M, Sáez M. "Retinal arteriole-to-venule ratio changes and target organ disease evolution in newly diagnosed hypertensive patients at 1-year follow-up". *Journal of the American Society of Hypertension*. 2014;8:83-9. PMID: 24239162. I.F.: 2.68. doi: 10.1016/j.jash.2013.10.002.

Ferriol C, Tremols S, Jiménez C, Tura A, Sanmartín M, Pagès N, Rodríguez-Poncelas A, Paz-Bermejo M, Sáez M, Coll-de-Tuero G. "Are There Height-Dependent Differences in Subclinical Vascular Disease in Hypertensive Patients?" *Journal of Clinical Hypertension*. 2014;16:70-6. PMID: 24188542. I.F.: 2.96. doi: 10.1111/jch.12222.

García Gutiérrez S, Quintana JM, Baricot M, Bilbao A, Capelastegui A, Cilla Eguiluz CG, Domínguez A, Castilla J, Godoy P, Delgado-Rodríguez M, Soldevila N, Astray J, Mayoral JM, Martín V, González-Candelas F, Galán JC, Tamames S, Castro-Acosta AA, Garín O, Pumarola T; CIBERESP Cases and Controls in Pandemic Influenza Working Group, Spain. "Predictive factors of severe multilobar pneumonia and shock in patients with influenza". *Emergency Medicine Journal*. 2014;31:301-7. PMID: 23449891. I.F.: 1.78. doi: 10.1136/emered-2012-202081.

García-Sáenz A, Sáez M, Napp S, Casal J, Sáez JL, Acevedo P, Guta S, Allepuz A. "Spatio-temporal variability of bovine tuberculosis eradication in Spain (2006-2011)". *Spatial and Spatiotemporal Epidemiology*. 2014;10:1-10. PMID: 25113586. doi: 10.1016/j.sste.2014.06.002. I.F.: ---

Hoffmann R, Borsboom G, Sáez M, Mari Dell'Olmo M, Burström B, Cormán D, Costa C, Deboosere P, Domínguez-Berjón MF, Dzúrová D, Gandarillas A, Gotsens M, Kovács K, Mackenbach J, Martikainen P, Maynou L, Morrison J, Palència L, Pérez G, Pikhart H, Rodríguez-Sanz M, Santana P, Saurina C, Tarkainen L, Borrell C. "Social differences in

avoidable mortality between small areas of 15 European cities: an ecological study". *International Journal of Health Geographics*. 2014;13:8. PMID: 24618273. I.F.: 1.97. doi: 10.1186/1476-072X-13-8.

Borrell C, Mari-Dell'olmo M, Palència L, Gotsens M, Burström BO, Domínguez-Berjón F, Rodríguez-Sanz M, Dzúrová D, Gandarillas A, Hoffmann R, Kovács K, Marinacci C, Martikainen P, Pikhart H, Cormán D, Rosicova K, Sáez M, Santana P, Tarkainen L, Puigpinós R, Morrison J, Pasarín MI, Díez É. "Socioeconomic inequalities in mortality in 16 European cities". *Scandinavian Journal of Public Health*. 2014;42:245-54. PMID: 24567425. I.F.: 3.13. doi: 10.1177/1403494814522556.

Ortiz Collado MA, Sáez M, Favrod J, Hatem M. "Antenatal psychosomatic programming to reduce postpartum depression risk and improve childbirth outcomes: a randomized controlled trial in Spain and France". *BMC Pregnancy and Childbirth*. 2014;14:22. PMID: 24422605. I.F.: 2.15. doi: 10.1186/1471-2393-14-22.

Renart-Vicens G, Sáez M, Moreno-Crespi J, Serdà B, Marcos-Gragera R. "Incidence variation of prostate and cervical cancer according to socioeconomic level in the Girona Health Region". *BMC Public Health* 2014; 14:1079. PMID: 25325921. I.F.: 2.32. doi: 10.1186/1471-2458-14-1079.

Serra L; Sáez M; Juan P; Varga D; Mateu J. "A spatio-temporal poisson hurdle point process to model wildfires". *Stochastic Environmental Research and Risk Assessment (SERRA)* 2014; 28:1671-1684 . I.F.: 2.67.

Celma-Benaiges D, Martínez-García E, Coenders G. "Corporate social responsibility in human resource management: an analysis of common practices and their determinants in Spain". *Corporate Social Responsibility and Environmental Management*. 2014; 21:82-99. I.F.: 2.05.

Serra L, Sáez M, Mateu J, Varga D, Juan P, Díaz-Ávalos C, Rue H. "Spatio-temporal log-gaussian cox processes for modelling wildfire occurrence: the case of catalonia, 1994-2008". *Environmental and Ecological Statistics* 2014; 21:531-563. I.F.: 0.97.

Ferrer-Rosell B, Martínez-García E, Coenders G. "Package and no frills air carriers as moderators of length of stay". *Tourism Management* 2014; 42:114-122. I.F.: 2.38.

Alsuis M, Soler A, Sáez M, Bach C, Cabrero MD, Borrell A, Casas M, Pérez F, Alexandre RN. "Diagnóstico prenatal en la provincia de Girona en el periodo 1999-2009". *Diagnóstico Prenatal* 2014; 24:90-98.

**Books**

González-Penedo M, González-Vázquez S, Barreira N, Saez M, Pose-Reino A, Rodríguez-Blanco A. En Ng Eyk, Rajendra-Acharya U, Suri Js, Campilho A (eds). "Arteriovenous ratio calculation using image-processing techniques". *Image Analysis and Modelling in Ophtalmology*. ISBN: 978146655930, Boca Raton, Florida, USA: CRC Press, 2014, pp. 203-225.

**Grants for Research in Progress:**

- Convocatoria 2014 de subvenciones del Banco de Santander para favorecer la movilidad de profesores visitantes en estudios universitarios oficiales de máster y doctorado en la Universidad de Girona  
Duration: 2014 - 2015  
Visiting Professor: Aurelio Tobías  
Marc Sáez

**Patents:**

Title: Modelo de diagnóstico de cáncer de páncreas. combinatoria de los marcadores clínicos CA19.9, CEA, IGF-1 y albúmina que mejoran el diagnóstico de cáncer de páncreas frente a la pancreatitis crónica.  
Patent Number: P 2014 31022  
Corporation: Universitat de Girona

# ANNEXES

**Annex 1. Seminars****Title**

**II Sessió - Jornada de transferència IDIBGI**  
- Protecció de resultats de la recerca biomèdica i en salut pública i comunitària mitjançant patents i models. Especial consideració dels dispositius mèdics (medical devices)  
Es poden fer empreses i projectes més enllà de la recerca amb mostres d'un Biobanc?

**Date**

09/01/2014

**Title**

**III Sessió - Jornada de transferència IDIBGI**  
- Protecció del software sanitari/assistencial. Qüestions importants a tenir en compte quan encarreguem i desenvolupem software. Titularitat i explotació del software a nivell hospitalari.  
- Creacions des d'un entorn assistencial: Qüestionaris, formularis, protocols d'actuació, traduccions. Com protegir tot això? Copyright. Copyleft

**Date**

06/02/2014

**Title**

Presentació de l'Acció Estratègica en Salut

**Speakers**

Dr. Albert Barberà  
Sra. Núria Chico

**Date**

09/06/2014

**Title**

¿Sirven realmente para algo los biobancos?

**Speakers**

Dr. Manuel Morente  
Coordinador de la Red Nacional de Biobancos Hospitalarios-Instituto de Salud Carlos III (ISCIII)

**Date**

30/01/2014

**Title**

**IV Sessió - Jornada de transferència IDIBGI**  
- Contractes en l'entorn assistencial: llicències, convenis, encàrrecs, prestació de serveis, subcontractacions. Transferència del coneixement i comercialització del coneixement per a tercers (llicències, spin-off, start ups...)

**Date**

06/03/2014

## Annex 2. Winners of the IDIBGI Award 2014

### The IDIBGI Award for the best final year project of the Nursing School. Undergraduates

**Laura Peña Archidona.** “Atenció a l’ictus agut: comparació del sistema català amb el sistema finlandès”

**Nicola Lleona Jackson.** “Influència de l'educació envers la prevenció d'úlceres per pressió, en els coneixements dels professionals de l'equip d'infermeria i en la prevalença”

### The IDIBGI Award for the best final year project the Nursing School. Graduate

**Miguel Angel Robles Sánchez.** “La mejora de la calidad de vida y la satisfacción del/a paciente con Esclerosis Múltiple y diagnóstico reciente mediante una consulta de enfermería especializada”

## Annex 3. Clinical Trials List

### ANAESTHETIC DEPARTMENT

**1326V9235.** Josep Vilaplana Birba. “Estudio en fase III, randomizado, doble ciego, controlado con placebo, de grupos paralelos y multicéntrico para evaluar la seguridad a largo plazo de la naldemedina en el tratamiento del estreñimiento inducido por opiáceos en pacientes con dolor crónico de origen no oncológico que están recibiendo tratamiento con opiáceos”.

### CARDIOLOGY

**D513BC00001.** Jaime Aboal. “Ensayo multinacional, aleatorizado, doble ciego, controlado con placebo, para evaluar el efecto de Ticagrelor 90mg dos veces al día sobre la incidencia de muerte cardiovascular, infarto de miocardio o ictus en pacientes con diabetes mellitus tipo 2”.

**BOE-AVK-2011-01.** Jaime Aboal. “Estudio Titán. Estudio Nacional de Calidad de la Anticoagulación Oral en la Fibrilación Auricular no Valvular”.

**COR-BVS-2013-01.** Joan Bassanganyas. “Registro de pacientes con dispositivo biorreabsorbible en la práctica clínica habitual – Estudio REPARA”.

**FROST-2014-01.** Pablo Loma-Osorio. “Estudio aleatorizado multicéntrico sobre la eficacia de diferentes niveles de hipotermia en supervivientes comatosos de una parada cardiaca extrahospitalaria”.

**BAY-RIV-2014-01.** Julia Roure. “Estudio observacional y transversal para evaluar las características sociodemográficas y clínicas de los pacientes tratados con rivaroxaban en la práctica clínica habitual de hematólogos, cardiólogos e internistas de todo el territorio nacional (Estudio HEROIC)”.

### EMERGENCY DEPARTMENT

**REGISTRO ESPHERIA.** Maria Rosa Arcega Sainz. “Perfil de riesgo de los Pacientes con ETV en Hospitales Españoles atendidos en los servicios de Urgencias e impacto asistencial”.

### ENDOCRINOLOGY AND METABOLIC MEDICINE

**BCB109.** Mercé Fernández Balsells. “Ensayo clínico aleatorizado, controlado con placebo, para evaluar los resultados clínicos cardiovasculares tras el tratamiento con exenatida una vez a la semana en pacientes con diabetes mellitus de tipo 2”.

**HM-EXC-203.** Lidia Sojo. “Ensayo de fase II, aleatorizado, doble ciego, de grupos paralelos, multicéntrico e internacional, de 12 semanas de duración para evaluar el

efecto sobre el control glucémico de cinco dosis de HM11260C comparado con placebo o liraglutida en abierto, en pacientes con diabetes tipo 2”.

### GASTROINTESTINAL SERVICES

**W13-984.** Xavier Aldeguer. “Rapidez en el inicio de la respuesta a Adalimumab en pacientes con enfermedad de Crohn luminal (RAPIDA)”.

**ABB-ADA-2013-01.** Xavier Aldeguer. “Registro no intervencionista de larga duración para evaluar la seguridad y la efectividad de HUMIRA® (adalimumab) en pacientes con colitis ulcerosa (CU) de actividad moderada a grave (LEGACY)”.

**OCR002-HE209.** Xavier Aldeguer. “Multicenter, Randomized Phase 2B Study to Evaluate the Efficacy, Safety and Tolerability of OCR-002 (ornithine phenylacetate) in Hospitalized Patients with Cirrhosis and Associated Hyperammonemia with an Episode of Hepatic Encephalopathy – STOP-HE Study”.

**CSAI.** Carlos Huertas. “Estudio aleatorizado, enmascarado, controlado con placebo sobre los efectos de Adalimumab intralesional en estenosis intestinales de pacientes con enfermedad de Crohn”

**IMI-TRI-2013-01.** Carme López. “Estudio de adherencia en triple terapia para la hepatitis C”.

### INTERNAL MEDICINE

**CLOROTIC.** Arola Armengou. “Estudio aleatorizado, doble ciego, multicentrico, para evaluar la eficacia y seguridad del tratamiento diurético combinado (diurético de asa y hidraclorotiacida) comparado con diurético de asa y placebo en pacientes con insuficiencia cardiaca descompensada”.

**OSIRIS STUDY.** Ferran García-Bragado. “Estudio longitudinal para identificar criterios predictivos de hipertension pulmonar postrombotica”.

**BAY 59-7939/16416.** Ferran García-Bragado. “Rivaroxaban a dosis reducida y Rivaroxaban frente a AAS en la prevención a largo plazo del tromboembolismo sintomático recurrente en pacientes con trombosis venosa profunda sintomática y/o embolia pulmonar”.

### NEPHROLOGY

**MK 3102-019.** Martí Vallès. “Estudio de fase III, multicentrico, aleatorizado y en doble ciego, para evaluar la eficacia y la seguridad de MK-3102 frente a placebo en sujetos con diabetes mellitus de tipo II afectos de insuficiencia renal cronica moderada o severa o de insuficiencia renal terminal

en diàlisi y con control glucemico inadecuado”.

**1517-CL-0610.** Martí Vallès. “Estudio de fase 3, aleatorizado, abierto y controlado con tratamiento activo para evaluar la eficacia y la seguridad de FG-4592 en el tratamiento de la anemia en pacientes con insuficiencia renal crónica no tratados con diálisis”.

**PYR-311.** Martí Vallès. “Estudio en fase III, randomizado, doble ciego, controlado con placebo y multicéntrico para evaluar la seguridad y la eficacia de Pyridorin™ (dihidrocloruro de piridoxamina) en pacientes con nefropatía secundaria a diabetes de tipo 2”

#### NEUROLOGY

**101SK201.** M<sup>º</sup> del Mar Castellanos Rodrigo. “Estudio multicéntrico, doble ciego, controlado por placebo, aleatorizado, de grupos paralelos, para evaluar la seguridad y la eficacia de natalizumab intravenoso (BG00002) para reducir el volumen del infarto en el accidente cerebrovascular isquémico agudo”.

**BAY-ACO-2014-01.** M<sup>º</sup> del Mar Castellanos. “Validación del cuestionario ACTS en pacientes con Fibrilación Auricular (FA) tratados con anticoagulantes orales (ACOs) en consultas de medicina interna y neurología de España. Estudio ALADIN”.

**POINT.** M<sup>º</sup> del Mar Castellanos. “Platelet-Oriented Inhibition in New TIA”.

**NEU-EPI-2013-01.** Albert Mollins Albanell. “Estudio observacional prospectivo, para valorar el efecto de la Blterapia PREcoz en pacientes con epilepsia con fallo a la primera monoterapia: evaluación de CALidad de vida, eficacia, tolerabilidad y estado de depresión y ansiedad”.

**218MS401.** Lluís Ramió i Torrentà. “Estudio observacional, multicéntrico, multinacional para recopilar información sobre la seguridad y documentar la utilización farmacéutica de Fampyra® cuando se usa en la práctica médica habitual (LIBERATE)”.

**CFTY720D2306E1.** Lluís Ramió i Torrentà. “Estudio de extensión abierto con un único brazo de tratamiento del estudio multicentricentrico, aleatorizado, doble ciego, controlado con placebo, con grupos paralelos para comparar la eficacia y seguridad de 0,5 mg FTY20 administrado via oral 1 vez al dia versus placebo pacientes con esclerosis multiple”.

**109MS408.** Lluís Ramió i Torrentà. “Estudio abierto multicéntrico para evaluar la eficacia de Tecfidera™ oral (dimetilfumarato) en la actividad de la EM y en los resultados

notificados por el paciente en sujetos con esclerosis múltiple remitente recidivante en el mundo real (PROTEC)”.

**NOV-FIN-2014-02.** Lluís Ramió i Torrentà. “Estudio observacional retrospectivo para describir la tolerabilidad de Gilenya (Fingolimod) al inicio del tratamiento en la práctica clínica habitual. Estudio MS Right”.

**VITADEM.** Lluís Ramió i Torrentà. “Vitamina D como tratamiento adyuvante para la esclerosis multiple recurrente remitente: estudio multicéntrico, aleatorizado, doble ciego, controlado por placebo”.

**NOV-ESC-2014-01.** Lluís Ramió i Torrentà. “Estudio del coste del brote de la esclerosis múltiple en Cataluña”.

**D5134C00001.** Joaquín Serena Leal. “Estudio aleatorizado, doble ciego y multinacional para la prevención de episodios vasculares mayores con ticagrelor comparado con aspirina (AAS) en pacientes con infarto cerebral agudo o AIT (SOCRATES)”.

**ECASS-4: EXTEND.** Joaquín Serena Leal. “European Cooperative Acute Stroke Study-4. extending the time for thrombolysis in emergency neurological deficits”.

#### ONCOLOGY

**D0816C00002.** Pilar Barretina. “Ensayo fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo, de mantenimiento con Olaparib en monoterapia en pacientes con cancer de ovario con mutacion de brca y recaida platino sensible, que estan en respuesta completa o parcial despues de una quimioterapia basada en platino”.

**ET-D-009-10.** Pilar Barretina. “Ensayo fase III, internacional y aleatorizado de trabectedina más doxorubicina liposomal pegilada (DLP) en comparación con carboplatino más DLP en pacientes con cáncer de ovario que presentan progresión en los 6-12 meses siguientes al último tratamiento con platino”.

**MDV3100-14.** Miquel Beltran. “A multinational, phase 3, randomized, double-blind, placebo- controlled, efficacy and safety study of enzalutamide in patients with nonmetastatic castration-resistant prostate cancer”.

**D4191C00003.** Joaquim Bosch. “A Phase II, Non-comparative, Open label, Multi-centre, International Study of MEDI4736, in Patients with Locally Advanced or Metastatic Non-Small Cell Lung Cancer (Stage IIIB-IV) who have received at least Two Prior Systemic Treatment Regimens Including One Platinum-based Chemotherapy Regimen (ATLANTIC)”.

**D4191C00003.** Joaquim Bosch. “A Phase II, Non-comparative, Open label, Multi-centre, International Study of MEDI4736, in Patients with Locally Advanced or Metastatic Non-Small Cell Lung Cancer (Stage IIIB-IV) who have received at least Two Prior Systemic Treatment Regimens Including One Platinum-based Chemotherapy Regimen (ATLANTIC)”.

**WI190764.** Joaquim Bosch. Reversión de la transición epitelio-mesénquima (EMT) cconductora de resistencia a Crizotinib con Flavonolognan silibina en tumores NSCLC con traslocación EML4-ALK.

**CICL670A2421.** Rosa Coll. “Estudio piloto abierto, fase II, randomizado, para evaluar el efecto de Deferaxirox combinado con eritropoyetina comparado con eritropoyetina sola, en terminos de mejora eritroide, en pacientes con síndrome mielodisplásico de riesgo bajo en INT-1”.

**TRC112121.** Rosa Coll. “Estudio fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo de Eltrombopag o placebo en combinación con Azacitidina en sujetos con síndromes mielodisplásicos (SMD) de riesgo intermedio-1, intermedio-2 o alto según el IPSS”.

**GEINO 14-01.** Sonia del Barco. “Ensayo Clínico fase IIB, aleatorizado, multicéntrico, de continuación o no continuación con 6 ciclos de temozolomida tras los 6 primeros ciclos de tratamiento estándar en primera línea en pacientes con glioblastoma”.

**SOLTI-1301.** Joan Dorca. “Plataforma SOLTI de cribado genómico: Estudio piloto para implementar la terapia personalizada en pacientes con cáncer de mama avanzado o metastásico”.

**GO28888.** Joan Dorca Ribugent. "Estudio de fase II aleatorizado, doble ciego, de letrozol más GDC-0032 versus letrozol más placebo en neoadyuvancia para mujeres postmenopáusicas con cáncer de mama en estadio inicial positivo para receptores de estrógenos y Her2-negativo".

**FMS-LMC-2012-01.** Cristalina Fernández. “Estudio observacional post-autorización registro de pacientes con leucemia mieloide cronica con alta probabilidad de alcanzar respuesta molecular completa”.

**GEM-MIE-2014-01.** Cristalina Fernández. “Estudio observacional prospectivo para identificar los aspectos clínicos que conducen a la toma de decisiones terapéuticas en pacientes con mielofibrosis.”.

**CEL-CPM-2014-01.** Adelaida García. “Estudio observacional de cohorte sobre calidad de vida relacionada con la salud en

pacientes que inician tratamiento con quimioterapia para el cáncer de páncreas metastásico”.

**RV-FOL-GELARC-0683.** David Gallardo Giralt. “Estudio en fase 3, abierto, aleatorizado, para comparar la eficacia y seguridad de Rituximab más Lenalidomida (CC-5013) frente a Rituximab más quimioterapia, seguido de Rituximab en pacientes con Linfoma Folicular sin tratamiento previo”.

**C16019.** Yolanda González. “A Phase 3, Randomized, Placebo-Controlled, Double-Blind Study of Oral Ixazomib Citrate (MLN9708) Maintenance Therapy in Patients With Multiple Myeloma Following Autologous Stem Cell Transplant”.

**GEM2014MAIN.** Yolanda González. “Estudio fase III nacional, multicéntrico, abierto, aleatorizado, de tratamiento de mantenimiento con Lenalidomida y Dexametasona versus Lenalidomida, Dexametasona y MLN9708 tras trasplante autólogo de progenitores hematopoyéticos para pacientes con mieloma múltiple sintomático de nuevo diagnóstico”.

**E7080-G000-304.** Raquel Guardado. “A Multicenter, Randomized, Open-Label, Phase 3 Trial to Compare the Efficacy and Safety of Lenvatinib (E7080) Versus Sorafenib in First-Line Treatment of Subjects With Unresectable Hepatocellular Carcinoma”.

**LMA-2012.** Ramon Guardia. “Tratamiento de la leucemia mieloide aguda de novo en pacientes adultos de hasta 70 años de edad”.

**TTD-14-01.** Xavier Hernández. “Estudio fase II de Regorafenib como agente único para el tratamiento de pacientes con cáncer colorrectalmetastásico (CCRm) con mutaciones en cualquier RAS o BRAF previamente tratados con FOLFOXIRI mas bevacizumab”.

**JUA-BEN-2012-01.** Nicolás Kelleher. “Registro de datos de pacientes con Linfoma Folicular en recaída, tratados con Bendamustina y rituximab por uso compasivo”.

**9090-14.** Rut Porta. “A Randomized, Phase 3 Study of Ganetespib in Combination with Docetaxel versus Docetaxel Alone in Patients with Advanced Non-Small-Cell Lung Adenocarcinoma”.

**BRCAP-GELTAMO12.** Josep Maria Roncero. “Estudio fase II aleatorizado de tratamiento de los pacientes jovenes diagnosticados de linfoma B difuso de celula grande con IPI de alto riesgo con R-CHOP vs Bortezomib-r-CAP”.



**D4203C00011.** Jordi Rubió. "Ensayo fase III multicentrico, aleatorizado, doble ciego y controlado por placebo, para evaluar la eficacia y seguridad de Vandetanib (Caprelsa) 300 mg en pacientes con cancer de tiroides papilar o pobremente diferenciado localmente avanzado o metastasico, refractarios o no aptos para tratamiento con radioyodo".

**L00070IN309F0.** Jordi Rubió. "Estudio en fase III de vinflunina i.v. en combinación con metotrexato frente a metotrexato sólo en pacientes con cáncer de cabeza y cuello de células escamosas recurrente o metastásico previamente tratados con quimioterapia basada en platino".

**ARN-509-003.** Nuria Sala González. "Estudio de fase III, multicéntrico, aleatorizado, doble ciego, de ARN-509 controlado con placebo en hombres con cáncer de próstata no metastásico (M0) y resistente a la castración".

**APR-ANG-2012-01.** Nuria Sala González. "Estudio observacional prospectivo y multicéntrico para la identificación de microARNs como biomarcadores pronósticos y predictores de respuesta a fármacos en primera línea de tratamiento en pacientes con carcinoma renal de células claras avanzado o metastásico".

**JAN-CPR-2013-01.** Nuria Sala González. "Registro prospectivo de pacientes con cáncer de próstata resistente a la castración metastásico con diagnóstico confirmado de adenocarcinoma".

**D081DC00008.** Nuria Sala González. "Estudio multicéntrico de fase II, aleatorizado, doble ciego y controlado con placebo para comparar la eficacia, la seguridad y la tolerabilidad del olaparib frente a placebo cuando se administra junto con tratamiento de abiraterona en pacientes con cáncer de próstata metastásico resistente a la castración que han recibido quimioterapia previa con docetaxel".

**009175QM.** Gemma Vinyes. "Estudio en fase II, aleatorizado, de Fulvestrant en combinacion con el mTOR inhibidor AZD2014 o Everolimus, o con Fulvestrant en monoterapia para el tratamiento del cáncer de mama avanzado o metastásico con receptor de estrógenos positivos (MANTA)".

**D081CC00006.** Gemma Vinyes. "Ensayo fase III, multicéntrico, aleatorizado, doble ciego, de grupos paralelos, controlado con placebo, para evaluar la eficacia y la seguridad de olaparib frente a placebo como tratamiento adyuvante en pacientes con cáncer de mama HER2 negativo de alto riesgo y mutaciones germinales de BRCA1/2, que han finalizado el tratamiento local y la quimioterapia neoadyuvante o adyuvante".

#### PEDIATRICS

**SAN-SOM-2011-01 (EP00-501).** Abel López Bermejo. "Vigilancia postcomercialización para controlar la seguridad y eficacia a largo plazo de Omnitrope® en niños y adolescentes (PATRO Children)".

**SCI-SPAI-2014-01.** Susana Uriel Prat. "Estudio epidemiológico de incidencia de infección aguda de las vías respiratorias (IRA) por virus respiratorio sincitial (VRS) que requiere ingreso hospitalario en poblaciones pediátricas con enfermedad cardiaca diferente a la cardiopatía congénita hemodinámicamente significativa (CCHS). Estudio CIVIC 6"

#### TRAUMA AND ORTHOPAEDIC SURGERY

**HEALTH.** Miguel Angel Froufe. "A multi-centre randomized trial comparing total hip arthroplasty and hemi-arthroplasty on revision surgery and and quality of life in patients with displaced femoral neck fractures"

#### UROLOGY

**JAN-CPR-2014-01.** Josep Maria Comet. "Estudio observacional transversal para describir la prevalencia e intensidad de la fatiga en pacientes con cáncer de próstata resistente a la castración en España (Estudio VITAL)"

#### VASCULAR SURGERY

**T122E2.** Omar Andrés Navarro. "RX REGISTRY Prospective, Non-randomized, Multicentre, Observational Registry to Assess Clinically Relevant Benefit of performing the whole PTA procedure using the Rapid Exchange (RX) devices"

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