



2019

ANNUAL SCIENTIFIC REPORT

IdIB^R
IGi

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University of Girona (UdG)	120
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Presentation

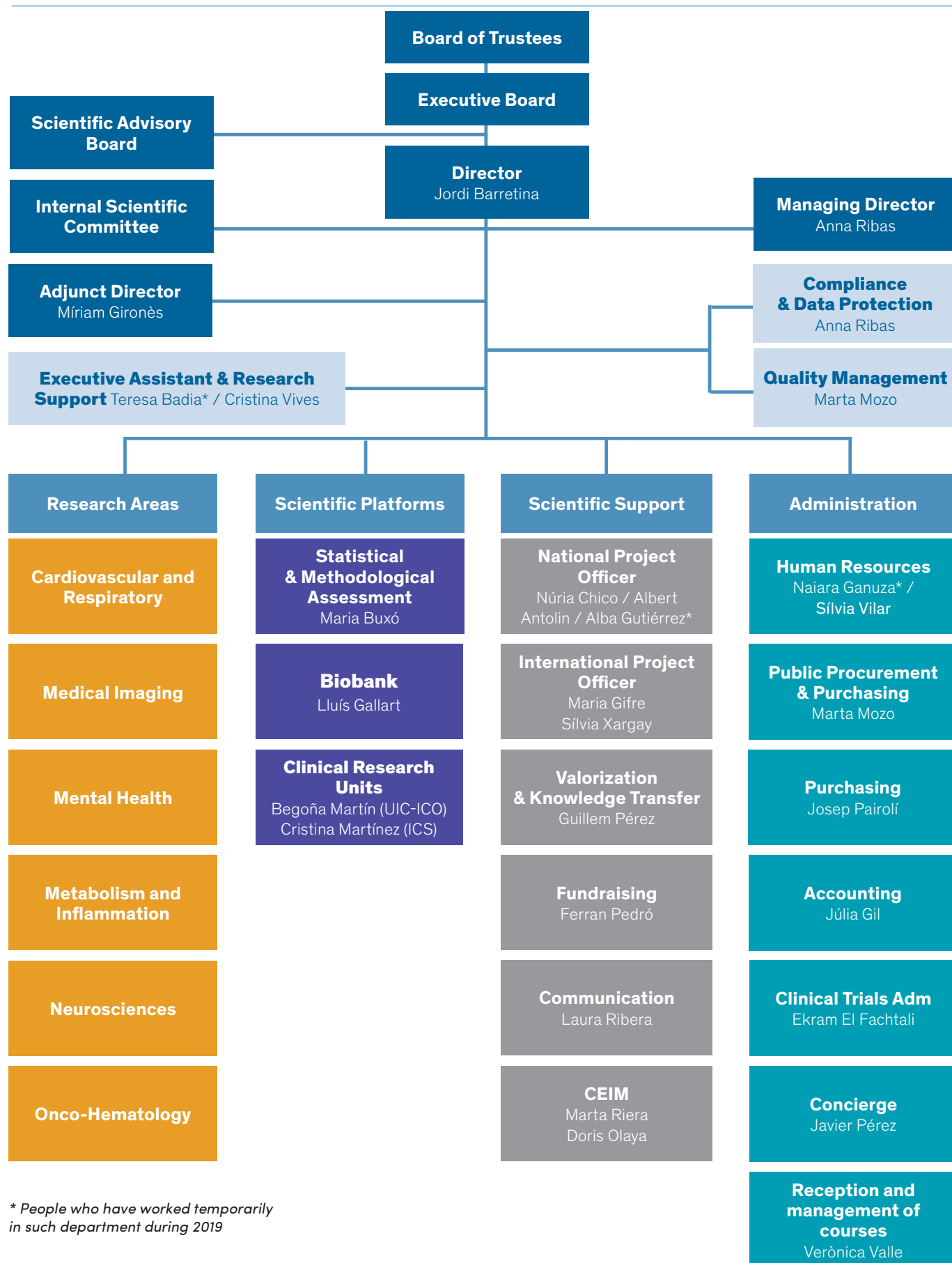
The Girona Biomedical Research Institute (IDIBGI) is a public research centre that aims to be at the center of translational biomedical and health research in the province of Girona. IDIBGI belongs to the Catalan Network of Research Centres of the Generalitat de Catalunya (CERCA).

IDIBGI's mission 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. We aspire to become a leading player in biomedical research by producing and transferring knowledge that has a significant impact on the health and quality of life of everybody in our society.

IDIBGI is the umbrella organization for investigators from different institutions: the ICS - Doctor 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 (IDIAP Jordi Gol) and the University of Girona (UdG) in those groups related to health and biomedical research.

The combination of investigators with different expertise and backgrounds enables the creation of powerful synergies and multidisciplinary teams focused on the search for solutions to the main health problems and on training new professionals for the future. IDIBGI is well positioned to face new and future health challenges by undertaking innovative translational biomedical research in Girona.

Organization



* People who have worked temporarily in such department during 2019

Board of trustees

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Robert Fabregat Fuentes

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Deputy Director of Research and Health Innovation.

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Elena Ribera Garijo

Managing Director, Universitat de Girona

Josep Calbó Angrill

Vice-dean of Strategic Projects, Universitat de Girona

Maria Pla de Solà Morales

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Joaquim Casanovas Lax

Managing Director (Girona Region) at Institut Català de la Salut (ICS) and Institut d'Assistència Sanitària (IAS)

Glòria Padura Esnarriaga

Director at the Hospital Universitari Dr. Josep Trueta

Joan Profitós Tuset

President at the Institut d'Assistència Sanitària (IAS) Girona

David Gallardo Giralt

Head of the Hematology Department the Institut Català d'Oncologia Girona (ICO)

Joaquim Casanovas Lax

Managing Director (Girona Region) at Institut Català de la Salut (ICS) and Institut d'Assistència Sanitària (IAS)

Secretary

M^a Jesús Costa Serra

IAS Girona lawyer

Executive board

President

Robert Fabregat Fuentes

General Director of Research and Health Innovation, Department de salut, Generalitat de Catalunya.

Members

Joan Gómez Pallarès

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Vice-dean of strategic projects, Universitat de Girona

Joan Profitós Tuset

President Institut d'Assistència Sanitària (IAS) Girona

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Marisol Soengas

Molecular Pathology Programme, Spanish National Cancer Research Centre, Madrid

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Jordi Barretina

IDIBGI Director

MEMBERS

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Girona Heart Registry Principal Investigator

Pilar Solé

Nursing Research Coordinator, University of Girona

Montserrat Vendrell

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Rafel Marcos-Gragera

Descriptive Epidemiology, Genetics and Cancer Prevention Principal Investigator

Begoña Martín

ICO Clinical Research Unit Coordinator

Javier Menéndez

Metabolism and Cancer Principal Investigator

UdG

Ramon Brugada

Cardiovascular Genetics Principal Investigator

Dolors Juvinyà

Health and Health Care Principal Investigator

IAS

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Mental Health Principal Investigator

Josep Garre

Aging and Health Principal Investigator

IDI

Salvador Pedraza

Medical Imaging Principal Investigator

SECRETARY

Guillem Pérez Sánchez

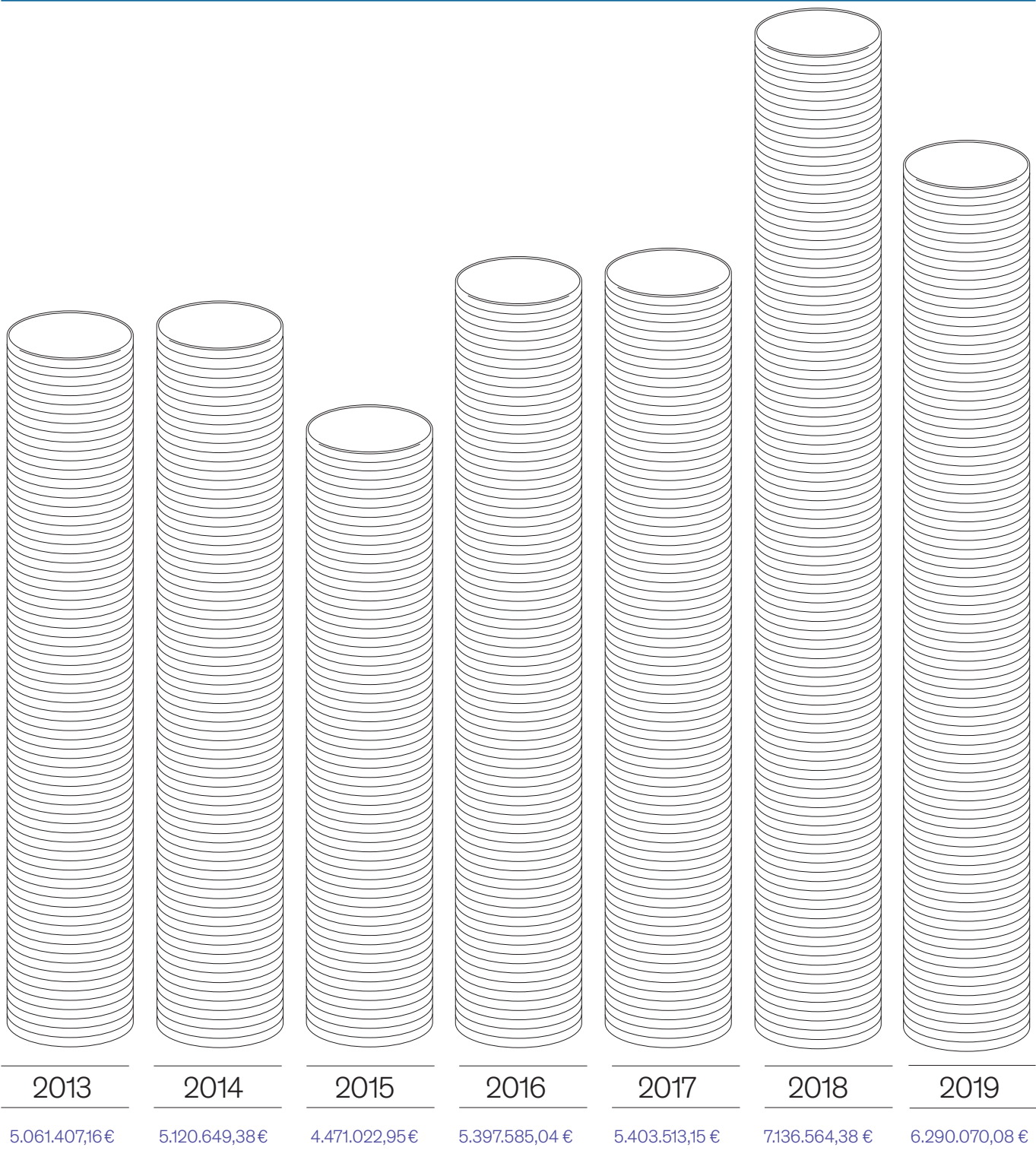
Valorization & Knowledge Transfer Officer



FACTS AND FIGURES

Management report

ANNUAL BUDGET



FUNDING SOURCES AND EXPENSES

2019 Funding Sources

Clinical trials & private contracts: 1.732.326,94 €	
State administration competitive funds: 1.201.466,17 €	
Platforms: 1.066.788,93 €	
Philanthropy: 799.377,61 €	
Generalitat de Catalunya transfer: 450.000,00 €	
Generalitat de Catalunya competitive funds: 304.014,92 €	
Other associations & foundations: 230.486,39 €	
La Marató de TV3 Foundation: 201.193,12 €	
La Caixa Foundation: 200.000,00 €	
European funds (FEDER): 185.748,76 €	
Other public funds: 115.796,90 €	
Diputació de Girona & DipSalut: 110.000,00 €	
Other privat funds: 37.962,97 €	
European funds (FP7-EU): 18.849,44 €	
Finantial income: 7.555,45 €	
TOTAL: 6.661.567,60€	

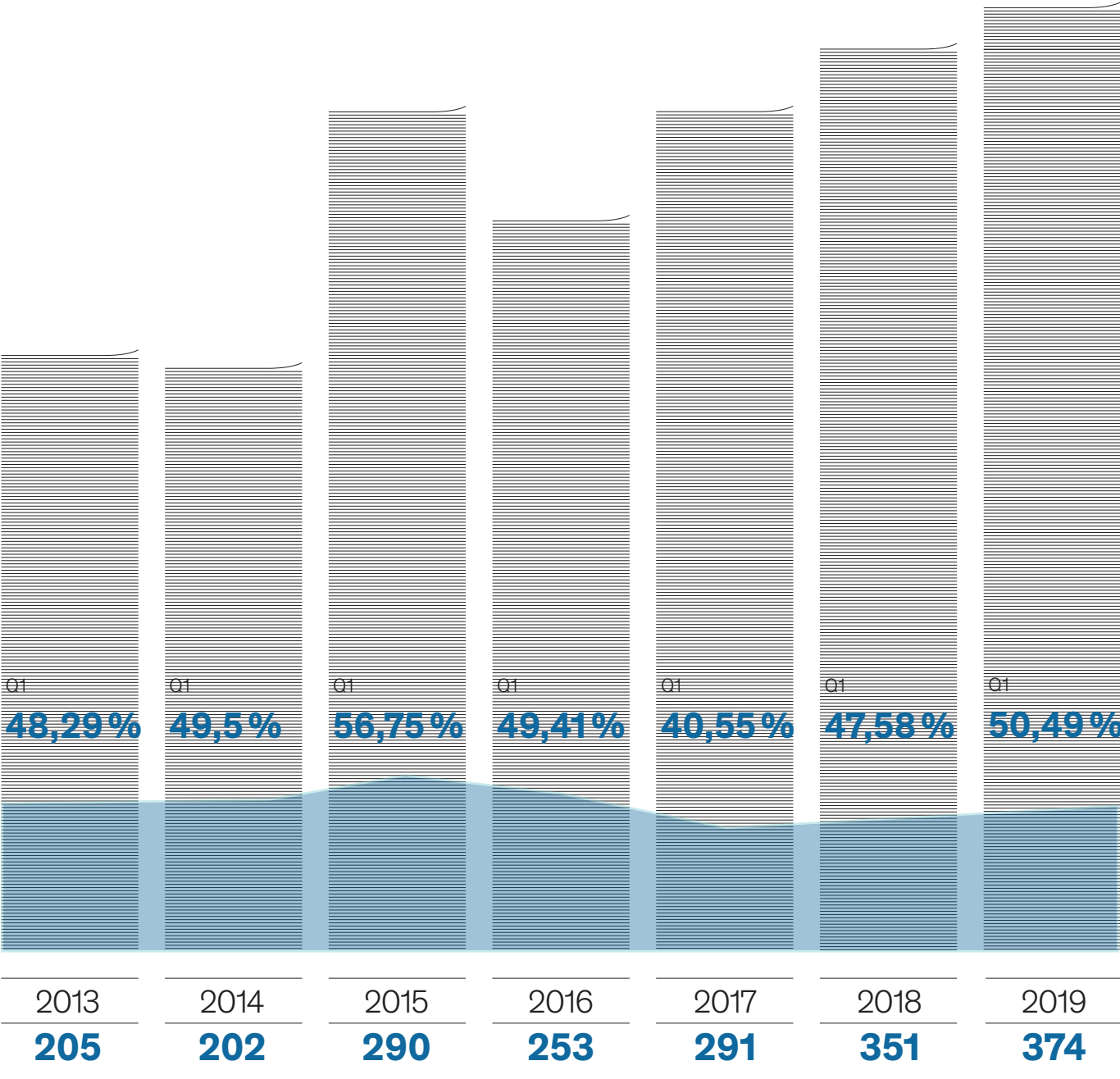
2019 Expenses

Projects	Human Resources: 2.403.473,20 €	
	Medical consumables & external works: 1.137.843,42 €	
	Collaborations: 164.365,84 €	
	Publications & academic training: 111.981,43 €	
	Travelling costs: 160.175,02 €	
	Other Services: 324.738,73 €	
	Transfers to other public institutions: 92.392,61 €	
	Equipment: 185.579,01 €	
Support	Running costs: 305.318,49 €	
	Administration office: 469.598,80 €	
	Research support office: 191.265,70 €	
TOTAL: 5.846.696,25 €		

Scientific output

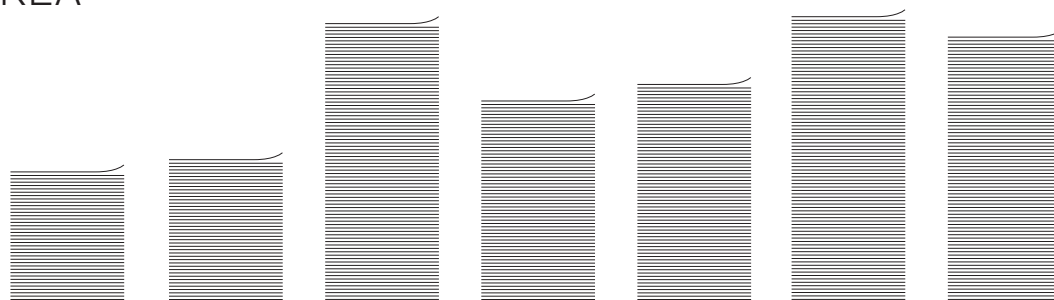
NUMBER OF ARTICLES

400 ARTICLES



ARTICLES BY AREA

Cardiovascular



2013
22

2014
24

2015
47

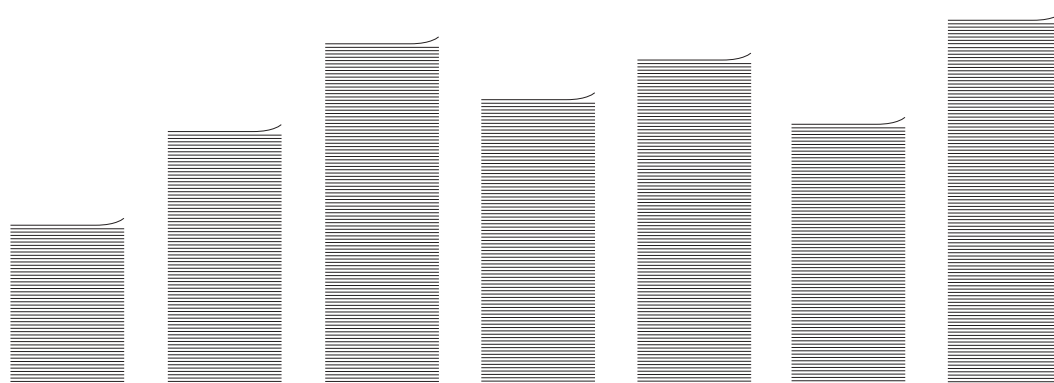
2016
34

2017
37

2018
48

2019
43

Metabolism



2013
27

2014
43

2015
56

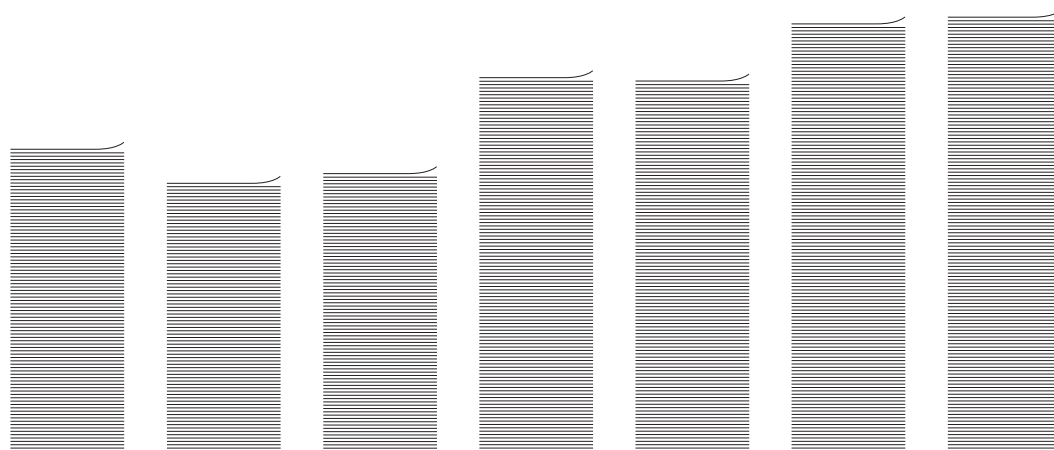
2016
48

2017
52

2018
44

2019
64

Neurosciences



2013
50

2014
45

2015
46

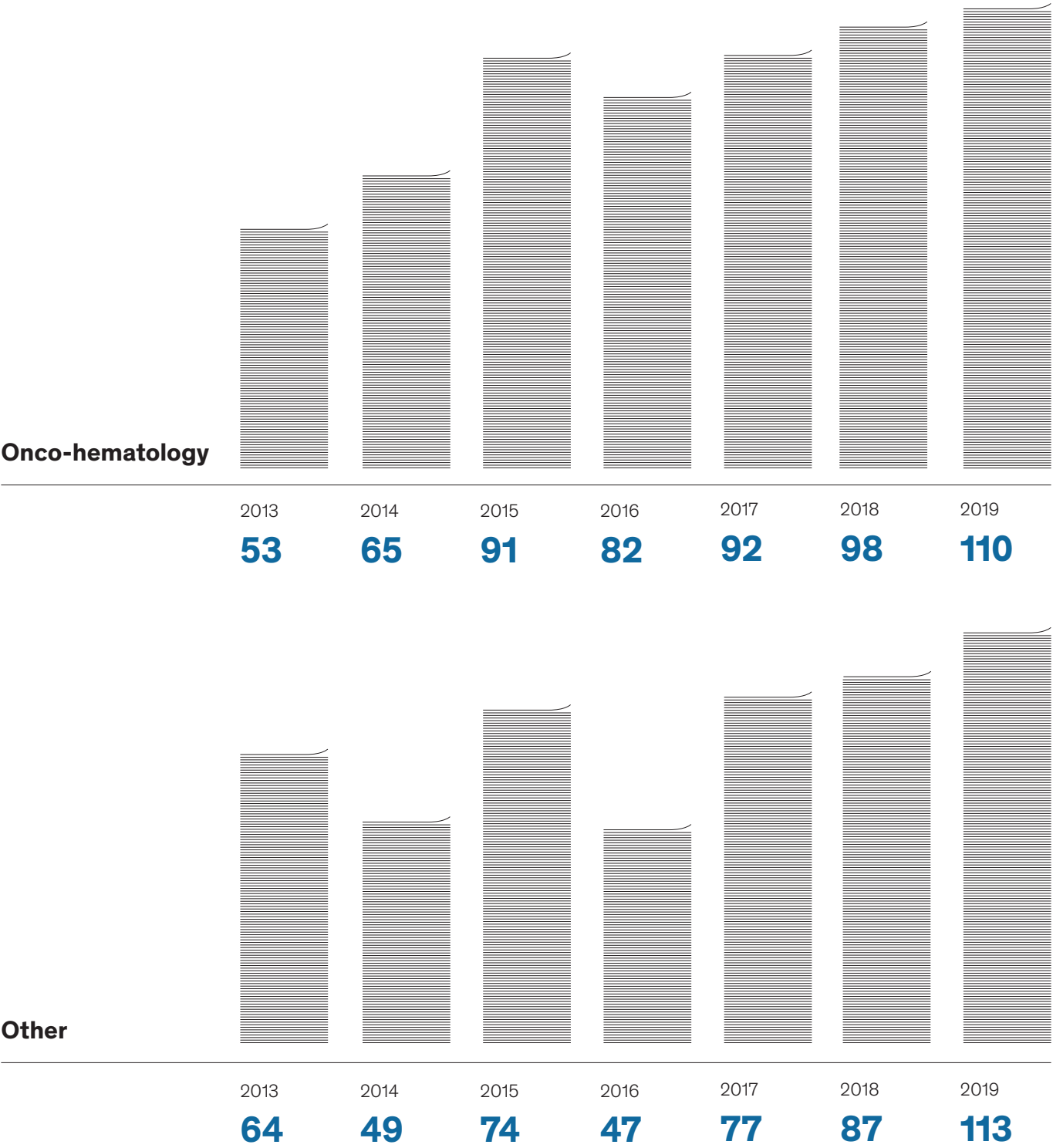
2016
62

2017
61

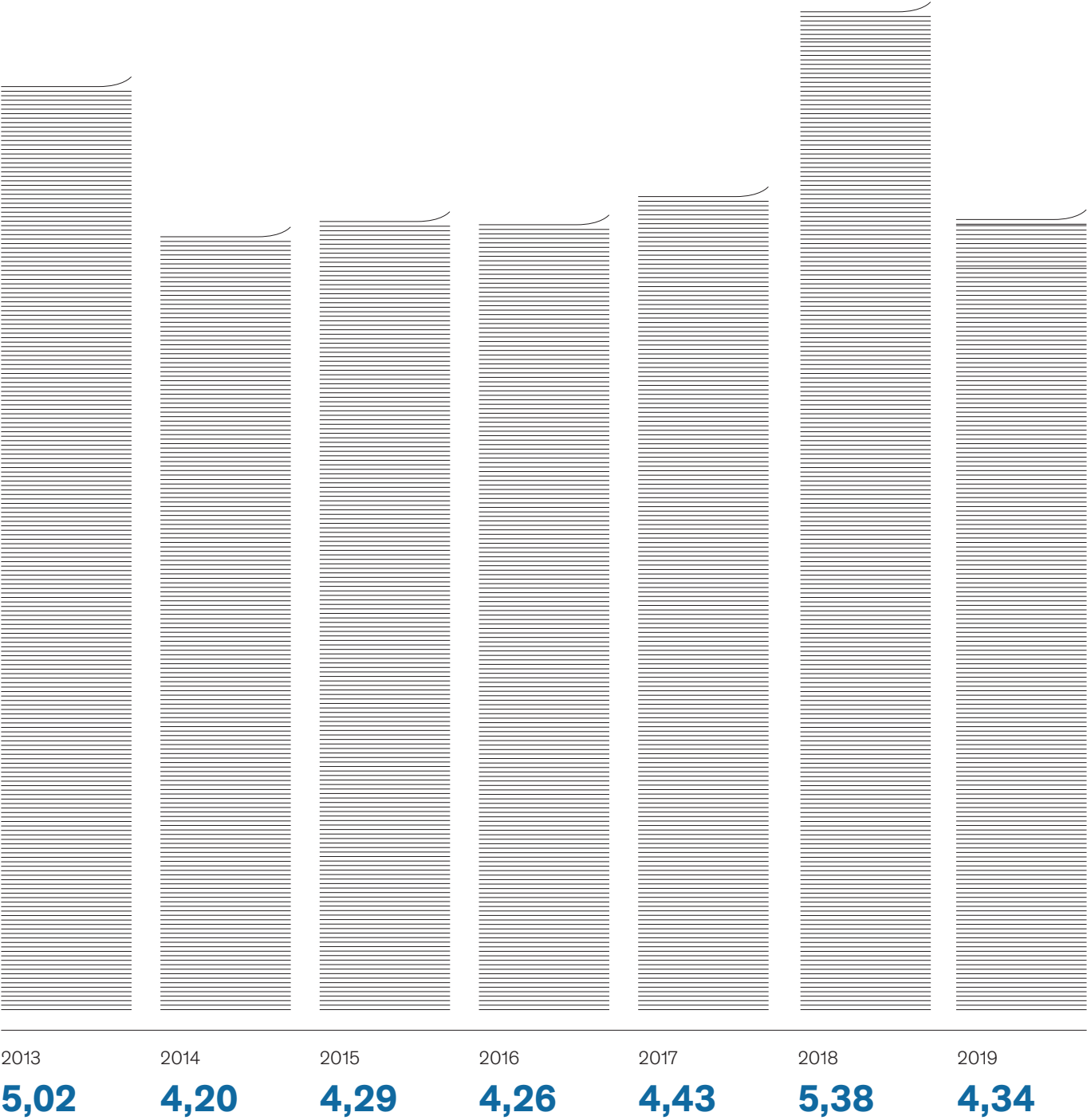
2018
71

2019
74

ARTICLES BY AREA



IMPACT FACTOR PER ARTICLE



FACTS AND FIGURES

This list reflects all journals in which investigators of the IDIBGI have published articles during 2019.

JOURNAL	Total Articles Published	IF
THE NEW ENGLAND JOURNAL OF MEDICINE	1	70,67
LANCET	1	59,10
JAMA - JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	1	51,27
JOURNAL OF CLINICAL ONCOLOGY	2	28,35
EUROPEAN HEART JOURNAL	1	24,89
JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY	1	18,64
BLOOD	1	16,60
CIRCULATION RESEARCH	1	15,86
DIABETES CARE	2	15,27
ALZHEIMERS & DEMENTIA	3	14,42
JAMA NEUROLOGY	1	12,32
NATURE COMMUNICATIONS	3	11,88
BRAIN	1	11,81
NUCLEIC ACIDS RESEARCH	2	11,15
JOURNAL OF THE NATIONAL CANCER INSTITUTE	1	10,21
LEUKEMIA	1	9,94
ANNALS OF SURGERY	2	9,48
MEDICAL IMAGE ANALYSIS	1	8,88
NEUROLOGY	1	8,69
GENETICS MEDICINE	2	8,68
ENVIRONMENT INTERNATIONAL	1	7,94
BLOOD CANCER JOURNAL	1	7,90
IEEE TRANSACTIONS ON MEDICAL IMAGING	1	7,82
REDOX BIOLOGY	1	7,79
ALIMENTARY PHARMACOLOGY & THERAPEUTICS	3	7,73
DERMATOLOGY	1	7,57
GASTROINTESTINAL ENDOSCOPY	1	7,23
AMERICAN JOURNAL OF TRANSPLANTATION	1	7,16
CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION	1	6,70
EUROPEAN JOURNAL OF CANCER CARE	1	6,68
THE AMERICAN JOURNAL OF CLINICAL NUTRITION	1	6,70
CANCER LETTERS	1	6,51
METABOLISM-CLINICAL AND EXPERIMENTAL	1	6,51
CLINICAL NUTRITION	3	6,40
ENDOSCOPY	1	6,38
CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY	1	6,24
CANCERS	1	6,16
AMERICAN JOURNAL OF HEMATOLOGY	1	6,14
AMERICAN JOURNAL OF HYPERTENSION	1	6,14
STROKE	1	6,05
JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM	1	6,04
JOURNAL OF MEDICAL GENETICS	2	5,90
TRANSLATIONAL STROKE RESEARCH	1	5,85
CIRCULATION-CARDIOVASCULAR IMAGING	1	5,81
JOURNAL OF NEUROINFLAMMATION	1	5,70
JOURNAL OF CLINICAL MEDICINE	4	5,69
BREAST CANCER RESEARCH	2	5,68
MULTIPLE SCLEROSIS JOURNAL	1	5,65

JOURNAL

Total Articles
Published

IF

EUROPEAN JOURNAL OF PREVENTIVE CARDIOLOGY	2	5,64
THE JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM	3	5,61
AGING	2	5,52
REVIEWS IN ENDOCRINE & METABOLIC DISORDERS	3	5,52
CLINICAL EPIGENETICS	1	5,50
SEMINARS IN CELL & DEVELOPMENTAL BIOLOGY	1	5,46
BRITISH JOURNAL OF CANCER	2	5,42
FASEB JOURNAL	1	5,39
ONCOIMMUNOLOGY	1	5,33
THE ONCOLOGIST	2	5,25
HEART RHYTHM	2	5,23
BRITISH JOURNAL OF HEMATOLOGY	3	5,21
REVISTA ESPAÑOLA DE CARDIOLOGIA	6	5,09
EUROPACE	2	5,05
CANCER & METABOLISM	1	5,03
ENVIRONMENTAL RESEARCH	2	5,03

CLINICAL GUIDELINES

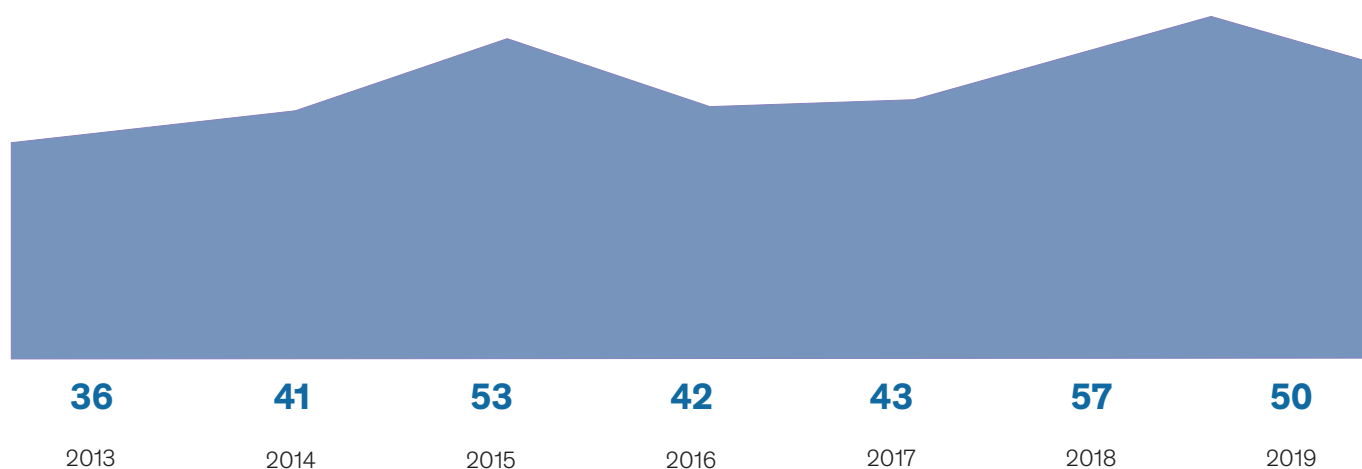
Guies mèdiques oficials de diagnòstic i tractament de la Societat Catalana de Neurologia (SCN) (3^a edició - 2019). Protocol de tractament. Diagnòstic i tractament de les malalties vasculars cerebrals. 2019.

Solans M, Romaguera D, Gracia-Lavedan E, Molinuevo A, Benavente Y, Saez M, Marcos-Gragera R, Costas L, Robles C, Alonso E, de la Banda E, Gonzalez-Barca E, Llorca J, Rodriguez-Suarez MM, Lozano-Lorca M, Aymerich M, Campo E, Gimeno-Vázquez E, Castaño-Vinyals G, Aragonés N, Pollán M, Kogevinas M, de Sanjose S, Amiano P, Casabonne D. Adherence to the 2018 WCRF/AICR cancer prevention guidelines and chronic lymphocytic leukemia in the MCC-Spain study. *Cancer Epidemiol.* 2020 Feb;64:101629. doi: 10.1016/j.canep.2019.101629. Epub 2019 Nov 19. PMID: 31756676.

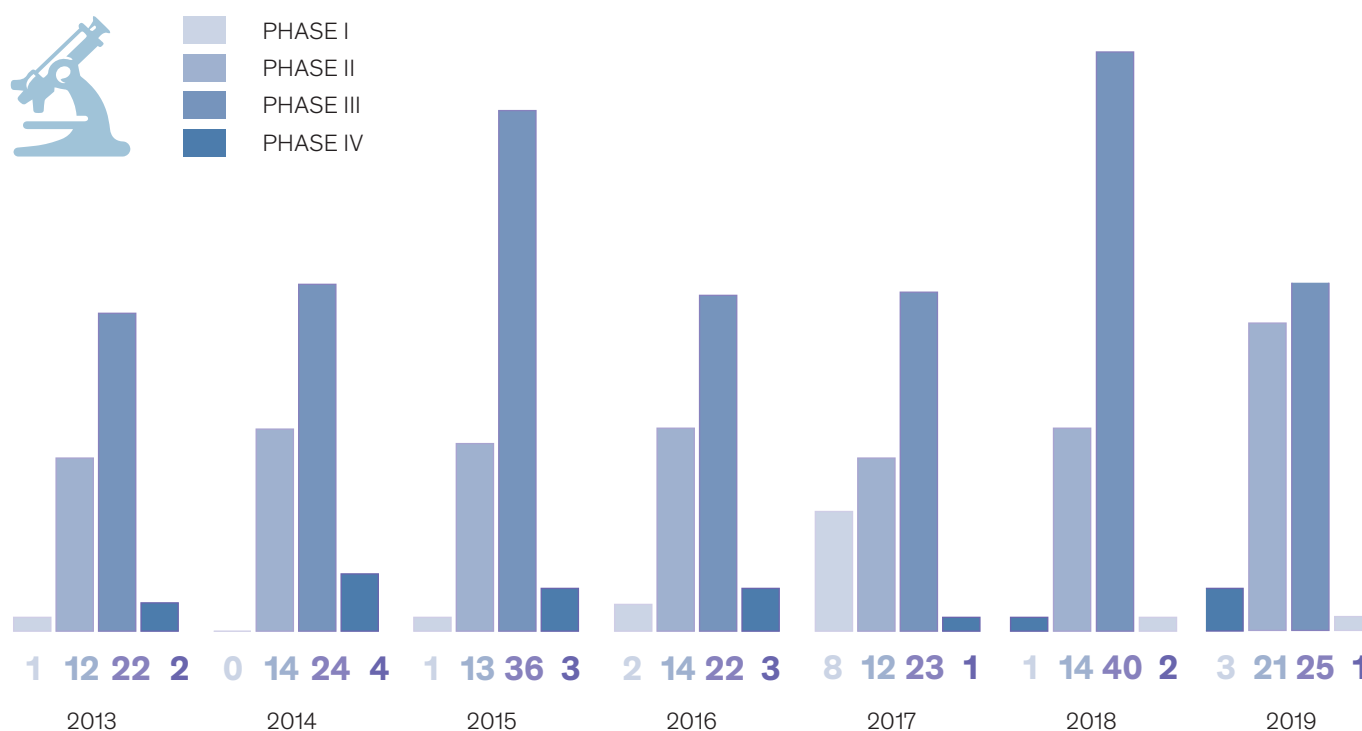
CLINICAL TRIALS

Clinical Trials

Clinical Trials initiated 2013-2019



Clinical Trials by Phase 2013-2019





CARDIO- VASCULAR AREA AND RESPIRATORY AREA

**CARDIOVASCULAR GENETICS
RESEARCH IN VASCULAR HEALTH
RESPIRATORY GROUP**

Cardiovascular genetics

Recognised as a consolidated research group - 2017SGR804

Team involved in "Red de Enfermedades Cardiovasculares"

Team involved in "Centro de Investigación Biomédica en Red Enfermedades Cardiovasculares" (CIBER-CV)

KEYWORDS: **Sudden Cardiac Death; Arrhythmia; Genetics; Cell Biology; Epigenomics; iPSCells**



Group members

Principal Investigator

Ramon Brugada

Senior Researchers

Óscar Campuzano

Sara Pagans

Guillermo Pérez

Fabiana Scornik

Marcel Verges

Elisabet Selga

Carles Ferrer

Alexandra Pérez

Post-doctoral Researchers

Mireia Alcalde

Mónica Coll

Mel·lina Pinsach

Marta Puigmulé

Bernat del Olmo

Pre-doctoral Researchers

Eric Cortada

Anna Fernández

David Carreras

Rebecca Martínez

Marta Prats

Adrià Pérez

Medical Researchers

Emilce Trucco

Coloma Tiron

Xavier Albert Bertran

Daniel Bosch

Núria Coma

Aleix Fort

Markus Linhart

Paula Fluvià

Elisabet Pujol

Maria Berenguel

Marco Paz

Isabel Ramió

Jaime Aboal

Sergi Moral

Pablo Loma-Orsorio

Mérida Cardenas

Maria Núñez

Daniel Rivero

Technicians

Ferran Picó

Laura López

Núria Neto

Adrià Simon

Support

Eloi Arias

Elisabet Canals

Laia Nogué

Anna Iglesias



Overview

The aim of this point is to explain briefly the research group Cardiovascular

Genetics Centre (www.gencardio.org)

The CGC is a research laboratory created in 2008 and dedicated to the investigation of sudden cardiac death. The CGC is hosted by the Institute of Biomedical Research of Girona (IDIBGI, Spain), which embraces all the biomedical research groups at the University of Girona and Trueta and Santa Caterina Hospitals.

CGC's research aims to improve understanding of the basic mechanisms associated factors and causes of heart disease and sudden death and improve diagnostic tools, prevention and treatment.

This scientific area is divided into an area of research in an area of clinical and basic research.

CLINICAL RESEARCH

The clinical research program leverages collaboration of hospitals and health centers to study the risk factors, possible treatments and prevention methods.

BASIC RESEARCH

Studies to better understand the biological basis of diseases associated with sudden death. The laboratory is involved in several projects to understand the pathophysiological basis of sudden death from six major areas: genetics, epigenetics, histology, electrophysiology, membrane traffic and proteomics.

DIAGNOSIS

The diagnostic laboratory of cardiovascular genetics is the reference laboratory in its field in Catalonia, since 2015. The laboratory provides tools to help clinicians in the diagnosis of inherited cardiovascular diseases

Research topics

INHERITED CARDIOVASCULAR DISEASES

1. GenCardio has several projects involving the identification of genetic causative and modulating factors associated with the risk of inherited cardiac diseases. Several of these diseases are associated with sudden cardiac death in the young. We work both with structural heart disease (cardiomyopathies), as well as pure electrical diseases (channelopathies). At present we are also investigating the genetic factors associated with predisposition to myocarditis, to myocardial infarction, to thrombosis as well as to predisposition to cardiac insufficiency from

chemotherapy. The group has developed several genetic panels to performs these studies.

2. MOSCAT. Sudden death in Catalonia. Since 2012 we are performing the genetic analyses in all sudden cardiac deaths before the age of 50, in collaboration with the Institute of Legal Medicine. This project, a systematic approach to diagnosis of unexplained sudden death, is unique in the world.
3. Sudden death in the neonate. In collaboration with Sant Joan de Deu Hospital we aim at unravelling the genetic basis of sudden infant death syndrome.
4. Sudden death in epilepsy. In collaboration with the Catholic University of Rome, we work on the identification of the genetic basis of sudden death in patients with epilepsy.

GENETIC VARIABILITY IN REGULATORY REGIONS

6. We are characterizing the genetic variability in regulatory regions in genes associated with Brugada syndrome. This work will provide important information in causality as well as modulation of symptoms in this lethal disease.

FUNCTIONAL STUDIES

7. Animal model of arrhythmogenic cardiomyopathy. We have developed a mouse model of AC in order to understand the role of exercise and age in the progression of the disease.
8. Cardiomyocyte-derived IPs for the study of inherited arrhythmias. The basic electrophysiology team is currently using CM-IPs to investigate the functional effects of genetic variation in sudden cardiac death in several genetic diseases (Brugada syndrome, Catecholaminergic polymorphic ventricular tachycardia, etc)
9. Molecular biology of AC. Using CRISPR technology we are investigating the role of several desmosomal variants in the development of the disease, as well as the pathophysiological mechanisms which cause the cascade of events towards fibrofatty replacement of myocardial tissue.
10. Protein trafficking to membrane. Some of the genetic variants will not enable the ion channel to reach the membrane. This trafficking defect has been associated with sudden cardiac death. We are investigating the role of channel beta subunits in the trafficking of the ion channels.

CLINICAL PROJECTS

11. Girona Vital Project. We have developed one of the most important public access defibrillation programs in Europe to evaluate the benefits of this program in the prevention of sudden cardiac death. Cardiac rehabilitation Projects. We have several projects evaluating the role of cardiac rehabilitation in the prevention of further cardiac events.
12. Resuscitated cardiac arrest: we investigate the pathophysiology of post cardiac arrest syndrome including, temperature management, acute hemodynamic features and factors associated to neurological outcome.

13. Acute coronary syndromes. Since 2012 we study the clinical characteristics, risk profile and outcomes of patients presenting to ER with acute chest pain, and evaluate the safety and diagnostic accuracy of an early discharge protocol based on high sensitivity troponins.
14. ST elevation acute myocardial infarction (STEMI): we have developed a predictive model to calculate STEMI diagnosis-guise cross time.
15. Non ST elevation acute coronary syndrome: a registry to evaluate the bleeding risk related with antithrombotic therapy in these patients.
16. New technologies applied to the acute myocardial infarction (AMI) network: we are working to improve the AMI network with new technologies. Valvular heart disease. The imaging group is investigating several parameters associated with the progression of valvular heart disease, in order to better identify preventive mechanisms.
17. Cardiac insufficiency associated with chemo and radiotherapy. We are investigating imaging parameters which can predict development of cardiac failure in its early stages to adopt preventive therapies. Handgrip manoeuvres in SVT: We use a simplified protocol to induce SVT and to perform a differential diagnosis of the arrhythmia.
18. Leadless pacemaker and tricuspid function: We analysed tricuspid valve function pre and post pacemaker implant.
19. Anticoagulation in flutter: We ablate typical flutter and perform follow up of thromboembolic events in patient with and without atrial fibrillation.

Publications

Case reports

Fort A, Loma-Orsorio P, Alcalde Ó, Brugada R. The «De Winter» pattern on the electrocardiogram: It is time to run. *Med Clin (Barc)*. 2018 Jun 7. pii: S0025-7753(18)30298-7. doi: 10.1016/j.medcli.2018.05.003. [Epub ahead of print] English, Spanish. PubMed PMID: 29887179.

Originals

Milman A, Hochstadt A, Andorin A, Gourraud JB, Sacher F, Mabo P, Kim SH, Conte G, Arbelo E, Kamakura T, Aiba T, Napolitano C, Giustetto C, Denjoy I, Juang JJM, Maeda S, Takahashi Y, Leshem E, Michowitz Y, Rahkovich M, Jespersen CH, Wijeyeratne YD, Champagne J, Calo L, Huang Z, Mizusawa Y, Postema PG, Brugada R, Wilde AAM, Yan GX, Behr ER, Tfelt-Hansen J, Hirao K, Veltmann C, Leenhardt A, Corrado D, Gaita F, Priori SG, Kusano KF, Takagi M, Delise P, Brugada J, Brugada P, Nam GB, Probst V, Belhassen B. Time-to-first appropriate shock in patients implanted prophylactically with an implantable

cardioverter-defibrillator: data from the Survey on Arrhythmic Events in BRUGADA Syndrome (SABRUS). *Europace*. 2018 Dec 24. doi: 10.1093/europace/euy301. [Epub ahead of print] PubMed PMID: 30590530.

López-Sainz Á, Salazar-Mendiguchía J, García-Álvarez A, Campuzano Larrea O, López-Garrido MÁ, García-Guereta L, Fuentes Cañamero ME, Climent Payá V, Peña-Peña ML, Zorio-Grima E, Jordá-Burgos P, Díez-López C, Brugada R, García-Pinilla JM, García-Pavía P. Clinical Findings and Prognosis of Danon Disease. An Analysis of the Spanish Multicenter Danon Registry. *Rev Esp Cardiol (Engl Ed)*. 2018 Aug 11. pii: S1885-5857(18)30304-9. doi: 10.1016/j.rec.2018.04.035. [Epub ahead of print] English, Spanish. PubMed PMID: 30108015.

Iglesies J, Loma-Orsorio P, Aboal J, Núñez M, Brugada R. Mechanical Chest Compressions and Traumatic Complications in Out-of-hospital Cardiac Arrest. Is There a Price to Pay? *Rev Esp Cardiol (Engl Ed)*. 2018 Apr 11. pii: S1885-5857(18)30106-3. doi: 10.1016/j.rec.2018.01.019. [Epub ahead of print] English, Spanish. PubMed PMID: 29655766.

Cuyàs E, Gumuzio J, Lozano-Sánchez J, Carreras D, Verdura S, Llorach-Parés L, Sanchez-Martinez M, Selga E, Pérez GJ, Scornik FS, Brugada R, Bosch-Barrera J, Segura-Carretero A, Martin ÁG, Encinar JA, Menendez JA. Extra Virgin Olive Oil Contains a Phenolic Inhibitor of the Histone Demethylase LSD1/KDM1A. *Nutrients*. 2019 Jul 19;11(7). pii: E1656. doi: 10.3390/nu11071656.

Santori M, Gil R, Blanco-Verea A, Riuró H, Díaz-Castro Ó, López-Abel B, Brugada R, Carracedo Á, Pérez GJ, Scornik FS, Brion M. Sudden infant death as the most severe phenotype caused by genetic modulation in a family with atrial fibrillation. *Forensic Sci Int Genet*. 2019 Nov;43:102159. doi: 10.1016/j.fsigen.2019.102159. Epub 2019 Aug 31.

Yeste M, Llavanera M, Pérez G, Scornik F, Puig-Parri J, Brugada R, Bonet S, Pinart E. Elucidating the Role of K⁺ Channels during In Vitro Capacitation of Boar Spermatozoa: Do SLO1 Channels Play a Crucial Role? *Int J Mol Sci*. 2019 Dec 15;20(24). pii: E6330. doi: 10.3390/ijms20246330.

Cortada E, Brugada R, Verges M. N-Glycosylation of the voltage-gated sodium channel $\beta 2$ subunit is required for efficient trafficking of Nav1.5/ $\beta 2$ to the plasma membrane. *J Biol Chem*. 2019 Nov 1;294(44):16123-16140. doi: 10.1074/jbc.RA119.007903. Epub 2019 Sep 11. PMID: 31511323

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Books

Georgia Sarquella-Brugada, Anna Fernandez-Falgueras, Sergi Cesar, Victoria Fiol, Josep Brugada, Daniel Natera, Laura Carrera, Carlos Orteza, Cecilia Jimenez-Mallebrera, Cristina Jou, Andres Nascimento, Ramon Brugada, Oscar Campuzano. Distrofia muscular asociada a mutaciones en LMNA Estudio de nuevas alteraciones genéticas mediante tecnología de secuenciación masiva. Revista Genética Médica, Octubre 2018

Mireia Alcalde, Oscar Campuzano, Marta Prats, Anna Fernandez-Falgueras, Georgia Sarquella-Brugada, Sergi Cesar, Anna Iglesias, Ramon Brugada. Chapter 3: Arrhythmogenic cardiomyopathy: update on genetic basis. Book: Rare Diseases. Avid Science Publications, 2018

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Grants

Project: Muerte Súbita Inexplicada en población joven: estudio genético, traslación clínica y prevención familiar

Funding agency: Instituto de Salud Carlos III (PI17/01690)

Duration: 2018-2020

Coordinator: -

Principal Investigator: Ramon Brugada / Oscar Campuzano

Project: Centro Investigación Biomédica En Red (CIBER), Enfermedades Cardiovasculares (ciber-cv)

Funding agency: Instituto de Salud Carlos III

Duration: 2017-2021

Coordinator: -

Principal Investigator: Ramón Brugada / Oscar Campuzano

Project: Investigació Cardiovascular

Funding agency: Obra Social "La Caixa"

Duration: 2017-2022

Coordinator:

Principal Investigator: Ramon Brugada

Project: Ajuts complementaris per la Mobilitat d'investigadors UdG

Tipus: MOB18

Funding agency: Universitat de Girona

Duration: 2018-2019

Coordinator: Universitat de Girona

Principal Investigator: Rebecca Martínez Moreno

Project: Travel Award to attend the Biophysical Society Meeting, Baltimore, USA, 2019

Funding agency: The Biophysical Society

Duration: 2019

Coordinator:

Principal Investigator: Rebecca Martínez Moreno

Project: Arritmias cardíacas: causas y mecanismos.

Funding agency: Fundación Española para la Ciencia y la Tecnología (FECYT) a través de la plataforma de micromecenazgo (crowdfunding) Precipita (PR220)

Duration: 01/2019-03/2020

Principal Investigator: Marcel Vergés

Patents

Number of application: ES20140031546U

Title: Aparato para el entrenamiento del masaje cardiac - modelo de utilidad.

Inventor: Ramón Brugada

Research activity contributions related to clinical and assistance development and technology development

Since 2015 we have the reference diagnostic laboratory for cardiovascular genetics. The CGC Diagnostic Laboratory (Gencardio Diagnostics) works to establish standard and regulated procedures for obtaining results from genetics and clinical interpretation in the field of cardiovascular disease. To achieve this, we are developing tools and technologies for genetic diagnosis according to validation and regulation standards. Our goal is to deploy genetic diagnostic products for use in diagnostic laboratories.

For that purpose we are collaborating with the clinical laboratory as well as with the Catalan Institute of Oncology to provide diagnostic tools using NGS technology.

Membership of collaborative research structures (National & International):

CIBER-CV

Funding agency: Instituto de Salud Carlos III

Duration: 2017-2022

Principal Investigator: Dr. Ramon Brugada

Director, Comissió de treball per la Cohesió Territorial del Sistema de Recerca i Innovació en Salut a Catalunya.

Thesis

Title: Regulome-seq: a Novel Approach for the Identification of Non-coding Variants Associated with Human Disease. Assessment of its Applicability in 89 Brugada syndrome Individuals.

Student: Mel-lina Pinsach

Directors: Dra. Sara Pagans Lista, Dr. Ivan Garcia-Bassets, Dr. Ramon Brugada Tarradellas.

Date: 30/01/2019

Research stays: Departament de Medicina de la Universitat de Califòrnia, San Diego (15/01/2016 - 15/05/2016)

Title: "Development of a computational tool to detect Structural Variants from High-Throughput Sequencing"

Student: Bernat del Olmo

University: Università Cattolica del Sacro Cuore, Roma, Itàlia.

Directors: Dr. Ramon Brugada, Dr. Antonio Oliva (Università Cattolica del Sacro Cuore).

Date: 2016-2019.

Research stays: University California San Diego (UCSD) - Març 2018-Juny 2018.

Supervisor: Dr. Ivan Garcia-Bassets.

- Hospital Sant Joan de Déu. Sudden Cardiac death in Infants and intrauterine death.
- Hospital del Mar i Maternitat de Barcelona per tal de dur a terme estudi ECG en nounats. L'objectiu és identificar alteracions en el ECG des del naixement per tal de prendre mesures preventives.
- Institut de Medicina Legal de Catalunya (IMLC). Genetics in unexplained Sudden Cardiac death
- GenIncode. Collaboration in the development of genetic panels
- DipSalut. Collaboration on the public access defibrillation program.

Awards / Recognition

Rebecca Martínez Moreno MOB18 Short-stay Grant, University of Girona.

Eric Cortada Almar:

Short (3 months) stay at the Department of Pharmacology - University of Michigan Medical School (Prof. Lori L. Isom), financed by

1. Ajut complementari per la Mobilitat d'investigadors UdG" (MOB) (MOB2019)
2. gency for Management of University and Research Grants (AGAUR): internationalization activity

Collaborations

- University of Rome. Collaborative Project in sudden cardiac death related to epilepsy.
- Hospital Trueta. Collaboration in genetics of sudden cardiac death

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 - 2017SGR1146

KEYWORDS: **Atherosclerosis, cardiovascular risk, primary prevention**

Group members

Principal Investigator

Rafel Ramos

Senior Researchers

Maria del Mar García

Ruth Martí Lluch

Anna Ponjoan Thäns

Post-doctoral Researchers

Lia Alves

Miquel Quesada

Dídac Parramon

Lourdes Camós

Mar Serrat

Pre-doctoral Researchers

Jaime Aboal

Elisabet Balló

Laura Guerrero

Eli Carlomagno

Èrica Homs

Margarita Matas

Esther Lazaro

Ester Fages

Carles López

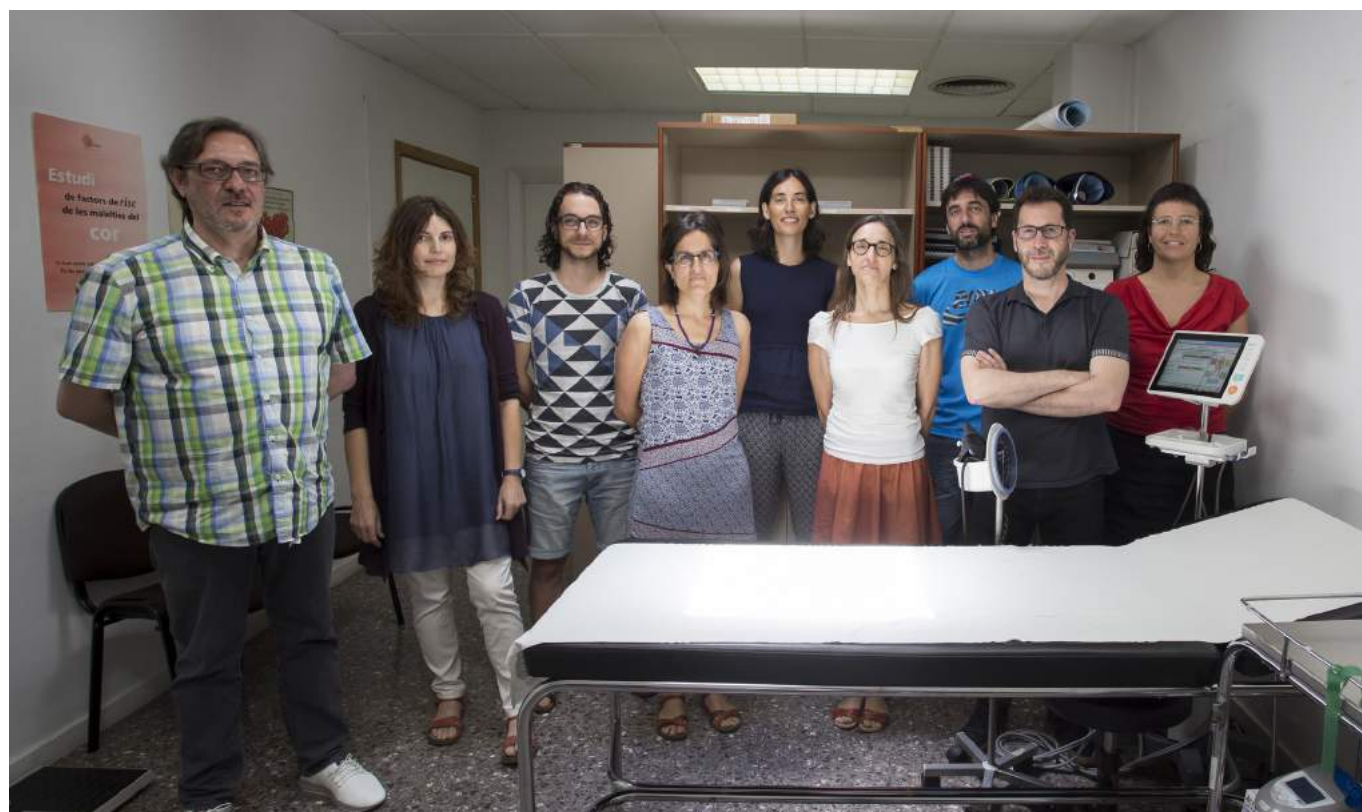
Alícia Carrera

Ester Càceres

Medical Researchers

Carlos Cerezo

Pascual Solanas



Overview

The group Investigació en Salut Vascular (ISV) of Girona is multidisciplinary and encompasses all perspectives of the proposed research lines. In this group, experts in epidemiology and methodology of research work along with physicians and clinical researchers. Thus, interpretation and discussion of the projects are grounded and take into account the needs and considerations of clinical practice. The group is linked with three institutions: Institut de Recerca Biomèdica de Girona (IDIBGI), Institut d'Investigació en Atenció Primària (IDIAP), and Universitat de Girona (UdG). The group consists of family physicians (M.Quesada, D.Parramon, P.Solanas, C. Cerezo, R.Ramos), an epidemiologist (M.Garcia), mathematicians (J.Blanch, M.Comas), a laboratory medicine specialist (L.Alves-Cabratosa), nurses (L.Camos) and biologists (A.Ponjoan, R.Martí).

The multidisciplinary of the team has been key to achieve the results obtained so far, and will be crucial to keep such trend in the future. Expertise areas in our group are related to primary care, disease prevention, epidemiology, study of lipids, cardiovascular diseases, statistics, and analysis of large clinical databases.

Research in ISV group is focused on the study of the epidemiology of vascular diseases, detection of cardiovascular disease in its asymptomatic stage, mathematical modelling of risk prediction (construction of prediction tools to be applied in Primary Care), and evaluation of interventions to prevent vascular disease, particularly the effectiveness of lipid-lowering drugs.

The group is organised to adapt to its strategic objectives. The leading researcher and general coordinator of the group is Dr Rafel Ramos, who is a Family Physician. There is a scientific group supervised by Dr Ramos and by Dr Maria García -who is an expert in research methodology and statistics. Both coordinate the supervision of the projects, the prioritisation of the objectives, and the analyses performed by the postdoctoral researchers. They are also responsible, along with Dr Ruth Martí, for the supervision of the PhD students' works. To accomplish the scientific and strategic objectives of the group, three platforms have been organised:

1. The platform for tuition, coordinated by Maria García, Ruth Martí, and Rafel Ramos, is in charge of the internal tuition for the group members (proposing and selecting courses for the researchers and technicians, organising the internal instruction of the researchers particularly of the PhD students, and the group sessions). They also organise the lectures in research methodology that the group members address to other health professionals. Currently, this platform is directing 10 doctoral theses in primary care and cardiovascular epidemiology. There are 4 members in the group who are associate teachers within

the Departament de Ciències Mèdiques in Universitat de Girona (UdG), and they lecture in the Medical Degree, in the Master in Health Promotion, and in the Master in Molecular Biology and Biomedicine from UdG. They lecture in multiple courses and seminars about research given to health professionals at the unitat Docent de Medicina de Família de Girona. The group ISV also hosts residents in medicine and in nursing for a period of research instruction during their internship.

2. The platform for data management and statistical analysis. This structure is strategic for the group, since the expertise in the management of large clinical databases supports the three strategic objectives of the group. The coordinator of this platform is Dr Garcia and the technicians are M. Comas and J. Blanch, who are both mathematicians. In recent years, this platform has gained great expertise in the management of clinical databases, essentially through collaboration with other international research groups. This platform supports 8 projects that are under competitive funding. Dr Maria García has been recently appointed director of SIDIAP system (www.sidiap.org).

3. Platform for patient recruitment and follow-up. This structure is specialised in patient enrolment and follow-up, with tuition in sample extraction, clinical measurements, and questionnaire administration. In recent years, more than 9000 participants have been recruited for the various projects this platform supports (HERMES study, MARK study, REGICOR study). Dra. Martí is the coordinator of this platform.

Project management and follow-up are carried out by R. Ramos, M. García, R. Martí, and A. Ponjoan.

Research topics

The ISV research group offers a broad spectrum of expertise in both methodologies and topic areas in primary care. Its research is focused on three principal research lines, with which we aim to continue during the next three years. These lines are 1) evaluation of preventive interventions and study of the effectiveness of drugs used in primary prevention, using the Information System for Research in Primary Care (SIDIAP). The SIDIAP database was created in 2010 under the auspices of the Catalan Institute of Health (CIH) and the Primary Care Research Institute Jordi Gol (IDIAP). It is an anonymized database that generates reliable and standardized clinical information of nearly 5 million patients – about 80% of the Catalan population, and 10% of the Spanish – attended by 3414 general practitioners (GPs) in the 274 primary care practices managed by the CIH. The main aim of the SIDIAP platform is to promote the development of research based on data from these medical records. 2) Epidemiology of cardiovascular diseases, especially asymptomatic. 3) The design of decision-making support tools using mathematical modelling

of risk prediction.

The above-mentioned three main research lines can be concreted in the following 5 objectives:

1. To assess the effectiveness and efficiency of different interventions for prevention and control of atherosclerotic disease in primary care using large databases.
2. To analyse the role of cardiovascular (CV) risk factors and their control in dementia incidence.
3. To design and validate risk functions, tailored to the needs of general and specific populations.
4. To analyse the role of emerging and new risk factors and the presence of asymptomatic atherosclerosis in cardiovascular risk prediction.
5. To evaluate activities for health promotion and disease prevention in the context of the redIAPP (Research Network on Preventive Activities and Health Promotion, RETICS).

Publications

Originals

Fa-Binefa, M., Clará, A., Pérez-Fernández, S., Grau, M., Dégano, I. R., Martí-Lluch, R., Ramos, R., Marrugat, J., & Elosua, R. (2019). Early smoking-onset age and risk of cardiovascular disease and mortality. *Preventive medicine*, 124, 17–22

Ramos R, Masana L, Comas-Cufí M, García-Gil M, Martí-Lluch R, Ponjoan A, Plana N, Alves-Cabratos L, Marrugat J, Elosua R, Dégano IR, Gomez-Marcos MA, Zamora A. Derivation and validation of SIDIAP-FHP score: A new risk model predicting cardiovascular disease in familial hypercholesterolemia phenotype. *Atherosclerosis*. 2019 Oct; 292:42-51. doi:10.1016/j.atherosclerosis.2019.10.016. Epub 2019 Oct 30.

García-Gil, M., Comas-Cufí, M., Ramos, R., Martí, R., Alves-Cabratos, L., Parramon, D., Prieto-Alhambra, D., Baena-Díez, J. M., Salvador-González, B., Elosua, R., Dégano, I. R., Marrugat, J., & Grau, M. (2019). Effectiveness of Statins as Primary Prevention in People With Gout: A Population-Based Cohort Study. *Journal of cardiovascular pharmacology and therapeutics*, 24(6), 542–550.

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Gomez-Sanchez, L., Gomez-Marcos, M. A., Patino-Alonso, M. C., Recio-Rodriguez, J. I., Gomez-Sanchez, M., González-Sánchez, J., Alonso-Domínguez, R., Sánchez-Aguadero, N., Maderuelo-Fernandez, J. A., Ramos, R., Garcia-Ortiz, L., Rodriguez-Sanchez, E., & MARK Group (2019). Reclassification by applying the Framingham equation 30 years to subjects with intermediate cardiovascular risk. *MARK study. Medicina clinica*, 153(9), 351–356. <https://doi.org/10.1016/j.medcli.2019.01.033>

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Clinical epidemiology, 11, 509–518. <https://doi.org/10.2147/CLEP.S206770>

Dégano, I. R., Ramos, R., García-Gil, M., Zamora, A., Comas-Cufí, M., Francés, A., García-Elias, A., & Marrugat, J. (2019). Three-year events and mortality in cardiovascular disease patients without lipid-lowering treatment. *European journal of preventive cardiology*, 2047487319862103. Advance online publication. <https://doi.org/10.1177/2047487319862103>

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Pol-Pons A, Aubanell-Serra M, Vidal M, Martí-Lluch R, Ponjoan A. Lactancia materna: competencia básica de los profesionales sanitarios de atención primaria [Breastfeeding: Basic competence of primary health care professionals]. *Aten Primaria*. 2019;51(1):4749.

Grants

Project: Development and validation of digital risk prediction tools for adolescent common mental disorder.

Funding agency: Wellcome Trust

Duration: 2019-2020

Coordinator: Irene Petersen (UCL)

Principal Investigator: Rafel Ramos i Maria Garcia

Project: Smart City Observatories implement REsilient Water Management

Funding agency: H2020

Duration: 2019-2020

Coordinator: Lluís Corominas (ICRA)

Principal Investigator: Anna Ponjoan i Rafel Ramos

Project: Girona, Regió Saludable

Funding agency: Generalitat de Catalunya, Fons FEDER

Duration: 2018-2020

Coordinator: Rafel Ramos, Josep Puig i Josep Garré

Principal Investigator: Rafel Ramos, Josep Puig i Josep Garré

Project: Predicción del Riesgo vascular en población de edad

avanzada del mediterráneo. Estudio PROTEO

Funding agency: Generalitat de Catalunya, Fons FEDER

Duration: 2017-2019

Coordinator: Rafel Ramos

Principal Investigator: Rafel Ramos

Project: Epidemiologia de la Hipercolesterolèmia Familiar; predicció de risc, efectivitat i seguretat del tractament hipolipemiant

Funding agency: Departament de Salut (Convocatòria PERIS 2016)

Duration: 2017-2019

Coordinator: Rafel Ramos

Principal Investigator: Rafel Ramos

Project: Asociación entre la administración de inhibidores de la bomba de protones y la incidencia de enfermedad renal crónica y lesión renal aguda en población general

Funding agency: IDIAP Jordi Gol

Duration: 2017-2019

Coordinator: Antonio Rodriguez

Principal Investigator: Antonio Rodriguez

Project: Seguiment de la cohort poblacional de l'estudi REGICOR: tendències en la incidència de malaltia cardiovascular, en la prevalença de factors de risc, identificació de nous mecanismes i biomarcadors predictius, i avaluació d'estratègies de prevenció

Funding agency: Departament de Salut (Convocatòria PERIS 2016)

Duration: 2017-2019

Coordinator: Roberto Elosua

Principal Investigator: Rafel Ramos

Project: Efectividad de los Objetivos Terapéuticos de la Lipoproteína de Baja Densidad (cLDL) en la Reducción de Eventos Aterotrombóticos. Proyecto ELECTRA.

Funding agency: Instituto de Salud Carlos III

Duration: 2016-2018

Coordinator: Maria del Mar Garcia Gil

Principal Investigator: Maria del Mar Garcia Gil

Project: Retrospective longitudinal analysis in T1D and T2D for the population of Catalonia

Funding agency: Novo Nordisk Pharma, S.A.

Duration: 2018-2019

Coordinator: Maria del Mar Garcia Gil

Principal Investigator: Maria del Mar Garcia Gil

Membership of the collaborative research networks

National collaborations

We participate in the Redes temáticas de Investigación Cooperativa en Salud (RETICS). These are organisational structures integrated by the association of a group of biomedical multidisciplinary centres and research groups to Instituto de Salud Carlos III. Eight members of our group belong to CARDIOCAT (RD16/0007/0004), a group that is part of the Research Network in preventive activities and health promotion (redIAPP) which is configured by several Spanish research groups. The objective of CARDIOCAT is to generate knowledge that will benefit Primary Health Care, particularly on the efficacy, effectiveness, and efficiency of preventative interventions. We have many articles and projects in common with other redIAPP members. Specially with the group led by Dr L. Garcia-Ortiz (Research Group in cardiovascular disease from Castilla y León, RD16/0007/0003) and the group led by Dr B. Bolívar, coordinator of redIAPP (Research Group in Primary Health Services in Catalonia, RD16/0007/0001).

Doctoral thesis

Title: Factors associated with arterial stiffness in a general Mediterranean population and in a Mediterranean intermediate cardiovascular risk population

Student: Lourdes Camós i LLovet

Director: Rafel Ramos Blanes i Maria Garcia Gil.

University: Universitat Autònoma de Barcelona

Faculty/School: Medicine

Date: 26/02/2019

Title: Avaluació de la funció renal en la millora de la predicció del risc vascular. Anàlisi del rol de les estatines en la prevenció primària d'esdeveniments cardiovascular en la població amb malaltia renal crònica inicial.

Student: Dídac Parramon Font

Director: Rafel Ramos Blanes i Maria Garcia Gil.

University: Universitat de Girona (UdG)

Faculty/School: Medicine

Date: 26/07/2019

Title: Disseny, validació i posada en pràctica d'un instrument per a mesurar els coneixements teòrics dels professionals sanitaris en la mesura de la pressió arterial

Student: Mar Serrat Costa

Director: Gabriel Coll de Tuero, Wifredo Ricart i Carme Bertran

University: Universitat de Girona (UdG)

Faculty/School: Medicine

Date: 24/05/2019

Title: Estimación de la prevalencia de la Hipercolesterolemia Familiar y de las características clínicas asociadas en Cataluña

Student: Àlex Vila Belmonte

Director: Albert Zamora Cervantes, Rafel Ramos Blanes i Núria Plana Gil

University: Universitat de Girona (UdG)

Faculty/School: Medicine

Date: 2019

Title: El síndrome coronario agudo: tendencias en la magnitud del problema, en el manejo hospitalario y en la aparición de complicaciones en un estudio de base poblacional, y mejoras en las estrategias de prevención individual

Student: Gabriel Vazquez Oliva

Director: Roberto Elosua Llanos, Alberto Zamora Cervantes i Rafel Ramos Blanes

University: Universitat de Girona (UdG)

Faculty/School: Medicine

Date: 2019

Awards / Recognition

Statins for prevention in older adults article, has been considered as one of the Top 20 Research Studies of 2018 for Primary Care Physicians

Collaborations

We effectively collaborate and share projects with investigators from both national and international institutions.

International collaborations

- Dr Irene Petersen's research group. The group is located at the University College of London, and they are experts on Missing imputation techniques. Dr Irene Petersen collaborates as researcher in some of the projects led by members of our group.
- Participation with EU-ADR Alliance. Members of the group are part of this European structure. We intend to be involved in European projects related to cost effectiveness of treatments for the prevention of CV disease.
- We are partners of the European Project entitled "Real world Outcomes across the Alzheimer's disease spectrum to better care: Multi-modal data Access Platform" (ROADMAP), financed by the Innovative Medicines Initiative (IMI) and

with 13 partners from 5 other countries (United Kingdom, Netherlands, Denmark, Luxembourg, and Sweden).

- With some other IDIAP investigators, we are part of the consortium of the European Medical Information Framework (EMIF) project. The consortium is formed by 14 countries and 56 institutions (<http://www.emif.eu/consortium>). The objectives of this project are to establish the Information Framework (EMIF-Platform), to identify predictors and diagnostic biomarkers for Alzheimer's Disease, and to identify predictors and diagnostic markers of metabolic complications in adults and in children.
- Dr Prieto Alhambra's research group from Oxford University. Drs Ramos and García stayed for a research fellowship at the Botnar Research Center
- We are partners of the E-Limiter proposal in the second stage call of H2020-SC1-2016-2017 (Personalised Medicine). The project is coordinated by Dr J. Marrugat of IMIM.
- Collaboration with the International Society of Vascular Health & Aging (I.S.V.H). We are collaborating in an international project entitled Advanced Approach to Arterial Stiffness.

National collaborations

- Information System for Research in Primary Care (SIDIAP) platform. SIDIAP promotes the development of research based on data from primary care electronic medical records and other complementary databases. We actively participate in this platform. We use this platform in most of our active projects, as has already been mentioned. Moreover, Dr Garcia is the Director of this platform and Dr Ramos is a member of its executive and scientific boards.
- Cardiovascular Epidemiology and Genetics Group from the IMIM (Institut Hospital del Mar Investigacions Mèdiques). Dr R. Elosua is the coordinator of this group, which is also composed by Dr J. Marrugat and Dr M. Grau, among others, with whom we have collaborated in many projects, and authored many papers.
- Participation in the FRESCO Platform (Función de Riesgo a España de acontecimientos Coronarios y Otros) which is a collaborative, multicentre, prospective cohort study, based on grouping population cohorts that have been recruited by researchers throughout Spain for a variety of different studies. These cohorts include more than 54,000 participants aged 35 to 79 years and provide 10-year

follow-up data (32036 of this participants are from our study EMMA)

- Collaboration with CIBERCV, through Dr Marrugat's (CB16/11/00229), Dr Elosua's (CB16/11/00246), and Dr Brugada's (CB16/11/00329) groups.
- We also collaborate on the Myocardial Infarction Genetics Consortium (MIGen): This international genetics research platform includes 2,967 cases of early-onset myocardial infarction and 3,075 age- and sex-matched controls.
- We also participate in the Non-Communicable Diseases Risk Factor Collaboration (NCD-RisC), which is a network of health scientists around the world that provides rigorous and timely data on major risk factors for non-communicable diseases; it covers all countries worldwide. (<http://ncdrisc.org/>)
- We are also involved in the INTERPRESS-IPD: The Inter-arm blood pressure difference individual patient data collaborations. It is an international collaboration evaluating the independent contribution of Inter-arm blood pressure difference to estimate cardiovascular and all-cause mortality risk. (<http://medicine.exeter.ac.uk/research/healthresearch/primarycare/projects/interpress-ipd/>)

Respiratory group

KEYWORDS: **Bronchiectasis; Sleep disorders; Interstitial Lung Diseases and Occupational diseases**

Group members

Principal Investigator

Ramón Orriols

Established Researchers

Montserrat Vendrell

Olga Tura

Post-doctoral Researchers

Manel Haro

Susana Mota

Gerard Muñoz

Marc Bonin

Pre-doctoral Researchers

Eric Rojas

Eduard Barrio

Daniel S. Torres

Medical Researchers

Sònia Belda

Anton Obrador

Laura Sebastián

Juan Carlos Calderón

Maria José Redondo

Saïoa Eizaguirre

Gladis Sabater

Technicians

Neus Luque

Support

Laia Merchan

Cristina Martinez



Overview

Respiratory Research Group at IDIBGI is composed by several researchers from the Pneumology Service. It is focused on bronchiectasis, sleep diseases, occupational respiratory diseases and Interstitial Lung Diseases research.

Research is complemented with an intensive clinical activity, which has lent the group to be invited to conferences at international congresses, draft reviews and publishers in magazines of high impact, as well as to be a member of experts in the field of respiratory illnesses, either on a national and international.

Research topics

- Bronchiectasis. Physiotherapy. Primary immunodeficiencies
- Sleep diseases: diagnostic at Primary Health care level and vascular impact.
- Occupational diseases and immunoallergic respiratory diseases.
- Diffuse interstitial pulmonary disease: diagnostic and treatment.
- Lung cancer.
- Pulmonary hypertension

Publications

Originals

Aldas I, Menendez R, España PP, Almirall J, Borderias L, Rajas O, Zalacain R, Vendrell M, Mir I, Torres A. Grupo NEUMONAC. Eventos cardiovasculares tempranos y tardíos en pacientes ingresados por neumonía adquirida en la comunidad. Arch Bronconeumol 2019 Nov 29. pii: S0300-2896(19)30401-6.

Case reports

Oliveras Font, Berta¹; Piñol Sanchez, Virginia¹; Albert Carrasco, Marc¹; Lopez Nuñez. Carme¹; Aldegue Mante, Xavier¹; Peries Reverter, Laia¹; Gutierrez Prat, Laia¹; Busquets Casals, David¹; Uchima Koecklin, Hugo¹; Ferrazza Martin, Laura²; Ortiz Duran, Maria Rosa²; Timoteo Delgado, Ander³; Orriols Martinez, Ramon⁴; Eizaguirre Anton, Saioa⁴. A case report of gastrointestinal histoplasmosis in a patient treated with Infliximab. European Journal of Gastroenterology & Hepatology (in press).

Grants

Project: DISON: Endothelial dysfunction, metabolomics and biomarkers in patients with Obstructive Sleep Apnea Syndrome (OSAS)

Funding agency: SEPAR

Duration: 2018-2020

Coordinator: Olga Tura

Principal Investigator: Olga Tura

Project: Noves dianes terapèutiques de la Hipertensió Pulmonar Tromboembòlica Crònica (HTEPC): causes de la malaltia i model in vivo de la patologia endotelial de la HTEPC

Funding agency: FIS

Duration: 2018-2020

Coordinator: Olga Tura

Principal Investigator: Olga Tura

Project: Beneficis de la inhalació de l'administració d'una solució salina hipertònica previs a la fisioteràpia respiratòria amb la tècnica ELTGOL en pacients amb bronquièctasis. Estudi randomitzat

Funding agency: SOCAP

Duration: 2 Years

Coordinator: Montserrat Vendrell

Principal Investigator: Montserrat Vendrell & Gerard Muñoz

Project: La detecció de ctDNA com a eina de diagnòstic en la neoplasia de pulmó amb codi de protocol Codi ctDNA

Funding agency: Menarini

Duration: 2 years

Coordinator: Ramon Orriols

Principal Investigator: Ramon Orriols & Eduard Barrio

Project: Biomarcadors de disfunció endotelial en la SAOS

Funding agency: PERIS, Generalitat de Catalunya, PERIS 2018

Duration: 3 years

Coordinator: Olga Tura

Principal Investigator: Olga Tura

Research activity contributions related to clinical activity

Beca Oximesa-SOCAP al millor projecte pneumològic tema lliure: Vendrell M, Muñoz G, Redondo MJ, "Beneficis de la inhalació de l'administració d'una solució salina hipertònica previs a la fisioteràpia respiratòria amb la tècnica ELTGOL en pacients amb bronquièctasis. Estudi randomitzat". 5, abril 2019

Estudio aleatorizado, doble ciego, controlado con placebo, de grupos paralelos, multicéntrico, para evaluar la eficacia, la seguridad, la tolerabilidad y la farmacocinética de INS1007

administrada una vez al día durante 24 semanas en sujetos con bronquiectasia no debida a fibrosis quística; el estudio Willow. Investigador principal en H.Trueta, Dra. M Vendrell. 2018-2019.

Heterogeneidad en la susceptibilidad a la infección en las bronquiectasias: Interacción huésped-microbioma y su valor predictivo en la práctica clínica. Investigador principal: A.Marin, H. Germans Tries i Pujol, Investigador principal en H.Trueta, Dra. M Vendrell. 2018-2020

Carga de la enfermedad en pacientes con EPOC eosinófilica en España: Estudio observacional multicéntrico. GSK. 2019. Investigador Principal H.Trueta Dr. M Bonnin

Estudio observacional del impacto socioeconómico de la FIP en España. BI. Investigador Principal H.Trueta. Dra. S Eizaguirre. 2018-2019

tasis registry (EMBARC) –Dra.M Vendrell

- Membre del BRN (Barcelona) –Dr. R Orriols

Membership of collaborative research networks (National & International)

Investigadora del CIBERES de grup d'investigació del Dr. Ferran Morell Brotad del ref. CB06/06/0030 del Hospital Vall d'Hebron (Dra. M Vendrell).

Investigador del CIBERES de grup d'investigació del Dr. Ferran Morell Brotad del ref. CB06/06/0030 del Hospital Vall d'Hebron (Dr. R Orriols).

Investigador col.laborador del Grup Emergent “Observatori per l'estudi de les malalties relacionades amb l'Amiant”. Institut Català de la Salut – IDIAP Jordi Gol. (Dr. R Orriols)

Projecte AGAUR. IP: Morell Brotad, Ferran. Referència: 2014 SGR 523. Durada: - 2015 – 2019. Investigadores col.laboradores: Dr. R Orriols i Dra. M Vendrell.

Incorporació al Grup de recerca de respiratori: Biomarcadors de disfunció endotelial. Beca PERIS 2018. Generalitat de Catalunya. Investigadora Principal: Dra. O Tura 2018-2021

Collaborations

Membre del comitè científic de la societat catalana pneumologia (SOCAP); PhD PT Gerard Muñoz.

- Membre del Steering Committee : The European bronchiectasis registry (EMBARC) –Dra. M Vendrell.
- Membre del Scientific Committee The European bronchiectasis registry (EMBARC) –Dra. M Vendrell.



MEDICAL IMAGING

MEDICAL IMAGING

Medical imaging

Group members

Principal Investigator

Salvador Pedraza

Established Researchers

Josep Puig
Kai Vilanova
Albert Maroto
Victor Pineda

Pre-doctoral Researchers

Nerses Nerseyan

Medical Researchers

Laia Valls
Brigite Beltran
Daisy Garcia
Anna Qules
Victoria Garriga
Elda Balliu
Jaume Codina
Laura Paul
Diego Preciado
Noemí Cañete

Sergi Juanpere
Sebastián Remollo
David Hernández
Paco Jaldo
Anna Oliva
Pep Daunis
Blanca Domenec

Technicians

Carles Biarnes
Marian Martí



Overview

Medical Imaging research group main goals:

- Image Biomarkers validation.
- Validation of brain connectivity as a predictive biomarker in patients with cerebral infarction
- Aging predictive biomarkers study.
- “Population” study

Research topics

The main research lines are:

- Determination of the biomarkers associated to the healthy aging in population studies.
- Validation of the predictive value about cardiovascular risk of imaging biomarkers.
- Validation of the value of artificial intelligence to predict cardiovascular risk of imaging biomarkers.
- Determination of the protocol of follow-up of incidental findings in population studies.
- Validation of the predictive utility of imaging biomarkers in patients with cerebral infarct.
- Validation of the prognostic value of imaging biomarkers in patients with cerebral hematoma.
- Validation of the predictive utility of imaging biomarkers in patients with brain tumors.
- Validation of the prognostic value of imaging biomarkers in patients with obesity.
- Validation of the predictive utility of imaging biomarkers in patients with Multiples sclerosis.
- Validation of the prognostic value of imaging biomarkers in patients with obesity.
- Validation of the diagnostic value of artificial intelligence in the interpretation of thoracic X-rays.

Publications

Originals

Macrovascular Networks on Contrast-Enhanced Magnetic

Resonance Imaging Improves Survival Prediction in Newly Diagnosed Glioblastoma J Puig, C Biarnés, P Daunis-i-Estadella, G Blasco, A Gimeno, M Essig , C Balaña, A Alberich-Bayarri, A Jimenez-Pastor, E Camacho, S Thio-Henestrosa, J Capellades, J Sanchez-Gonzalez, M Navas-Martí, ,B Domenech-Ximenes, S Del Barco, M Puigdemont, C Leiva-Salinas, M Wintermark, K Nael, R Jain and S Pedraza. Cancers 2019, 11, 84; doi: 10.3390/cancers11010084. Impact Factor. 5.326 PMID: 30646519

Comparison of classification methods for tissue outcome after ischemic stroke Running headline: Comparison of classification methods in stroke MRI. Tozlu C, Ozenne B, Tae-Hee Cho, Nighoghossian N, Klærke I, Derex L, Hermier M, Pedraza S, Fiehler J, Østergaard L, Berthezène Y, Baron JC, Maucourt-Boulch D. bioRxiv. doi: <https://doi.org/10.1101/551903>. February 18, 2019. PMID: 31278787

Functional Outcome of Intravenous Thrombolysis in Patients With Lacunar Infarcts in the WAKE-UP Trial. Barow E, Boutitie F, Cheng B, Cho TH, Ebinger M, Endres M, Fiebach JB, Fiehler J, Ford I, Galinovic I, Nickel A, Puig J, Roy P, Wouters A, Magnus T, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Gerloff C, Thomalla G; WAKE-UP Investigators. JAMA Neurol. 2019 Mar 25. PMID: 30907934doi: 10.1001/jamaneurol.2019.0351. Impact factor 11.5.

Predicting Motor Outcome in Acute Intracerebral Hemorrhage. Puig J, Blasco G, Terceño M, Daunis-I-Estadella P, Schlaug G, Hernandez-Perez M, Cuba V, Carbó G, Serena J, Essig M, Figley CR, Nael K, Leiva-Salinas C, Pedraza S, Silva Y. AJNR Am J Neuroradiol. 2019 May 2019, 40 (5) 769-775. doi: 10.3174/ajnr.A6038. Impact factor. 3.653. PMID: 31000524.

Clinical Characteristics and Outcome of Patients with Lacunar Infarcts and Concurrent Embolic Ischemic Lesions. Barow E, Boutitie F, Cheng B, Cho TH, Ebinger M, Endres M, Fiebach JB, Fiehler J, Ford I, Galinovic I, Nickel A, Puig J, Roy P, Wouters A, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Gerloff C, Thomalla G; WAKE-UP Investigators. Clin Neuroradiol. 2019 Jun 3. doi: 10.1007/s00062-019-00800-5. [Epub ahead of print] PMID: 31161343. Impact factor. 2.79

Comparison of classification methods for tissue outcome after ischemic stroke. Tozlu C, Ozenne B, Tae-Hee C, Nighoghossian N, Mikkelsen IK, Derex L, Hermier M, Pedraza S, Fiehler J, Østergaard L, Berthezène Y, Baron JC, Maucourt-Boulch D. Eur J Neurosci. 2019 jul 6. doi: 10.1111/ejn.14507. [Epub ahead of print]. PMID: 31278787.Impatc factor 2.784.

Individualized Quantification of the Benefit from Reperfusion Therapy using Stroke Predictive Models. Ozenne B, Tae-Hee C, Mikkelsen IK, Hermier M, Thomalla G, Pedraza S, Roy P, Berthezène Y, Nighoghossian N, Østergaard L, Baron JC, Maucourt-Boulch D. Eur J Neurosci. 2019 jul 8. doi: 10.1111/ejn.14505. PMID:31283062. Impatc factor 2.932

Total mismatch in diffusion negative patients in the WAKE-UP trial. Scheldeman L, Wouters A, Dupont P, Cheng B, Ebinger M, Endres M, Fiebach JB, Gerloff C, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Boutitie F, Thomalla G, Lemmens R. *Int J Stroke*. 2019 Sep 7;1747493019875238. doi: 10.1177/1747493019875238. PMID: 31496439. Impatc factor 3.859.

Post-hoc Analysis of Outcome of Intravenous Thrombolysis in Infarcts of Infratentorial Localization in the WAKE-UP Trial. Galinovic I, Boutitie F, Fiebach JB, Villringer K, Cheng B, Ebinger M, Endres M, Fiehler J, Ford I, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Roy P, Gerloff C, Thomalla G. *Front Neurol*. 2019 Sep 11;10:983. doi: 10.3389/fneur.2019.00983. eCollection 2019. PMID: 31572293 PMCID: PMC6749039 DOI: 10.3389/fneur.2019.00983. Impatc factor 3.508.

Quantitative Signal Intensity in Fluid-Attenuated Inversion Recovery and Treatment Effect in the WAKE-UP Trial. Cheng B, Boutitie F, Nickel A, Wouters A, Cho TH, Ebinger M, Endres M, Fiebach JB, Fiehler J, Galinovic I, Puig J, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Gerloff C, Thomalla G; WAKE-UP (Efficacy and Safety of MRI-Based Thrombolysis in Wake-Up Stroke Trial) investigators and administrative staff are as follows: *Stroke*. 2019 Oct 30;STROKEAHA119027390. doi: 10.1161/STROKEAHA.119.027390. PMID: 31662118. Impatc factor 6.046.

Introducing online continuing education in radiology for general practitioners. Pau Xiberta, Imma Boada, Santiago Thió-Henestrosa, Pedro Ortuño, Salvador Pedraza. *Journal of Medical Systems* 2019 (in press), doi: 10.1007/s10916-019-1499-7. Segon quartil. PMID: 31950280

Current Smoking Does Not Modify the Treatment Effect of Intravenous Thrombolysis in Acute Ischemic Stroke Patients – A Post-hoc Analysis of the WAKE-UP Trial. Ludwig Schlemm, Anna Kufner, Florent Boutitie, Alexander Heinrich Nave, Christian Gerloff, Götz Thomalla, Claus Ziegler Simonsen, Ian Ford, Robin Lemmens, Keith W Muir, Norbert Nighoghossian, Salvador Pedraza, Martin Ebinger, Matthias Endres. *Front Neurol*. 2019 Nov 22; 10:1239. doi: 10.3389/fneur.2019.01239. eCollection 2019. PMID: 31824412 | <https://doi.org/10.3389/fneur.2019.01239>. Impact factor 3.552.

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Review

Functional MRI for evaluation of hyaline cartilage extracellular matrix, a physiopathological-based approach. Martín Noguerol T, Raya JG, Wessell DE, Vilanova JC, Rossi I, Luna A. *Br J Radiol.* 2019 Aug 23;20190443. doi: 10.1259/bjr.20190443. PMID: 31433668.

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Research activity contributions related to clinical activity

"A phase III, open label, randomized study of Atezolizumab (MPD-L3280A, Anti-PD-L1 Antibody) in combination with carboplatin or cisplatin + pemetrexed compared with carboplatin or cisplatin + pemetrexed in chemotherapy-naïve patients with stage IV non-squamous non-small cell lung cancer" GO29438. Joaquim Bosch. Noemí Cañete.

"A two-part, open-label, randomized, phase II/III study evaluating the efficacy, safety and pharmacokinetics of Dinutuximab for second line treatment of subjects with relapsed or refractory small cell lung cancer" DIV-SCLC-301. Joaquim Bosch. Noemí

Cañete.

"A Phase III, Open Label, Randomized Study to Assess the Efficacy and Safety of Olaparib (Lynparza™) Versus Enzalutamide or Abiraterone Acetate in Men with Metastatic Castration-Resistant Prostate Cancer Who Have Failed Prior Treatment with a New Hormonal Agent and Have Homologous Recombination Repair Gene Mutations".D081DC00007. Núria Sala. Vicky Garriga. Albert Maroto.

"Estudio de Fase III, aleatorizado, en doble ciego, controlado con placebo y multicéntrico, de la monoterapia de mantenimiento con olaparib en pacientes con cáncer de páncreas metastásico con mutación de gBRCA cuya enfermedad no ha progresado con una quimioterapia de primera línea basada en el platino". D081FC00001. Adelaida García. Albert Maroto.

"A phase 3, multicenter, multinational, randomized, open-label, parallel-arm study of Avelumab plus best supportive care versus best supportive care alone as a maintenance treatment in patients with locally advanced or metastatic urothelial cancer whose disease did not progress after completion of first-line platinum-containing chemotherapy". B9991001.Núria Sala. Gerard Carbó.

"A randomized phase II trial of palbociclib in combination with Letrozole versus Letrozole monotherapy for patients with estrogen receptor positive advanced or recurrent endometrial cancer". ENGOT-EN3-NSGO". Pilar Barretina. Marta Bonfill

"Chemotherapy-free trastuzumab and pertuzumab in HER2-positive breast cancer: FDG-PET response-adapted strategy". MedOPP096. Gemma Viñas. Elsa Pérez. Gerard Carbó.

"A Phase IIIb, Single-arm, Open-label Multicentre Study of Olaparib Maintenance Monotherapy in Platinum Sensitive Relapsed non-germline BRCA mutated Ovarian Cancer Patients who are in Complete or Partial Response Following Platinum based Chemotherapy ".D0816C00020. Pilar Barretina. Laia Valls. Marta Bonfill

"A phase 3 multicenter, open-label, Randomized Study of Ruca-parib versus weekly paclitaxel in patients with relapsed, high-grade epithelial ovarian, fallopian tube, or primary peritoneal cancer ". ARIEL. CO-338-043. Pilar Barretina. Marta Bonfill. Laia Valls.

"A Phase 2, Open-label, Single Agent, Multi-Center Study to Evaluate the Efficacy and Safety of a Pan-FGFR Tyrosine Kinase Inhibitor INCB054828 in Patients with Metastatic or Surgically Unresectable Urothelial Carcinoma Harboring FGF/FGFR Alterations ".INCB54828-201. Núria Sala. Vicky Garriga. Albert Maroto.

"A Phase 1 Dose Escalation and Cohort Expansion Study of TSR-042, an anti-PD-1 Monoclonal Antibody, in Patients with Advanced Solid Tumors ". GARNET. 4010-01-001. Pilar Barretina. Sergi Juanpere. Marga Osorio

"A phase I/II, open label study to assess the efficacy and safety of ABTL0812 in combination with paclitaxel and carboplatin in patients with advanced endometrial cancer or squamous NSCLC ". ABILITY. ABT-C5-2016. Joaquim Bosch. Laia Valls. Marta Bonfill.

"A phase I/II, open label study to assess the efficacy and safety of ABTL0812 in combination with paclitaxel and carboplatin in patients with advanced endometrial cancer or squamous NSCLC ". ABILITY. ABT-C5-2016. Joaquim Bosch. Pedro Ortuño

"A phase 3 trial of ADXS11-001 administered following chemotherapy as adjuvant treatment for high risk locally advanced cervical cancer ". ADXS001-02. Pilar Barretina. Laia Valls. Sergi Juanpere.

"A randomized, double-blinded, phase III study of atezolizumab versus placebo in patients with late relapse of epithelial ovarian, fallopian tube, or peritoneal cancer treated by platinum-based chemotherapy and bevacizumab ". ATALANTE. GINECO-OV236b _ GEICO 17-01. Pilar Barretina. Marta Bonfill. Sergi Juanpere

"Phase 3, randomized, open-label study of efficacy and safety of lorlatinib monotherapy vs crizotinib monotherapy as 1st line treatment of patients with advanced ALK-positive NSCLC ". CROWN. B7461006. Joaquim Bosch. Noemí Cañete

"Estudio en fase I/II, abierto, aleatorizado para investigar la seguridad y la eficacia de IO102 en combinación con pembrolizumab, con o sin quimioterapia, como tratamiento de primera línea para pacientes con cáncer de pulmón no microcítico metastásico ". IO102-012. Joaquim Bosch. Pedro Ortuño

"An Open-Label, Randomized, Phase 3 Clinical Trial of REGN2810 Versus Therapy of Investigator's Choice Chemotherapy in Recurrent or Metastatic Platinum-Refractory Cervical Carcinoma ". EMPOWER. R2810-ONC-1676. Pilar Barretina. Vicky Garriga. Laia Valls

"An Open Label Phase II Study of Tipifarnib in Advanced Squamous Non-small Cell Lung Cancer with HRAS Mutations ". THOMAS. GECP 17-04. Joaquim Bosch. Noemí Cañete.

"Phase III randomized sequential, open-label study, to evaluate the efficacy of FOLFOX + panitumumab followed by FOLFIRI + bevacizumab (Sequence 1) versus FOLFOX + bevacizumab followed by FOLFIRI + panitumumab (Sequence 2) in untreated patients with wild-type RAS metastatic, primary left-sided, unre-

sectable colorectal cancer ". CR-SEQUENCE. TTD-18-01. Xavier Hernández. Vicky Garriga.

"A Randomized Phase III Trial of Platinum Chemotherapy plus Paclitaxel with Bevacizumab and Atezolizumab versus Platinum Chemotherapy plus Paclitaxel and Bevacizumab in Metastatic (stage IVB), Persistent or Recurrent Carcinoma of the Cervix ". BEATcc. ENGOT-Cx10 _ GEICO 68-C. Pilar Barretina. Albert Maroto. Vicky Garriga

"Estudio aleatorizado de fase II para evaluar la eficacia de FOLFIRI + panitumumab en el tratamiento en segunda línea de pacientes con cáncer colorrectal metastásico RAS no mutado que han recibido FOLFOX + panitumumab en primera línea de tratamiento ". BEYOND. GEMCAD-17-01. Xavier Hernández. Marga Osorio. Sergi Juanpere

"INtegratioN of trastuzumab, with or without pertuzumab, into periOperatiVe chemotherApy of HER-2 posiTlve stOmach caNcer ". INNOVATION. EORT-1203-GITCG. Raquel Guardado. Sergi Juanpere

"Phase 1b/II randomized study combining Glasdegib (SHH pathway inhibitor) with temozolamide in patients with newly diagnosed Glioblastoma ". GEINOGLAS. GEINO 1602. Sonia Del Barco. Ana Quiles. Gemma Laguillo.

"Phase II non-randomized study of Atezolizumab (MPDL3280A) in combination with Carboplatin plus Pemetrexed in patients who are chemotherapy-naïve and have stage IV non-squamous non-small cell lung cancer with asymptomatic brain metastasis ". ATEZO-BRAIN. GECP 17-05. Joaquim Bosch. Eva Gómez. Ana Quiles.

"Estudio en fase II/III, aleatorizado y multicéntrico de MOR00208 con bendamustina frente a rituximab con bendamustina en pacientes con linfoma difuso de linfocitos B grandes recidivante o resistente al tratamiento (DLBGR-R) que no cumplen las condiciones para recibir quimioterapia a dosis altas (QDA) y autotrasplante de progenitores hematopoyéticos (ATPH) ". B MIND. MOR208C204. Josep Maria Roncero. Vicky Garriga.

"A phase III randomized, double-blinded trial of platinum-based chemotherapy with or without atezolizumab followed by niraparib maintenance with or without atezolizumab in patients with recurrent ovarian, tubal or peritoneal cancer and platinum treatment-free interval (TFIp) >6 months ". ANITA. ENGOT-Ov41 _ GEICO 69-O. Pilar Barretina. Laia Valls. Vicky Garriga

"A Randomized, double blind, Phase 3 Comparison of Platinum-Based Therapy with TSR-042 and Niraparib versus Standard of care Platinum-Based Therapy as first line treatment

in stage III or IV nonmucinous epithelial ovarian Cancer ". FIRST. . 3000-03-005_ENGOT OV-44. Pilar Barretina. Laia Valls. Marta Bonfill.

"A phase Ib study of Cobimetinib administered in combination with Niraparib, with or without Atezolizumab, to patients with advanced platinum-sensitive ovarian cancer. YO40482. YO40482. Pilar Barretina. Vicky Garriga. Albert Maroto.

"A phase 3 randomized, double-blind, controlled study evaluating FPA144 and modified FOLFOX6 in patients with previously untreated advanced gastric and gastroesophageal cancer: Phase 3 preceded by dose-finding in Phase 1". FIGHT. FPA144-004. Raquel Guardado. Sergi Juanpere.

"A multi-arm, multi-stage, randomized phase II/III trial of immunotherapy strategies in metastatic hormone-sensitive prostate cancer. Pilot phase.". PROSTRATEGY. CA209-9HX. Núria Sala. Albert Maroto.

"A Phase II open-label multicenter exploratory study to assess efficacy of Pembrolizumab re-challenge as second or further line in patients with advanced non - small cell lung cancer". REPLAY. GECP 17-02. Joaquim Bosch. Víctor Pineda

"A Randomised, Double-blind, Placebo-controlled, Multicentre Phase III Study of Olaparib Plus Abiraterone Relative to Placebo Plus Abiraterone as First-line Therapy in Men with Metastatic Castration-resistant Prostate Cancer". PROPEL. D081SC00001. Núria Sala. Vicky Garriga.

"A Phase 2, Open-Label, Randomized Study to Assess the Antitumor Activity and Safety of Zolbetuximab (IMAB362) in Combination with Nab-Paclitaxel and Gemcitabine (Nab-P + GEM) as First Line Treatment in Subjects with Claudin 18.2 (CLDN18.2) Positive, Metastatic Pancreatic Adenocarcinoma". 8951-CL-5201 8951-CL-5201. Adelaida García. Jaume Codina .

"Phase III randomized placebo controlled trial of atezolizumab in combination with paclitaxel and carboplatin in women with advanced/recurrent endometrial cancer". ATTEND . Pilar Barretina Laia Valls "

"A multicenter, randomized, phase II trial evaluating the efficacy of endocrine therapy in combination with eribulin after progression on endocrine therapy in luminal unresectable, locally-recurrent or metastatic breast cancer patients". REVERT MedOPP167. Sonia Del Barco. Joana Ferrer".

"Estudio de fase II, internacional, multicéntrico, randomizado y abierto para evaluar la eficacia y la seguridad de la continuación de palbociclib en combinación con terapia endocrina de segunda línea en pacientes con cáncer de mama avanzado con receptores hor-

monales positivos y HER2 negativo tras beneficio clínico durante el tratamiento de primera línea basado en palbociclib". PALMIRA MedOPP068. Sonia Del Barco. Gerard Carbó.

"A randomized phase II study of neo-adjuvant chemo/immunotherapy versus chemotherapy alone for the treatment of locally advanced and potentially resectable non-small cell lung cancer (NSCLC) patients". GECP 18/02. Joaquim Bosch, Víctor Pineda.

"Estudio de fase 3, aleatorizado y abierto de pembrolizumab (MK-3475) más olaparib frente a acetato de abiraterona o enzalutamida en participantes con cáncer de próstata resistente a la castración metastásico (CPRCm) que no son seleccionados por defectos en el sistema de reparación por recombinación homóloga y que han mostrado fracaso con el tratamiento previo con un fármaco hormonal de última generación (FHUG) y quimioterapia". KEYLYNK-010 MK7339-010. Núria Sala. Vicky Garriga "

"Phase 3, Randomized, Double-blind Study of Pembrolizumab Plus Docetaxel versus Placebo Plus Docetaxel in Patients with Chemotherapy-Naïve metastatic castration resistant prostate cancer". KEYNOTE-921. MK3475-921A. Núria Sala, Vicky Garriga.

"A phase III, randomized, double-blind, placebo-controlled clinical trial of Pembrolizumab (MK-3475) as monotherapy in the adjuvant treatment of renal cell carcinoma post-nephrectomy". KEYNOTE-564 MK3475-564. Núria Sala, Brigitte Beltran.

"A phase 3, randomized study of Zanubrutinib (BGB-3111) compared with Ibrutinib in patients with relapsed / refractory chronic lymphocytic leukemia or Small Lymphocytic Lymphoma". ALPINE BGB-3111-305 Josep Maria Roncero, Deysi García

"A Pivotal, Double-Blind, Randomized, Placebo-Controlled, Multinational Study of SGX942 (DUSQUETIDE) for the treatment of Oral Mucositis in patients being treated with Concomitant Chemoradiation for the treatment of Squamous Cell Carcinoma of the Head and Neck". DOM-INNATE IDR-OM-02. Jordi Marrueco, Gemma Laguillo.

"A randomised, open-label Phase II study to determine the contribution of Ipatasertib to neoadjuvant chemotherapy plus atezolizumab in women with triple-negative breast cancer"- BARBICAN MedOPP209. Gemma Viñas, Elsa Pérez.

"A two-stage Simon Design phase II study for Non-BRCA metastatic Breast cancer (MBC) patients with homologous recombination deficiency treated with". NOBROLA MedOPP100. Gemma Viñas, Quico Castanyer

"A randomized, open label, phase II trial of Anti-PD1, TSR-042, as maintenance therapy for patients with high-risk locally advanced cervical cancer after chemo-radiation". ATOMICC GEICO 78-C.

Pilar Barretina, Estefania González.

"A Phase 3, Randomized, Double-blind Trial of Pembrolizumab Plus Enzalutamide versus Placebo Plus Enzalutamide in Participants with mCRPC". KEYNOTE-641 MK3475-641. Núria Sala, Vicky Garriga .

"A phase III study of approximately 610 cisplatin ineligible MIBC patients will be randomized in a 1:1 manner to either cystectomy plus perioperative pembrolizumab or cystectomy alone". KEYNOTE-641. MK3475-641. Núria Sala, Albert Maroto.

"A phase III study of approximately 790 cisplatin eligible MIBC patients will be randomized in a 1:1 manner to either peri-operative pembrolizumab + neoadjuvant chemotherapy or peri-operative placebo + neoadjuvant chemotherapy ". KEYNOTE-866. MK3475-866. Núria Sala. Diego Preciado "

"A randomized, multicentre, open-label, controlled phase II trial of Foxy-5 as neo-adjuvant therapy in subjects with Wnt-5a low colon cancer". NEOFOX Foxy-5 PH2. Bernardo Queralt. Estefania González.

"A phase III, multicenter, randomized, open-label trial to evaluate efficacy and safety of ribociclib with endocrine therapy as an adjuvant treatment in patients with hormone receptor-positive, HER2-negative, early breast cancer. (New Adjuvant Trial with Ribociclib [LEE011" NATALEE TRIO033 . Joan Dorca, Gerard Carbó

"An Open-Label, Multi-Center, Global Study to Evaluate Long Term Safety and Efficacy in Patients Who are Receiving or Who Previously Received Durvalumab in Other Protocols (WAVE)". WAVE. D910FC00001. Joaquim Bosch.

" AC-058B302".

" BN29553".

" CHEMOBRAIN".

" CL02-ORY-2001MS".

" COMB157G2301".

" DRI15928".

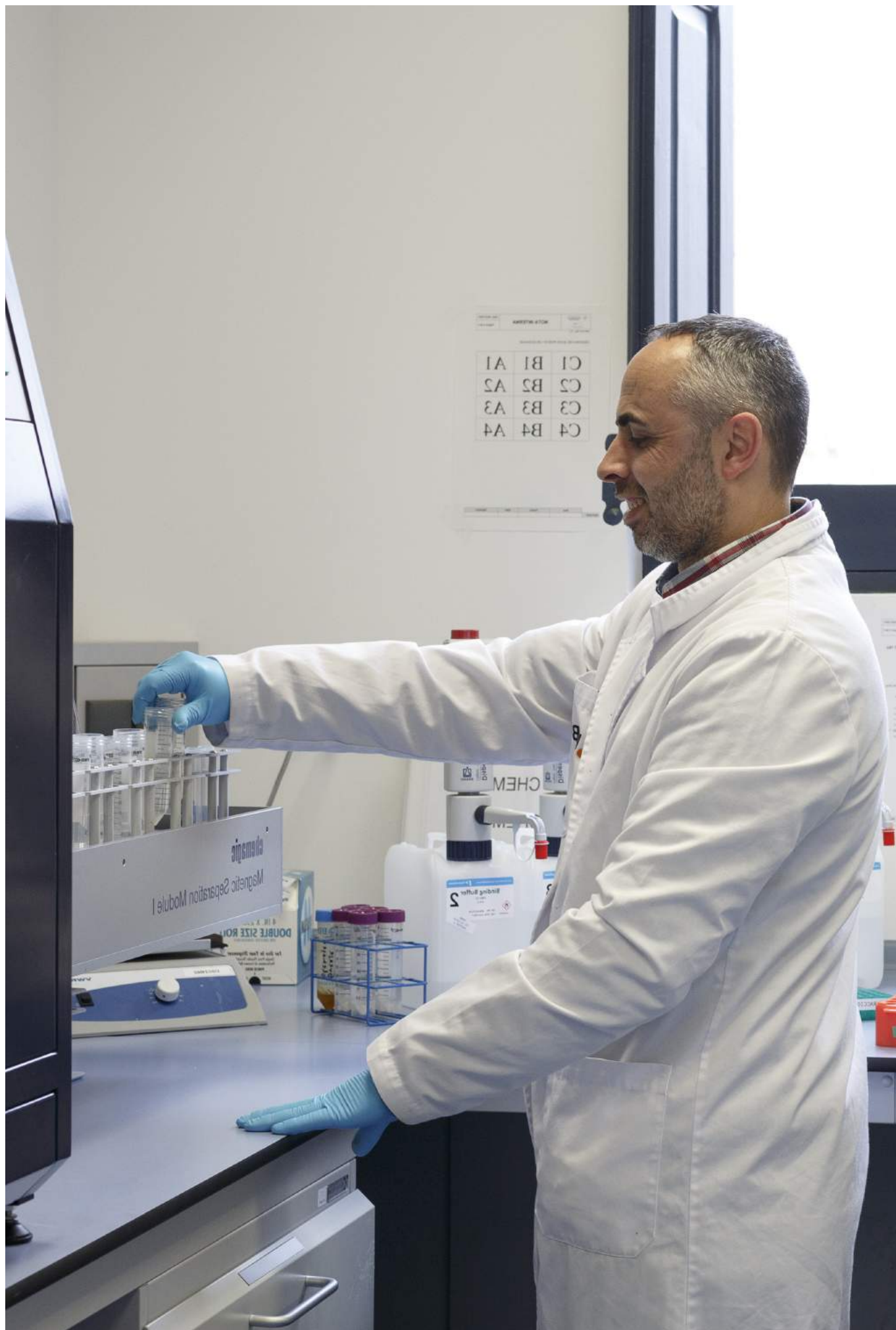
" MA30005".

" MD1003CT2016-01MS-SPI2".

Memberships

Salvador Pedraza. Ordinary member of the ESR Professional Issues and Economics in Radiology (PIER) Subcommittee of the ESR National Societies Committee. European Society of Radiology (ESR). 2019- actualidad.

Salvador Pedraza. Miembro del comité científico de EURAMED. 2019-2021



MENTAL HEALTH

**MENTAL HEALTH AND EPIDEMIOLOGY ACTIONS, PREVENTIONS AND
RESULTS**

NEURODEVELOPMENT DISORDERS RESEARCH

Mental Health and Addiction Research Group

Group members

Principal investigator

Jordi Cid

Post-doctoral Researchers

Eva Frigola

Laura Masferre

Pre-doctoral Researchers

Miriam Broncano

Àngels Déu

Medical researchers

Jordi Nuñez

Meritxell Beltran

M^a Àngels Vila

Sacramento Mayoral

René Morgan

Eduard Palomer

Evgenia Baykova

Domènec Serrano

Overview

The Mental Health Research group lump together 2 research groups: Clinical and economics and Neurobiology. The two groups build collaborative research projects and share research structure.

Research topics

1. Clinical and Economics: Jordi Cid
 - Psychosis: functionalism, diagnosis and intervention – Jordi Cid and Eva Frigola-Capell
 - Suicide: epidemiology, diagnosis and genetics – Jordi Cid and Eva Frigola-Capell
 - School failure: epidemiology, prevention, neurodevelopmental disorders – Jordi Cid
 - Mental Health and Neuropsychology: Jordi Cid and Eva Frigola-Capell
 - Cost efficiency and Big Data: Jordi Cid

- Patient Safety: Eva Frigola-Capell
- Addictions: risk factors and health outcomes – Laura Masferrer
- 2. Neurobiology: Domènec Serrano
 - TDHA: pharmacological treatment and Mobile technology – Domènec Serrano, Sacramento Mayoral, Evgenia Baykova

Publications

Originals

Salas-Sender, M., López-Carrilero, R., Barajas, A., Lorente-Rovira, E., Pousa, E., Barrigón, M. L., Grasa, E., Ruiz-Delgado, I., González-Higueras, F., Cid, J., Aznar, A., Pélaez, T., Birulés, I., Moritz, S., Ochoa, S., & Spanish Metacognition Study Group (2019). Gender differences in response to metacognitive training in people with first-episode psychosis. *Journal of consulting and clinical psychology*, 10.1037/ccp0000468. Advance online publication. <https://doi.org/10.1037/ccp0000468> PMID:31855037

Hassiotis, A., Brown, E., Harris, J., Helm, D., Munir, K., Salvador-Carulla, L., Bertelli, M., Baghdadli, A., Wieland, J., Novell-Alsina, R., Cid, J., Vergés, L., Martínez-Leal, R., Mutluer, T., Ismayilov, F., & Emerson, E. (2019). Association of Borderline Intellectual Functioning and Adverse Childhood Experience with adult psychiatric morbidity. Findings from a British birth cohort. *BMC psychiatry*, 19(1), 387. <https://doi.org/10.1186/s12888-019-2376-0> PMID: 31805899

Grants

Project: Cognició social i biaixos cognitius en persones amb primers episodis psicòtics en comparació amb esquizofrènia crònica i controls sans

Funding agency: PERIS

Duration: 2018-2020

Coordinator: Jordi Cid

Principal Investigator: Susana Ochoa

Project: Influencia del estilo de apego en la cognición social y sesgos cognitivos en personas con primeros episodios psicóticos, esquizofrenia crónica y controles sanos

Funding agency: ISCIII

Duration: 2018-2021

Coordinator: Jordi Cid

Principal investigator: Susana Ochoa Güerre & Jordi Cid

Project: Predictores clínicos y biomarcadores de las tentativas de suicidio en pacientes del Código

Riesgo Suicidio de Cataluña (CRS)

Funding agency: ISCIII

Duration: 2017-2020

Coordinator: Jordi Nuñez

Principal Investigator: Diego J Palao Vidal

Project: Desenvolupament d'una eina per formular recomanacions terapèutiques participatives, individualitzades i automatitzades per al tractament de pacients amb Trastorn per Dèficit d'Atenció amb Hiperactivitat (TDAH) (AIN2018E)

Funding agency: Col·legi Oficial Metges de Girona

Duration: 2018 - 2020

Coordinator: Domènec Serrano

Principal Investigator: Xavier Castells Cervello / Domènec Serrano

Neurodevelopmental Disorders Research

KEYWORDS: mental health, addiction, intellectual disabilities, epidemiology, clinical and treatments

Group members

Principal Investigator

Ramón Novell

Established Researchers

Susana Esteba-Castillo

Medical Researchers

Núria Ribas Vidal



Overview

The Neurodevelopmental Disorders Research Group has been involved in many national and international research projects in the field of intellectual disability and development and has received several research grants. The members of the group have a long trajectory and experience in the evaluation and management of people with ID. The team collaborates with other research groups with several projects. For example, the neuroimaging research team at the Hospital del Mar directed by Jesús Pujol. This team is considered an international reference in obtaining and analyzing structural and functional neuroimaging in psychopathologies such as OCD, Affective Disorders and in the study of brain morphology in the emotional or personality component. Another of the teams is the Genetics group of the Corporació Sanitària Parc Taulí (CSPT), which has a long experience in the study of the etiology of intellectual disability and psychiatric disorders, among which we can highlight the study of the molecular and diagnostic bases of the Prader Willi, Fragile X, and Angelman syndromes. Likewise, the CSPT Genetics group is integrated in international collaborations with the aim of grouping and analysing the data of each team in order to identify recurrent variants and to be able to apply for European funding (Horizon 2021). It is important to point out the work done with the Department of Endocrinology of the Corporació Sanitària Parc Taulí (CSPT), studying the relationship between certain hormones and peptides and their relationship with cognition. Finally, the technical team of SESM-DI collaborates in the global training of the Institut d'Assistència Sanitària as a multidisciplinary teaching unit in psychiatry, psychology and neuropsychology, leading to. The project provides university internships for students in the fields of medicine, psychology and nursing, as well as students of post-graduate courses and masters.

Research topics

The group has different lines of research:

1. Aging, mild cognitive impairment and dementia in people with intellectual disabilities.
2. Genetics in mental illness and challenge behaviour in people with intellectual disabilities
3. Behavioural and neuropsychological phenotypes of genetic origin
4. Autism and Neuropsychology
5. Integral care for people with limited intellectual functioning.
6. Creation, normalization and validation of Neuropsychological tests for ID population.

Publications

Originals

García-Alba, J., Ramírez-Toraño, F., Esteba-Castillo, S., Bruña, R., Moldenhauer, F., Novell, R., Romero-Medina, V., Maestú, F., & Fernández, A. (2019). Neuropsychological and neurophysiological characterization of mild cognitive impairment and Alzheimer's disease in Down syndrome. *Neurobiology of aging*, 84, 70–79. <https://doi.org/10.1016/j.neurobiolaging.2019.07.017>

Gomis-González, M., Hernandez, G., Esteba-Castillo, S., Del Hoyo, L., Sánchez-Gutiérrez, J., Cortés, M. J., Ozaita, A., Espadaler, J. M., Novell, R., Martínez-Leal, R., Milá, M., Diersen, M., ... TESXF Study Group (2020). A phase 1, randomized double-blind, placebo controlled trial to evaluate safety and efficacy of epigallocatechin-3-gallate and cognitive training in adults with Fragile X syndrome. *Clinical nutrition* (Edinburgh, Scotland), 39(2), 378–387. DOI: 10.1016/j.clnu.2019.02.028

Blanco-Hinojo, L., Pujol, J., Esteba-Castillo, S., Martínez-Vilavella, G., Giménez-Palop, O., Gabau, E., Casamitjana, L., Deus, J., Novell, R., & Caixàs, A. (2019). Lack of response to disgusting food in the hypothalamus and related structures in Prader Willi syndrome. *NeuroImage. Clinical*, 21, 101662. <https://doi.org/10.1016/j.nicl.2019.101662>

Hassiotis, A., Brown, E., Harris, J., Helm, D., Munir, K., Salvador-Carulla, L., Bertelli, M., Baghdadli, A., Wieland, J., Novell-Alsina, R., Cid, J., Vergés, L., Martínez-Leal, R., Mutluer, T., Ismayilov, F., & Emerson, E. (2019). Association of Borderline Intellectual Functioning and Adverse Childhood Experience with adult psychiatric morbidity. Findings from a British birth cohort. *BMC psychiatry*, 19(1), 387. <https://doi.org/10.1186/s12888-019-2376-0> PMID: 31805899

Alsina, R. N., Esteba-Castillo, S., i Pedragós, A. C., Gabau, E., Palop, O. G., Nuez, J. P., ... & Rodas, D. T. (2019). Compulsiones en el síndrome de Prader-Willi: presencia y gravedad en función del subtipo genético. *Actas españolas de psiquiatría*, 47(3), 79-87.

Grants

Project: Growth hormone treatment in adults with Prader-Willi syndrome: effect on muscle tone assessed by functional magnetic resonance imaging (fMRI) and its relationship to muscle strength and body composition

Funding agency: Fondo de Investigación Sanitaria, Instituto de Salud Carlos III. Ministerio de Sanidad y Consumo.

Duration: 2017-2020

Coordinator: Assumpta Caixàs Pedragós

Leader Researcher: Assumpta Caixàs Pedragós

Membership of collaborative research structures (National & International)

Susanna Esteba-Castillo:

Grup de Recerca Consolidat (GRC) 2017-2019. Neuroimaging, Personality, Prevention and Treatment in Clinical and Health Psychology (PsychoClisis). Autonomous University of Barcelona. [File No. 2017-SGR-1198]. Organism responsible: Generalitat de Catalunya, Spain.

I3PT Research Group on Obesity and Prader Willi Syndrome. Group code: A4G1. Group head: Assumpta Caixàs Pedragós. Area: Inflammation, Immunology and metabolism

Consolidated Research CONSORTIUM group; University of Leuven and University College of London

Consolidated Research Group group on Neurodevelopmental disorders; genetics, psychiatry, intellectual disabilities and brain sciences with the Univeristy College London, division of Psychiatry.

Ramon Novell:

Member of the Grup de Treball sobre FIL, Departament de Presidència, Generalitat de Catalunya

Consolidated Research CONSORTIUM group; University of Leuven and University College of London

Consolidated Research Group group on Neurodevelopmental disorders; genetics, psychiatry, intellectual disabilities and brain sciences with the Univeristy College London, division of Psychiatry.

Collaborations

- CSPT Genetics group.
- CSPT Endocrinology group.
- Department of Clinical and Health Psychology, Autonomous University of Barcelona
- MRI Research Unit, Department of Radiology, Hospital del Mar, Barcelona



METABOLISM AND INFLAMMATION AREA

MICROBIOLOGY AND INFECTION OF CRITICALLY ILL PATIENTS

DIGESTIVE DISEASES AND MICROBIOTA RESEARCH GROUP

NUTRITION, EUMETABOLISM AND HEALTH

PEDIATRIC ENDOCRINOLOGY

MATERNAL AND FETAL METABOLIC RESEARCH

INTERNAL MEDICINE

NEPHROLOGY

Microbiology and infection of critically ill patients

KEYWORDS: Microbiota, Inflammatory Bowel diseases, biomarker, molecular microbial ecology

Group members

Principal Investigator

Josep Maria Sirvent

Medical Researchers

Patricia Ortiz
Cristina Murcia
Juliana González
Silvia Cuenca
Carolina Lorencio
Anna Baró
Claudia Vera
Abdó Taché
Montse Motjé
Adriana Sánchez

Overview

More than 15 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. Also Dr. Sirvent, is involved in CIBERrespiratori group, 14th grou- Dr. Antoni Torres (Hospital Clinic).

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: Study Group of Microbiology and Infection in Critically ill patients (MI-ICU).

Research topics

- Studies of Microbiology and Infections in the critically ill patient.
- Study of sepsis.
- Study of community-acquired pneumonia.
- Study of sepsis in glycemia.
- Nursing procedure in security and sepsis in critical patient.

Digestive diseases and microbiota research group

KEYWORDS: Microbiota, Inflammatory Bowel diseases, biomarker, molecular microbial ecology

Group members

Principal Investigator

Xavier Aldeguer

Post-doctoral Researchers

Anna Bahí Salavedra

Marc Llíros

Marta Malagón

Pre-doctoral Researchers

David Busquets

Josep Oriol Miquel

Sílvia Virolés

Mireia Vila

Aleix Lluansí

Medical Researchers

Esther Fort

L Torrealba

Hugo Uchima

Carlos Huertas

Isabel Serra

Virgínia Piñol

C. López Nuñez

Support

Carlota Puig

M. Capdevila



Overview

The group lead by MD PhD X Aldeguer is interested in understanding the role of those tinny bugs living in the gut and how their perturbations (i.e., dysbiois) affect the status of health and disease in humans. Basically, deviations from the "normal" state will tell us about the disease status and putative ways to solve the disequilibrium. We are a multidisciplinary team involving post-doctoral researchers with broad experience in the medical and microbial ecology fields, but also a wide range of medical doctors pursuing a PhD degree to understand the role of our tinny trip companions. In order to give answer to our research topics (basically which is the role of gut microbes on health and inflammatory bowel status), we are performing human clinical studies and culture-independent techniques focused on DNA sequencing of the 16S rRNA gene. These tools will enable us to address our biological questions from a taxonomic and functional perspective.

Research topics

Over the last years our research group has established as main research lines the study of the human gut microbiome in all diseases affecting the digestive tract with the involvement of the inflammatory process (e.g., inflammatory bowel disease (IBD), colorectal cancer (CRC), chronic pancreatitis (CP), pancreatic cancer (PC), hepatic steatosis, hepatocarcinoma, Barrett's esophagus disease, among few others) with the intention to define a set of microbial biomarkers as prognosis tools for such disease collection, but also paying attention to their diagnosis and monitoring to support clinicians. Briefely, our research group has been working on the description IBD microbiome ever since 2002. Moreover, we have been spanning our view thus getting involved in research projects were inflammatory processes can be related with the role of gut microbiome (e.g., rheumatic diseases or ashma, to cite a pair).

On an early stage, we focused on the microbiome profile in Crohn's disease based upon colonic biopsies. A study that deserved a prestigious local grant. La Marato TV3 among others. The microbiome was described using 16SRNA application and DGGE gels. These studies were published in The IBD Journal 2016 (Martinez-Medina et al).

Derived from this early study, we took a step further and drew attention to the description of two main species in IBD, E coli and F. prausnitzii. We have also evaluated macrophage-resistant adherent adhesive E. coli found mainly in ileal Crohn's. We have shown their in vitro growth upon conditions resembling those of "western diet", resistance to antibiotics and their intriguing presence in dogs' and , above all, cats' diarrhea conditions published in different specialized international journals. In

parallel, we worked on F. prausnitzii and we were the first group in the world to describe 2 phylotypes of this species (Lopez-Sileset al. 2016 IBD Journal) with differences between Crohn's disease (CD) and Ulcerative Colitis (UC; unpublished results). The abundance of Akkermansia on mucosa samples in many IBD subtypes is currently being assessed and has been published (Lopez-Siles et al Front Cell InfectMicrobiol. 2018).

Beyond IBD, our group has also contributed to the description of microbial markers for IBS and colon cancer. In this sense, the main strategic research lines of our group are based on the following pillars:

1. Dysbiosis indicators in inflammatory bowel diseases

Over the last years, we are performing a wide-range study aimed to correlate microbiological indexes (based on logarithmic ratios of absolute quantifications) and clinical determinants for inflammatory bowel disorders (IBD) (Crohn's Disease (CD), ulcerative colitis (UC), and colo-rectal cancer (CRC)). We propose such ratios for risk determination, pre-screening processes and diagnostic of bowel disorders. Besides IBD, the utility of logarithmic ratios on Inflammatory Bowel Syndrome (IBS) is also under study. Moreover, a step forward in the healing mucosa concept is underlining our scientific proxy.

In close collaboration with the clinical microbiology team at Universitat de Girona lead by PhD Margarita Martínez-Medina, we are digging into the genetic elements defining the "adherent-invasive" pathovar within Escherichia coli (AIEC) and its role on CD. Microbiologically based molecular tools for detection of AIEC on CD patients are under process.

2. Hepatopancreatic line

More and more evidences pointed towards the presence and active role of microbes (either resident or transient ones from the gut) in the hepatopancreatic environment. In this sense, we have recently opened a new research line studying the microbial community in fecal samples of patients suffering of hepatic inflammatory diseases. By now, we are studying diseases such: chronic pancreatitis (CP) and its evolution towards cancer or steatotic liver ending in hepatocellular carcinoma.

3. Liver microbiome

Liver related diseases have somehow an inflammatory process. In this sense, we are currently performing clinical- and molecular-based studies trying to correlate gut microbiome and liver diseases, basically non-alcoholic steatohepatitis (NASH), hepatocellular carcinoma (HCC), and non-alcoholic fatty acid liver disease (NAFLD).

4. Dysbiosis and rheumatic diseases

A new research line aimed to connect the inflammatory process of rheumatic disorders with the gut microbiome has been recently

activated. As for the IBD, the presence of inflammatory signals might be correlated with the gut microbiome. In this sense, we propose the use and application of logarithmic ratios of absolute microbial quantifications to establish threshold values for rheumatic disorders.

6. Healing dysbiosis with traditional bread

In close collaboration with a high-quality traditionally made bread produced, we have started to investigate the effect of traditional bread (long fermentation of whole grain wheat flour with wild starters) on patients suffering of IBD and metabolic syndrome (in collaboration with the Institut Mar d'Investigacions Biomèdiques (IMIM) of Hospital del Mar de Barcelona. This new research line allowed establishing collaboration between the private sector (Elias Boulanger) and two public partners (IMIM and IDIBGI).

Based on those results, our group has founded in 2014, a start-up biotech company named GoodGut (www.goodgut.eu). This company is focused on the development of microbial fecal signatures based on markers described in our previous studies which are integrated upon a machine-learning derived algorithm.

Based on this techniques, there are three markers being validated clinically for IBD:

- Raid-Monitor that correlates more precisely to endoscopic indexes than calprotectin (results under submission)
- Raid-Response which have a preliminary results very robust on prediction of response to anti-TNF treatment
- Raid-DX which allows a good differential diagnosis between IBD and IBS (under submission)

Publications

Originals

Malagón, M., Ramió-Pujol, S., Serrano, M., Serra-Pagès, M., Amoedo, J., Oliver, L., Bahí, A., Mas-de-Xaxars, T., Torrealba, L., Gilabert, P., Miquel-Cusachs, J., García-Nimo, L., Saló, J., Guardiola, J., Piñol, V., Cubiella, J., Castells, A., Aldeguer, X., Garcia-Gil, J. (2019). Reduction of faecal immunochemical test false-positive results using a signature based on faecal bacterial markers *Alimentary Pharmacology & Therapeutics* 49(11), 1410 - 1420. <https://dx.doi.org/10.1111/apt.15251> PMID: 31025420

Casellas, F., Navarro, E., Amil, P., Barber, C., Marín, L., Guardiola, J., Espín, E., Sainz, E., Aldeguer, X., Gallego, M., Murciano, F., García-Planella, E., Martín-de-Carpi, J., Mendive, J., González-Mestre, A. (2019). Development and validation of the QUECOMIICAT questionnaire: a tool to assess disease-related knowledge in patients with inflammatory bowel disease

Revista Española de Enfermedades Digestivas 111(<https://dx.doi.org/10.17235/reed.2019.6298/2019>) PMID: 31317762

Casanova, M., Chaparro, M., Mínguez, M., Ricart, E., Taxonera, C., García-López, S., Guardiola, J., Román, A., Iglesias, E., Beltrán, B., Sicilia, B., Vera, M., Hinojosa, J., Riestra, S., Domènech, E., Calvet, X., Pérez-Calle, J., Martín-Arranz, M., Aldeguer, X., Rivero, M., Monfort, D., Barrio, J., Esteve, M., Márquez, L., Lorente, R., García-Planella, E., Castro, L., Bermejo, F., Merino, O., Rodríguez-Pérez, A., Martínez-Montiel, P., Domselaar, M., Alcaín, G., Domínguez-Cajal, M., Muñoz, C., Gomollón, F., Fernández-Salazar, L., García-Sepulcre, M., Rodríguez-Lago, I., Gutiérrez, A., Argüelles-Arias, F., Rodríguez, C., Rodríguez, G., Bujanda, L., Llaó, J., Varela, P., Ramos, L., Huguet, J., Almela, P., Romero, P., Navarro-Llavat, M., Abad, Á., Piscina, P., Lucendo, A., Sesé, E., Madrigal, R., Charro, M., García-Herola, A., Pajares, R., Khorrami, S., Gisbert, J. (2019). Effectiveness and Safety of the Sequential Use of a Second and Third Anti-TNF Agent in Patients With Inflammatory Bowel Disease: Results From the Eneida Registry. *Inflammatory bowel diseases* <https://dx.doi.org/10.1093/ibd/izz192> PMID: 31504569

Grants

Project: Caracterización y desarrollo de Procesos de Elaboración de Productos Panificables con Impacto positivo en la Salud Humana: Estudio en modelos Humanos de Inflamación y Disbiosis Intestinal. RTC-2017-6467-2

Funding agency: RETOS collaboration 2017, Spanish Ministry of Economics, Industry

Duration: 2 years (2018–2020)

Coordinator: Elias Forner

Principal Investigator: Xavier Aldeguer Manté

Project: Description of intestinal microbiota changes induced by infliximab treatment in patients with rheumatoid pathologies and inflammatory bowel disease. Pilot Study. XAM-INF-2017-01 / MII&RHEU

Funding agency: Pfizer

Duration: 2018–ongoing

Coordinator: Xavier Aldeguer Manté

Principal Investigator: Xavier Aldeguer Manté

Project: Golimumab effect in the modulation of gut microbiota in Ulcerative Colitis. Pilot Study. XAM-GOL-2016-01/Goli2015

Funding agency: Merck & Co., Inc

Duration: 2017–ongoing

Coordinator: Xavier Aldeguer Manté

Principal Investigator: Xavier Aldeguer Manté

Project: Study the effect of Creon® on intestinal dysbiosis balance in patients with PancreaticExocrinen Insufficiency (PEI) due to chronic pancreatitis. CREON

Funding agency: Abbott Laboratories

Duration: 2015–2019

Coordinator: Xavier Aldeguer Manté

Principal Investigator: Xavier Aldeguer Manté

Patents

Number of application: WO2016EP69188

Title: Method for the quantification of faecalibacterium prausnitzii phylogroup i and/or phylogroup ii members and the use thereof as biomarkers.

Inventor: López Siles M, García Gil Librado J, Aldeguer Manté X, Martínez Medina M.

Number of application: WO2015EP54451

Title: Method for diagnosing colorectal cancer from a human feces sample by quantitative PCR, primers and kit

Inventor: Serra Pagès M, García-Gil J, Mas De Xaxars T, Aldeguer X.

Research activity contributions related to clinical activity

Ref. SEAVUE/ CNT01959CRD3007

Title: A phase 3b, multicenter, randomized, blinded, active-controlled study to compare the efficacy and safety of Ustekinumab to that of Adalimumab in the treatment of biologic naïve subjects with moderately-to-severely active Crohn's Disease.

Funding Entity: Janssen Research & Development, LLC

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref. I6T-MC-AMAN/I6T-MC-AMBG (LUCENT 1&2)

Title: I6T-MC-AMAN. A phase 3, multicenter, randomized, double-blind, parallel, placebo-controlled induction study of Mirikizumab in conventional-failed and biologic-failed patients with moderately to severely active Ulcerative Colitis; LUCENT 1 & I6T-MC-AMBG.

A phase 3, multicenter, randomized, double-blind, parallel-arm, placebo-controlled maintenance study of Mirikizumab in patients with moderately to severely active Ulcerative Colitis; LUCENT 2

Funding Entity: Eli Lilly

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref. PBF-677

Title: Ensayoclínicomulticéntrico de fasella (prueba de concepto) aleatorizado, con dobleenmascaramiento y controlado con placebo

para evaluar la seguridad y eficacia del tratamiento oral con PBF-677 enpacientes con colitis ulcerosaleveo moderada.

Funding Entity: PaloBiofarma S.L.

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref.LATTICE-IM011023

Title: A phase 2 randomized, double-blind, placebo-controlled study of the safety and efficacy of bms-986165 in subjects with moderate to severe Crohn's Disease.

Funding Entity: Bristol-Myers Squibb Research and Development

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref. CT-P13

Title: An open-label, randomized, parallel-group, Phase I study to evaluate phamacokinetics, efficacy and safety between subcutaneous ct-p13 and intravenous ct-p13 in patients with active Crohn's Disease and active Ulcerative Colitis.

Funding Entity: CELLTRION, Inc.

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref. PRV-6527-CD2a

Title: A phase 2, multicenter, randomized, double-blind, placebo-controlled, parallel study to evaluate the efficacy and safety of oral jnj-40346527 (prv-6527), an inhibitor of Colony Stimulating Factor-1 receptor, in subjects with moderately to severely active Crohn's Disease.

Funding Entity: Proventionbio

Type of Entity: Private

Start year: 2018- ongoing.

Type of participation: Principal Investigator

Ref. ST10-01-304

Title: A phase 3b, randomized, controlled, multicentre study with oral ferric maltol (Feraccru) or intravenous iron (ferric carboxymaltose; FCM), for the treatment of iron deficiency anaemia in subjects with inflammatory bowel disease.

Funding Entity: Shield TX (UK) Limited

Type of Entity: Private

Start year: 2018-2018.

Type of participation: Principal Investigator

Ref. GIS-SUSANTI-TNF-2015 (EXIT)

Title: suspensión del tratamiento anti-TNFenpacientes con enfermedadinflamatoria intestinal: ensayoclínicomulticéntrico, prospectivo yaleatorizado.

Funding Entity: Fundación de InvestigaciónBiomédica del Hospital Universitario de La Princesa.

Start year: 2017- ongoing.

Principal Investigador: Dr. David Busquets Casals

Type of participation: Researcher collaborator

Ref. ZOB-INF-14-02

Title: Post-marketing observational cohort study of patients with inflammatory bowel disease (IBD) treated with Inflectra (Infliximab) in usual clinical practice (CONNECT-IBD).

Funding Entity: Hospira UK Ltd

Type of Entity: Private

Start year: 2016- 2019.

Type of participation: Principal Investigator

Ref. GA29103 Gardenia.

Title: Phase III, randomized, multicenter double-blind, double-dummy study to evaluate the efficacy and safety of Etrolizumab compared with Infliximab in patients with moderate to severe active ulcerative colitis who are naïve to TNF inhibitors.

Funding Entity: Roche.

Type of Entity: Private

Start year: 2015- ongoing.

Type of participation: Principal Investigator

Ref. GA28950 Hickory.

Title: Phase III, double-blind, placebo-controlled, multicenter study of the efficacy and safety of etrolizumab during induction and maintenance in patients with moderate to severe active ulcerative colitis who are refractory to or intolerant of TNF inhibitors.

Funding Entity: Roche.

Type of Entity: Private

Start year: 2015- ongoing.

Type of participation: Principal Investigator

Ref. GA28951 Cottonwood.

Title: An open-label extension and safety monitoring study of moderate to severe ulcerative colitis patients previously enrolled in etrolizumab phase III studies.

Funding Entity: Roche.

Type of Entity: Private

Start year: 2015- ongoing.

Type of participation: Principal Investigator

Ref. M14-115.

Title: Multicenter, randomized, double-blind trial to evaluate the efficacy and safety of two regimens of induction with adalimumab in patients with moderate active Crohn's Disease and evidence of mucosal ulceration.

Funding Entity: ABBVIE.

Type of Entity: Private

Start year: 2015-2019.

Type of participation: Principal Investigator

Ref. M14-347.

Title: Multicenter, open study to evaluate the efficacy, safety and

tolerability of long-term repeated administration of adalimumab in patients with Crohn's disease.

Funding Entity: ABBVIE.

Type of Entity: Private

Start year: 2015- 2019.

Type of participation: Principal Investigator

Ref. ADA-FOS.

Title: Effect of prebiotic FOS on intestinal abundance of Faecalibacteriumprausnitziiin patients with Crohn's Disease.

Funding Entity: Vall Hebron University Hospital, Spain

Type of Entity: Public

Start year: 2015- 2018.

Type of participation: Principal Investigator

Ref. LEGACY// P11-282.

Title: a long-term non-interventional registry to assess safety and effectiveness of humira® (Adalimumab) in patients with moderately to severely active Ulcerative Colitis (UC).

Funding Entity: ABBVIE.

Type of Entity: Private

Start year: 2014- ongoing.

Type of participation: Principal Investigator

Doctoral Thesis

Title: Desenvolupament de noves eines no invasives basades en signatures bacterianes fecals per a la detecció precoç del càncer colorectal

Student: Marta Malagón

Director: LL. García-Gil, X. Aldeguer

University: Universitat de Girona

Date: December 2019

Collaboration

Our research group is currently collaborating with the following team partners (see provided list below).

Clinical Microbiology and Infectious diseases group of the University of Girona (UdG); with the university research group lead by M Martínez-Medina and LJ García-Gil we have a close collaboration experience dealing with inflammatory bowel diseases and isolation, characterization and study of different E. coli enterotypes.

- LJ García-Gil, full-professor
- C Abella, full-professor
- M Martínez Medina, tenure-track lecturer
- C Camprubí Font, post-doctoral researcher

-
- QueraltBonet, PhD student

Goodgut sl; a biotechnology company dedicated to the research and development of non-invasive systems to support the diagnosis and treatment of digestive diseases located in Girona area and in which our group leader is co-founder and medical director.

- M Malagón, post-doctoral researcher.

Oncology Data Analytics Program (ODAP), Catalan Institute of Oncology (ICO) from the Bellvitge Biomedical Research Institute (IDIBELL); with Eric Duell's team we have been awarded with a MARATÓ TV3 prize to investigate the human microbiome in pancreatic cancer.

- E Duell, team leader
- Ainhoa García, PhD student

Nutrition, eumetabolism and health

Team involved in "Centro de Investigación Biomédica en Red Fisiopatología de la Obesidad y Nutrición" (CIBERObn)
 Recognised as a consolidated research group - 2017SGR734
 KEYWORDS: **Inflammation, Iron, Insulin Resistance, Type 2 diabetes, Obesity**



Group members

Principal Investigator

José-Manuel Fernández-Real

Established Researchers

José María Moreno Navarrete
 Francisco José Ortega

Post-doctoral Researchers

Jordi Mayneris-Perxachs
 Anna Castells
 Josefina Biarnés
 Wifredo Ricart
 Yenny Leal
 Oren Conteras
 Eduardo Esteve
 Mercè Fernández
 Gemma Xifra

Pre-doctoral Researchers

María Arnoriaga
 Agustina Irazusta
 Ferran Comas
 Jessica Latorre
 Aina Lluch

Medical Researchers

Mariona Esteve
 Mònica Recasens
 Elisabet Costa
 David Pérez
 Lúdia Sojo

Technicians

Núria Oliveras
 Judit Comalada

Support

Ylenia González
 Cristina Planella
 Oscar Rovira
 Anna Pibernat



Overview

The research group, "Nutrition, Eumetabolism and Health", is a consolidated group recognized by the Generalitat of Catalonia and belongs to the CIBERobn (CIBER Physiopathology of Obesity and Nutrition) since its foundation.

The research is focused on the pathophysiology of obesity, type 2 diabetes mellitus and their complications and the main lines of research are centered on innate immune system, inflammation and metabolic disease, the group has done significant work on the association of various genetic inflammatory polymorphisms of the innate immune system with insulin resistance and several other parameters of the metabolic syndrome;

Genomic / genetic type 2 diabetes and obesity (including microRNAs and long-non-coding RNAs);

Biology of adipose tissue, the group coordinates the FatBANK at the state level, the only biobank specializing in adipose tissue;

Iron (systemic, circulating and tissue in liver, brain, fatty tissue and muscle) as a modulator of inflammation to metabolic pathology, the group has pioneered the study of the links between iron metabolism and type 2 diabetes and José Manuel Fernández-Real was the first to propose ferritin as a component of the metabolic syndrome (Diabetes Care 1998) and to measure the effects of iron-depletion on insulin sensitivity in type 2 diabetes mellitus (Diabetes 2002);

The role of the microbiota to obesity and type 2 diabetes, the microbiota is a very important regulatory factor of aggression and response to aggression. Intestinal bacteria are a part of the unconscious system that regulates our behavior. It has been postulated that in the absence of bacteria humans would not have developed their level of cognitive performance;

Non-alcoholic steatohepatitis and fatty liver;

The brain as a metabolic organ and

Computational tools to optimize glycemic control.

In parallel, the group's work has contributed to characterize new phenotypic variables linked to insulin resistance.

The group has led a part of a European project (FLORINASH) that characterizes the signature of the microbiota related to non-alcoholic steatohepatitis in patients with morbid obesity and is currently part of another Horizon 2020 project, PEPPER (patient empowerment through predictive personalised decision support), which contemplates the development of a personalized decision

support system for the management of chronic diseases. The system, based on reasoning based on cases and predictive models, will allow patients to manage their own illnesses, as is the case of diabetes.

Research topics

- Inflammation and insulin resistance.
- Physiology of the adipose tissue.
- Iron metabolism and insulin resistance.
- Biomarkers for obesity, insulin resistance and Type-2 diabetes.
- Microbiota composition in metabolic disease.
- Interactions among microbiota, brain microstructure and function: the gut-brain axis.

Publications

Originals

Arnoriaga-Rodríguez M, Fernández-Real JM. Microbiota impacts on chronic inflammation and metabolic syndrome-related cognitive dysfunction. *Endocrine and Metabolic Disorders*.2019; 20(4):473-480.;31884557

Fernández-Real JM, Federici M, Burcelin R. Consider the microbiome in the equation! They were here before us, And hosted us!. *Endocrine and Metabolic Disorders*.2019; 20(4):383-385;31865508

Moreno-Navarrete JM, Fernandez-Real JM. The gut microbiota modulates both browning of white adipose tissue and the activity of brown adipose tissue. *Endocrine and Metabolic Disorders*.2019; 20(4):387-397; 31776853

Muñoz-San Martín M, Reverter G, Robles-Cedeño R, Buxò M, Ortega FJ, Fernández-Real JM. Analysis of miRNA signatures in CSF identifies upregulation of miR-21 and miR-146a/b in patients with multiple sclerosis and active lesions. *J Neuroinflammation*. 2019; 14;16(1):220; 31727077

Mayneris-Perxachs- J, Fernández-Real JM.Exploration of the microbiota and metabolites within body fluids could pinpoint novel disease mechanisms. *The FEBS Journal*.2019;31709683

- Palomino-Schätzlein M, Mayneris-Perxachs J, Caballano-Infantes E, Rodríguez MA, Palomo-Buitrago ME, Fernández-Real JM. Combining metabolic profiling of plasma and faeces as a fingerprint of insulin resistance in obesity. *Clinical Nutrition*. 2019; (19)33109-7. 31708234
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- Santamaria-Martos F, Latorre J, Moreno-Navarrete JM, Ricart W, Fernández-Real JM; Ortega FJ. Comparative and functional analysis of plasma membrane-derived extracellular vesicles from obese vs. nonobese women. *Clinical Nutrition*. 2019; 17. pii: S0261-5614(19)30163-3. 31036413
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Violés S, Hernández MR, Serra I, Goday A, Vila L, Siso-Almirall A, Solans R, Fernández-Real JM, Carrión JA, Graupera I, Ginès P. Recommendations for the detection, diagnosis and follow-up of patients with non-alcoholic fatty liver disease in primary and hospital care. *Med Clin (Barc)*. 2019 Aug 16; 153(4):169-177. doi: 10.1016/j.medcli.2019.01.030. Epub 2019 Jun 6. English, Spanish. PubMed PMID: 31178295.

Seoane-Collazo P, Liñares-Pose L, Rial-Pensado E, Romero-Picó A, Moreno-Navarrete JM, Martínez-Sánchez N, Garrido-Gil P, Iglesias-Rey R, Morgan DA, Tomasini N, Malone SA, Senra A, Folgueira C, Medina-Gomez G, Sobrino T, Labandeira-García JL, Nogueiras R, Domingos AI, Fernández-Real JM, Rahmouni K, Diéguez C, López M. Central nicotine induces browning through hypothalamic α -nicotinic receptor. *Nat Commun*. 2019 Sep 6; 10(1):4037. doi: 10.1038/s41467-019-12004-z. PubMed PMID: 31492869; PubMed Central PMCID: PMC6731305

Ceperuelo-Mallafre V, Llauro G, Keiran N, Benaiges E, Astiarraga B, Martínez L, Pellitero S, González-Clemente JM, Rodríguez A, Fernández-Real JM, Lecube A, Megía A, Vilarasa N, Vendrell J, Fernández-Veledo S. Preoperative Circulating Succinate Levels as a Biomarker for Diabetes Remission After Bariatric Surgery. *Diabetes Care*. 2019 Oct; 42(10):1956-1965. doi: 10.2337/dc19-0114. Epub 2019 Aug 2. Erratum in: *Diabetes Care*. 2019 Dec; 42(12):2347. PubMed PMID: 31375523.

Fernández-Real JM, Federici M, Burcelin R. Consider the microbiome in the equation! They were here before us...and hosted us! *Rev Endocr Metab Disord*. 2019 Dec; 20(4):383-385. doi: 10.1007/s11154-019-09538-4. PubMed PMID: 31865508

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Reviews

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Steward T, Mestre-Bach G, Granero R, Sánchez I, Riesco N, Vintró-Alcaraz C, Sauchelli S, Jiménez-Murcia S, Agüera Z, Fernández-García JC, Garrido-Sánchez L, Tinahones FJ, Casanueva FF, Baños RM, Botella C, Crujeiras AB, Torre R, Fernández-Real JM, Frühbeck G, Ortega FJ, Rodríguez A, Menchón JM, Fernández-Aranda F. Reduced Plasma Orexin-A Concentrations are Associated with Cognitive Deficits in Anorexia Nervosa. Sci Rep. 2019 May 27;9(1):7910. doi: 10.1038/s41598-019-44450-6. PubMed PMID: 31133733; PubMed Central PMCID: PMC6536521.

Castelblanco E, Sanjurjo L, Falguera M, Hernández M, Fernandez-Real JM, Sarrias MR, Alonso N, Mauricio D. Circulating Soluble CD36 is Similar in Type 1 and Type 2 Diabetes Mellitus versus Non-Diabetic Subjects. J Clin Med. 2019 May 18;8(5). pii: E710. doi: 10.3390/jcm8050710. PubMed PMID: 31109109; PubMed Central PMCID: PMC6571689.

Grants

Project: Restricting fatty liver: Therapeutic utility of miR-30b (CP19/00109)

Funding agency: Miquel Servet - Instituto de Salud Carlos III (ISCIII)

Duration: 2020-24

Principal Investigator: Francisco J Ortega

Project: Papel de Olfactomedin 2 (OLFM2) en el balance energético (FI19/00045)

Funding agency: PFIS - Instituto de Salud Carlos III (ISCIII)

Duration: 2020-23

Principal Investigator: Francisco J Ortega

Lead Researcher: Francisco Ortega

Project: Restringiendo el hígado graso: utilidad terapéutica del miR-30b (SED 2019)

Funding agency: Sociedad Española de Diabetes (SED)

Duration: 2019-21

Principal Investigator: Francisco J Ortega

Project: Restringint el fetge gras no alcohòlic: utilitat terapèutica del miR-30b (ACD 2019)

Funding agency: Associació Catalana de Diabetes (ACD)

Duration: 2019-20

Principal Investigator: Francisco J Ortega

Project: Papel de la Olfactomedina 2 (OLFM2) en el tejido adiposo en relación con la obesidad (PI18/00550)

Funding agency: Funding entity or bodies: Instituto de Salud Carlos III (ISCIII)

Duration: 2019-21

Principal Investigator: Francisco J Ortega

Patents

Number of application: WO2019077125

Title: Methods for determining whether a subject has or is at risk of having a non-alcoholic fatty liver disease (NAFLD) or one of its complications.

Inventor: Burcelin R, Federici M, Hoyles L, Dumas M, Barton Richard H, Fernandez-Real JM.

Number of application: WO2017060039

Title: Method for diagnosing hepatic fibrosis based on bacterial profile and diversity

Inventor: Lelouvier B, Servant F, Courtney M, Federici M, Fernandez-Real JM.

Number of application: WO2015EP58772

Title: Method for diagnosing hepatic fibrosis

Inventor: Courtney M, Lelouvier B, Federici M, Fernandez-Real JM, Païssé S.

Research activity contributions related to clinical activity

Bacteriana y la obesidad: cómo encontrar un equilibrio predictivo? Poster presentado en el 3er Taller de Estadística y Computacional Algorithmic.Center de Biología. La Fundación Simons, 2019, Nueva York.

Thesis

Title: Disseny, validació i posada en pràctica d'un instrument pe a mesurar els coneixements teòrics dels professionals sanitaris en la mesura de la pressió arterial: Qüestionari ARC

Student: Mar Serrat Costa

Director: Wifredo Ricart

University: Universitat de Girona

Date: 05/24/2019

Title: La salud de las mujeres desde la perspectiva de los determinantes sociales

Student: Ángeles López Sánchez López

Director: Wifredo Ricart

University: Universitat de Girona

Date: 06/10/2019

Awards

Title: Gut función de genes ClpB bacteriana está asociada con la ingesta de fibra dietética y la disminución de peso corporal

Institution: Congreso ESPEN 2019

Awardee/s: premio de la comunicación oral, uno de los cinco mejores resúmenes a los 844 presentados en el Congreso

Collaborations

- Dra. AB Crujeiras (CIBEROBN): Survivin
- Dr. C Adrain (Instituto Gulbenkian de Ciência (IGC), Portugal): iRhom
- Dr. M López (CiMUS): OLFM2, hepatic miRNAs
- Dr. A Zorzano (CIBERDEM): NCOA6
- Dr. V Grandjean (INSERM): ERA/JPI-HDHL
- Dr. D Llobet-Navas (IDIBELL): Marató TV3
- Dra. S Kozma (IDIBELL): Marató TV3
- Dr. V Olkkonen (Minerva Foundation Institute): ANGPTL8, hepatic miRNAs
- Dr. I Santis (CIBERDEM): LncRNAs
- Dr. J Tibau, Dra. Maria Ballester (IRTA): INCOMES

Pediatric endocrinology

KEYWORDS: obesity, cardiovascular risk, children, epigenetics, DNA methylation, imprinting

Group members

Principal Investigator

Abel López Bermejo

Post-doctoral Researcher

Sílvia Xargay

Pre-doctoral Researchers

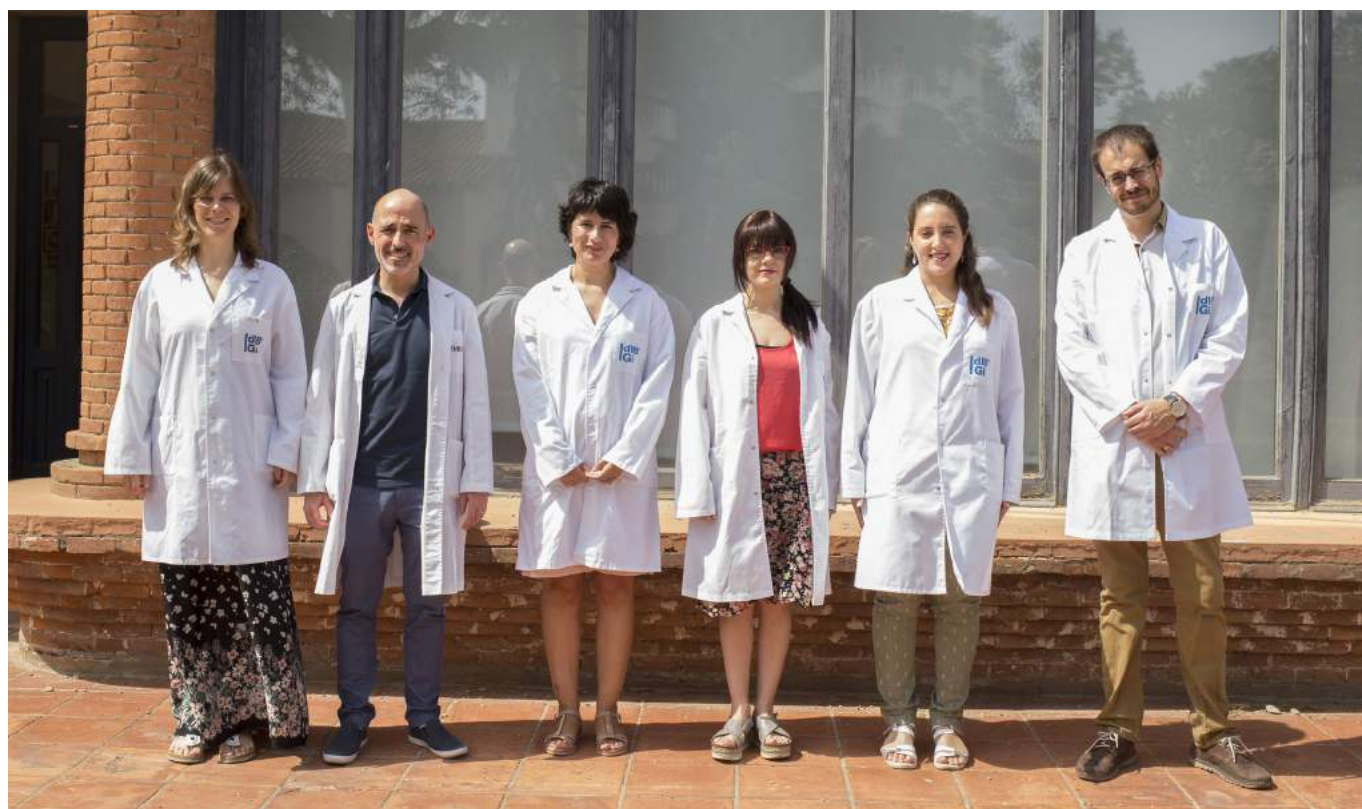
Ferran Díaz

Medical Researchers

Lluís Mayol
Pilar Soriano
Elena Riera
Inés Osiniri

Technicians

Berta Mas



Overview

Our research is aimed at identifying new biomarkers during the perinatal life and childhood for the early detection and prevention of cardio-metabolic risk in the adult life. We also investigate the epigenetic marks that contribute to prenatal programming of such diseases and the use of metformin to prevent them early in life. To carry out these objectives we have developed a population-based cohort of children with and without obesity (n = 700), two prenatal cohorts of pregnant mother-father-infant trios (n=700) and a swine animal model of piglets treated with metformin (n=96). In recent years, we have characterized several endocrine, genetic and epigenetic markers in relation to the pre- and postnatal growth and metabolic dysfunction in pregnant women and in the offspring.

Research topics

Main research lines:

- Identification of biomarkers in childhood for the early detection and prevention of cardio-metabolic risk.

Specific research lines:

- Pathophysiology of childhood obesity.
- Cardiovascular risk markers in childhood.
- Epigenetics of development: DNA methylation and imprinted marks.
- Prenatal basis of metabolic programming.
- The use of metformin to revert metabolic programming.

Publications

Originals

Díaz M, Campderrós L, Guimaraes MP, López-Bermejo A, de Zegher F, Villarroja F, et al. Circulating growth-and-differentiation factor-15 in early life: relation to prenatal and postnatal growth and adiposity measurements. *Pediatr Res*. 2019 Oct 23. PMID: 31645058

Malpique R, Sánchez-Infantes D, Garcia-Beltran C, Taxerås SD, López-Bermejo A, de Zegher F, et al. Towards a circulating marker of hepato-visceral fat excess: S100A4 in adolescent girls with polycystic ovary syndrome - Evidence from randomized clinical trials. *Pediatr Obes*. 2019; 14(5):e12500. PMID: 30653851

Sebastiani G, García-Beltran C, Pie S, Guerra A, López-Bermejo A, de Toledo JS, et al. The sequence of prenatal growth restraint and postnatal catch-up growth: normal heart but thicker intima-media and more pre-peritoneal fat in late infancy. *Pediatr Obes*.

2019; 14(3):e12476. PMID: 30362284.

Malpique R, Gallego-Escuredo JM, Sebastiani G, Villarroja J, López-Bermejo A, de Zegher F, et al. Brown adipose tissue in prepubertal children: associations with sex, birthweight, and metabolic profile. *Int J Obes (Lond)*. 2019; 43(2):384-391. PMID: 30185921

Mas-Parés B, Xargay-Torrent S, Bonmatí A, Lizarraga-Mollinedo E, Martínez-Calcerrada JM, Carreras-Badosa G, et al. Umbilical Cord miRNAs in Small-for-Gestational-Age Children and Association With Catch-Up Growth: A Pilot Study. *J Clin Endocrinol Metab*. 2019; 104(11):5285-5298. PMID: 31125087

Carreras-Badosa G, Remesar X, Prats-Puig A, Xargay-Torrent S, Lizarraga-Mollinedo E, de Zegher F, et al. Dlk1 expression relates to visceral fat expansion and insulin resistance in male and female rats with postnatal catch-up growth. *Pediatr Res*. 2019; 86(2):195-201. PMID: 31091532

Suárez-Ortegón MF, Echeverri I, Prats-Puig A, Bassols J, Carreras-Badosa G, López-Bermejo A, et al. Iron Status and Metabolically Unhealthy Obesity in Prepubertal Children. *Obesity (Silver Spring)*. 2019; 27(4):636-644. PMID: 30821086

Bassols J, Martínez-Calcerrada JM, Osiniri I, Díaz-Roldán F, Xargay-Torrent S, Mas-Parés B, et al. Effects of metformin administration on endocrine-metabolic parameters, visceral adiposity and cardiovascular risk factors in children with obesity and risk markers for metabolic syndrome: A pilot study. *PLoS One*. 2019; 14(12):e0226303. PMID: 31821361

Zhao M, López-Bermejo A, Caserta CA, Medeiros CCM, Kollias A, Bassols J, et al. Metabolically Healthy Obesity and High Carotid Intima-Media Thickness in Children and Adolescents: International Childhood Vascular Structure Evaluation Consortium. *Diabetes Care*. 2019; 42(1):119-125. PMID: 30420475

Zhao M, Caserta CA, Medeiros CCM, López-Bermejo A, Kollias A, Zhang Q, et al. Metabolic syndrome, clustering of cardiovascular risk factors and high carotid intima-media thickness in children and adolescents. *J Hypertens*. 2019 Dec 4. [Epub ahead of print]. PMID: 31790055

Korevaar T, Derakhshan A, Taylor PN, Meima M, Chen L, Bliddal S, et al. Association of Thyroid Function Test Abnormalities and Thyroid Autoimmunity With Preterm Birth: A Systematic Review and Meta-analysis. *JAMA*. 2019; 322(7):632-641. PMID: 31429897

Mas-Parés B, Xargay-Torrent S, Bonmatí A, Lizarraga-Mollinedo E, Martínez-Calcerrada JM, Carreras-Badosa G, et al. Umbilical Cord miRNAs in Small-for-Gestational-Age Children

and Association With Catch-Up Growth: A Pilot Study. J Clin Endocrinol Metab. 2019; 104(11):5285-5298. PMID: 31125087

Carreras-Badosa G, Remesar X, Prats-Puig A, Xargay-Torrent S, Lizarraga-Mollinedo E, de Zegher F, et al. Dlk1 expression relates to visceral fat expansion and insulin resistance in male and female rats with postnatal catch-up growth. Pediatr Res. 2019; 86(2):195-201. PMID: 31091532

Lizarraga-Mollinedo E, Martínez-Calcerrada JM, Padrós-Fornieles C, Mas-Pares B, Xargay-Torrent S, Riera-Pérez E, et al. Renal size and cardiovascular risk in prepubertal children. Sci Rep. 2019; 9(1):5265. PMID: 30918295

Reviews

López-Bermejo A, Prats-Puig A, Osiniri I, Martínez-Calcerrada JM, Bassols J. Perirenal and epicardial fat and their association with carotid intima-media thickness in children. Ann Pediatr Endocrinol Metab. 2019; 24(4):220-225. PMID: 31905440

Grants

Project: Efecto de la sobrenutrición materna en las marcas epigenéticas de programación metabólica: identificación y reversibilidad terapéutica (PI16/01335)

Funding agency: Fondo de Investigación Sanitaria (ISCIII)

Duration: 2017-2019

Coordinator: Abel López-Bermejo

Principal Investigator: Abel López-Bermejo

Project: Impronta genética y crecimiento recuperativo postnatal en recién nacidos con bajo peso al nacimiento

Funding agency: Asociación Española de Pediatría

Duration: 2019 - 2021

Coordinator: Judit Bassols

Principal Investigator: Abel López-Bermejo

Project: Función cognitiva y obesidad en niños prepuberales: Efecto de la obesidad materna, crecimiento pre y postnatal y factores ambientales

Funding agency: Fundación Merck-Salud

Duration: 2019 - 2021

Coordinator: Judit Bassols

Principal Investigator: Abel López-Bermejo

Project: Repercusión de las alteraciones prenatales perinatales en el desarrollo postnatal: Enfermedades de origen fetal. (Exp. 2017-SGR-1236)

Funding agency: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2018-2020

Coordinator: Lourdes Ibañez

Principal Investigator: Lourdes Ibañez

Project: Identificació de biomarcadors placentaris del metabolisme lipídic en obesitat materna: efectes endocrino-metabòlics en la descendència

Funding agency: Fundació Agrupació

Duration: 2018-2019

Coordinator: Judit Bassols

Principal Investigator: Judit Bassols

Project: Epidemiologia de la Hipercolesterolèmia Familiar, predicció de risc, efectivitat i seguretat del tractament hiperlipemiant

Funding agency: Institut Català de la Salut de Barcelona, Generalitat de Catalunya

Duration: 2017-2019

Coordinator: Rafel Ramos

Principal Investigator: Rafel Ramos

Membership of collaborative research networks (National & International)

2018-actual. International Childhood Vascular Structure Evaluation Consortium: The consortium consists of 5 research groups (Brazil, China, Greece, Italy and Spain) with data on more than 3,500 children. PI: Abel Lopez-Bermejo and Judit Bassols

2016-actual. International Consortium on Thyroid and Pregnancy: The consortium consists of 23 research groups with data on more than 80,000 mother-child pairs from across the world. PI: Abel Lopez-Bermejo and Judit Bassols

2017-2020 Research Groups Recognized and Funded by the Generalitat of Catalonia (2017 SGR 1236)

Research activities contributions related to clinical activity

Project: Prospective, single-cohort, multicentre observational long-term study in short children born small for gestational age (SGA) after treatment with Saizen® (EMR 200098_008)

Funding agency: Merck KGaA

Duration: 2019-2031

Leader Researcher: Abel Lopez-Bermejo

Project: Vigilancia poscomercialización para controlar la seguridad y la eficacia a largo plazo de Omnitrope® en niños y adolescentes PATRO Children (EP00-501)

Funding agency: Sandoz

Duration: 2015-2025

Leader Researcher: Abel Lopez-Bermejo

Collaborations

- Endocrinology, Pediatric Research Institute, Sant Joan de Déu Children's Hospital, Barcelona
- Development & Regeneration, University of Leuven, Leuven, Belgium
- Genetics and Animal Improvement. Agrifood Research and Technology Institute (IRTA), Monells, Girona.
- Genomic Imprinting and Development, Institute of Molecular Genetics of Montpellier, CNRS, Montpellier, France.

Materno-Fetal Metabolic Research

KEYWORDS: pregnancy, pre and postnatal growth, metabolic programming

Group members

Principal Investigator

Judit Bassols

Pre-doctoral Researchers

José María Martínez-Calcerrada

Ariadna Gómez Vilarrubia

Medical Researchers

Mercè Montesinos

Alexandra Bonmatí

Montserrat Gispert Sauch

Technicians

Berta Mas



Overview

An unfavorable prenatal environment and inadequate nutritional stimulus during critical developmental periods are associated with an increased risk of endocrine-metabolic diseases in the mother and in their offspring. This metabolic programming is produced, in part, by epigenetic changes in maternal and fetal tissues. In recent years, we have developed a longitudinal clinical study in a cohort of pregnant-newborns with prenatal development alterations (pregestational obesity, gestational obesity and fetal growth restriction) to study the epigenetic marks (miRNA and DNA methylation) in maternal plasma, placenta and umbilical cord and to determine their relationship with endocrine-metabolic parameters and with pre and postnatal growth. These epigenetic marks in pregnancy available tissues can be used as new predictive elements for the identification of newborns at risk of developing future metabolic diseases and as new therapeutic targets for these diseases.

Research topics

Main Research line:

Identification of metabolic and (epi)genetic marks associated with metabolic alterations of pregnancy and offspring, and their relation to pre and postnatal growth.

Specific research lines:

1. Alterations of prenatal development: gestational obesity and restriction of fetal growth.
2. Postnatal recovery growth (catch-up).
3. Metabolic programming during pregnancy.
4. Epigenetics of development.

Publications

Originals

Mas-Parés B, Xargay-Torrent S, Bonmatí A, Lizarraga-Mollinedo E, Martínez-Calcerrada JM, Carreras-Badosa G, et al. Umbilical Cord miRNAs in Small-for-Gestational-Age Children and Association With Catch-Up Growth: A Pilot Study. *J Clin Endocrinol Metab*. 2019;104(11):5285-5298. PMID:31125087

Carreras-Badosa G, Remesar X, Prats-Puig A, Xargay-Torrent S, Lizarraga-Mollinedo E, de Zegher F, et al. Dlk1 expression relates to visceral fat expansion and insulin resistance in male and female rats

with postnatal catch-up growth. *Pediatr Res*. 2019;86(2):195-201. PMID: 31091532

Suárez-Ortegón MF, Echeverri I, Prats-Puig A, Bassols J, Carreras-Badosa G, López-Bermejo A, et al. Iron Status and Metabolically Unhealthy Obesity in Prepubertal Children. *Obesity (Silver Spring)*. 2019;27(4):636-644. PMID: 30821086

López-Bermejo A, Prats-Puig A, Osiniri I, Martínez-Calcerrada JM, Bassols J. Perirenal and epicardial fat and their association with carotid intima-mediathickness in children. *Ann Pediatr Endocrinol Metab*. 2019; 24(4):220-225. PMID: 31905440

Bassols J, Martínez-Calcerrada JM, Osiniri I, Díaz-Roldán F, Xargay-Torrent S, Mas-Parés B, et al. Effects of metformin administration on endocrine-metabolic parameters, visceral adiposity and cardiovascular risk factors in children with obesity and risk markers for metabolic syndrome: A pilot study. *PLoS One*. 2019;14(12):e0226303. PMID: 31821361

Zhao M, López-Bermejo A, Caserta CA, Medeiros CCM, Kollias A, Bassols J, et al. Metabolically Healthy Obesity and High Carotid Intima-Media Thickness in Children and Adolescents: International Childhood Vascular Structure Evaluation Consortium. *Diabetes Care*. 2019;42(1):119-125. PMID: 30420475

Zhao M, Caserta CA, Medeiros CCM, López-Bermejo A, Kollias A, Zhang Q, et al. Metabolic syndrome, clustering of cardiovascular risk factors and high carotid intima-mediathickness in children and adolescents. *J Hypertens*. 2019 Dec 4. [Epub ahead of print]. PMID: 31790055

Korevaar T, Derakhshan A, Taylor PN, Meima M, Chen L, Bliddal S, et al. Association of Thyroid Function Test Abnormalities and Thyroid Autoimmunity With Preterm Birth: A Systematic Review and Meta-analysis. *JAMA*. 2019;322(7):632-641. PMID: 31429897

Carreras-Badosa G, Remesar X, Prats-Puig A, Xargay-Torrent S, Lizarraga-Mollinedo E, de Zegher F, et al. Dlk1 expression relates to visceral fat expansion and insulin resistance in male and female rats with postnatal catch-up growth. *Pediatr Res*. 2019;86(2):195-201. PMID: 31091532

Lizarraga-Mollinedo E, Martínez-Calcerrada JM, Padrós-Fornieles C, Mas-Pares B, Xargay-Torrent S, Riera-Pérez E, et al. Renal size and cardiovascular risk in prepubertal children. *Sci Rep*. 2019; 9(1):5265. PMID: 30918295

Grants

Project: Identificació de biomarcadors placentaris del metabolisme lipídic en obesitat materna: efectes endocrino-metabòlics en la descendència

Funding agency: Fundació Agrupació

Duration: 2019

Coordinator: Judit Bassols

Principal Investigator: Judit Bassols

Project: Impronta genética y crecimiento recuperativo postnatal en recién nacidos con bajo peso al nacimiento

Funding agency: Asociación Española de Pediatría

Duration: 2019 - 2021

Coordinator: Judit Bassols

Principal Investigator: Abel López-Bermejo

Project: Función cognitiva y obesidad en niños prepuberales: Efecto de la obesidad materna, crecimiento pre y postnatal y factores ambientales

Funding agency: Fundación Merck-Salud

Duration: 2019 – 2021

Coordinator: Judit Bassols

Principal Investigator: Abel López-Bermejo

Project: Repercusión de las alteraciones prenatales perinatales en el desarrollo postnatal: Enfermedades de origen fetal. (Exp. 2017-SGR-1236)

Funding agency: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2018-2020

Coordinator: Lourdes Ibañez

Principal Investigator: Lourdes Ibañez

Project: Perfil de ácidos grasos y programación epigenética en placenta: prevención del riesgo cardiovascular y obesidad en la infancia (PI17/00557)

Funding agency: Fondo de Investigación Sanitaria (ISCIII)

Duration: 2018-2020

Coordinator: Judit Bassols

Principal Investigator: Judit Bassols

Membership of collaborative research networks (National & international)

2018-actual. International Childhood Vascular Structure Evaluation Consortium: The consortium consists of 5 research groups (Brazil, China, Greece, Italy and Spain) with data on more than 3,500 children. PI: Judit Bassols and Abel Lopez-Bermejo

2016-actual. International Consortium on Thyroid and Pregnancy: The consortium consists of 23 research groups with data on

more than 80,000 mother-child pairs from across the world. PI: Judit Bassols and Abel Lopez-Bermejo
2017-2020 Research Groups Recognized and Funded by the Generalitat of Catalonia (2017 SGR 1236)

Research activity contributions related to clinical activity

Project: Prospective, single-cohort, multicentre observational long-term study in short children born small for gestational age (SGA) after treatment with Saizen® (EMR 200098_008)

Funding agency: Merck KGaA

Duration: 2019-2031

Leader Researcher: Abel Lopez-Bermejo

Project: Vigilancia poscomercialización para controlar la seguridad y la eficacia a largo plazo de Omnitrope® en niños y adolescentes PATRO Children (EP00-501)

Funding agency: Sandoz

Duration: 2015-2025

Leader Researcher: Abel Lopez-Bermejo

Collaborations

- Endocrinology, Pediatric Research Institute, Sant Joan de Déu Children's Hospital, Barcelona
- Development & Regeneration, University of Leuven, Leuven, Belgium
- Genetics and Animal Improvement. Agrifood Research and Technology Institute (IRTA), Monells, Girona.

Internal medicine

Group members

Principal Investigator

Antoni Castro i Guardiola

Medical Researchers

Antoni Castro
Iria Francisco
Joel Elias
Arola Armengou
Xavier Salgado
Gemma Alvarez

Overview

All members belong to the Internal Medicine Service, a healthcare service that assists a wide spectrum of pathologies. The main activity of the group is the assistance, and, in their effort to maintain the quality of care, they dedicate notable efforts to continuing medical education (after hours), and in their conviction that clinical research results in a better quality of care.

Research topics

- Venous thromboembolic disease (VTE). The group, for years, has been dedicated to clinical research of the VTE; has participated in several controlled clinical trials on the new direct-acting oral anticoagulants, all of which were published in the New England Journal of Medicine (the last in 2018). The group also participates in two international registries on the VTE, the registries RIETE and GARFIELD - VTE. Nowadays involves in the trial API-CAT STUDY for Apixaban Cancer Associated Thrombosis.
- Heart failure. Dr. Arola Armengou She is a member of the Heart Failure and Atrial Fibrillation group of the Spanish Internal Medicine Society and is an active member of the RICA registry.
- *Infectious diseases. The group designed and developed a clinical trial on pneumonia acquired in the community, as well

as other studies on the same pathology; These studies were translated into an original in the American Journal of Medicine as well as other publications and communications to different congresses. The group also works on the infection by the human immunodeficiency virus, multiresistant bacteria, urinary tract infections and Tuberculosis.

- Finally, the group also participates in the clinical investigation of systemic autoimmune diseases and recently we have started clinical research, together with the Ophthalmology Service, of uveitis. The group participates in the RELES registry (Registro Español del Lupus Eritematoso Sistémico) of the Spanish Internal Medicine Society.

Publications

Originals

Jara-Palomares L, Alfonso M, Maestre A, Jimenez D, Garcia-Bragado F, Font C, Reyes RL, Blasco LH, Vidal G, Otero R, Monreal M; RIETE investigators. Comparison of seven prognostic tools to identify low-risk pulmonary embolism in patients aged <50 years. Sci Rep. 2019 Dec 27;9(1):20064. doi: 10.1038/s41598-019-55213-8. PMID: 31882805; PMCID: PMC6934558.

Nephrology

Group members

Principal Investigator

Jordi Calabia

Post-Doctoral Researchers

Xoana Barros

Post-Graduate Researchers

Marcela Castillo

Marina Cufí

Nàdia Martín

Medical Researchers

Isabel García

Pere Torquet

Cristina Noboa

Collaborators

Cristina Martínez

Elisabeth Marcè

Nursing Staff

Estibaliz Platero

Montse Jubany

Overview

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.

Research topics

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.



NEURO- SCIENCE AREA

**CEREBROVASCULAR PATHOLOGY
NEURODEGENERATION AND NEUROINFLAMMATION
AGING, DISABILITY AND HEALTH**

Cerebrovascular pathology



Team involved in "Red de Enfermedades Vasculares Cerebrales (RED INVICTUS)"

Recognised as a consolidated research group - 2017SGR1730

KEYWORDS: **Acute Stroke**, **ischaemic stroke**, **haemorrhagic stroke**, **thrombolysis**, **stroke unit**, **endovascular treatment**, **cryptogenic stroke**, **animal models**, **molecular and cellular neuroscience**, **atherosclerosis**.

Group members

Principal Investigator

Joaquín Serena Leal

Pre-doctoral Researchers

Saima Bashir

Established Researchers

Gemma Huguet

Elisabet Kádár

Medical Researchers

Yolanda Silva

Mikel Terceño

Post-doctoral Researchers

Carne Gubern

Support

Laura Pardo

Montserrat Reina



Overview

The Cerebrovascular Pathology Research Group is a multidisciplinary team with more than 20 years of investigating experience in the area of cerebrovascular diseases, during which time it has consolidated itself as new investigators have joined. It has been recognised as a pre-consolidated research group by the Catalan Autonomous Government (2017 SGR 1730) and maintains scientific relations with other member centres of a network of scientific collaboration which began more than 10 years ago. Relations are particularly close with the groups that make up the STROKE area of the Thematic Network of Cooperative Health Investigation (Red RENEVAS, Red INVICTUS –Investigación Vascular en Ictus– and Red INVICTUS PLUS), of the Carlos III Health Institute. We are one of the 11 members of this group, who have all been selected on the basis of their experience and results from the first call of this network.

Research topics

The main areas of investigation of the group are:

1. Clinical and experimental investigation of vulnerable atheromatous plaques in the identification of at-risk groups of patients with atherothrombotic disease.
2. Clinical and experimental investigation of the predictive capacity of biomarkers in the functional prognosis of patients with ischaemic and haemorrhagic stroke, with special focus on biomarkers of endothelial lesions and of the extracellular matrix that are predictors of haemorrhagic transformation (HT) of the ischaemic lesion and the recanalization response in patients who receive fibrinolytic therapy with rt-PA.
3. Basic investigation into the molecular mechanisms related with cerebral ischaemia in vivo and in vitro experimental models. Blood brain barrier model. Mechanisms of genic regulation (miRNA) and their involvement in cerebral ischaemia.
4. Clinical and experimental investigation of the predictive capacity of biomarkers associated with haematoma growth in patients with primary intracerebral haemorrhage.
5. Application and utility of advanced neuroimaging predictors in the identification of salvageable cerebral tissue in the ischaemic penumbra and predictors of progression in cerebral haemorrhage.
6. Ultrasound clinical investigation focussed on the epidemiology of the patent foramen ovale, the possibility

of associated stroke recurrence, and response to current preventative pharmacological therapy.

Publications

Originals

Terceño M, Remollo S, Silva Y, Bashir S, Castaño C, Serena J. Intracranial Hemorrhage Secondary to a Delayed Cerebral Pseudoaneurysm Rupture 18 Years after Cranial Trauma. *Case Rep Neurol*. 2019 Nov 21;11(3):325-329. PMID: 31824288.

Terceño M, Silva Y, Bragado I, Bashir S, Buxó M, Serena J. Troponin T predicts cardioembolic aetiology and clinical outcome in undetermined ischaemic stroke in hyperacute phase. *J Stroke Cerebrovasc Dis*. 2020 Feb;29(2):104528. doi: 10.1016/j.jstrokecerebrovasdis.2019.104528. Epub 2019 Dec 3. PMID: 31806451 FI:1,646 (Q3)

Sobrino T, Rodríguez-Yáñez M, Campos F, Millan M, Perez de la Ossa N, Davalos A, Delgado-Mederos R, Martínez-Domeño A, Martí-Fàbregas J, Castellanos M, Serena J, Lago A, Díez-Tejedor E, Castillo J. Association of high serum levels of growth factors with good outcome in ischemic stroke: a multicenter study. *Transl Stroke Res*. 2019 Nov 25. PMID: 31768951. [Epub ahead of print] (Q3)

Terceño M, Serena J, Bashir S, Vera-Monge VA, Puig J, Blasco G, Puig M, Silva Y. Serotonin Reuptake Inhibitor Drugs Are Associated with Contrast Extravasation and Clinical Outcome in Patients with Intracerebral Haemorrhage. *Eur Neurol*. 2019 Oct 25; 81(5-6):254-261. PMID:31655802. [Epub ahead of print] FI: 1,235 (Q4).

Requena M, Olivé-Gadea M, Boned S, Ramos A, Cardona P, Serena J, et al. Clinical and neuroimaging criteria to improve the workflow in transfers for endovascular treatment evaluation. *Int J Stroke*. 2019 Sep 10. PMID: 31506026. [Epub ahead of print] FI: 4,466 (Q1).

Gomez-Choco M, Mengual JJ, Rodríguez-Antigüedad J, Paré-Curell M, Purroy F, Serena J. Pre-existing cerebral small vessel disease limits early recovery in patients with acute lacunar infarct, on behalf of the Registro Nacional de Ictus de la Sociedad Española de Neurología (RENISEN). *J Stroke Cerebrovasc Dis*. 2019 Nov;28(11). PMID: 31395422. Epub 2019 Aug 5. FI: 1,646 (Q3))

Campbell BCV, Ma H, Ringleb PA, Parsons MW, Churilov L, Bendszus M, Levi CR, et al.; EXTEND, ECASS-4, and EPITHET Investigators. Extending thrombolysis to 4-5-9 h and wake-

up stroke using perfusion imaging: a systematic review and meta-analysis of individual patient data. *Lancet*. 2019 Jul 13;394(10193):139-147. PMID: 31128925. FI: 59,102 (D1).
 Abilleira S, Pérez de la Ossa N, Jiménez-Fàbrega X, Cardona P, Cocho D, Serena J, et al. Transfer to the Local Stroke Center vs Direct Transfer to Endovascular Center of Acute Stroke Patients with Suspected Large Vessel Occlusion in the Catalan Territory (RACECAT): study protocol of a cluster randomized within a cohort trial. *Int J Stroke*. 2019 Oct;14(7):734-744. PMID: 31142219. FI: 4,466 (Q1) .

Purroy F, Vena A, Forné C, Arce A, Davalos A, Serena J. Age and sex specific risk profiles and in-hospital mortality in 13,392 Spanish stroke patients (RENISEN). *Cerebrovasc Dis*. 2019;47(3-4):151-164. Epub: May 3, 2019. PMID: 31055571. FI: 3,698 - FI: 2,681 (Q2).

Puig J, Blasco G, Terceño M, Daunis-I-Estadella J, Schlaug G, Stinear C, et al. Predicting Motor Outcome in Acute Intracerebral Hemorrhage. *AJNR Am J Neuroradiol*. 2019 May;40(5):769-775. PMID: 31000524. FI: 3,675 (Q2).

Ringleb P, Bendszus M, Bluhmki E, Donnan D, Eschenfelder C, Fatar M, et al. for the ECASS-4 study group. Extending the time window for I.V.-Thrombolysis in acute Ischemic Stroke using MRI based patient selection. *Int J Stroke*. 2019 Jul;14(5):483-490. PMID: 30947642. FI: 4,466 (Q1).

Mola-Caminal M, Carrera C, Soriano-Tárraga C, Giralte G, Diaz-Navarro R, Tur S, et al. PATJ low frequency variants are associated with worse ischemic stroke functional outcome: a genome-wide meta-analysis. *Circ Res*. 2019 Jan 4;124(1):114-120. PMID: 30582445. FI: 11,089 (D1)

Zapata-Wainberg G, Masjuan J, Quintas S, Ximenez-Carrillo A, García-Pastor A, Martínez-Zabaleta M, et al. The Neurologist's Approach to Cerebral Infarct and Transient Ischemic Attack in Patients Receiving Anticoagulant Treatment for Nonvalvular Atrial Fibrillation. ANITA-FA Study. *Eur J Neurol*. 2019 Feb;26(2):230-237. 2018 Aug 28. PMID: 30153363. FI: 4,387 (Q1)

Carrera D, Gorchs M, Querol M, Abilleira S, Ribo M, Millán M, et al.; Catalan Stroke Code and Reperfusion Consortium (Cat-SCR). Revalidation of the RACE scale after its regional implementation in Catalonia: a triage tool for large vessel occlusion. *J Neurointerv Surg*. 2019 Aug;11(8):751-756. PMID: 30580284. FI: 3,925 (Q1).

Torres-Pascual C, Rodríguez-Rodríguez A, Serena J. Análisis bibliométrico de las investigaciones españolas sobre neurorrehabilitación en el ictus indizadas en MEDLINE (2008-2017). *Rev Neurol*. 2019;68(11):491-492. PMID: 31132140.

Barba MA, Serena J, Puig JM, Valverde V, Climent V, Herrero J, Huertas R, Torra R. Clinical profile of women diagnosed with Fabry disease non receiving enzyme replacement therapy. *Med Clin (Barc)*. 2019;153(2):47-55. PMID: 30658922. FI: 1,277 (Q3)
 Yogendrakumar V, Ramsay T, Fergusson DA, Demchuk AM, Aviv RI, Rodríguez-Luna D, et al.; PREDICT/Sunnybrook CTA Study Group. Independent Validation of the Hematoma Expansion Prediction Score: A Non-contrast Score Equivalent in Accuracy to the Spot Sign. *Neurocrit Care*. 2019 Aug;31(1):1-8. PMID: 31123995

Clinical guidelines

Guies mèdiques oficials de diagnòstic i tractament de la Societat Catalana de Neurologia (SCN) (3ª edició - 2019). Protocol de tractament. Diagnòstic i tractament de les malalties vasculars cerebrals. 2019.

Books

Serena J. MEDICINE Unidad Temática Enfermedad Cerebrovascular. Protocolos Clínicos. Protocolo de diagnóstico y atención del ictus en urgencias. Barna: Elsevier Ed. 2019;12(70):4124-4129. DOI: 10.1016/j.med.2019.01.006.

Grants

Project: Aproximación proteómica para la identificación de placa vulnerable y posterior validación de biomarcadores no invasivos en pacientes con estenosis carotídea: biomarcadores en sangre periférica y neuroimagen de alta resolución. PI16/01540.

Funding agency: Instituto de Salud Carlos III

Duration: 2017-2019

Principal Investigator: Joaquín Serena

Project: Prediction of intracerebral hemorrhage growth by CT-perfusion: a prospective study. 284/U/2017

Funding agency: Fundació La Marató de TV3

Duration: 2017 - 2019

Principal Investigator: Yolanda Silva

Project: Grup de Recerca Pre-consolidat Reconegut per la Generalitat de Catalunya. 2017SGR1730.

Funding agency: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)

Duration: 2017 -2020

Principal Investigator: Joaquín Serena

Project: Potenciación de la plasticidad neural en ratas sanas y en un modelo de enfermedad de Alzheimer: estimulación cerebral reforzante y sinergias con suplementos dietéticos (PlastAEICdietAD). PSI2017-83202-C2-2-P.

Funding agency: Ministerio de economía y competitividad
Duration: 2018 -2020
Coordinador: Pilar Segura
Principal Investigator: Gemma Huguet Blanco – Elisabet Kádár García

Project: Addressing challenges of stroke care in the XXIst century: Reaching reperfusion therapy top rates, eliminating inequalities in access and dealing with big data.

Funding agency: Fundació la Marató de TV3

Duration: 2018 – 2021

Coordinator: At hospital Trueta: Saima Bashir

Principal Investigator: Miquel Gallofré-Pla Director Ictus

Project: RED INVICTUS Plus (RD16/0019/0003) - Red De Enfermedades Vasculares Cerebrales (INVICTUS PLUS).

Funding agency: Instituto de Salud Carlos III

Duration: 2016 -2019

Principal Investigator: Joaquin Serena

Membership of collaborative research networks (National & international)

2019: CAS-ROADSAVER. Prospective, single-arm, multi-center, observational study to further confirm safety and efficacy of the dual-layer micromesh Roadsaver™ Carotid Stent for the treatment of carotid artery stenosis in patients considered eligible for elective stenting procedure.

Promotor: Terumo Europe N.V. Leuven Belgium

Start date HJT: Octubre 2019

Principal Investigator: M. Terceño

2019: PREvention of STroke in Intracerebral haemorrhage survivors with Atrial Fibrillation (PRESTIGE-AF).

Promotor: Imperial College of Science, Technology and Medicine (Imperial)

Start date HJT: Octubre 2019

Principal Investigator: Y. Silva

2019: ARICH. Anticoagulant-Related IntraCerebral Hemorrhage, a Spanish national registry.

Promotor: Vall d'Hebron Barcelona Hospital Campus, Barcelona.

Start date HJT: Octubre 2019

Principal Investigator: Y. Silva

2019: PACIFIC. Randomized, placebo controlled, double-blind, parallel group, dose-finding Phase 2 study to evaluate efficacy and safety of BAY 2433334 in patients following an acute non-cardioembolic ischemic stroke.

Promotor: Bayer

Start date HJT: Pendiente

Principal Investigator: J. Serena

2019: CellStroke. Therapeutic efficacy of allogenic adipose tissue derived mesenchymal stem cells for enhancing functional outcome in stroke patients.

Promotor: Consorcio

Start date HJT: Pendiente

Principal Investigator: J. Serena

2019: CHARM. Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Phase 3 Study to Evaluate the Efficacy and Safety of Intravenous BIIB093 (Glibenclamide) for Severe Cerebral Edema following Large Hemispheric Infarction

Protocol code: 252LH301

EUDRA CT NUMBER: 2017-004854-41

Promotor: Biogen Idec Research Limited

Start date HJT: Nov. 2018.

Principal Investigator: J. Serena

2019: APOLO. Estudio internacional, multicéntrico, aleatorizado, abierto y de grupos paralelos, para evaluar la eficacia en la reducción de cLDL y presión arterial, y la seguridad de la polipíldora cardiovascular Fuster – CNIC – Ferrer versus tratamiento habitual en pacientes con enfermedad cardiovascular aterotrombótica. Estudio APOLO.

Protocol code: FMD-TRI-2017-01

EudraCT: 2017-002343-14

Promotor: Ferrer Internacional S.A.

Start date HJT: 2017 (CEIC).

Principal Investigator: J. Serena

2019: TEMPO 2. A randomized controlled trial of TNK-tPA versus standard of care for minor ischemic stroke with proven occlusion

Promotor: Calgary University

Start date HJT: Nov. 2017.

Principal Investigator: J. Serena

2017-2019: CONVINCENCE. CONVINCENCE (COLchicine for prevention of Vascular inflammation in Non-CardioEmbolic Stroke – a randomised clinical trial of low dose colchicine for secondary prevention after stroke)

Sponsor: University College Dublin, Belfield, Dublin 4, Ireland

EUDRACT Number: 2015-004505-16

Start date HJT: 2017 (CEIC).

Principal Investigator: J. Serena

2017-2019: THALES. A Randomised, Double-Blind, Placebo-Controlled, International, Multicentre, Phase III Study to Investigate the Efficacy and Safety of Ticagrelor and ASA Compared with ASA in the Prevention of Stroke and Death in Patients with Acute Ischaemic Stroke or Transient Ischaemic

Attack

THALES - Acute STroke or Transient IschHaemic Attack Treated with TicAgreLor and ASA for PrEvention of Stroke and Death].

Sponsor: AstraZeneca AB, 151 85 Södertälje, Sweden

Study Code: D5134C00003

Start date HJT: 2017 (CEIC).

Principal Investigator: J. Serena

Membership of collaborative research network

Red de Enfermedades Vasculares Cerebrales (INVICTUS PLUS)
(RD16/0019/0003).

The International PFO Consortium Study Group.

Collaborations

- Grupo: Dr. Ignacio Lizasoain and Dr. María Ángeles Moro. Unidad de Investigación Neurovascular (UIN). Departamento de Farmacología. Facultad de Medicina. Universidad Complutense de Madrid.
- Grupo: Prof. José Castillo. Laboratorio de Investigación en Neurociencias Clínicas. Hospital Clínico Universitario. Santiago de Compostela.
- Grup col·laboratiu Catalan Stroke Code and Reperfusion Study Group (Cat-SCR) del Pla Director de Malalties Cerebrovascular.
- International PFO Consortium. Prof. Dr. med. Krassen Nedeltchev. Kantonsspital Aarau AG. CH – 5001 Aarau (<http://www.pfoconsortium.org>).
- Grup de Gestió del Pla de Malalties Malalties Cerebrovasculars de l'Institut Català de la Salut (ICS).
- Grupo de Trabajo de la Sociedad Española de Neurología - Proyecto RENISEN, Registro de Ictus de la Sociedad Española de Neurología.

Neurodegeneration and neuroinflammation

Team involved in "Red Española de Esclerosis Múltiple (REEM)"

Recognised as a consolidated research group - 2017SGR1444

KEYWORDS: multiple sclerosis, neurodegeneration, neuroinflammation, cognitive impairment, neuroimmunology, epigenetics



Group members

Principal Investigator

Lluís Ramió i Torrentà

Post-doctoral Researchers

René Robles
Jordi Tomàs
Jordi Gich
Ester Quintana

Pre-doctoral Researchers

María Muñoz
Claudia Coll
Naiara Celarain
Judit Salavedra

Medical Researchers

Joan Carles Vilanova
Imma Pericot
David Genís
Laura Fàbregas
Anna Cots
Berta Solano
Antoni Turón
Berta Alemany

Technicians

Imma Gómez
Míriam Broncano
Miguel Merchan
Dagmar Keller
Marina González

Support

Pepi López
Meritxell Rigola
Mireia Montserrat



Overview

Our multidisciplinary research group is headed by Dr. Lluís Ramió i Torrentà who is also in charge of the Neuroimmunology and Multiple Sclerosis (MS) Unit and head of the neurology department in Dr. Josep Trueta University Hospital. The Unit take care of most of the multiple sclerosis patients in Girona's region. The group is composed by neurologist, neuropsychologist, radiologists, lab personal, nurses and office personal with common aim of give responses to each challenge that MS could give us. Our horizon is not only with the knowledge, but transfers it to the society and finally to the patient. We are involved in several clinical studies (clinical trials, epidemiologic studies) and in basic research (genetic and epigenetic factors, biomarkers, cognitive rehabilitation, rare clinical phenotypes) we also are actively working in developing eHealth systems no improve patients' care.

Research topics

Brief description of the main lines of research group

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. Improve the clinical data collection by developing of a multiparametric, multidisciplinary database for multiple sclerosis. Include biosensors and app as new methods to collect data
6. Application of Deep Learning technique as a new brain MRI analyzer to generate prognosis markers in multiple sclerosis.
7. Shared decisions, expert patient empowerment and patient with multiple sclerosis

Priority lines in basic research:

1. Study of epigenetic factors in multiple sclerosis.
2. Study of miRNA pattern expression in different clinical subtype and their biomarker value
3. Study of the relation between viruses miRNAs and multiple sclerosis
4. Study of pattern methylation in multiple sclerosis
5. Genetic studies in familial multiple sclerosis
6. 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).
7. Determination of biological response factors (genetic and

biochemical) to immunomodulatory treatments in multiple sclerosis.

8. Microbiota in multiple sclerosis and other neurodegenerative diseases.

Bank of DNA, CSF and serum samples of neuroimmunological diseases and control subjects

Publications

Originals

Arnoriaga Rodríguez M, Blasco G, Coll C, Biarnés C, Contreras-Rodríguez O, et al. Glycated Hemoglobin, but not Insulin Sensitivity, is Associated with Memory in Subjects with Obesity. *Obesity* (Silver Spring). 2019;27(6):932-942. PMID: 30985999

Genís D; Ortega-Cubero S; San Nicolas H; Corral J; Gardenyes J; de Jorge L; López E; Campos B; Lorenzo E; Tonda R; Beltran S; Nere M; Obon M; Beltran B; Fabregas L; Alemany B; Marquez F; Ramió-Torrentà LI; Gich J; Volpini V; Pastor P. Heterozygous STUB1 mutation causes familial ataxia with cognitive affective syndrome (SCA48). *Neurology* 2018;91(21):1988

Pérez-Miralles F, Prefasi D, García-Merino A, Ara JR, Izquierdo G, Meca-Lallana V, et al. Perception of stigma in patients with primary progressive multiple sclerosis. *Mult Scler J Exp Transl Clin*. 2019 May 22;5(2):2055217319852717. PMID: 31205741

Valverde S, Salem M, Cabezas M, Pareto D, Vilanova JC, Ramió-Torrentà L, et al. One-shot domain adaptation in multiple sclerosis lesion segmentation using convolutional neural networks. *Neuroimage Clin*. 2019;21:101638. PMID: 30555005

Palomo-Buitrago ME, Sabater-Masdeu M, Moreno-Navarrete JM, Caballano-Infantes E, Arnoriaga-Rodríguez M, et al. Glutamate interactions with obesity, insulin resistance, cognition and gut microbiota composition. *Acta Diabetol*. 2019 May;56(5):569-579. PMID: 30888539

Calvó-Perxas L, Belchí O, Turon-Estrada A, Van Eendenburg C, Linares M, Viñas M, et al. Incidence and characteristics of uncommon dementia subtypes: Results from 10 years of clinical surveillance by the Registry of Dementia of Girona. *Alzheimers Dement*. 2019 Jul;15(7):917-926. PMID: 31175028

Tomas-Roig J, Havemann-Reinecke U. Gene expression signature in brain regions exposed to long-term psychosocial stress following acute challenge with cannabinoid drugs. *Psychoneuroendocrinology*. 2019;102:1-8. PMID: 30476795

Tomas-Roig J, Torrente M, Cabré M, Vilella E, Colomina MT.

Long lasting behavioural effects on cuprizone fed mice after neurotoxicant withdrawal. *Behav Brain Res.* 2019;363:38-44. PMID: 30703396

Hervás-García JV, Ramió-Torrentà L, Brieva-Ruiz L, Batllé-Nadal J, Moral E, Blanco Y, et al. Comparison of two high doses of oral methylprednisolone for multiple sclerosis relapses: a pilot, multicentre, randomized, double-blind, non-inferiority trial. *Eur J Neurol.* 2019 Mar;26(3):525-532. PMID: 30351511

Muñoz-San Martín M, Reverter G, Robles-Cedeño R, Buxó M, Ortega FJ, Gómez I, et al. Analysis of miRNA signatures in CSF identifies upregulation of miR-21 and miR-146a/b in patients with multiple sclerosis and active lesions. *J Neuroinflammation.* 2019 Nov 14;16(1):220. PMID: 31727077

Borrego-Écija S, Antonell A, Puig-Butillé JA, Pericot I, Prat-Bravo C, Abellan-Vidal MT, et al. Novel P397S MAPT variant associated with late onset and slow progressive frontotemporal dementia. *Ann Clin Transl Neurol.* 2019 Aug;6(8):1559-1565.

Santos-García D, de Deus Fonticoba T, Suárez Castro E, Aneiros Díaz A, Paz González JM, Feal Panceiras MJ, et al. High ultrasensitive serum C-reactive protein may be related to freezing of gait in Parkinson's disease patients. *J Neural Transm (Vienna).* 2019 Dec;126(12):1599-1608. PMID: 31673927

Santos García D, de Deus Fonticoba T, Suárez Castro E, Borrué C, Mata M, Solano Vila B, et al. Non-motor symptoms burden, mood, and gait problems are the most significant factors contributing to a poor quality of life in non-demented Parkinson's disease patients: Results from the COPPADIS Study Cohort. *Parkinsonism Relat Disord.* 2019 ;66:151-157. PMID: 31409572

Santos García D, Jesús S, Aguilar M, Planellas LL, García Caldentey J, Caballol N, et al. COPPADIS-2015 (COhort of Patients with PARKinson's Disease in Spain, 2015): an ongoing global Parkinson's disease project about disease progression with more than 1000 subjects included. Results from the baseline evaluation. *Eur J Neurol.* 2019 Nov;26(11):1399-1407. PMID: 31179586

Canedo-Antelo M, Baleato-González S, Mosqueira AJ, Casas-Martínez J, Oleaga L, Vilanova JC, et al. Radiologic Clues to Cerebral Venous Thrombosis. *Radiographics.* 2019;39(6):1611-1628. PMID: 31589585

Reviews

Oreja-Guevara C, Ayuso Blanco T, Brieva Ruiz L, Hernández Pérez MÁ, Meca-Lallana V, Ramió-Torrentà L. Cognitive Dysfunctions and Assessments in Multiple Sclerosis. *Front Neurol.* 2019;10:581. PMID: 31214113

Fernandez O, Tintore M, Saiz A, Calles-Hernandez MC, Comabella M, Ramio-Torrenta L, et al. Review of the novelties presented at the 2018 ECTRIMS Congress: 11th Post-ECTRIMS Meeting (II). *Rev Neurol.* 2019 Jun 1;68(11):468-479. PMID: 31132136

Fernandez O, Tintore M, Saiz A, Calles-Hernandez MC, Comabella M, Ramio-Torrenta L, et al. Review of the novelties presented at the 2018 ECTRIMS Congress: 11th Post-ECTRIMS Meeting (I). *Rev Neurol.* 2019 May 16;68(10):431-441. PMID: 31070235

García-Figueiras R, Baleato-González S, Padhani AR, Luna-Alcalá A, Vallejo-Casas JA, Sala E, et al. How clinical imaging can assess cancer biology. *Insights Imaging.* 2019 Mar 4;10(1):28. PMID: 30830470

Vilanova JC, García-Figueiras R, Luna A, Baleato-González S, Tomás X, Narváez JA. Update on Whole-body MRI in Musculoskeletal Applications. *Semin Musculoskelet Radiol.* 2019;23(3):312-323. PMID: 31163505

Martín Noguero T, Raya JG, Wessell DE, Vilanova JC, Rossi I, Luna A. Functional MRI for evaluation of hyaline cartilage extracellular matrix, a physiopathological-based approach. *Br J Radiol.* 2019 Nov;92(1103):20190443. PMID: 31433668

Celarain N, Tomas-Roig J. Changes in Deoxyribonucleic Acid Methylation Contribute to the Pathophysiology of Multiple Sclerosis. *Front Genet.* 2019;10:1138. PMID: 31798633

Grants

Project: EM-line Memory com a eina de rehabilitació cognitiva per a pacients que han patit un ictus

Funding agency: Fundació Mutuam Conviure

Duration: 2018 - 2019

Leader Researcher: Lluís Ramió I Torrentà

Project: Estudio de metiloma completo en células de sistema inmune de pacientes con esclerosis múltiple (PI16/01140)

Funding agency: Instituto de Salud Carlos III

Duration: 2016-2019

Leader Researcher: Lluís Ramió I Torrentà

Project: Estils de vida, característiques sociodemogràfiques i econòmiques, discapacitat, dolor, qualitat de vida, impulsivitat, suport social, i prevalença de factors de risc i de malalties cròniques de la població adulta de la província de Girona. (Girona, regió saludable).

Funding agency: Generalitat de Catalunya i Diputació de Girona

Duration: 2018 - 2020

Leader Researcher: Josep Puig / Rafel Ramos Blanes / Josep Garre Olmo

Project: Imagenoma de l'Envel·liment: Estudi observacional poblacional per al desenvolupament de biomarcadors d'imatge corporal integral basats en ressonància magnètica en individus de 50 anys d'edat o més i la seva relació amb factors de l'esfera biopsicosocial, cardiovascular, metabòlica, lipídica, microbiòtica i altres factors associats a l'envelliment
Funding agency: CDSA - Departament de Salut de la Generalitat de Catalunya
Duration: 2017 - 2020
Leader Researcher: Reinald Pamplona i Josep Puig

Project: Red Española de Esclerosis Múltiple
Funding agency: ISCA - Instituto de Salud Carlos III
Duration: 2017-2021
Coordinator: LM Villar
Leader Researcher: Lluís Ramió i Torrentà

Project: New technologies applied to clinical practice for obtaining biomarkers of atrophy and lesions in magnetic resonance images of patients with multiple sclerosis (BiomarkEM.cat)
Funding agency: FTV3 - Fundació La Marató de TV3
Duration: 2015 - 2019
Leader Researcher: Xavier Lladó Bardera

Project: Estudio de los mecanismos fisiopatológicos que juegan un papel importante en las formas progresivas de EM
Funding agency: Esclerosis Múltiple España (EME)
Duration: 2018 - 2019
Coordinator: Luisa María Villar
Leader Researcher: Ester Quintana Camps

Research activity

Title: A 96 Week, Prospective, Multicentre, Randomized, Double-blind, Placebo-controlled, 2 Parallel-groups, Phase 3 Study to Compare Efficacy and Safety of Masitinib 4.5 mg/kg/Day Versus Placebo in the Treatment of Patients With Primary Progressive or Relapse-free Secondary Progressive Multiple Sclerosis
Protocol: AB07002
Promotor: AB Science

Title: A Randomized, Double-blind, Double-dummy, Parallel-group Study Comparing the Efficacy and Safety of Ofatumumab Versus Teriflunomide in Patients With Relapsing Multiple Sclerosis
Protocol: COMB157G2301
Promotor: Novartis (Novartis Pharmaceuticals)
Title: Estudio de extensión abierto, de brazo único y multicéntrico, para evaluar la seguridad, tolerabilidad y eficacia a largo plazo de ofatumumab, en pacientes con esclerosis múltiple

(EM) que cursa con brotes (Alithios)
Protocol: COMB157G2399
Promotor: Novartis

Title: An Open-Label Study To Evaluate the Efficacy and Safety of Ocrelizumab in Patients With Relapsing Multiple Sclerosis Who Have A Suboptimal Response to an Adequate Course of Disease-Modifying Treatment
Protocol: MA30005
Promotor: Hoffmann-La Roche

Title: Observational study to evaluate changes in quality of life in patients with relapsing-remitting multiple sclerosis treated with alemtuzumab (Lemtrada)
Protocol: SAN-ALE-2015-03 (LEMVIDA)
Promotor: Sanofi-Genzyme

Title: A single arm, open label multicentre extension study to evaluate the effectiveness and safety of ocrelizumab in patients with multiple sclerosis previously enrolled in a F. Hoffman-La Roche sponsored ocrelizumab phase IIIb/IV clinical trial.
Protocol: MN39158
Promotor: F. Hoffmann-La Roche Ltd

Title: Randomized, double-blind, placebo-controlled, 3-arm, 36 weeks parallel-group study to evaluate the safety and tolerability of ORY-2001 in patients with Relapsing-Remitting Multiple Sclerosis (RRMS) and Secondary Progressive Multiple Sclerosis (SPMS) - Estudio SATEEN
Protocol: CL02-ORY-2001MS
Promotor: ORYZON

Title: Clinical Study to Compare the Efficacy and Safety of Ponesimod to Placebo in Subjects With Active Relapsing Multiple Sclerosis Who Are Treated With Dimethyl Fumarate (Tecfidera®) (POINT)
Protocol: AC-058B302
Promotor: Actelion

Title: Effect of MD1003 in Progressive Multiple Sclerosis (SPI2)
Protocol: MD1003CT2016-01MS-SPI2
Promotor: MedDay Pharmaceuticals SA

Title: A Randomized, Double-Blind, Placebo-Controlled Phase II Study of M2951 With a Parallel, Open-Label, Active Control Group (Tecfidera), in Patients With Relapsing Multiple Sclerosis to Evaluate Efficacy, Safety, Tolerability, Pharmacokinetics, and Biological Activity.
Protocol: MS200527-0086
Promotor: Merck-Serono

Title: A Multi-Site, Open-Label Extension Trial of Oral RPC1063 in Relapsing Multiple Sclerosis

Protocol: RPC01-3001

Promotor: Celpene International

Title: A prospective, multicenter, observational, post-authorization safety study (PASS) to evaluate the long term safety profile of LEMTRADA® (alemtuzumab) treatment in patients with relapsing forms of multiple sclerosis PASS

Protocol: OBS13434

Promotor: Genzyme-Sanofi

Title: A Randomized, Double-Blind, Double-Dummy, Parallel-Group Study To Evaluate the Efficacy and Safety of Ocrelizumab in Comparison to Interferon Beta-1a (Rebif) in Patients With Relapsing Multiple Sclerosis

Protocol: WA21093

Promotor: F. Hoffmann-La Roche Ltd

Title: A Phase III, Multicentre, Randomized, Parallel-group, Double-blind, Placebo Controlled Study to Evaluate the Efficacy and Safety of Ocrelizumab in Adults With Primary Progressive Multiple Sclerosis

Protocol: WA25046

Promotor: F. Hoffmann-La Roche Ltd

Title: TOP - Tysabri® Observational Program

Protocol: IMA-06-02

Promotor: Biogen Idec Limited

Title: : A Phase 2b dose-finding study for SAR442168, a Bruton's tyrosine kinase inhibitor, in participants with relapsing multiple sclerosis

Protocol: DRI15928

Promotor: Genzyme Corporation

Title: : Long-term extension safety and efficacy study of SAR442168 in participants with relapsing multiple sclerosis.

Protocol: LTS16004

Promotor: Genzyme Corporation

Title: Estudi observacional, no intervencionista, para evaluar los cambios en la calidad de vida en pacientes tratados con teriflunomida en práctica clínica habitual (Tericare)

Protocol: SAN-TER-2015-02

Promotor: Genzyme Corporation

Title: Estudio observacional transversal con recogida de datos retrospectivos, para valorar la carga de la Esclerosis Múltiple Secundaria Progresiva.

Protocol: CBAF312AES01 – DISCOVER

Promotor: Novartis

Title: A 96 Week, Prospective, Multicentre, Randomized, Double-blind, Placebo-controlled, 2 Parallel-groups, Phase 3 Study to

Compare Efficacy and Safety of Masitinib 4.5 mg/kg/Day Versus Placebo in the Treatment of Patients With Primary Progressive or Relapse-free Secondary Progressive Multiple Sclerosis

Protocol: AB07002

Promotor: AB Science

Title: A Randomized, Double-blind, Double-dummy, Parallel-group Study Comparing the Efficacy and Safety of Ofatumumab Versus Teriflunomide in Patients With Relapsing Multiple Sclerosis

Protocol: COMB157G2301

Promotor: Novartis (Novartis Pharmaceuticals)

Title: Estudio de extensión abierto, de brazo único y multicéntrico, para evaluar la seguridad, tolerabilidad y eficacia a largo plazo de ofatumumab, en pacientes con esclerosis múltiple (EM) que cursa con brotes (Alithios)

Protocol: COMB157G2399

Promotor: Novartis

Title: An Open-Label Study To Evaluate the Efficacy and Safety of Ocrelizumab in Patients With Relapsing Multiple Sclerosis Who Have A Suboptimal Response to an Adequate Course of Disease-Modifying Treatment

Protocol: MA30005

Promotor: Hoffmann-La Roche

Title: Observational study to evaluate changes in quality of life in patients with relapsing-remitting multiple sclerosis treated with alemtuzumab (Lemtrada)

Protocol: SAN-ALE-2015-03 (LEMVIDA)

Promotor: Sanofi-Genzyme

Title: A single arm, open label multicentre extension study to evaluate the effectiveness and safety of ocrelizumab in patients with multiple sclerosis previously enrolled in a F. Hoffman-La Roche sponsored ocrelizumab phase IIIb/IV clinical trial.

Protocol: MN39158

Promotor: F. Hoffmann-La Roche Ltd

Title: Randomized, double-blind, placebo-controlled, 3-arm, 36 weeks parallel-group study to evaluate the safety and tolerability of ORY-2001 in patients with Relapsing-Remitting Multiple Sclerosis (RRMS) and Secondary Progressive Multiple Sclerosis (SPMS) - Estudio SATEEN

Protocol: CL02-ORY-2001MS

Promotor: ORYZON

Title: Clinical Study to Compare the Efficacy and Safety of Ponesimod to Placebo in Subjects With Active Relapsing Multiple Sclerosis Who Are Treated With Dimethyl Fumarate (Tecfidera®) (POINT)

Protocol: AC-058B302

Promotor: Actelion

Title: Effect of MD1003 in Progressive Multiple Sclerosis (SPI2)
Protocol: MD1003CT2016-01MS-SPI2
Promotor: MedDay Pharmaceuticals SA

Title: A Randomized, Double-Blind, Placebo-Controlled Phase II Study of M2951 With a Parallel, Open-Label, Active Control Group (Tecfidera), in Patients With Relapsing Multiple Sclerosis to Evaluate Efficacy, Safety, Tolerability, Pharmacokinetics, and Biological Activity.
Protocol: MS200527-0086
Promotor: Merck-Serono

Title: A Multi-Site, Open-Label Extension Trial of Oral RPC1063 in Relapsing Multiple Sclerosis
Protocol: RPC01-3001
Promotor: Celpene International

Title: A prospective, multicenter, observational, post-authorization safety study (PASS) to evaluate the long term safety profile of LEMTRADA® (alemtuzumab) treatment in patients with relapsing forms of multiple sclerosis PASS
Protocol: OBS13434
Promotor: Genzyme-Sanofi

Title: A Randomized, Double-Blind, Double-Dummy, Parallel-Group Study To Evaluate the Efficacy and Safety of Ocrelizumab in Comparison to Interferon Beta-1a (Rebif) in Patients With Relapsing Multiple Sclerosis
Protocol: WA21093
Promotor: F. Hoffmann-La Roche Ltd

Title: A Phase III, Multicentre, Randomized, Parallel-group, Double-blind, Placebo Controlled Study to Evaluate the Efficacy and Safety of Ocrelizumab in Adults With Primary Progressive Multiple Sclerosis
Protocol: WA25046
Promotor: F. Hoffmann-La Roche Ltd

Title: TOP - Tysabri® Observational Program
Protocol: IMA-06-02
Promotor: Biogen Idec Limited

Title: A Phase 2b dose-finding study for SAR442168, a Bruton's tyrosine kinase inhibitor, in participants with relapsing multiple sclerosis
Protocol: DRI15928
Promotor: Genzyme Corporation

Title: Long-term extension safety and efficacy study of SAR442168 in participants with relapsing multiple sclerosis.
Protocol: LTS16004
Promotor: Genzyme Corporation

Title: Estudi observacional, no intervencionista, para evaluar

los cambios en la calidad de vida en pacientes tratados con teriflunomida en práctica clínica habitual (Tericare)
Protocol: SAN-TER-2015-02
Promotor: Genzyme Corporation

Title: Estudio observacional transversal con recogida de datos retrospectivos, para valorar la carga de la Esclerosis Múltiple Secundaria Progresiva.
Protocol: CBAF312AES01 – DISCOVER
Promotor: Novartis

Title: Ensayo clínico fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo, de grupos paralelos, para investigar la eficacia y seguridad de BX-1 para el alivio sintomático de la espasticidad en pacientes con esclerosis múltiple
Protocol: DroSpas-1
Promotor: Bionorica

Title: European and multicenter study of retrospective and prospective cohorts to evaluate the safety of safinamide and its dose in the clinical practice during the first phase after commercialization
Protocol: Z7219N02
Promotor: Zambon S.A.

Title: A Phase 2, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate the Safety, Tolerability, and Efficacy of ANAVEX2-73 for Cognitive Impairment in Patients with Parkinson's Disease with Dementia
Protocol: ANAVEX2-73-PDD-001
Promotor: Anavex Life Sciences Corp

Title: COPPADIS-2015, Cohort of Patients with Parkinson's Disease in Spain, 2015
Protocol: COH-PAK-2014-01NT
Promotor/ Principal Investigator: Dr. Diego Santos García, MD, PhD

Title: Determinación de Octopamina y otras aminas traza como marcadores biológicos precoces en la enfermedad de Parkinson
Protocol: OCTOPAMINA
Promotor: inclòs en tesis doctoral en el Programa de Doctorat de Biologia Molecular, Biomedicina i Salut de la Universitat de Girona

Title: Opicapona y Perfiles de Tratamiento en consultas de Trastornos del Movimiento (OPTIMO)
Protocol: BIA-OPI-2018-02
Promotor: Laboratorios Bial S.A

Title: Estudi pilot per definició d'una signature microbiològica en fèntes de pacients en el debut de malalties neurodegeneratives, Hospital Santa Caterina de Salt
Promotor: Beca, aprovació CE: 23/05/2017

Title: CSF-longitudinal substudy associated with: a phase III, multicenter, randomized, double-blind, placebo-controlled, parallel-group, efficacy and safety study of crenezumab in patients with prodromal to mild Alzheimer's disease

Protocol: BN29553-CSF Longitudinal Substudy

Promotor:F. Hoffmann-La Roche Ltd

Title: A phase III, multicenter, randomized, double-blind, placebo-controlled, parallel-group, efficacy, and safety study of gantenerumab in patients with early (prodromal to mild) Alzheimer's disease

Protocol: WN29922

Promotor: F. Hoffmann-La Roche Ltd

Title: A phase III, multicenter, randomized, double-blind, placebo-controlled, parallel-group, efficacy and safety study of crenezumab in patients with prodromal to mild alzheimer's disease

Protocol: BN29553

Promotor: F. Hoffmann-La Roche

Membership of collaborative research networks (National & international)

Red Española de Esclerosis Múltiple. RD16/0015/0006 2016-2021

Awards

Title: Proyecto EM-Line! Rehabilitación cognitiva desde casa
INSTITUTION: IV Premios Solidarios con la EM de la Fundación Merk Salud

Awardee/s: Gich J, Coll-Marinez C, Salavedra-Pont J, Quintana E, Robles R, Ramió-Torrentà LL

Other: 2019

Collaborations

- VICOROB- UdG
- Hospital Ramón y Cajal, neurology service
- Hospital Universitari Vall d'Hebron, neuroimmune service
- Trial in collaboration with the CIBER (Centro de Investigación Biomédica en Red) group of Valencia. Title: "Validación de microRNAs circulantes como biomarcadores de variabilidad fenotípica en la Ataxia de Friedreich"

Aging, disability and health

Recognised as a consolidated research group – 2017SGR731

The Survey of Health, Ageing and Retirement in Europe Consortium

KEYWORDS: ageing, disability, dementia, Alzheimer's disease, epidemiology, neuropsychology, depression, caregivers



Group members

Principal Investigator

Josep Garre-Olmo

Established Researchers

Josep Lluís Conde

Manuel de Gracia

Laia Calvó

Pre-doctoral Researchers

Lluís Zacarías

Vanesa Viñas

Mar Fernández

Medical Researchers

Joan Vilalta-Franch

Post-doctoral Researchers

Oriol Turró



Overview

The research group on Ageing, Health and Disability has as a scientific challenge related to the socio-demographic, clinical and epidemiological factors associated with the normal and pathological aging and with the process of disability and dependence.

Research topics

1. Clinical characteristics and consequences of pathological aging associated with dementia
2. Epidemiology of dementia and aging
3. Development, adaptation and validation of psychometric instruments to measure variables related to aging (normal and pathological) and disability

Publications

Originals

Calvó-Perxas L, Belchí O, Turon-Estrada A, Van Eendenburg C, Linares M, Viñas M, Manzano A, Turró-Garriga O, Vilalta-Franch J, Garre-Olmo J; Registry of Dementia of Girona Study Group (ReDeGi Study Group). Incidence and characteristics of uncommon dementia subtypes: Results from 10 years of clinical surveillance by the Registry of Dementia of Girona. *Alzheimers Dement*. 2019;15(7):917-926.PMID: 31175028

Arnoriaga Rodríguez M, Blasco G, Coll C, Biarnés C, Contreras-Rodríguez O, Garre-Olmo J, Puig J, Gich J, Ricart W, Ramió-Torrentà L, Fernández-Real JM. Glycated Hemoglobin, but not Insulin Sensitivity, is Associated with Memory in Subjects with Obesity. *Obesity (Silver Spring)*. 2019;27(6):932-942.PMID: 30985999

Tochel C, Smith M, Baldwin H, Gustavsson A, Ly A, Bexelius C, Nelson M, Bintener C, Fantoni E, Garre-Olmo J, Janssen O, Jindra C, Jørgensen IF, McKeown A, Öztürk B, Ponjoan A, Potashman MH, Reed C, Roncancio-Diaz E, Vos S, Sudlow C; ROADMAP consortium. What outcomes are important to patients with mild cognitive impairment or Alzheimer's disease, their caregivers, and health-care professionals? A systematic review. *Alzheimers Dement (Amst)*. 2019;11:231-247.PMCID: PMC641150

Ponjoan A, Garre-Olmo J, Blanch J, Fages E, Alves-Cabratosa L, Martí-Lluch R, Comas-Cufí M, Parramon D, Garcia-Gil M, Ramos R. Epidemiology of dementia:prevalence and incidence estimates

using validated electronic health records from primary care. *Clin Epidemiol*. 2019;11:217-228.PMID: 30881138

Conde-Sala JL, Garre-Olmo J, Calvó-Perxas L, Turró-Garriga O, Vilalta-Franch J. Course of depressive symptoms and associated factors in people aged 65+ in Europe: A two-year follow-up. *J Affect Disord*. 2019 Feb 15;245:440-450.PMID: 30428444

Janssen O, Vos SJB, García-Negredo G, Tochel C, Gustavsson A, Smith M, Ly A, Nelson M, Baldwin H, Sudlow C, Bexelius C, Jindra C, Vaci N, Bauermeister S, Gallacher J, Ponjoan A, Dufouil C, Garre Olmo J, Pedersen L, Skoog I, Hottgenroth A, Visser PJ, van der Lei J, Diaz C. Real-world evidence in Alzheimer's disease: The ROADMAP Data Cube. *Alzheimers Dement*. 2019; S1552-260. PMID: 31786128.

Turró-Garriga O, Conde-Sala JL, Viñas V, Turon-Estrada A, Culléll-Juncà M, Calvó-Perxas L, Juvinyà-Canal D, Mioshi E, Garre-Olmo J. Antonovsky's sense of coherence and resistance resources reduce perception of burden in family carers of people with Alzheimer's disease. *Aging Ment Health*. 2019 Sep 27:1-9. PMID: 31559837

Blanco-Silvente L, Castells X, Garre-Olmo J, Vilalta-Franch J, Saez M, Barceló MA, Capellà D. Study of the strength of the evidence and the redundancy of the research on pharmacological treatment for Alzheimer's disease: a cumulative meta-analysis and trial sequential analysis. *Eur J Clin Pharmacol*. 2019Dec;75(12):1659-1667. PMID: 31435707

Garre-Olmo J, Ponjoan A, Inoriza JM, Blanch J, Sánchez-Pérez I, Cubí R, de Eugenio R, Turró-Garriga O, Vilalta-Franch J. Survival, effect measures, and impact numbers after dementia diagnosis: a matched cohort study. *Clin Epidemiol*. 2019;11:525-542. PMID:31410066

Ponjoan A, Garre-Olmo J, Blanch J, Fages E, Alves-Cabratosa L, Martí-Lluch R, Comas-Cufí M, Parramon D, García-Gil M, Ramos R. How well can electronic health records from primary care identify Alzheimer's disease cases? *Clin Epidemiol*;11:509-518. PMID: 31456649

Vinas-Diez V, Conde-Sala JL, Turro-Garriga O, Gascon-Bayarri J, Rene-RamirezR. [Depressive symptoms and burden in family caregivers in Alzheimer's disease: a model of structural equations]. *Rev Neurol*. 2019;69(1):11-17.PMID: 31236906

Grants

Project: Riesgo y variables asociadas a la mortalidad tras el diagnóstico de demencia en población general (PI15/O1980)

Funding agency: Instituto de Saludo Carlos III

Duration: 2015 - 2019

Principal Investigator: Josep Garre-Olmo

Project: Trastorns afectius i risc cardiovascular en població general: efecte diferencial dels mecanismes fisiopatològics (SLT006/17/234)

Funding agency: Generalitat de Catalunya – Departament de Salut – Pla estratègic de recerca i innovació en salut (PERIS) 2016-2020

Duration: 2018-2020

Principal Investigator: Josep Garre-Olmo

Project: Maduresa i envelliment Satisfactori a Girona (MESGI50) – Survey of health. Ageing, and retirement in Europe – Girona node

Funding agency: Organisme de Salut Pública de la Diputació de Girona - Dipsalut

Duration: 2013 - 2023

Principal Investigator: Josep Garre-Olmo

Project: Imagenoma de l'enveliment: Estudi observacional poblacional per definir biomarcadors d'imatge RM corporal integral i òmics que s'associen al procés d'envelliment i a factors de risc biopsicosocials en subjectes adults i que defineixen la seva trajectòria vital cap a un envelliment saludable o bé la fragilitat i discapacitat

Funding agency: Generalitat de Catalunya – Departament de salut – Pla estratègic de recerca i innovació en salut (PERIS) 2016 - 2020

Duration: 2017 -2019

Principal Investigator: Reinald Pamplona Gras

Project: Real world outcomes across the AD spectrum for better care: Multimodal data Access Platform (ROADMAP)

Funding agency: Innovative Medicines Initiative 2. Research and Innovation Actions. European Commission and European Federation of Pharmaceutical Industries and Associations

Duration: 2017 - 2019

Principal Investigator: John Gallacher

Project: Desigualdades socioeconómicas en salud en los cuidadores informales (PI16/00184)

Funding agency: Instituto de Salud Carlos III

Duration: 2016 - 2019

Principal Investigator: Laia Calvó-Perxas

Project: El sentido de la coherencia de las personas cuidadoras como factor determinante de los costes asistenciales de la enfermedad de Alzheimer

Funding agency: Instituto de Salud Carlos III

Duration: 2017 - 2020

Principal Investigator: Oriol Turró- Garriga

Membership of collaborative research networks (Nationals & international)

Survey of Health, Ageing and Retirement in Europe (<http://www.share-project.org>)

Collaborations

- IDIAP Jordi Gol Girona (Dra Anna Ponjoan, Dra. Ruth Martí i Dr. Rafel Ramos)
- Laboratori de Medicina Translacional i Ciències de la Decisió (TransLab) (Dra. Dolors Capellà, Dr. Xavier castells)
- Registre Gironí del Cor (REGICOR) (Dr. Jaume Marrugat i Dr. Roberto Elosua)
- Servei de Radiologia-Institut de Diagnòstic per la Imatge (IDI) (Dr. Josep Puig)
- Grup de recerca Nutrició, eumetabolisme i salut (IDIBGI) (Dr. Jose Manuel Fernández Real Lemos)
- East Anglia University, UK (Dr. Eneida Mioshi)
- Universidade Federal do Rio de Janeiro, Brasil (Dra. Maria Fernanda Barroso de Sousa)



ONCOLOGY AND HEMATOLOGY AREA

CHROMOSOME REPLICATION

DESCRIPTIVE EPIDEMIOLOGY, GENETICS AND CANCER PREVENTION

HEMATOLOGY

HEPATOBIILIARY & PANCREATIC SURGERY AND ONCOLOGY

METABOLISM AND CANCER GROUP

Chromosome replication

KEYWORDS: genomic duplication and cell cycle

Group members

Principal Investigator

Jordi Frigola Mas

Pre-doctoral Researchers

Marina Guerrero



Overview

Genomic duplication is an essential task to any living organism. In eukaryotes, multiple replication origins are used to replicate their large genomes. Once copied their DNA, the cells will be ready to divide into two daughter cells. Genomic duplication, together with cell division, are a series of events that allow cells to grow, develop, proliferate and renew themselves. Due to its prominent role in cell proliferation and cancer, historically chromosome replication has been a major target of both, radiotherapy and chemotherapy. During the last decade or so, enormous progression has been made towards the molecular comprehension of chromosome replication.

Our laboratory is working on the first stages of chromosome replication, known as origin licensing. Using budding yeast as a model organism, together with the latest developed tools in the replication field, we are dissecting the specific roles of individual proteins involved in origin licensing. Ultimately, our goal is to translate all this knowledge into new and better cancer treatments. Specifically, we are developing new therapies that allow us to stop cell proliferation without the need to introduce any DNA damage. This new strategy should overcome one of the main limitations of the current therapies, their high toxicity.

Research topics

Our laboratory is working into two main lines of research.

1. Understand at molecular level how the protein complex that allows cells to duplicate their genomes, known as replisome, assembles, regulates and function. To do so, we make use of budding yeast and the latest generation of replication assays.
2. Develop new cancer treatments that target chromosome replication with significantly less toxicity than current ones. At present, most of cancer treatments that target replication induce DNA damage to stop uncontrolled cell proliferation. Our aim is to develop new therapies that halt replication, without the need to induce vast amount of mutations.

Descriptive epidemiology, genetics and cancer prevention

Team involved in “Centro de Investigación Biomédica en Red Epidemiológica y Salud pública” (CIBERESP)

Member of the steering committee: EUROCARE

Member of the steering committee: Spanish cancer registries

KEYWORDS: **Cancer epidemiology; prognostic and predictive markers; cancer risk factor**

Group members

Principal Investigator

Rafael Marcos-Gragera

Post-doctoral Researchers

Gemma Osca

Pre-doctoral Researchers

Marta Solans

Medical Researchers

Carme Carmona

Rafael Fuentes

Sónia del Barco

Carme Auñón

Angel Izquierdo

Neus Vilar

Jordi Rubió

Loreto Vilardell

Adelaida García

Maria Aranzazu Eraso

Technicians

Joana Fuentes

Montse Puigdemont

Anna Vidal

Martí Rispau

Support

Bernat Serdà

Collaborators

Antonia Bianca



Overview

The Descriptive Epidemiology, Genetics and Cancer prevention group is made up of a multidisciplinary group including epidemiologists, statisticians, oncologists, radiotherapists, physical therapist, dermatologist; biologist, nurse and medical documentalists, biologist. The group main focus is cancer epidemiology (descriptive and analytical), cancer prevention and genetic.

The group takes part in numerous national and international collaborations:

- La Red Española de Registros de Cáncer (REDECAN). <http://redcan.org/es/index.cfm>
- Cancer Incidence in Five Continents (CI5) is the result of a long collaboration between the International Agency for Research on Cancer and the International Association of Cancer Registries. The series of monographs, published every five years, has become the reference source of data on the international incidence of cancer. <http://ci5.iarc.fr/Default.aspx>
- International Incidence of Childhood Cancer (IICC) is a collaborative project of the International Agency for Research on Cancer (IARC) and the International Association of Cancer Registries (IACR). This project was co-sponsored by the Union for International Cancer Control (UICC). The objective is to disseminate the available data on the incidence of cancer in children around the world.
- The European Network of Cancer Registries (ENCR), established within the framework of the Europe Against Cancer Programme of the European Commission, has been in operation since 1990. The ENCR promotes collaboration between cancer registries, defines data collection standards, provides training for cancer registry personnel and regularly disseminates information on incidence and mortality from cancer in the European Union and Europe. <http://www.encr.eu/>
- European Cancer Information System (ECIS). ECIS provides the latest information on indicators that quantify cancer-burden across Europe. It permits the exploration of geographical patterns and temporal trends of incidence, mortality and survival data across Europe for the major cancer entities. The purpose of the web-application is to support research as well as public-health decision-making in the field of cancer and to serve as a point of reference and information for European citizens. <https://ecis.jrc.ec.europa.eu/>
- EUROpean Cancer REgistry based study on survival and care of cancer patients (EUROCARE) (member of the Steering Committee); <http://www.eurocare.it/>
- The High Resolution studies (HR) started in 1990s as ancillary studies of the EUROCARE project, with the participation of a few population-based Cancer Registries (CR) across Europe. Based on samples of cases representative of the whole cancer incidence population, the HR studies collect more clinical detailed data than those available in the routine cancer registry activity, such as stage at diagnosis, diagnostic procedures, molecular profiling and main treatments. The main aim of the HR studies is: to explain the reasons of the cancer survival differences evidenced by the EUROCARE studies across Europe. The HR studies started in the 1990s with 26 CR, and thanks to a steadily growing number of participating Cancer Registries; the study regularly provides publications of patterns of care in Europe. <http://www.hrstudies.eu/>
- RARECAREnet project: the RARECAREnet database on the epidemiology of rare cancers in Europe is drawn from the dataset of EUROCARE-5, the wider collaborative study on cancer patients' survival in Europe (www.eurocare.it). Overall 94 European population-based cancer registries (CRs) participating in EUROCARE-5 adhered to the RARECAREnet project also. They provided information on cancer patients diagnosed up to 2007 and followed-up for vital status ascertainment to the end of 2008 or later. <http://www.rarecaren.net/>
- Global surveillance of cancer survival (CONCORD programme). CONCORD is the global programme for world-wide surveillance of cancer survival, led by the London School of Hygiene & Tropical Medicine. . <http://csg.lshtm.ac.uk/>
- EUPancreas. is a COST Action .-BM1204-. That aims to unite pancreas cancer research groups across Europe and provides an innovative and unique platform for collaborating and sharing information, ideas and experience.
- **Multicentre case-control studies:**
 - » MCC Spain. Population-based multicase-control study (MCC-SPAIN) to evaluate the influence of environmental factors and their interaction with genetic factors in common tumours or tumours with peculiar epidemiological characteristics in our country, for which the environmental factors involved were not well investigated. At present, the MCC-Spain study includes 17 CIBERSP research groups.
 - » International Lymphoma Epidemiology Consortium

(InterLymph). The InterLymph Consortium, or formally the International Consortium of Investigators Working on Non-Hodgkin's Lymphoma Epidemiologic Studies, is an open scientific forum for epidemiologic research in non-Hodgkin's lymphoma. Formed in 2001, the Consortium is a group of international investigators who have completed or have ongoing case-control studies and who discuss and undertake research projects that pool data across studies or otherwise undertake collaborative research. <https://epi.grants.cancer.gov/>

Research topics

Strategic objectives

1. Descriptive and analytical epidemiology of cancer

Population-based cancer registry in the province of Girona (national and international collaborations)

- To monitor the cancer burden (incidence, prevalence and survival) and its evolution in Girona, Spain, Europe and Worldwide.
- To provide a basis for research on cancer causes
- Aetiological studies of chronic lymphocytic leukaemia (CLL) and breast cancer.
- Study of the genetic and molecular prognosis factors in breast cancer and haematological tumours.
- Study of the genetic and environmental risk factors in breast cancer and chronic lymphocytic leukaemia.
- Studies of infectious, genetic and environmental risk factors linked to the development of lymphomas.
- Genetic susceptibility and the interaction between genes and environment. The study of the interaction of environmental factors with genetic factors is a key part of aetiopathogenesis.

2. Cancer prevention

Primary prevention

- Evaluation of the efficacy of vaccination against the human papilloma virus

Secondary prevention

- Evaluation of the organized breast cancer detection program:

Benefits and adverse effects of breast cancer detection: a method to improve the measurement of the results of early detection.

Evaluation of the rate of interval of cancer and its determinants in the program of early detection of breast cancer at the province of Girona.

- Screening and prevention of cervical cancer. Evaluation of the program of timely detection of cervical cancer:

Determination of the sensitivity and specificity of cervical cytology.

Tertiary prevention

- Tertiary prevention in cancer care: the use of treatment and rehabilitation programmes to improve the outcome of illness among affected individuals.
- To design strategic rehabilitation programmes improve Quality of Life in cancer patients.
- To design and implement rehabilitation programmes based on epidemiological knowledge.
- To maintain strategic and collaborative links with rehabilitation cancer research programmes.
- To improve the quality of survival in older cancer population based on multimodal rehabilitation programmes.
- To generate knowledge on cancer recovery and Quality of Life by conducting, assisting and evaluating innovative, internationally competitive, public health programs.
- To form and maintain strategic and collaborative links with cancer research / control programs and related institutions nationally and internationally.

3. Genetics (Genetic Epidemiology of Cancer)

- Evaluation of the risk of developing cancer.
- Study of the genetic risk factors for cancer.
- Genetic susceptibility to cancer.

Principal lines of research

Descriptive and analytical epidemiology of cancer

Publicactions

Originals

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Grants

Project: Genetic and metabolomics screening towards the precision medicine in cancer prevention

Funding agency: Fundación AECC Investigación contra el cancer

Duration: 1.10.2018 – 30.09.2023

Principal Investigator: Victor Moreno Aguado

Collaborator researcher: Rafael Marcos and Marta Solans

Project: Estudio Poblacional Multinivel de las Desigualdades Socioeconómicas en la Distribución Geográfica de la Incidencia, la Mortalidad y la Supervivencia Neta del Cáncer en España.

Funding agency: FIS – Instituto de Salud Carlos III

Duration: 2018-2020

Coordinator: Miguel Angel Luque Fernández

Principal Investigator: Miguel Angel Luque Fernández

Collaborator researcher: Loreto Vilardell and Montse Puigdemont

Project: Patrones asistenciales y factores asociados al envejecimiento de la población en la supervivencia de la leucemia linfática crónica.

Funding agency: Evaluación de Tecnologías Sanitarias, Fondo de Investigación Sanitaria (FIS_ETS). Proyecto coordinado

Duration: 2016-2018 (prórroga fins el 2020)

Coordinator: Silvia de Sanjosé

Principal Investigator: Rafael Marcos-Gragera

Collaborator researcher: Marta Solans; Loreto Vilardell

Project: Modelo predictivo de supervivencia poblacional del cáncer de mama según el estadio, el subtipo molecular en el momento del diagnóstico y la adherencia al tratamiento.

Funding agency: FIS – Instituto de Salud Carlos III

Duration: 2019-2021

Principal Investigator: Ramon Clèries (PDO)

Collaborator researcher: Ramon Clèries (PDO)

Project: Angel Izquierdo

Funding agency: Hacia una estimación precisa de cáncer y la individualización del tratamiento médico mediante la aplicación del riesgo poligénico en cáncer de mama y ovario hereditario. FIS – Instituto de Salud Carlos III

Duration: 2020-2022

Principal Investigator: Balmaña (HVO)

Coordinator: Judith Balmaña (HVO)

Collaborator researcher: Angel Izquierdo

Project: Análisis en base poblacional de la prevalencia de la mutación de BRAF en los pacientes diagnosticados de melanoma en Girona en el período 2009-2011 y su correlación con supervivencia y otros factores pronósticos

Funding agency: NOVARTIS

Duration: 2018-2019

Principal Investigator: Marcos-Gragera R

Collaborator researcher: Jordi Rubió (ICO-GIRONA)

Project: Organ-specific biomarkers and therapies to improve the management of brain metastasis

Funding agency: MARATÓ TV3

Duration: 2020-2022

Principal Investigator: Joaquim Bosch Barrera.

Collaborator researcher: Montse Puigdemont Gemma Osca Gelis.

Project: Grup d'Estudi de les Neoplasies Hematològiques de Girona (2017-SGR-733)

Funding agency: Agència de Gestió d'Ajuts Universitaris i Recerca (AGAUR)

Duration: 2018-2020

Principal Investigator: David Gallardo

Collaborator researcher: Rafael Marcos-Gragera i David Gallardo.

Research activity contributions related to clinical activity

Radiation versus Observation following surgical resection of Atypical Meningioma: a randomised controlled trial (The ROAM trial).

Referència: EORTC 1308 - ROAM trial EORTC 1308.

Principal Investigator: Rafael Fuentes.

Membership of collaborative research structures (National)

Marta Solans: PhD contract of CIBER in Epidemiology and Public Health (CIBERESP), Madrid, Spain.

Thesis

Title: Dietary patterns in the etiology of lymphoid neoplasms

Student: Marta Solans Margalef

Director: Marcos-Gragera R, Marc Saez Zafra

University: Universitat de Girona

Faculty/School: Molecular Biology, Biomedicine and Health

Date: 14/10/2019

Title: Neoadyuvancia en pacientes ancianas diagnosticadas de cáncer de mama. Factores pronósticos y predictivos de toxicidad y respuesta

Student: Beatriz Losada

Director: Sonia del Barco

University: Universidad Rey Juan Carlos de Madrid

Date: 24/09/2019

Haematology

Team involved in “Red Temática de Investigación Cooperativa en Cáncer (RTICC)”
Recognised as a consolidated research group - 2017SGR733

Group members

Principal investigator

David Gallardo Giralt

Post-doctoral Researchers

Gemma Osca

Medical Researchers

Anna Angona
Yolanda González
Josep M^a Roncero
Esperanza Tuset
Rosa Coll
Natália Lloveras
Nicholas Kelleher
Joahana Díaz
Nazly Santos
David Cruz

Technicians

Rocío Rodríguez
Sandra Lara

Support

Lorena Casado



Overview

The Hematology Group has been working in clinical and translational research since its foundation in 2007. The PI is Dr. David Gallardo, Head of the Hematology Department. The group has been awarded with several grants obtained in competitive calls, such as 3 projects Fundació Marató TV3, 6 projects FIS in a row (Instituto de Salud Carlos III), two projects from Fundació Mutua Madrileña and also grants from local foundations against cancer, such as Oncolliga Girona, Roses contra el cancer or Llavaneres contra el cancer. We are currently collaborating with one of the IDIBAPS groups in a European grant (POCTEFA) together with the Toulouse group.

The group has published several papers in top scientific journals, such as *Blood*, *Leukemia* or *Haematologica*. Moreover, active collaboration of many investigators in scientific networks has led to publication of collaborative works, both at the National and International levels.

There are currently five Ph.D. projects going on as a result of the group scientific activity.

Research topics

- Immune response after allogeneic stem cell transplant
- Pharmacogenomics and signaling pathways in acute myeloid leukemia
- Immune checkpoints in hematological malignancies
- Molecular mechanisms involved in lymphoma transformation
- Clinical trials concerning hematological malignancies

Publications

Originals

O'Connor OA, Özcan M, Jacobsen ED, Roncero JM, Trotman J, Demeter J, et al; Lumiere Study Investigators. Randomized Phase III Study of Alisertib or Investigator's Choice (Selected Single Agent) in Patients With Relapsed or Refractory Peripheral T-Cell Lymphoma. *J Clin Oncol*. 2019 Mar 10;37(8):613-623. doi: 10.1200/JCO.18.00899. Epub 2019 Feb 1. PubMed PMID: 30707661; PubMed Central PMCID: PMC6494247

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Barba P, Morgades M, Montesinos P, Gil C, Fox ML, Ciudad

J, et al. Increased survival due to lower toxicity for high-risk T-cell acute lymphoblastic leukemia patients in two consecutive pediatric-inspired PETHEMA trials. Eur J Haematol. 2019 Jan;102(1):79-86. doi: 10.1111/ejh.13178. Epub 2018 Nov 22. PubMed PMID: 30267597.

Sitges M, Vives S, Ribera JM. Blastic plasmacytoid dendritic cell neoplasm. A study of three cases. Med Clin (Barc). 2019 Jul 23. pii: S0025-7753(19)30405-1. doi: 10.1016/j.medcli.2019.04.029. [Epub ahead of print] English, Spanish. PubMed PMID: 31350059.

Grants

Project: PI17/00815
Funding agency: Instituto de Salud Carlos III
Duration: 2018-2020
Coordinator: David Gallardo
Principal Investigator: David Gallardo

Project: EFA281/16/IMLINFO
Funding agency: POCTEFA 2014-2020 FR
Duration: 2018-2021
Coordinator: Patricia Pérez (IDIBAPS)
Principal Investigator: David Gallardo

Project: Estudi de les molècules de coestimulació com a marcadors de progressió del mieloma múltiple
Funding agency: Fundació Roses contra el càncer
Duration: 2019-2020
Principal Investigator: Yolanda González

Research activity contributions to clinical activity

The Hematology group has been involved in 25 on-site clinical trials concerning hematological malignancies during 2019.

Overall, 22 new patients have been included in 13 recruiting trials.

Membership of collaborative research networks (National)

Grup CETLAM
 Drs. Gallardo D., Guardia R., Coll R., Díaz J., Llovetas N.
 Study and treatment of acute leukemias and myelodysplasias

Grup PETHEMA
 Drs. Gallardo D., Guardia R., Kelleher N.

Study and treatment of malignant haemopathies

Grup GELTAMO
 Drs. Roncero JM., Buch J., Kelleher N.
 Spanish group of autologous lymphoma transplant

Grupo Español de Mieloma (GEM)
 Dr. González Y.
 Spanish Myeloma Group

Grupo Español de SMD
 Drs. Coll R., Llovetas N..
 Spanish group for the study of myelodysplastic syndromes

Grupo español de LLC
 Dr. Roncero JM.
 Spanish Group of LLC

Grup Trombocat
 Drs. Bustins, Santos..
 Catalan Thrombosis and Haemostasis Group

Club català de citologia hematològica
 Drs. Tuset E., Llovetas N.
 Catalan Club of Haematological Cytology

Grupo Español de citología hematológica
 Dr. Tuset E.
 Spanish Group of Haematological Cytology

Grupo Español de Trasplante Hematopoyético (GETH)
 Drs. Gallardo D., Coll R.
 Spanish Group of Hematopoietic Transplant (GETH)

General and Digestive Surgery

KEYWORDS: **Oncology Surgery**

Group members

Principal Investigator

Antoni Codina Cazador

Medical Researchers

Jordi Gironés

Pere Planellas

David Julia

Anna Pigem

Maite Albiol

Clara Codony

Ander Timoteo

Francesc Tuca

Jose Ignacio Rodríguez

Ernest Castro

Júlia Gil

Laia Falgueras

Marcel Pujadas

Núria Ortega

Ramón Farres

Núria Gómez

Santiago López-Ben

Margarida Casellas

Elisabet Garcia

Eva Artigau

Support

Lidia Cornejo

Overview

The research group focuses on digestive oncological diseases. Our research is fundamentally clinical and is based on clinical assistance.

Research topics

The main lines of research group are:

- Colorectal cancer
- Gastric tumours
- Liver and pancreas tumours

Publications

Originals

Planellas P, Salvador H, Farres R, Gomez N, Julia D, Gil J, et al. A randomized clinical trial comparing the initial vascular approach to the inferior mesenteric vein versus the inferior mesenteric artery in laparoscopic surgery of rectal cancer and sigmoid colon cancer. *Surg Endosc* 2019; 33(4):1310-1318. PMID: 30377755

Planellas P, Gil J, Farres R, Codina A. Transanal surgery: A tool in the colorectal anastomotic leakage. *Cir Esp* 2019;97(10):590-593. PMID: 31151743

Codina A, Biondo S, Espin E, Enriquez JM, Garcia-Granero E, Roig -Vila JV, et al. A teaching project on rectal cancer and concentration of procedures: a comparison of oncological results between catalonia and the rest of autonomous communities. *Rev Esp Enferm Dig* 2019;111(7):519-529. PMID: 31081668

Sabater L, Cugat E, Serrablo A, Suarez-Artacho G, Diez-Valladares L, Santoyo J, et al. Does the Artery-first approach improve the rate of R0 resection in pancreatoduodenectomy?: A multicenter, randomized, controlled trial. *Ann Surg* 2019;270(59):738-746. PMID: 31498183

Klompmaier S, Peters N, Van Hilst J, Bassi C, Boggi U, Busch O, et al. Outcomes and risk score for distal pancreatectomy with celiac axis resection (DP-CAR). An international multicenter analysis. *Ann Surg Oncol* 2019;26(3): 772-781. PMID 30610560

Vidal O, Saavedra-Perez D, Martos JM, De la Quintana A, Rodriguez JI, et al. Risk factors for open conversion of lateral transperitoneal laparoscopic adrenalectomy: retrospective cohort study of the Spanish adrenal surgery. *Surg Endosc* 2019;Nov

21.doi: 10.1007/s00464-019-07264-1

Viganò L, Torzilli G, Troisi R, Aldrighetti L, Ferrero A, Majno P, Toso C, Figueras J, Cherqui D, Adam R, Kokudo N, Hasegawa K, Guglielmi A, Krawczyk M, Giuliani F, Hilal MA, Costa-Maia J, Pinna AD, Cescon M, De Santibanes E, Urbani L, Pawlik T, Costa G, Zugna D; CLISCO group. Minor Hepatectomies: Focusing a Blurred Picture: Analysis of the Outcome of 4471 Open Resections in Patients Without Cirrhosis. Ann Surg. 2019 Nov;270(5):842-851. doi:10.1097/SLA.0000000000003493. PubMed PMID: 31569127.

Grants

Project: Torega Study: Impact of fragility on Postoperative Outcomes in gastric cancer Surgery

Coordinator: M Pujadas

Principal Investigator: E Garcia-Moriana

Project: Use of fibrin (Tisseal) adhesive to reduce the dehiscence of esophageal jejunum anastomosis in total gastrectomies due to Cancer : randomized, Multicenter study

Coordinator: M Pujadas

Principal Investigator: E Garcia-Moriana

Project: Sustainable production of nanocelluloses for application in different sectors and industrial processes

Funding agency: MIMECO

Duration: 2017-2021

Coordinator: M Delgado

Principal Investigator: A Codina

Project: LiverMetSurvey

Funding agency: ARCAD. Aide et Recherche en Cancerologie Digestive LMS Program

Coordinator: S. Lopez-Ben

Principal Investigator: S. Lopez-Ben

Project: Estudio de expresión génica de enzimas implicados en procesos de invasión y metástasis en carcinomas humanos

Coordinator: Dra Ferri. Laboratori HUGJP

Principal Investigator: S.Lopez-Ben

Project: The early detection of pancreatic cancer. Strategies for the discovery of new biomarkers for the diagnosis of pancreatic ductal adenocarcinoma

Funding agency: University of Girona (UdG)

Coordinator: Peracaula

Principal Investigator: M. Albiol

Metabolism and cancer group

KEYWORDS: Metabolism, cancer, aging

Group members

Principal Investigator

Javier A. Menéndez

Post-doctoral Researchers

Elisabet Cuyàs

Pre-doctoral Researchers

Sara Verdura

Medical Researchers

Joaquim Bosch

Begoña Martín

Eugeni López



Overview

The “Metabolism & Cancer” group adopts the view that aging diseases including cancer are governed by a pivotal regulatory role of metabolic reprogramming in cell fate. The group aims to advance new metabolism-targeted anti-approaches through completion of clinical proof-of-efficacy in cancer patients.

Research topics

Metabolism & Cancer

- Metabolism as a bona fide cancer driver
- Metabolic mechanisms of drug resistance: Targeting cellular metabolism to improve cancer therapeutics
- Molecular characterization and preclinical evaluation of new metabolic targets in human carcinomas
- Pre-clinical development and clinical testing of anti-metabolic drug candidates for oncology patients

Metabolo-epigenetics & cancer: molecular aspects and therapeutic development

- Metabolo-epigenetic mechanisms involved in the generation and maintenance of cancer stem cells (CSCs), i.e., the metabostemness hallmark.
- New therapeutic strategies targeting the metabolo-epigenetic machinery of CSCs.
- Precision medicine approaches based on the metabolo-epigenetic machinery of CSCs.
- Mitochondrial dynamics & cancer
- Role of autophagy and mitochondrial dynamics in the generation and maintenance of CSCs
- Targeting autophagy and mitochondrial dynamics to overcome drug resistance in cancer therapy

Computational systems biology in cancer & aging

- Mathematical & Computational Biology: stochastic tools, conceptual frameworks, and wet-lab validation of metabolo-epigenetics models in cancer & aging

Natural biocompounds: mechanisms & drug development

- Molecular characterization and preclinical evaluation of natural with anti-cancer and/or anti-aging properties
- In silico modeling and pre-clinical development of biocompounds-based anti-cancer and anti-aging drugs

Metabolo-immunotherapy

- Identification of metabolic nodes essential for the regulation of immune checkpoints in cancer cells
- Dietary interventions and efficacy of immune checkpoint inhibitors (ICIs)
- In silico clinical trials of metabolic interventions in combination with ICIs

Publications

Originals

Verdura S, Cuyàs W, Martin-Castillo B, Menendez JA. Metformin as an archetype immuno-metabolic adjuvant for cancer immunotherapy. *Oncoimmunology*. 2019;8(10): e1633235. doi: 10.1080/2162402X.2019.1633235. eCollection 2019. PMID:31646077.

Menendez JA, Cuyàs E, Folguera-Blasco N, Verdura S, Martin-Castillo B, Joven J, Alarcón T. In silico clinical trials for anti-aging therapies. *Aging (Albany NY)*. 2019;11(16):6591-6601. doi: 10.18632/aging.102180. PMID: 31444969.

Cabré N, Luciano-Mateo F, Fernández-Arroyo S, Baiges-Gayà G, Hernández-Aguilera A, Fibla M, et al. Laparoscopic sleeve gastrectomy reverses non-alcoholic fatty liver disease modulating oxidative stress and inflammation. *Metabolism*. 2019;99:81-89. doi: 10.1016/j.metabol.2019.07.002. PMID: 31279739.

Hernández-Aguilera A, Fibla M, Cabré N, Luciano-Mateo F, Camps J, Fernández-Arroyo S, et al. Chemokine (C-C motif) ligand 2 and coronary artery disease: Tissue expression of functional and atypical receptors. *Cytokine*. Epub 2019 Nov 15. doi: 10.1016/j.cyto.2019.154923. PMID:31739217.

Cabré N, Luciano-Mateo F, Baiges-Gayà G, Fernandez-Arroyo A, Rodríguez-Tomás E, Hernández-Aguilera A, et al. Plasma metabolic alterations in patients with severe obesity and non-alcoholic steatohepatitis. *Aliment Pharmacol Ther*. Epub 2019 Dec 11. doi: 10.1016/j.cyto.2019.154923. PMID:31825539.

Cuyàs E, Verdura S, Micol V, Joven J, Bosch-Barrera J, Encinar JA, et al. Revisiting silibinin as a novobiocin-like Hsp90 C-terminal inhibitor: Computational modeling and experimental validation. *Food Chem Toxicol*. 2019;132:110645. doi: 10.1016/j.fct.2019.110645. PMID:31254591.

Luciano-Mateo F, Cabré N, Fernández-Arroyo S, Baiges-Gaya G, Hernández-Aguilera A, Rodríguez-Tomás E, et al. Chemokine (C-C motif) ligand 2 gene ablation protects low-density lipoprotein and paraoxonase-1 double deficient mice from liver injury, oxidative stress and inflammation. *Biochim Biophys Acta Mol Basis Dis*. 2019;1865(6):1555-1566. doi: 10.1016/j.bbdis.2019.03.006. PMID: 30905786.

Cuyàs E, Verdura S, Lozano-Sánchez J, Viciano I, Llorach-Parés L, Nonell-Canals A, et al. The extra virgin olive oil phenolic oleacein is a dual substrate-inhibitor of catechol-O-methyltransferase. *Food Chem Toxicol*. 2019;128:35-45. doi:

10.1016/j.fct.2019.03.049. PMID: 30935952.

Cuyàs E, Castillo D, Llorach-Parés L, Lozano-Sánchez J, Verdura S, Nonell-Canals A, et al. Computational de-orphanization of the olive oil biophenol oleacein: Discovery of new metabolic and epigenetic targets. *Food Chem Toxicol.* 2019;131:110529. doi: 10.1016/j.fct.2019.05.037. PMID: 31150784.

Cuyàs E, Fernández-Arroyo S, Buxó M, Pernas S, Dorca J, Álvarez let al. Metformin induces a fasting- and antifolate-mimicking modification of systemic host metabolism in breast cancer patients. *Aging (Albany NY).* 2019;11(9):2874-2888. doi: 10.18632/aging.101960. PMID: 31076561.

Guiducci G, Paone A, Tramonti A, Giardina G, Rinaldo S, Bouzidi A, et al. The moonlighting RNA-binding activity of cytosolic serine hydroxymethyltransferase contributes to control compartmentalization of serine metabolism. *Nucleic Acids Res.* 2019;47(8):4240-4254. doi: 10.1093/nar/gkz129. PMID: 30809670.

Folguera-Blasco N, Pérez-Carrasco R, Cuyàs E, Menendez JA, Alarcón T. A multiscale model of epigenetic heterogeneity-driven cell fate decision-making. *PLoS Comput Biol.* 2019;15(4):e1006592. doi: 10.1371/journal.pcbi.1006592. PMID: 31039148.

Pietzke M, Arroyo SF, Sumpton D, Mackay GM, Martin-Castillo B, Camps J, et al. Stratification of cancer and diabetes based on circulating levels of formate and glucose. *Cancer Metab.* 2019;7:3. doi: 10.1186/s40170-019-0195-x. PMID: 31049200.

Pérez-Sánchez A, Cuyàs E, Ruiz-Torres V, Agulló-Chazarra L, Verdura S, González-Álvarez I, et al. Intestinal Permeability Study of Clinically Relevant Formulations of Silibinin in Caco-2 Cell Monolayers. *Int J Mol Sci.* 2019;20(7). pii: E1606. doi: 10.3390/ijms20071606. PMID: 30935093.

Cuyàs E, Buxó M, Ferri Iglesias MJ, Verdura S, Pernas S, Dorca J, et al. The C Allele of ATM rs11212617 Associates With Higher Pathological Complete Remission Rate in Breast Cancer Patients Treated With Neoadjuvant Metformin. *Front Oncol.* 2019;9:193. doi: 10.3389/fonc.2019.00193. PMID: 30984619.

Verdura S, Cuyàs E, Lozano-Sánchez J, Bastidas-Velez C, Llorach-Parés L, Fernández-Arroyo S, et al. An olive oil phenolic is a new chemotype of mutant isocitrate dehydrogenase 1 (IDH1) inhibitors. *Carcinogenesis.* 2019;40(1):27-40. doi: 10.1093/carcin/bgy159. PMID: 30428017.

Lopez-Bonet E, Buxó M, Cuyàs E, Pernas S, Dorca J, Álvarez I, et al. Neoadjuvant Metformin Added to Systemic Therapy

Decreases the Proliferative Capacity of Residual Breast Cancer. *J Clin Med.* 2019;8(12). pii: E2180. doi: 10.3390/jcm8122180. PMID: 31835708.

Cuyàs E, Gumuzio J, Lozano-Sánchez J, Carreras D, Verdura S, Llorach-Parés L, et al. Extra Virgin Olive Oil Contains a Phenolic Inhibitor of the Histone Demethylase LSD1/KDM1A. *Nutrients.* 2019;11(7). pii: E1656. doi: 10.3390/nu11071656. PMID: 31331073.

Reviews

Gaforio JJ, Visioli F, Alarcón-de-la-Lastra C, Castañer O, Delgado-Rodríguez M, Fitó M, et al. Virgin Olive Oil and Health: Summary of the III International Conference on Virgin Olive Oil and Health Consensus Report, JAEN (Spain) 2018. *Nutrients.* 2019;11(9). pii: E2039. doi: 10.3390/nu11092039. PMID:31480506

Case reports

Bosch-Barrera J, Oliva E, Sais E, Vázquez CA, Roselló A, Menéndez JA. Hyperprogression after first dose of immunotherapy in a patient with radioresistant metastasis from nonsmall cell lung cancer. *Anticancer Drugs.* 2019;30(10):1067-1070. doi: 10.1097/CAD.0000000000000837. PMID:31567311.

Grants

Project: A therapeutic strategy to co-target brain metastasis-initiating and hyperlipidemia-driving mechanisms in lorlatinib-treated NSCLC

Funding agency: Pfizer

Duration: 2019-2020

Principal Investigator: Javier A. Menendez

Project: A metabolomic framework for reducing and exploiting the multidimensional complexity of tumor heterogeneity: sub-phenotyping of cancer stem cell metabolomic states

Funding agency: Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia, Subprograma Estatal de Generación de Conocimiento. Plan Estatal de Investigación Científica y Técnica y de Innovación 2013-2016. Ministerio de Economía y Competitividad, Agencia Estatal de Investigación

Duration: 2016-2019

Principal Investigator: Javier A. Menendez

Project: Caracterización de un inhibidor dual de STAT3 como quimio-sensibilizador del cáncer de pulmón

Funding agency: Spanish Lung Cancer Group, 2ª Edición Becas GECP "Jóvenes Investigadores en cáncer de pulmón"

Duration: 2018-2019

Coordinator: Javier A. Menendez

Principal Investigator: Joaquim Bosch-Barrera

Project: Calorie restriction and cancer: Molecular bases and new therapeutic strategies

Funding agency: Fundació Oncolliga Girona

Duration: 2018-2019

Coordinator: Javier A. Menendez

Principal Investigator: Joan Brunet

Project: 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.

Funding agency: Ministerio de Sanidad

Duration: 2010-2019

Coordinator: Begoña Martín-Castillo/Javier A. Menendez

Principal Investigator: Begoña Martín-Castillo

Patents

Number of application: EP20170382891

Title: Means for preventing and treating brain metastasis.

Inventor: Valiente Cortés M, Priego Bendeck N, Bosch Barrera J.

Research activity contributions related to clinical activity

TA phase 2 trial of neoadjuvant metformin in combination with trastuzumab and chemotherapy in women with early HER2-positive breast cancer: the METTEN study

EU Clinical Trials Register, EudraCT number 2011-000490-30. Registered 28 February 2011, <https://www.clinicaltrialsregister.eu/ctr-search/trial/2011-000490-30/ES>.

Clinical Coordinator: Begoña Martín-Castillo

Translational Research Coordinator: Javier A. Menendez

Collaborations

- ICREA Prof.Tomás Alarcón. Centre de Recerca Matemàtica (CRM). Barcelona (Spain).
- Prof.Jorge Joven. Pere Virgili Institute for Health Research (IISPV)/Rovira i Virgili University. Reus (Spain)
- Prof. Vicente Micol. Universidad Miguel Hernández. Elche (Spain)
- Prof. José Antonio Encinar. Universidad Miguel Hernández. Elche (Spain)
- Dr. Angel G. Martín.StemTek Therapeutics. Bilbao (Spain)
- Dr. Josema Torres. Universidad de Valencia (Spain)
- Dr. Alexei Vazquez. Beatson Institute for Cancer Research (UK).
- Prof.Francesca Cutruzzolà. SAPIENZA University of Rome (Italy).
- Prof. Jiri Neuzil. School of Medical Science/GIH Griffith University, Gold Coast Campus (Australia).
- Prof. Ruth Lupu. Mayo Clinic (USA)
- Prof. Ana Jesús García-Sáez. Tübingen University (Germany)
- Prof. Pilar Blancafort. Harry Perkins Institute of Medical Research, University of Western Australia (Australia)



ASSOCIATED GROUPS

UNIVERSITY OF GIRONA

BIOCHEMISTRY OF CANCER

COMPUTER VISION AND ROBOTICS

**CONTROL ENGINEERING AND INTELLIGENT SYSTEMS - MEDICINE
AND HEALTH**

HEALTH AND HEALTHCARE

HEALTH PSYCHOLOGY

MICELAB - MODELLING, IDENTIFICATION AND CONTROL ENGINEERING

PROTEIN ENGINEERING

STATISTICS AND DATA ANALYSIS

STATISTICS, ECONOMETRICS AND HEALTH (GRECS)

Biochemistry of cancer

University of Girona

Recognised as a consolidated research group - 2017 SGR 673

KEYWORDS: **Pancreatic cancer, Prostate cancer, tumor markers, aberrant glycosylation, PSA. New cancer therapeutic approaches, targeted drug delivery.**

Group members

Principal Investigators

Rafael de Llorens and Rosa Peracaula

Established Researchers

Anna Massaguer

Sílvia Barrabés

Esther Llop

Pre-Doctoral Researchers

Anna Gratacós

Adrià Duran

Laura Miró

Medical Researchers

Josep Comet

Manel Ramírez

Overview

Research Group: "Biochemistry of Cancer"

Research group of de Biochemistry and Molecular Biology area of the Biology Departament of the Faculty of Sciences. University of Girona (Spain). (GRTC003).

web:<http://www2.udg.edu/grupsrecerca/Bioqu%C3%ADmicadelC%C3%A0ncer/Activitats/Projectesderecerca/tabid/20005/language/es-ES/Default.aspx>

Research topics

1. Tumor markers: Abnormal glycosylation of various serum proteins as possible tumor markers for carcinomas. Currently focused on pancreatic and prostatic carcinomas, specifically in the abnormal glycosylation of human pancreatic ribonuclease, acute phase proteins and PSA (prostate specific antigen). Extensible to other glycoproteins (Proteomics and Glycomics).
2. Molecular mechanisms responsible for the changes of glycosylation in tumors: Expression studies of glycosyltransferases responsible for the biosynthesis of glucidic antigens associated with the tumor, determination of their involvement in different stages of tumor progression and the factors that regulate their expression.
3. Epidermal Growth Factor Analogs (EGF) as antitumor agents. Antitumor effects of recombinant protease inhibitors (EGF, truncated EGF). Obtaining new more related and cytotoxic derivatives. Study of the mechanisms of resistance to new agents, by the appearance of autocrine loops of the EGF / ErbB pathway. Obtaining derivatives of cisplatin and ruthenium with fewer side effects, and their delivery by binding to peptides ligands of receptors overexpressed in tumors (Targeted Drug Delivery).

Grants

Project: Biomarcadors no invasius per a l'estratificació del risc del Càncer de Próstata: glicoformes del PSA i Resonància Magnètica Multiparamètrica

Funding agency: La Marató de TV3

Duration: 3 anys

Coordinator: Esther Llop Escorihuela & Josep Comet (Hospital Trueta)

Principal Investigator: Esther Llop Escorihuela

Patents

Number of application: WO2016ES70781

Title: In vitro method for diagnosing prostate cancer.

Inventor: Peracaula Miró R, De Llorens Duran R, Llop Escorihuela E, Barrabés Vera S, Comet Batlle J, Ramírez Malagón M, Alexandre Cerarols R, Ferrer Batallé M, Fahey R, Rudd Pauline M.

Research activity contributions related to clinical activity

Finalització d'un estudi multicèntric per l'estudi d'un nou biomarcador del càncer de próstata, basat en a glucosilació anòmal del PSA. En col·laboració amb Roche diagnostic (Sant Cugat del Vallés).

Computer vision and robotics

University of Girona

SGR: 1164

Group members

Principal investigator

Joan Martí

Established Researchers

Xavier Lladó
 Arnau Oliver
 Jordi Freixenet
 Robert Martí

Post-doctoral Researchers

Oliver Díaz
 Sergi Valverde
 Mariano Cabezas

Pre-doctoral Researchers

Alexandra González
 Mostafa Salem
 Albert Malet
 Basel Alyafi
 Albert Clèrigues
 Joel Vidal
 Liliana Valencia
 Richa Agarwal
 Kaisar Kushibar
 José Bernal

Overview

The Image Analysis and 3D Perception research group (G3DAI) belongs to the VICOROB research Institute of the University of Girona and it has been recognised as a consolidated group (2017 SGR 1164).

G3DAI focuses its effort on two main research lines: image analysis and 3D perception. In the field of image analysis, G3DAI is committed in developing and optimizing methods (including both hardware and software developments) for analysis of data, with particular focus on the study of medical images. In the 3D perception field, G3DAI brings together extensive experience in many of the scientific and technological fields related to the acquisition of three-dimensional information of a real scene, as well as the processing of this information to approach tasks of automation of machinery or quality control of up to 100 % of the production.

Currently, G3DAI has 25 members: 10 doctors, 7 doctoral students, 6 master's students and 2 administrative staff.

From 2014 to December 2019, 15 theses have been defended and two of them still investigating in the group as postdoctoral researchers. In addition, 2 new doctoral students started working on their doctoral thesis. G3DAI has a strong capacity to attract new talent for training (PhD students) which is funded from

different sources (European, National, and Catalan level), being the master MAIA the main source for obtaining candidates.

Research topics

G3DAI's motivation is driven by the scientific challenges which continuously appear as a consequence of the society's requirements. G3DAI is working towards the development of imaging tools to help women stratification for personalized breast cancer screening programs. In this sense, new algorithms and image acquisition protocols will be proposed to improve breast cancer detection using the most appropriate technology (mammography, ultrasound, magnetic resonance) for each woman, according to their cancer risk (e.g. breast density). With respect to multiple sclerosis, the group's research intends to develop novel algorithms to improve the current magnetic resonance biomarkers such as brain lesions, longitudinal brain atrophy, and regional cortical and subcortical gray matter, which indeed will improve the diagnosis, monitoring and follow-up of patients. Furthermore, we will tackle the challenge of developing predictive models fusing MRI information with other relevant clinical information. Moreover, G3DAI plans also to continue the development of novel 3D reconstruction techniques based on scanner systems and computer vision algorithms, with the main focus to deal with other quality control challenges from industrial companies.

Publications

Originals

J. Bernal, K. Kushibar, D. Sileshi A. S. Valverde, A. Oliver, R. Martí, X. Lladó. "Deep convolutional neural networks for brain image analysis on magnetic resonance imaging: a review". *Artificial Intelligence in Medicine*, 95, pp. 64-81, 2019. DOI: 10.1016/j.artmed.2018.08.008

M. Salem, S. Valverde, M. Cabezas, D. Pareto, A. Oliver, J. Salvi, À. Rovira, À. X. Lladó. "Multiple Sclerosis lesion synthesis in MRI using an encoder-decoder U-NET". *IEEE Access*, 7, pp. 25171-25184, 2019. DOI: 10.1109/ACCESS.2019.2900198

E. García, Y. Diez, X. Lladó, A. Gubern-Merida, R. Martí, J. Martí, A. Oliver. "Breast MRI and X-ray mammography registration using gradient values". *Medical Image Analysis*, 54, pp. 76-87, 2019. DOI: 10.1016/j.media.2019.02.013

S. González-Villà, A. Oliver, Y. Huo, X. Lladó, B. A. Landman. "Brain structure segmentation in the presence of multiple sclerosis lesions". *NeuroImage: Clinical*, 22, pp. 101709, 2019. DOI: 10.1016/j.nicl.2019.101709.

R. Agarwal, O. Diaz, X. Lladó, M. Hoon Yap, R. Martí. "Automatic mass detection in mammograms using deep convolutional neural networks". *Journal of Medical Imaging*, 6(3), 031409, 2019. DOI: 10.1117/1.JMI.6.3.031409.

K. Kushibar, S. Valverde, S. González-Villà, J. Bernal. M. Cabezas, A. Oliver, X. Lladó. "Supervised domain adaptation for automatic sub-cortical brain structure segmentation with minimal user interaction". *Scientific Reports*, 9, pp. 6742, 2019. DOI: 10.1038/s41598-019-43299-z

S. Valverde, M. Salem, M. Cabezas, D. Pareto, J.C. Vilanova, L. Ramió-Torrentà, A. Rovira, J. Salvi, A. Oliver, X. Lladó. "One-shot domain adaptation in multiple sclerosis lesion segmentation using convolutional neural networks". *NeuroImage: Clinical*, 21, pp. 101638, 2019. DOI: 10.1016/j.nicl.2018.101638

H. Kuijff, J. Biesbroek, J. Bresser, R. Heinen, S. Andermatt, M. Bento, M. Berseth, et al. "Standardized Assessment of Automatic Segmentation of White Matter Hyperintensities; Results of the WMH Segmentation Challenge". *IEEE Transactions on Medical Imaging*, 38(11), pp. 2556-2568, 2019. DOI: 10.1109/TMI.2019.2905770

J. Bernal, K. Kushibar, M. Cabezas, S. Valverde, A. Oliver, X. Lladó. "Quantitative Analysis of Patch-Based Fully Convolutional Neural

Networks for Tissue Segmentation on Brain Magnetic Resonance Imaging". *IEEE Access*, 7, pp. 89986 – 90002, 2019. DOI: 10.1109/ACCESS.2019.2926697

A. Clèrigues, S. Valverde; J. Bernal; J. Freixenet; A. Oliver; X. Lladó. "Acute ischemic stroke lesion core segmentation in CT perfusion images using fully convolutional neural networks". *Computers in Biology and Medicine*, 115, pp. 103487, 2019. DOI: 10.1016/j.combiomed.2019.103487

Editorials

EA. Krupinski, S. Astley, R. Martí, M. Tornai, R. Zwiggelaar. "Advances in Breast Imaging". *Journal of Medical Imaging*, 6, 3, 031401, 2019. DOI: 10.1117/1.JMI.6.3.031401

Grants

Project: Predictive models for multiple sclerosis using brain magnetic resonance imaging biomarkers - EVOLUTION
Funding agency: Ministerio de Economía y Competitividad
Duration: Ministerio de Economía y Competitividad
Coordinator: Universitat de Girona
Principal Investigator: Xavier Lladó

Project: Automatic brain Structures Segmentation As potential imaging Biomarkers - WASSABI
Funding agency: Ministerio de Economía y Competitividad
Duration: 2016-2019
Coordinator: Universitat de Girona (UdG)
Principal Investigator: Arnau Oliver / Xavier Lladó

Project: Smart Image Analysis for Screening Challenges in Breast Cancer – SMARTER
Funding agency: Ministerio de Economía y Competitividad
Duration: 2016 - 2019
Coordinator: Universitat de Girona (UdG)
Principal Investigator: Robert Martí

Project: Erasmus + Joint Master Degree in Medical Imaging and Applications – MAIA
Funding agency: Comissió Europea
Duration: 2016 – 2024
Coordinator: Universitat de Girona (UdG)
Principal Investigator: Arnau Oliver

Project: Computacion de la Imagen para la mejora de la Radiomica del cancer De Mama
Funding agency: Ministerio de Economía y Competitividad
Duration: 2019 – 2021
Coordinator: Universitat de Girona (UdG)
Principal Investigator: Robert Martí

Membership of collaborative research networks

In terms of research community, since, 1993, three members of G3DAI are members of the AERFAI (Spanish Association of Recognition of Forms and Analysis of Images), a non-profit association to encourage in Spain the development of subjects of Pattern Recognition, Image Processing and Analysis, Computer Vision, Remote Sensing and Speech Recognition. One of the objectives of the association is to contribute to the establishment of stronger ties between the international and Spanish research community and to disseminate relevant information on related topics among all its members.

Moreover, Joan Martí is member of the Scientific Committee of the International Workshop on Breast Imaging, formerly called the International Workshop on Digital Mammography (IWDM). The IWDM meetings bring together a diverse group of researchers, clinicians and representatives of industry, who are jointly committed to developing technology for early detection and subsequent patient management of breast cancer. IWDM, is designed as a platform to present the latest technological developments and clinical experiences of novel breast imaging technologies.

Finally, we have been invited to be part of the network "VISIOCat", a Computer Vision R&D network lead by the Universitat Politècnica de Catalunya. This network has been built in order to apply for the AGAUR grant call "Ajuts per a xarxes d'R+D+I per a dur a terme programes de valorització i transferència dels resultats de la Recerca". Therefore, it will just become a reality if they accept the project proposal.

Awards

Title: Winners of the 5th International Workshop on Recovering 6D Object Pose at International Conference on Computer Vision (ICCV) 2019, October 28, Seoul, Korea

Institution: University of Girona

Awardee/s: J. Vidal, CY. Lin, X. Lladó, R. Martí

Thesis

Title: Automated brain structure segmentation in magnetic resonance images of multiple sclerosis patients

Student: Alexandra González Villà

Director: Xavier Lladó Bardera / Arnau Oliver Malagelada

University: Universitat de Girona (UdG)

Faculty/School: Escola Politècnica Superior

Date: 31/05/2019

Title: Computed aided detection for breast lesion in Ultrasound and Mammography

Student: Richa Agarwal

Director: Robert Martí / Xavier Lladó / Oliver Fernando Diaz

University: Universitat de Girona (UdG)

Faculty/School: Escola Politècnica Superior

Date: 28/09/2019

Title: Recognition and 6D pose estimation of partially occluded 3D objects in cluttered scenes

Student: Joel Vidal Verdager

Director: Robert Martí / Chyi-Yeu Lin (NTUST, Taiwan)

University: Universitat de Girona (UdG)

Faculty/School: Escola Politècnica Superior

Date: 23/01/2019

Collaborations

- At an international level, through the existing international masters at G3DAI, the group coordinates on a daily basis with Fabrice Meriaudeau, Alain Lalande, from the University of Bourgogne (France) and Francesco Tortorella, from Cassino University (Italy). This has also encouraged the mobility of lectures between these institutions.
- In the field of brain image analysis, the group has also collaborations with international institutions such as Vanderbilt University, Nashville, USA (Prof. Bennett Landman), University College of London, UK (J.E. Iglesias, Prof. C. Wheeler-Kingshot), University of Sydney (Prof. S. Klistorner) or McConnell Brain Imaging Centre, Montreal, Canada (Prof. Arnold Douglas).
- The group is also collaborating in the field of breast image analysis and computer aided diagnosis with the Manchester Metropolitan University (Dr. Moi Hoon Yap), Aberystwyth University (Prof. Reyer Zwiggelaar), Universidad Complutense de Madrid (Dr. Margarita Chevalier), Prof. N. Karssemeijer (Radboud Medical University Center, Nijmegen, Netherlands, ScreenPoint Medical), Prof. A. Maidment, Dr. Pedrag Bakic (Penn University, USA), Prof. A. Noble (Univ. of Oxford, UK), Prof. F. Meriaudeau (Univ. de Bourgogne, France).

Control engineering and intelligent systems - Medicine and health

University of Girona

2017 SGR 1551 (in joint venture with other groups)

KEYWORDS: Healthcare, artificial intelligence, case based reasoning, machine learning, optimization

Group members

Principal Investigator

Beatriz López

Established Researchers

Bianca Innocenti

Miquel Rustullet

Daniel Macaya

Carles Pous

Post-doctoral Researchers

Ferran Torrent

Joaquim Massana

Pre-doctoral Researchers

Natàlia Mordvanyuk

Alihuén García

Technicians

Oscar Raya

Pau Olives

Jaume Gauchola

Marc González

Guillem Hernández

Support

Roberto Petite

Sara Murlà

Núria Estapé

Daniel Lambisto

Overview

The main research activity of the Medicine and Healthcare research line of the control engineering and intelligent systems (eXiT) research group is focused on the application of artificial intelligence principles (data mining and knowledge discovery, qualitative reasoning, case based reasoning, metaheuristic optimization) and machine learning, to support decision-making processes in healthcare.

Research topics

The Medicine and Healthcare research line of eXiT focuses on four main groups: (i) Disease prognosis, (ii) Clinical decision support systems, (iii) mHealth and (iv) Biosignal processing. These research and technical approaches were applied to the following medical and healthcare areas:

- Endocrinology: Insulin bolus recommendation for diabetic patients, phenotype model learning for obesity prognosis.
- Hospital management: machine learning methods for Emergency department attendance prediction.

- Internal medicine: treatment recommendations system for dyslipidaemia, and familial hypercholesterolemia detection mechanism.
- Mental health: treatment recommender system for Attention Deficit and hyperactivity disorder (ADHD).
- Neurology: machine learning algorithms for seizure detection and prediction from EEG, machine learning for migraine prediction.
- Odontology: New devices for bruxism monitoring.
- Paediatrics: Neonatologist at home (NOAH) project for vital signs monitoring in premature babies.

Publications

Originals

Ferran Torrent-Fontbona, Joaquim Massana, Beatriz López. Case-base Maintenance of a Personalised and Adaptive CBR Bolus Insulin Recommender System for Type 1 Diabetes. Expert Systems With Applications. Volume 121, 1 May 2019, Pages 338-

346.

Ferran Torrent-Fontbona, Beatriz Lopez. Personalised Adaptive CBR Bolus Recommender System for Type 1 Diabetes. IEEE Journal of Biomedical and Health Informatics, Vol 23, Num. 1, January 2019, pp. 387-394. Picture in the issue cover. DOI: 10.1109/JBHI.2018.2813424

Books

Koch, F., Koster, A., Riaño, D., Montagna, S., Schumacher, M., Teije, A., Guttmann, C., Reichert, M., Bichindaritz, I., Herrero, P., Lenz, R., Lopez, B., Marling, C., Martin, C., Montani, S., Wiratunga, N. (Eds.) Artificial Intelligence in Health, First International Workshop, AIH 2018, Stockholm, Sweden, July 13-14, 2018, Revised Selected Papers. Lecture Notes in Artificial Intelligence, 11326, Springer 2019. DOI 10.1007/978-3-030-12738-1.

Grants

Project: SERAS - Seizure Risk Assessment

Funding agency: MINECO (Retos Colaboración, RTC-2017-6701-1)

Duration: 3 years (1/1/2018 – 31/12/2020)

Coordinator: David Blázquez (MJN)

Principal Investigator: Beatriz López

Project: PEPPER - Patient Empowerment through Predictive PERSONALISED decision support

Funding agency: EU H2020 (PHC-28-2015), Grant Agreement 689810

Duration: 4,16 years (1/2/2016 – 31/3/2020)

Coordinator: Clare Martin (Oxford Brookes University)

Principal Investigator: Beatriz López

Project: Development of a prototype tool to formulate participatory, individualized and automated therapeutic recommendations for the treatment of patients with Attention Deficit Hyperactivity Disorder (ADHD)

Funding agency: COMG, Fundación Pascual i Prats & Campus Salut de la Universidad de Girona (UdG)

Duration: 2 years (1/5/2018 – 30/4/2020)

Principal Investigator: Domenec Serrano (IACS), Xavier Castells (Translab, UdG)

Project: Algorithms to predict epileptic seizures

Funding agency: MJN Neuroserveis, S.L.

Duration: 9 months (1/4/2019 – 29/11/2019)

Principal Investigator: Beatriz López

Research activity contributions related to clinical activity

H2020 PEPPER project clinical trials at IDIBGI

TDAH-COMG project clinical trials at ICS-Girona.

Membership of collaborative research

European AI Alliance.

Thesis

Title: Predicting the level of anxiety and stress in a person based on their physiological data and digital phenotype

Student: Alihuén Garcia

Director: Beatriz López

University: University of Girona (UdG)

Faculty/School: Polytechnic School

Date: On going

Title: Machine learning methods of evolving patterns

Student: Natalia Mordvanyuk

Director: Beatriz López

University: University of Girona (UdG)

Faculty/School: Polytechnic School

Date: On going

Collaborations

The eXit Healthcare research group collaborates with the following researchers / groups:

- Doctor Fernandez Real and team from IdIBGI (obesity and diabetes projects)
- Doctor Nick Oliver and team from Imperial College London (PEPPER project)
- Clare Martin and team from Oxford Brookes (PEPPER project)
- Doctor Xavier Castells from the Laboratori de Medicina Translacional i Ciències de la Decisió, TRANSLAB (ADHD project)
- Doctor Alberto Zamora, TRANSLAB (Dyslipidemia and Familiar Hypercholesterolemia project)
- MJN Neuroserveis (SERAS project, Epilepsy)
- Dra. Marina Vives (Curelator S.L., Migraines)
- Dr. Jordi Coderch (Emergency Department Admissions, Hospital de Palamós)
- Dr. Abel López Bermejo, Dra. Judith Sanz, Marta Fabrellas (Noah Project)

Health and healthcare

University of Girona

Recognised as a consolidated research group - 2017 SGR 1767

KEYWORDS: Health promotion, Elders and carers, woman, gender and health and health

Group members

Principal Investigator

Dolors Juvinyà

Post-doctoral Researchers

Marta Vilanova

Established Researchers

Carme Bertran
David Ballester
Maria del Carme Malagon
Maria Rosa Suñer
Concepció Fuentes
Anna Bonmatí
Bernat Carles Serdà
Josep Olivet
Cristina Bosch

Pre-doctoral Researchers

Almerinda Domingo

Technicians

Cristina Vilarò
Laura López

Overview

The Research Group in Health and Healthcare is a multidisciplinary group composed of experts in nursery, psychology, anthropology and physiotherapy. Its aim is to conduct high quality research in different areas of health.

The research group in Health and Healthcare was founded in 2002 and in 2017, the Generalitat de Catalunya (2017-SGR-1767) renew your recognition as a "Consolidated Group".

The group is part to the sectorial campus of Health of the University of Girona.

Research topics

The research carried out by the Group is organized into four major areas of work: Health Promotion, The elderly and carers, Woman, Gender and Health and Health Emergencies,

Health promotion

Research in Health Promotion covers a wide range of actions in several areas:

- Health institutions: evaluation of the quality of both the organizations themselves and the care services they provide; assessment of the skills of the professionals of health.
- Educational institutions such as schools and universities.
- Community collectives of users of health services.
- Strategies: health literacy and salutogenesis.
- Health care and quality of life of people in critical conditions, with neurological problems, with mental health problems or with cancer.

The Elderly and carers

The main objective of this area is to improve the quality of life of the elderly, the dependent and fragile population and its carers. To achieve it, its investigators do specialized research to enhance the understanding of these situations, with special attention to the development of tools to assess dependency.

Women, Gender and Health

The research developed in this area is designed to provide the scientific knowledge needed to undertake actions to revert the discriminatory elements of the healthcare system that affect the health professions, the health professionals and the users of health services.

Health Emergency

This area focuses on the assessment of the skills to conduct basic

and advanced life support protocols and on the creation of new tools to assess the professional competences in this field. This activity takes place in the group's laboratory in the Science Park

Publications

Originals

Fontova-Almató, A; Suñer Soler, R; Juvinyà Canal, D. Factors associated with patients and companions satisfaction with a hospital emergency department: A descriptive, cross sectional study. *Nursing & Care Open Access Journal*. 2019;6(3):834-841.

Malagón-Aguilera, MC; Suñer-Soler, R; Bonmatí-Tomas, A; Bosch-Farré, C; Gelabert-Vilella, S; Juvinyà-Canal, D. Relationship between sense of coherence, Health status, and work engagement among nurses. *Journal of Nursing Management*. 2019;27(8):1620-1630.

Fontova-Almató, A; Suñer-Soler, R; Juvinyà-Canal, D. Satisfacción laboral y síndrome de burnout en profesionales de un servicio de urgencias. *TESELA*. 2019;2(26):1-6.

Bonmatí-Tomas, A; Malagón-Aguilera, MC; Gelabert-Vilella, S; Bosch-Farré, C; Vaandrager, L; García-Gil, MM; Juvinyà-Canal, D. Salutogenic health promotion program for migrant women at risk of social exclusion. *International Journal for Equity in Health*. 2019;18(139).

Bauer, GF; Roy, M; Bakibinga, P; Contu, P; Downe, S; Eriksson, M; Espnes, GA; Jensen, BB; Juvinyà Canal, D; Lindström, B; Mana, A; Mittelman, MB; Morgan, AR; Pelikan, JM; Saboga-Nunes, L; Sagy, S; Shorey, S; Vaandrager, L; Vinje, HF. Future directions for the concept of salutogenesis: a position article. *Health Promotion International*. 2019. Saez, A; Sánchez, A; López-Navas, A; Ramirez, P; Parrilla, P. Nursing Students faced with Organ donation and transplantation: a spanish multicenter study. *Transplantation Proceedings*. 2019; 51(9):3008-3011

Grau Pallicer, M; Chamarro Lusa, A; Medina Casanovas, J; Serdà Ferrer, BC. Walking speed as a predictor of community mobility and quality of life after stroke. *Topics In Stroke Rehabilitation*. 2019;26:349-358.

Castellanos, M; Suñer, R; Fernández-Real, JM; Sanchez JM. 2,5-Dimethylfuran as a Validated Biomarker of Smoking Status. *Nicotine & Tobacco Research*. 2019; 21(6):828-834.

Turró Garriga, O; Code Sala, JL; Viñas, V; Turon Estrada, A; Collet Juncà, M; Calvo Perxas, L; Juvinyà Canal, D; Mioshi, E; Garre Olmo, J. Antonovsky's sense of coherence and resistance resources reduce perception of burden in family carers of people with

Alzheimer's Disease. *Aging & Mental Health*. 2019.

Garcia Codina, Oriol; Juvinyà Canal, Dolors; Amiel Buján, Paloma; Bertran Noguera, Carme; González Mestre, María Asunción; Masachs Fatjo, Eulalia; Santa Eugènia, Sebastià; Magriñá Rull, Pilar; Saltó Cerezuela, Esteve. Determinants of health literacy in the general population: results of the Catalan health survey. *BMC Public Health*. 2019;19(1122).

MC Malagón-Aguilera, R Suñer-Soler, A Bonmatí-Tomás, S Gelabert-Vilella, C Bosch-Farré, D Juvinyà-Canal. Compromiso laboral y burnout de las enfermeras en el ámbito sociosanitario. *Presencia: revista de enfermería de salud mental*. 2019;15(e12171). Escobar-Castellanos B, Cid P, Juvinyà D, Sáez K. Estilo de vida promotor de salud y sentido de coherencia en adultos jóvenes universitarios. *Hacia la Promoción de la Salud*. 2019;24(2):107-122

Martinez-Alarcon, L; Rios, A; Santainés-Borredá, E; Agras, MC; Cañadas-De la Fuente, G; Hurtado Pardos, B; Bárcena-Calvo, C; Perelló-Campaner, C; Arribas-Marín, J; García-Mayor, S; Soto Ruiz, N; Navalón, JC; Bertran-Noguera, C; Peña-Amaro, MP; Jiménez-Herrera, MF; Blanco-Sánchez, R; Calvo-Sánchez, MD; Prado-Laguna, MC; González-García, A; Martínez-Rodríguez, A; Bas, P; Faus-Gabandé, F; Muiños-Alvarez, A; Peyró-Gregori, L; Hernández-Martínez, H; Saez, A; Sánchez, A; López-Navas, A; Ramirez, P; Parrilla, P. Nursing Students know ledge about organ donation and transplantation: a spanish multicenter study. *Transplantation Proceedings*. 2019;9(51):3008-3011.

Martinez Alarcon, L; Bertran Noguera, C; Ramón Gutiérrez, P. Confidence perception on primary care physicians correlates to the attitude toward donation and organ transplantation. *Multicenter Study of medical and nursing spanish students. Transplantation*. 2019.

Gállego-Diéguez J. [Descriptive analysis of training in community Health engagement in Spain]. *Gac Sanit*. 2019 Jul 3. pii: S0213-9111(19)30147-5. doi:10.1016/j.gaceta.2019.05.004. [Epub ahead of print] Spanish. PubMed PMID: 31279506.

Pere Soler-Maso; Bernat Carles Serda Ferrer*; Anna Planas-Llado. Health promotion and students' wellbeing in secondary schools in Catalonia. *Health Education Journal*. 2019;1-11

Books

Juvinyà, D. Pilares de la promoción de la salud 30 años después de Ottawa. *Càtedra de Promoció de la Salut i Documenta Universitària*. Girona. 2019

Suñer Soler, R. La comunicació centrada en la persona en el àmbit de la salut. *Comunicació, llenguatge i salut /*

Comunicación, lenguaje y salud Estratègies lingüístiques per millorar la comunicació amb el pacient / Estrategias lingüísticas para mejorar la comunicación con el paciente. 2019.

Juvinyà, D; Batlle, P; Bonmatí, A; Vilanova M. Shangai 2016 in the Mediterranean countries. Càtedra de Promoció de la Salut i Documenta Universitaria Girona. 2019.

Rosa Suñer Soler; Albert Granero Lázaro; Alexandra Pascual Garcia; Pere Dalmau Llorca; Miriam Broncano Bolzoni; Elena Olabarrieta Zara. Anàlisis de l'entorn infermer en l'àmbit de la salut

Grants

Project: Redes de solidaridad con impacto en los procesos de recuperación de mujeres víctimas de violencia de género

Funding agency: Ministeri de Ciència, Innovació i Universitats - MCIU

Duration: 01/01/2019 – 31/12/2021

Coordinator: Patricia Melgar Alcantud

Principal Investigator: Patricia Melgar Alcantud

Project: EFA019/15. Prospectiva transfronteriza sanitaria y social / Prospective transfrontalière sanitaire et sociale. ProspecTasos

Funding agency: European Commission

Duration: 01/09/2016 - 31/08/2019 Start of prolongation:

01/09/2019 Final prolongation: 31/08/2020

Coordinator: Yves Gilbert

Principal Investigator: Anna Planas Llado

Project: Qualitat de vida i promoció de la salut

Funding agency: University of Girona (UdG)

Duration: 30/04/2019 - 20/11/2019

Coordinator: Dolors Juvinyà Canal

Principal Investigator: Dolors Juvinyà Canal

Project: El sentido de la coherencia en cuidadores de pacientes con demencia puede reducir los costes asistenciales

Funding agency: Instituto de Salud Carlos III

Duration: 01/01/2018 - 31/12/2020

Coordinator: Oriol Turro Garriga

Principal Investigator: Oriol Turro Garriga

Project: Salut i apoderament de les persones

Funding agency: University of Girona (UdG)

Duration: 01/01/2016 - 31/12/2018 Start of prolongation:

01/01/2019 Final prolongation: 31/05/2019

Coordinator: Dolors Juvinyà Canal, Carme Bertran Noguer

Principal Investigator: Dolors Juvinyà Canal, Carme Bertran

Noguer

Membership of collaborative research networks (National & International)

Membership of The Global Working Group on Salutogenesis (GWG-SAL). International Union on Health Promotion and Education.

Membership of International Health Promotion Hospitals and Health Center.

Thesis

Title: Disseny, validació i posada en pràctica d'un instrument per a mesurar els coneixements teòrics dels professionals sanitaris en la mesura de la pressió arterial: qüestionari ARC

Student: Mar Serrat Costa

Director: Carme Bertran Noguer, Wifredo Ricart Engel i Gabriel Coll de Tuero

University: University of Girona (UdG)

Faculty/School: Nursing faculty

Date: 2019

Title: La salud de las mujeres desde la perspectiva de los determinantes sociales

Student: Àngels López Sánchez

Director: Carme Bertran Noguer i Wifredo Ricart Engel

University: University of Girona (UdG)

Faculty/School: Nursing faculty

Date: 2019

Awards

Title: Health recognize: Medalla Josep Trueta al Mèrit Sanitari to Dolors Juvinyà

Institution: Government of Catalonia

Awardee/s: Josep Trueta Medals

Date: 29/11/2019

Health psychology

University of Girona

Recognised as a consolidated research group – 2017 SGR 98

KEYWORDS: **Health Psychology. Risk behavior.**

Group members

Principal Investigator

Montserrat Planes and M. Eugènia Gras

Established Researchers

Sílvia Font-Mayolas

Armand Grau

Maria Aymerich

Josefina Patiño

Mònica Cunill

Olga Hernández

Post-doctoral Researchers

Natàlia Cebrià

Laura Fàbregas

Anna Salamó

Anna Belén Gómez

Francesc Prat

Overview

The research group on health Psychology was founded at the UdG in 1994. In the first stage of its development, its studies focused on analysing factors influencing risk and prevention behaviours in the spheres of sexuality and driving. The range of subjects was later expanded by incorporating drug use, pain, stress and burn-out, aging and death, and mourning.

The group's researchers come from different fields of knowledge within the subjects of Psychology, Nursing and Medicine, and their research is interdisciplinary in nature.

The members of the group teach on the undergraduate and Master's degree programmes in their fields. One of the main tasks of the group's activity is the training of new researchers.

The research group has received recognition from the Catalan Autonomous Government by the following means and calls: - Recognized as a Consolidated Research Group by the Catalan Autonomous Government in the 2014-2016 call. Call No.: 2014 SGR 322. - Recognized as a Consolidated Research Group by the Catalan Autonomous Government in the 2009-2013 call. Call No.: 2009 SGR 618.

The group has also implemented knowledge transfer actions for public and private institutions in relation to the preparation and evaluation of preventive programmes.

Wherever possible, researchers from the group have disseminated the results of their research through different media.

Research topics

- Risky sexual behaviours.
- Risky behaviours on public roads.
- Substance addiction.
- Stress, pain and quality of life.
- Quality of life during aging.
- Loss and mourning processes.
- Research into health Psychology teaching.

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.

Director: Montserrat Planes & M. Eugenia Gras

University: Universitat de Girona (UdG)

Faculty/School: Education and Psychology

Date: 2019

Publications

Originals

Font-Mayolas, S., Sullman, M.J.M., & Gras, M.E. (2019). Sex and polytobacco use among Spanish and Turkish university students. *International Journal of Environmental Research and Public Health*, 16, 5038. doi: 10.3390/ijerph16245038. PMID: 31835705

Font-Mayolas, S., Hernández, O., Gras, M.E. & Sullman, M.J.M., (2019). Types of polydrug use among Spanish students in health sciences. *Journal of Addiction Nursing*, 30 (2), 108-113. doi: 10.1097/JAN.0000000000000274. PMID: 31162214

Gras, M.E., Font-Mayolas, S., Baltasar, A., Patiño, J., Sullman, M.J.M. & Planes, M. (2019). The Connor-Davidson Resilience Scale (CD-RISC) amongst young Spanish adults. *Clínica y Salud*, doi: org/10.5093/clysa2019a11

Patiño, J., Font-Mayolas, S., Salamó, A., Arboix, M., Sullman, M.J.M., & Gras, M.E. (2019). Predictors of intentions to use cigarettes and electronic cigarettes among high school students. *Journal of Multidisciplinary Healthcare*, 12, 591-599. doi: 10.2147/JMDH.S208031. PMID: 31534341

Books

Patiño, J., Hernández-Serrano, O., Gras, M.E., Planes, M., y Font-Mayolas, S. (2019). Prevención secundaria del consumo de drogas en jóvenes y adolescentes: una revisión. En *Colegio Oficial de Psicólogos. Libro de Capítulos del IV Congreso Nacional de Psicología*. Madrid: Consejo Nacional de la Psicología. ISBN: 978-84-947385-5-5

Thesis

Title: Factors emocionals associats amb la qualitat de vida del pacient en tractament d'hemodiàlisi crònica

Student: Afra Masià PLana

MICELab - Modelling, identification and control engineering

University of Girona

Recognised as a consolidated research group - 2017 SGR 1551

KEYWORDS: Artificial Pancreas, Diabetes Technology, Control Engineering, Artificial Intelligence, Machine Learning.

Group members

Principal Investigator

Josep Vehí

Established Researchers

Joaquim Armengol

Remei Calm

Ningsu Luo

Post-doctoral Researcher

Iván Contreras

Charrise Ramkisoon

Inés Ferrer

Pre-doctoral Researchers

Arthur Bertachi

Silvia Oviedo

Sayyar Ahmad

Lyvia Biaggi

Aleix Beneyto

Alvis Cabrera

Adrià Parcerisas

Ernesto Estremera

Support

Anna C. Comas

Overview

The MICELab group is an interdisciplinary research group of the Institute of Informatics and Applications of the University of Girona involved in national and international research and technology transfer projects. The team is composed of experienced researchers from the control engineering field with expertise in systems and control theory, modelling and control of biomedical systems, computer science, robust and predictive control, machine learning and decision support systems.

The group has extensive experience in the field of diabetes and is one of the leading groups in the development of the artificial pancreas worldwide. Since January 1st, 2018 the group led by Prof. Vehí belongs to the prestigious centre of excellence in diabetes CIBERDEM: "Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas", being one of the few engineering groups of the centre.

Research topics

Diabetes medical devices. Artificial pancreas

The development of algorithms related to the different elements involved in glycemic control loop for the artificial pancreas has

been one of the main research lines over the last years. In it we have developed algorithms to monitor and calibrate the continuous glucose monitors and have designed control systems, with special focus to the rejection of major disturbances such as food or exercise.

- Custom platform: Our Android-based AP platform (jAP) is a multivariable fully automated artificial pancreas. The jAP system stands out for its scalability, allowing the implementation of unihormonal / bihormonal systems and easily integrating additional devices such as physical activity monitors. It is one of the few platforms available internationally.

Fault detection and risk assessment

Within the framework of self-management of diabetes, interval predictive models combined with other methodologies, such as CBR, multivariate statistical control or data mining, have been used to develop tools to detect faults on devices (occlusions, insulin pumps losses, loss of sensitivity of the sensors, etc.), both for types 1 and 2. Risk assessment methods have also been used to assess and to predict the risks that are taken to perform an action.

Artificial Intelligence for Digital Health

Using advanced artificial intelligence algorithms to provide personalized health services, improve user experience, increase

the engagement of patients and move towards integrated health systems. This includes: the development of decision support tools based on machine learning methods to enhance patient safety by anticipating adverse glycaemic events, despite the difficulties of the large intra-individual variability and other factors that affect glycaemic control; development of advanced telemedicine systems and tools for chronic disease management, particularly diabetes and hypertension; and incorporation of prevention and prediction tools in the current systems for managing diabetes.

Publications

Originals

Vehí J, Contreras I, Oviedo S, Biagi L, Bertachi A. Prediction and prevention of hypoglycaemic events in type-1 diabetic patients using machine learning. *Health Informatics J*. 2019 Jun 13;1460458219850682. 31195880

Oviedo S, Contreras I, Quirós C, Giménez M, Conget I, Vehí J. Risk-based postprandial hypoglycemia forecasting using supervised learning. *Int J Med Inform*. 2019 Jun;126:1-8. 31029250

Vehí J, Regincóslern J, Parcerisas A, Calm R, Contreras I. Impact of Use Frequency of a Mobile Diabetes Management App on Blood Glucose Control: Evaluation Study. *JMIR MhealthUhealth*. 2019 Mar 7;7(3):e11933.30843865

Ramkissoon CM, Bertachi A, Beneyto A, Bondia J, Vehí J. Detection and Control of Unannounced Exercise in the Artificial Pancreas Without Additional Physiological Signals. *IEEE J Biomed Health Inform*. 2020 Jan;24(1):259-267. 30763250

Liu C, Vehí J, Avari P, Reddy M, Oliver N, Georgiou P, et al. Long-Term Glucose Forecasting Using a Physiological Model and Deconvolution of the Continuous Glucose Monitoring Signal. *Sensors (Basel)*. 2019 Oct 8;19(19). pii: E4338. 31597288

Oviedo S, Contreras I, Bertachi A, Quirós C, Giménez M, Conget I, et al. Minimizing postprandial hypoglycemia in Type 1 diabetes patients using multiple insulin injections and capillary blood glucose self-monitoring with machine learning techniques. *Comput Methods Programs Biomed*. 2019 Sep;178:175-180.31416546

Grants

Project: HYPOGLYCEMIA MINIMIZER
Funding agency: AGAUR + FEDER, UE
Duration: 01/06/2019 - 31/12/2020

Principal Investigator: Josep Vehí

Project: mSAFE-AP – Solutions for the improvement of efficiency and safety of the artificial pancreas by fault-tolerant multivariable control architectures

Funding agency: MINECO (Spain). DPI2016-78831-C2-2-R.
Duration: 2016-2020

Coordinator: Jorge Bondia

Principal Investigator: Josep Vehí

Project: SOCIALDIABETES, Hack your Diabetes Experience

Funding agency: European Commission (H2020-SMEInst: 768398)

Duration: 2017 - 2019

Coordinator: Víctor Bautista

Principal Investigator: Josep Vehí

Research activity contributions related to clinical activity

NCT03577158 - SAFE-AP: Automatic Control of Blood Glucose Under Announced and Unannounced Exercise (SAFE-AP3)

Membership of collaborative research networks (National & International)

CIBERDEM: "Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas"

Thesis

Title: Novel Methods for Efficacy and Safety in the Artificial Pancreas Intended for Domiciliary Use

Student: Ramkissoon, Charrise Mary

Director: Josep Vehí

University: Universitat de Girona (UdG)

Date: 07/03/2019

Title: Forecasting and decision support for Type 1 Diabetes insulin therapy using machine learning.

Student: Oviedo, Sílvia

Director: Josep Vehí, Ivan Contreras

University: Universitat de Girona (UdG)

Date: 09/04/2019

Title: Development and validation of strategies to mitigate the risk of hypoglycemic events in type 1 diabetes mellitus

Student: Hirata Bertachi, Arthur

Director: Ningsu Luo, Josep Vehí
University: Universitat de Girona (UdG)
Date: 08/07/2019

Title: Condition Assessment of Patients with Type Diabetes Using Compositional Data Analysis

Student: Biagi, Lyvia

Director: Universitat de Girona (UdG)

Date: 09/07/2019

Collaborations

- Hospital Clínic Universitari de Barcelona
- Hospital Sant Joan de Déu
- Hospital Clínic Universitari de Valencia
- Universitat Politècnica de València
- Università degli Studi di Padova
- Imperial College London
- CONICET - U. Nacional de La Plata

Protein engineering

University of Girona

Recognised as a consolidated research group - 2017SGR238

KEYWORDS: **Cancer**, **Proteinopathies**

Group members

Principal Investigators

Antoni Benito and Marc Ribó

Established Researchers

Maria Vilanova

Jessica Castro

Post-doctoral Researchers

Marlon Bravo

Alex Romero

Technicians

Imma Guardiola

Overview

Our research group is interested in the development of new effective antitumor drugs and in the study of protein oligomerization processes that are linked to proteinopathies. Specifically, we are developing new antitumor drugs based on nuclear-directed ribonucleases, on apoptin and on organometallic compounds of copper, ruthenium, manganese and iron. The protein cytotoxic drugs developed here are non-mutagenic compounds that exert their cytotoxic action on different targets that attack the malignant phenotype at multiple levels. TDP43 is associated with the amyotrophic lateral sclerosis (ALS) and with the frontotemporal lobar degeneration (FTLD), which constitute the third more important neurodegenerative disease. The use of inteins to selectively isotopically label different internal domains of the proteinopathic TDP43 protein allows studying the molecular determinants involved in its aggregation as well as the interactions to other cellular partners related to its function.

Research topics

- Development of new antitumor drugs based on proteins that target RNA in the cell nucleus
- Development of new antitumor drugs based on the viral apoptosis-inducing protein apoptin
- Development of drug delivery systems for antitumor proteins based on the vault structure
- Characterization of the molecular determinants of aggregation of TDP43 by isotopic labeling of internal sequences using intein methodology

Publications

Reviews

Alejandro Romero-Casañas, Verónica Gordo, Jessica Castro, Marc Ribó. (2020) Protein Splicing: From the Foundations to the Development of Biotechnological Applications. Methods of Molecular Biology 2133:15-29. https://doi.org/10.1007/978-1-0716-0434-2_2. PMID: 32144661

Grants

Project: Development of an antitumor protein delivery System into ovarian cancer cells using The sub cellular vault REf IDEAS18038BENI

Funding agency: Asociación Española contra el Cáncer

Duration: 01/01/2018 - 28/02/2021

Principal Investigator: Antoni Benito

Project: Pont 2019/13

Funding agency: Universitat de Girona (UdG)

Duration: October 2019 - June 2020

Principal Investigator: Antoni Benito

Statistics and data analysis (GR-EADC)

University of Girona

Grup de recerca en Estadística i Anàlisi de Dades Composicionals (GR-EADC)

Recognised as a consolidated research group - 2017 SGR 656

Compositional and Spatial Data Analysis (COSDA) (Ref: 2017SGR656)

KEYWORDS: **proportions, percentages, multivariate analysis, compositions**

Group members

Principal Investigator

Josep Antoni Martín-Fernández

Pre-doctoral Researchers

Iván Galván

Established Researchers

Marc Comas

Pepus Daunis Estadella

Marina Vives Mestres

M. Glòria Mateu

Vera Pawlowsky

Santiago Thió Fernández

Others

Anna Mota

Overview

Compositional Data Analysis (CoDA) refers to the analysis of compositional data (CoDa), which have been defined historically as random vectors with strictly positive components whose sum is constant (e.g., 100, one, a million). More recently, the term covers all those vectors representing parts of a whole which only carry relative information, thus including not only parts per unit or percentages, but also molar compositions, euros, kg or mg/L.

Typical examples in different fields are: geology (geochemical elements), economy (income/expenditure distribution), medicine (body composition: fat, bone, lean), questionnaire surveys (ipsative data), food industry (food composition: fat, sugar, etc), chemistry (chemical composition), ecology (abundance of different species), paleontology (foraminifera taxa), agriculture (nutrient balance ionomics), sociology (time-use surveys), environmental sciences (soil contamination), health (physical activities), and genetics (genotype frequency). This type of data appears in most applications, and the interest and importance of consistent statistical methods cannot be underestimated.

This hot topic of research has nowadays a broad impact in these fields. However, it took a long time to find a solution to the problem of how to perform a proper statistical analysis

of this type of data, i.e. to solve the problem of the spurious correlation, as it was named by Karl Pearson back in 1897, or the closure problem as called by Felix Chayes in the 1960's. Because standard statistical techniques loose their applicability and classical interpretation when applied to compositional data, new techniques were needed. No theoretically sound solution was proposed until the 1980's, when John Aitchison set forth a consistent theory based on log-ratios. Later developments have shown that the mathematical foundation of a proper statistical analysis for this type of data is based on the definition of a specific geometry on the simplex (the sample space of compositional data). Based on it, is possible to rigorously develop any statistical analysis (cluster analysis, discriminant analysis, factor analysis, regression models, to mention just a few).

This topic has been developed, and is currently extended, by the members of the Research Group on Compositional Data Analysis at the Dept. Informàtica, Matemàtica Aplicada i Estadística (IMAE-UdG) under the projects METHods for COMpositional Data (CODAMET) and COMpositional and Spatial Data Analysis (COSDA). The core of the group belongs to the University of Girona (UdG), and includes members from the Technical University of Catalonia (UPC), and Biomathematics & Statistics Scotland (BioSS).

Research topics

Current multivariate methods for the analysis and modeling of compositional data (CoDa) are the result of more than a century of efforts. K. Pearson already identified the difficulties in the statistical analysis of CoDa at the end of the 19th century. In the decade of the eighties, J. Aitchison presented a clever way for the statistical analysis of CoDa. He stated that the information contained in this type of data is in the ratio of the different parts and, in particular, in the logratios. Besides, he defined the simplex as the sample space for CoDa. The simplex is formed by vectors of positive components with constant sum (1 for proportions, 100 for percentages, one million for ppm). Despite the efforts of J. Aitchison and some of his co-authors, the methods for the CoDa analysis did not have a strong impact in the applied sciences.

In the beginning of the 21st century, as a consequence of the works of the members of UdG's CoDa Research Group, a theoretical consolidation of the compositional methods took place. They established the mathematical and statistical bases according to the geometry of the simplex. Two keys results were responsible for this consolidation: the definition of a composition as an equivalence class of vectors of proportional positive components; and the structure of the simplex as a Euclidean space. This opens the way to the principle of working on coordinates for the analysis of compositions and the identification of the hypotheses of the analysis.

Nowadays, the main challenge that emerges is the diffusion of the compositional methods in other fields of applied science and technology. The current aim of the group activities is to spread and transfer the CoDa methods in other scientific fields and, in particular, in the fields identified as societal challenges: climate change, health, wellness, and food quality. The final objective of the current group research lines is to obtain results by using compositional methods and to transfer them to involved entities, that is, to promote its social and economic impact. This spread of results will be carried out by means of the following activities proposed: organisation of seminars, workshops (CoDaWork), and courses (CoDaCourse); development of statistical packages (CoDaPack and R), and a specific website for CoDa (CoDaWeb); as well as the edition of specialized publications.

Grants

Project: METHods for COMpositional analysis of DATA (CODAMET).

Funding agency: Ministerio de Ciencia, Innovación y Universidades (Ref: RTI2018-095518-B-C21, 2019-2021) €67.800,00.

Duration: 2019 - 2021

Coordinator: José Antonio Martín Fernández, Glòria Mateu Figueras

Principal Investigator: José Antonio Martín Fernández, Glòria Mateu Figueras

Project: Research Group "Compositional and Spatial Data Analysis" (COSDA).

Funding agency: Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR), Generalitat de Catalunya (Ref: 2017SGR656).

Duration: 2017-2020

Coordinator: José Antonio Martín Fernández

Title: Normalització segons edat i sexe del component força de l'escala de Constant de valoració de la funció de l'espallla

Student: Eudald Balcells Díaz

Director: Lluís Puig Verdí i Pepus Daunís i Estadella

University: Universitat Autònoma de Barcelona

Faculty / School: Doctorat de Cirurgia i Ciències Morfològiques. Facultat de Medicina

Date: 18 Setembre de 2019

Membership of collaborative research networks (national & international)

CoDa-Association

Societat Catalana d'Estadística

Societat Catalana de Biologia

Sociedad Española de Biometría

Awards

Title: George Matheron Lecturer Award 2019. Distinction awarded by the International Association for Mathematical Geosciences for outstanding research ability in the field of spatial statistics or mathematical morphology

Awardee/s: Pawłowsky-Glahn, Vera

Collaborations

- Barcelona Supercomputing Center (BSC)
- Instituto de Investigación Biomédica de Bellvitge (IDIBELL)
- Instituto de Investigación del Sida IrsiCaixa
- Eurecat Centro Tecnológico de Cataluña

Statistics, econometrics and health (GRECS)

University of Girona and CIBERESP

Team involved in "Centro de Investigación Biomédica en Red en Epidemiología y Salud Pública" (CIBEResp)
Recognised as a consolidated research group- 2017SGR656



Group members

Principal Investigator

Marc Saez

Established Researchers

Maria Antònia Barceló

Carme Saurina

Germà Coenders

Laura Vall.Ilosera

Lluís Coromina

Gemma Renart

Diego Varga

Laura Serra

Pre-doctoral Researchers

Marta Solans

Álvaro Franquet

Support

Anna Mota

Overview

The Research Group on Statistics, Econometrics and Health (GRECS) is a research group with a multidisciplinary composition, composed mainly of statisticians and epidemiologists. It is a consolidated research group, not only at the national level, through its membership in the CIBER, but also at the regional level. His lines of research are applied as well as methodological. In the first case, epidemiology, both environmental and cancer, and clinical epidemiology occupy a prominent place. Among the topics investigated in the latter are cardiovascular risk factors, amyotrophic lateral sclerosis (ALS) and attention deficit hyperactivity disorder. Our research interests also include more methodological topics such as statistical methods related to mixed models, spatial statistics, survival analysis, Bayesian statistical methods and analysis of compositional data. Lately we are interested in mixed, methodological-applied research lines related to Real World Data, genomics and epigenetics.

Research topics

1. Epidemiology
 - 1.1. Environmental epidemiology
 - 1.2. Clinical epidemiology
 - Cardiovascular risk factors
 - Amyotrophic lateral sclerosis disease
 - Attention deficit hyperactivity disorder
 - 1.3 -. Socioeconomic inequalities in health
 - 1.4 -. Cancer epidemiology
 - 1.5-. Diet and Cancer
 - 1.6 -. Gender violence
2. Real World Data
3. Statistical methods
 - 3.1. Mixed models
 - 3.2. Spatial statistics
 - 3.3.- Spatial misalignment
 - 3.4.- Bayesian methods
4. Health econometrics
 - 4.1 -. Effects of the economic crisis on health
 - 4.2 -. Evaluation of public policies
 - 4.3 -. Evaluation of health technologies

Publications

Originals

Solans M, Romaguera D, Gracia-Lavedan E, Molinuevo A, Benavente Y, Saez M, et al. Adherence to the 2018 WCRF/AICR cancer prevention guidelines and chronic lymphocytic leukemia in the MCC-Spain study. *Cancer Epidemiol* 2020;64:101629.

Rodríguez-Poncelas A, Barceló MA, Saez M, Coll-De-Tuero G. Duration and dosing of proton pump inhibitors associated with high incidence of chronic kidney disease in population-based cohort *PlosOne* 2018; 13(10):e0204231.

Bayó J, Dalfó A, Barceló MA, Saez M, Roca C, Pallozzi J et al. The role first-day readings play in a three-day schedule of self-monitoring home blood pressure based on prognostic data. VAMPAHICA study. *American Journal of Hypertension* 2019.

Munuera-Gifre E, Saez M, Juvinyà-Canals D, Rodríguez-Poncelas A, Barrot-De-La-Puente J, Franch-Nadal J, Romero-Aroca P, Barceló MA, Coll-De-Tuero G. Analysis of the location of retinal lesions in central retinographies of patients with type 2 diabetes. *Acta Ophthalmologica* 2019.

Solans M, Benavente Y, Saez M, Agudo A, Jakszyn P, Naudin S et al. Inflammatory potential of diet and risk of lymphoma in the European Prospective Investigation into Cancer and Nutrition. *European Journal of Nutrition* 2019.

Freixenet J, Renart G, Rialp-Criado A. The impact of managers' global orientation on SME export and economic performance. *Management International Review* 2019; 58(4):571-604.

Blanco-Silvente L, Castells X, Garre-Olmo J, Vilalta-Franch J, Saez M, Barceló MA, Capellá D. Study of the strength of the evidence and the redundancy of the research on pharmacological treatment for Alzheimer's disease: a cumulative meta-analysis and trial sequential analysis. *European Journal of Clinical Pharmacology* 2019; 75(12):1659-1667.

Olmedo-Requena R, González-Donquiles C, Dávila-Batista V, Romaguera D, Castelló A, Molina de la Torre AJ, Amiano P, Dierssen-Sotos T, Guevara M, Fernández-Tardón G, Lozano-Lorca M, Alguacil J, Peiró R, Huerta JM, Gracia-Lavedan E, Aragonés N, Fernández-Villa T, Solans M, Gómez-Acebo I, Castaño-Vinyals G, Kogevinas M, Pollán M, Martín V. Agreement among Mediterranean Diet Pattern Adherence Indexes: MCC-Spain Study. *Nutrients*. 2019;11(3):E488.

Roca-Barceló A, Viñas G, Pla H, Carbó A, Comas R, Izquierdo Á, Pinheiro PS, Vilardell L, Solans M, Marcos-Gragera R. Mortality of women with ductal carcinoma in situ of the breast: a population-based study from the Girona province, Spain (1994-2013). *Clin*

Transl Oncol. 2019; 21(7):891-899.

Maynou-Pujolràs L, Saez M, Coll-De-Tuero G. The effects of copayment in primary health care: evidence from a natural experiment. *European Journal of Health Economics* 2019; 20:1237-1245.

Varga D, Roigé M, Pintó J, Saez M. Assessing the spatial distribution of the biodiversity in a changing temperature pattern. The case of Catalonia, Spain. *International Journal of Environmental Research and Public Health*, 2019; 16:4026.

Saez M, López-Casasnovas G. Assessing the effects on health inequalities of differential exposure and differential susceptibility of air pollution and environmental noise in Barcelona, 2007-2014. *International Journal of Environmental Research and Public Health*, 2019; 16(18):E3470.

Saez M, Barceló MA, Saurina C, Cabrera A, Daponte A. Evaluation of the biases in the studies that assess the effects of the Great Recession on health. A systematic review. *International Journal of Environmental Research and Public Health* 2019; 16(14):E2479.

Ek A, Nyström CD, Chirita-Emandi A, Tur JA, Nordin K, Bouzas C, Argelich E, Martínez A, Frost G, García-Pérez I, Saez M, Paul C, Löf M, Nowicka P. A randomized controlled trial for overweight and obesity in preschoolers: the More and Less Europe study. *BMC Public Health* 2019; 19:945.

Solans M, Coenders G, Marcos-Gragera R, Castelló A, Gràcia-Lavedan E, Benavente Y, Moreno V, Pérez-Gómez B, Amiano P, Fernández-Villa T, Guevara M, Gómez-Acebo I, Fernández-Tardón G, Vanaclocha-Espi M, Chirlaque Md, Capelo R, Barrios R, Aragonés N, Molinuevo A, Vitelli-Storelli F, Castilla J, Dierssen-Sotos T, Castaño-Vinyals G, Kogevinas M, Pollán M, Saez M. Compositional analysis of dietary patterns. *Statistical Methods in Medical Research* 2019; 28(9):2834-2847.

Coll-De-Tuero G, Comas-Cufí M, Rodríguez-Poncelas A, Barrot J, Blanch J, Figa A, Barceló MA, Saez M. Prognostic value of the estimated glomerular filtration rate decline in hypertensive patients without chronic kidney disease. *American Journal of Hypertension* 2019; 32(9):890-899.

Díaz J, López-Bueno JA, Saez M, Mirón IJ, Luna Y, Sánchez-Martínez G, Carmona R, Barceló MA, Linares C. Will there be cold-related mortality in Spain over the 2012-2050 and 2051-2011 time horizons despite the increase in temperatures as a consequence of climate change? *Environmental Research* 2019; 176:108557.

Solans M, Benavente Y, Saez M, Agudo A, Ferrari P, Saberi-

Hosnijeh F, Noh H, Freisling H, Naudin S, Besson C, Mahamat-Saleh Y, Boutron-Ruault MC, Kühn T, Kaaks R, Boeing H, Lasheras C, Rodríguez-Barranco M, Amiano P, Huerta JM, Barricarte A, Schmidt JA, Vineis P, Ribol E, Trichopoulou A, Bamia C, Peppas E, Masala G, Agnoli C, Tumino R, Sacerdote C, Panico S, Skeie G, Weiderpass E, Jerkeman M, Ericson U, Späth F, Nilsson LM, Dahm CC, Overvad K, Bolvig AK, Tjønneland A, De-Sanjosé S, Buckland G, Vermeulen R, Nieters A, Casabonne D. Adherence to the Mediterranean diet and lymphoma risk in the European prospective investigation into cancer and nutrition. *International Journal of Cancer* 2019; 145:122-131.

Paz MA, Farrerons M, Saez M, Saurina C, García-Pinto M, Castro S, Sobrino J, Coll-De-Tuero G. Practical application of the ATOM study: treatment efficacy of antihypertensive drugs in monotherapy or combination (ATOM metaanalysis according to PRISMA statement); tables for the use of antihypertensive drugs in monotherapy or combination. *Medicine* 2019; 98(15):e15010.

Coll-De-Tuero G, Saez M, Rodríguez-Poncelas A, Bayó-Llibre J, Beltrán-Vilella M, Reyes-Negre C, Dalfó-Baqué A, Barceló MA. What is the optimal cut-off threshold when self-monitoring blood pressure at home? A cohort study according to STROBE statement. *Medicine* 2019; 98(1):e14817.

Díaz J, Saez M, Carmona R, Mirón IJ, Barceló MA, Luna Y, Linares C. Mortality attributable to high temperatures over the 2021-2050 and 2051-2100 time horizons in Spain: adaptation and economic estimate. *Environmental Research* 2019; 172:475-485.

Solans M, Fabrega A, Morea D, Auñón-Sanz C, Roncero JM, Blanco A, Kelleher N, Buch J, Saez M, Marcos-Gragera R. Population-based incidence of lymphoid neoplasms: twenty years of epidemiological data in the Girona province, Spain. *Cancer Epidemiology* 2019; 58:8-11.

Saez M, Vidiella-Martin J, López-Casasnovas G. Impact of the great recession on self-perceived health in Spain. A longitudinal study with individual data. *BMJ Open* 2019; 9:e023258.

Books

Povedano M, García-Redondo A, Calvo AC, Vizán P, Barceló MA, Milián E, Landers J, Bendotti C, Al-Chalabi A, Gallo V, Azzouz M, López-De-Munain A, Osta R, Bosch F. *Genética y ELA. Implicaciones y retos en el conocimiento, diagnóstico y manejo de la enfermedad. Genetics & ALS. Implications and challenges in knowledge, diagnosis and disease management.* Madrid: Fundación Luzón, Editorial Centro de Estudios Ramón Areces, Fundación Ramón Areces, 2019. Depósito Legal: M-7284-2019.

Barceló MA, Renart G, Coenders G, Saez M, Vall-Lloera L, Saurina C, Escaramís G, Coromina LI, Serra L, Arroyo E.

Estadística i Econometria amb R Studio. Girona: Documenta Universitària 2019. ISBN: 978-84-9984-465-7, Depósito Legal: GI-334-2019.

Membership of collaborative research networks (national & international)

Centro de Investigación Biomédica en Red en Epidemiología y Salud Pública (CIBER CB06/02/1002). GRECS main researcher: Marc Saez (2007-...).

Acciones de dinamización 'Redes de Excelencia', Convocatoria 2016, Red Temática BIA2016-81749-REDT, Programa Estatal de Investigación Científica y Técnica de Excelencia, Subprograma Estatal de Generación del Conocimiento, Ministerio de Economía y Competitividad, Gobierno de España 'Microclima, habitabilidad y salud urbana (HABITA)', Investigador Principal: F. Javier Neila González (Universidad Politécnica de Madrid), Investigador principal del GRECS: Marc Saez (2017-2018). 20000 €.

Grup de Recerca Consolidat 'Compositional and Spatial Data Analysis (COSDA)' 2017 SGR 656, Investigador principal: Josep Antoni Martín Fernández (UdG), Investigador principal del GRECS: Marc Saez (2018-...)

Grup d'Experts en el Canvi Climàtic a Catalunya (GECCC). DURSI, Generalitat de Catalunya; Consell Asesor per al Desenvolupament Sostenible de Catalunya (CADS) del Departament de presidència, Generalitat de Catalunya; Institut d'Estudis Catalans; Fundació Catalana per a la Recerca i Innovació. Main coordinator: Josep Enric Llebot, UAB and CADS, GRECS main researcher: Marc Saez (2006-...).

Thesis

Title: Factors associated with arterial stiffness in a general Mediterranean population in a Mediterranean intermediate cardiovascular risk population.

Student: Lourdes Camós Llovet

Director: Rafael Ramos (IDIAP Jordi Gol) i Maria Garcia (IDIAP Jordi Gol). Tutor: Marc Saez (GRECS, UdG).

Date: 26th february 2019

Title: Áreas naturales protegidas y salud: Creencias, motivaciones y conductas relacionadas con la salud en el Parque Natural y Reserva de la Biosfera del Montseny (Catalunya)

Student: Teresa Romanillos Vidaña

Director: Roser Maneja Zaragoza (ICTA, UAB), Diego Varga (GRECS, UdG). Tutor: Martí Boada (ICTA, UAB).

Date: 5th July 2019

ASSOCIATED GROUPS

Title: Paterns in the etiology of lymphoid neoplasms' (UdG i CIBERESP)

Student: Marta Solans Margalef

Director: Directors: Marc Saez (GRECS, UdG), Rafael Marcos-Gragera (GRECS, UdG)

Date: 14th October 2019



OUTREACH ACTIVITIES

Conferences, courses and seminars

Conferences organized by IDIBGI during 2019:

- January, 22
Stem cell bank: services and clinical applications.
Dr. Anna Veiga
- February, 18
Propuesta de un modelo de formulación de caso psicológico dimensional.
Dr. Álvaro Quiñones
- March, 25
Drosophila as an animal model for the human disease.
Department of Diabetes, Endocrinology and Nutrition, Institut d'Investigació Biomèdica de Girona (IDIBGI)
Dra. Anna Castells
- 27 de maig
TRPV Channels in Physiopathology: Bridging interactomics and drug discovery. Department of Biochemistry and Molecular Biology / Institute of Neurosciences – Universitat Autònoma de Barcelona.
Dr. Àlex Perálvarez

Seminars organized by IDIBGI during 2019:

- February, 25
Jornada de Cirugía Tiroides: Utilización de Hemopatch, realitzada a l'Hospital Dr. Josep Trueta amb les ponències de Dr. Jordi Gironés Vila i Dr. Jose Ignacio Rodríguez Hermosa.
- March, 28
II Jornada d'Immunoteràpia amb el Dr. Joaquim Bosch i la Dra Núria Sala.
- April, 26
Jornada de constitució de l'Agrupació Sectorial del Campus Salut de la Universitat de Girona, realitzat a l'Auditori Ed. Narcís Monturiol, Parc Científic i Tecnològic, Universitat de Girona. Amb l'intervenció del Sr. Joan Cornet, director de l'Observatori de la Salut Digital de la ECHalliance (Dublín). També van intervenir: Sr. David Blánquez, fundador i CEO de MJN Neuroserveis. Sra. Sylvia Miàs, psicòloga de la Fundació Oncolliga Girona. Dr. Pere Plaja, director d'Innovació i Recerca a la Fundació Salut Empordà.
Dr. Salvador Pedraza, director de l'Institut de Diagnòstic per la Imatge a Girona i investigador principal del Grup de Recerca Imatge Mèdica de l'IDIBGI.
Sr. Pau Batlle, cap de l'àrea de Polítiques i Promoció de la Salut de Dipsalut.

- May, 10
III Jornada Formativa del Comité d'Ètica Assistencial, realitzada a la sala d'actes de l'Hospital Dr. Josep Trueta. Amb les ponències de Eva Miquel Fernández i Laura Servent Batlle.
- July, 3
Posa't al dial En esclerosi múltiple, realitzada a la Sala d'Actes de l'Hospital Santa Caterina. Patrocinador NOVARTIS.
- July, 11
INFODAY H2020. Salut, canvi demogràfic i benestar. Jornada de presentació de la convocatòria 2020, juntament amb la Universitat de Girona (UdG), amb la participació del Sr. Juan Riese (NCP-SC1, ISCIII)
- September, 24
Jornada dia Mundial de la Recerca en Càncer, realitzada a CaixaFòrum Girona i amb les intervencions de: Sra. Pilar Cort, Presidenta de l'AECC – Catalunya contra el Càncer. Sr. Jordi Barretina, director de l'Institut d'Investigació Biomèdica de Girona (IDIBGI). Sra. Maria Pla, Vicerectora de Recerca i de Transferència del Coneixement de la Universitat de Girona (UdG). Diàleg metge – pacient, Sr. Joaquim Bosch, Oncòleg mèdic de l'ICO, Hospital Universitari Dr. Josep Trueta, Investigador IDIBGI i professor associat Facultat de Medicina UdG. La Sra. Gisela Reyes, pacient, i com a moderadora la Sra. Núria Riquelme, periodista.
- September, 27
IV Jornada Catalana d'Actualització en Infectologia Pediàtrica (Infeccions en l'Adolescència), realitzat a l'Aula Magna, Facultat de Medicina i Ciències de la Salut, Universitat Rovira i Virgili de Reus. Comité Organitzador: Dra. Laura Minguell, Dr. Borja Guarch, Dr. Jose Maria Valle i la Dra. Neus Rius. Amb els patrocinis de GSK i Pfizer.
- September, 30
Jornada del Manejo de Acretismo Placentario, realitzada a l'Hospital Josep Trueta i amb la ponència del Dr. Jose Palacios Jaraquemada.
- November, 11
Jornada d'Acte d'entrega de l'Acreditació de la Unitat d'Atenció Integral de la Malaltia Inflamatòria Intestinal del Hospital Dr. Josep Trueta. Patrocinador Abbvie.
- November, 15 & 16
Jornades Gironines del Mediterrani, realitzades a l'Hotel Carlemany de Girona, amb l'acte de benvinguda del Dr. Miquel Carreras, gerent del CatSalut a Girona i el Dr. Lluís Ramió. Amb les ponències de: Dra. May Villar, Ester Quintana, Àlex Rovira, Dr. Bonaventura Casanova, Sergi Valverde, Dra. Núria bas, Javier De Oca, Fabio Pellegrini, Rafael Maldonado, Cristina Auger, Araceli Segarra, Georgina Arrambide, Dra. Thais Armangué, Dra. Yolanda

Higueras i Montse Moharra.

- December, 10

Jornada L'esclerosi múltiple centrada en la persona, realitzada a Sala d'Actes de l'Hospital Santa Caterina de Salt. Amb els patrocinis de NOVARTIS i BAYER.

- December, 12

Sessió interhospitalària d'actualització en esclerosi múltiple, realitzada a l'Hospital Santa Caterina. Amb la ponència del Dr. Héctor Daniel Perkal. Patrocinat per MERCK.

Courses organized by IDIBGI during 2018:

- February, 22 & 23

Curso Práctico de Ecocardiografía Transesofágica, realitzat a l'Hospital Dr. Josep Trueta. Directors del curs, Dr. Marc Vives i Dr. Alberto Hernández i els professors, Carlos Corredor i David Nagore.

- April, 5 & 6

II Edición Curso Básico de Ecografía en Cuidados Intensivos de la sección de cuidados intensivos de la SEDAR, realitzat a l'Hospital Universitari Bellvitge de Barcelona. Amb les ponències de Dr. Alberto Hernández, Dra. Paula Carmona, Dra. Maria Serna, Dr. Unai Bengoetxea, Dr. Xavi Borrat, Dr. Pablo Cuesta, Dr. Duilio González, Dr. David Nagore, Dr. Jordi Mercadal i Dr. Marc Vives.

- April 9 & 10

Colaboración servicios ponencia MET_MasterClass en Cirugía. Dirigit pel Dr. Planellas i el Dr. Codina i realitzat a l'Hospital Josep Trueta de Girona.

- May, 10 & 11

Curso Práctico de Ecocardiografía Transesofágica, realitzada a l'Hospital Univesitari Dr. Josep Trueta de Girona. Director del curs Dr. Marc Vives.

- May, 21

Formación Continuada en Hematología, realitzat a l'Hospital Dr. Josep Trueta – ICO Girona. Patrocinat per ALEXION PHARMA, AMGEN, BOEHRINGER i JANSSEN-CILAG.

- May, 29, 30 & 31

XIX CURSO DE PROCTOLOGIA PARA RESIDENTES DE 3º Y 4º AÑO 2019, realitzat a l'Hospital Universitari Dr. Josep Trueta, amb les intervencions de: Dr. Ferran Gómez i Dra Ester Rovira, Ramon Farrés i Dra. Núria Ortega, Dra. Núria Gomez, Dr. Ander Timoteo, Dra. Elena Salvador i Dr. Eloi Maldonado, Dr. David Julià, Dra. J. Gil i Dr. Pere Planellas i la Dra. Anna Pigem. Patrocinat per MEDTRONIC.

- May, 31

Curs de Tècniques Obstètriques per evitar i afrontar parts difícils,

realitzat a la Universitat de Girona. Amb les ponències de:

GEORGE ATILAKOS, SORTIRIS VIMPLIS, MARIE EL ANTOURY, ILIARA TORRE, MICHAEL DAVID JAMES ELKIN, RAMASAN NAVARATNARAHAI, VINCENT CHUKWUDI UMETIWASI i SUSIE CROWE.

- June, 6

4rt CURS D'ACTUALITZACIÓEN PROCTOLOGIA, realitzat a l'Aula Vermella del pavelló de govern de l'Hospital Dr. Josep Trueta de Girona. Amb les intervencions de: Dr. A. Codina Cazador - Cap de Servei de Cirurgia de l'Hospital Trueta de Girona; Dr. P. Planellas Giné- Cirurgià Unitat Cirurgia Colorectal; Dr. R. Farrés Coll - Cirurgià, Cap de Secció Unitat Cirurgia Colorectal ; Dr. E. Maldonado Marcos – R2 de Cirurgia; Dra. A. Pigem Rodeja - Cirurgiana, Unitat Cirurgia Colorectal HJT ; Dra. O. Delisau Puig – R3 de Cirurgia; Dr. J. GarciaAdámez – R4 de Cirurgia i Dra. J. Gil Garcia – Cirurgiana, Unitat Cirurgia Colorectal. Patrocinat per MEDTRONIC.

- June, 14

Curso Técnicas Laparoscópicas Correctales, realitzat a l'Hospital Dr. Josep Trueta i dirigit pel Dr. Codina Cazador. Patrocinat per Johnson & Johnson.

- September, 19 & 20

IX Curso de Enfermedades Genéticas Cardíacas, realitzat a La Fontana d'Or de Girona i dirigit pels Dr. Ramon Brugada, Dr. Ignacio Fernández Lozano i Pablo García – Pavía. Amb els patrocinis de: Medtronic, Biotronik, Amicus, Alnylam, Pfizer, Sanofi, Takeda, Boston Scientific i Abbott.

- October, 25

Técnicas Laparoscópicas Correctales, dirigit pel Dr. Codina i realitzat a l'Hospital Universitari Josep Trueta de Girona. Amb el patrocini de Johnson & Johnson.

- November, 14 & 15

1er Curso de Actualización en Cirugía Esófago-Gástrica Laparoscópica, dirigit pel Dr. Codina Cazador i realitzat a l'Hospital Universitari Josep Trueta de Girona. Amb el patrocini de Johnson & Johnson.

- November, 26 & 27

Colaboración servicios ponencia MET_MasterClass en Cirugía. Dirigit pel Dr. Planellas i el Dr. Codina i realitzat a l'Hospital Josep Trueta de Girona.

- November, 28 & 29

Colaboración servicios ponencia MET_MasterClass en Cirugía. Dirigit pel Dr. Planellas i el Dr. Codina i realitzat a l'Hospital Josep Trueta de Girona.

- December, 3 & 4

Colaboración servicios ponencia MET_MasterClass en Cirugía. Dirigit per a: Dr. Planellas i el Dr. Codina i realitzat a l'Hospital Josep Trueta de Girona.

Visits

- January, 17
KONIG: Mr. Marc Parals and Mr. Xavier Bou visited IDIBGI.

- January, 23
Friselva & Biology students visited IDIBGI

- January, 25
Helga Noell & Students

- January, 29
Coral grup de Gospel

- February, 6
Enduro Salinas

- February, 22
Creperia Vasarely Center

- March, 20
Col·legi Professional d'Infermeres/rs de Girona

- March, 26
La Marató de TV3

- April, 24
La Salle de Santa Coloma de Feners
Galetes Trias

- May, 9
INS Santiago Sobrequés

- May, 15
Jordi LP and Begonya Matesanz

- May, 17
Grup Les Vetes

- June, 5
Espuña Company

- June, 27
Centre escolar Empordà de Roses

- July, 16
Fundació Granés

- July, 19
ING Direct

- September, 24
Club Patinatge Artístic de Girona

- September, 30
Grup Iris

- October, 6
Political group - PdeCAT

- October, 7
Political group - Ciutadans

- October, 10
Fundació Memora

- November, 11
Oncolliga Girona

- December, 11
Farmàcia Pericot

- December, 12
Dones empresàries de Girona

- December, 12
IES Jaume Vicens Vives

- December, 19
Farmàcia Emi

- December, 23
Fundació Bosch Aymerich (FBA)

Winners of the IDIBGI award 2018

The IDIBGI Award for the best final year project of the Nursing School. Undergraduates (ex aequo) was awarded to:

Sara Vives Álvarez – La competencia cultural de les infermeres d'atenció primària envers la comunitat gitana

Aina Torres Florit – Anàlisi de L'efectivitat d'una intervenció de prevenció de suïcidi en estudiants d' infermeria

The IDBGI award for the best final year project of the nursing school master

Joan Olivet Vila – “Eixos de desigualtat en salut i mortalitat durant les onades de calor a la ciutat de Girona”

Judit Noguera Suquet - “Habilitats per la vida, sentit de coherència i estils de vida de les persones amb prediabetis des de la perspectiva de desigualtats”

Fundraising

During 2019, the Fundraising department has developed the following actions:

- **Companies:** 110 companies contacted, 46 of them conducted an official visit. Output: 16 new companies -> "Empresaris per la Recerca".

- **Professional bodies:** 26 professional bodies contacted, 9 of them conducted an official visit. Output: 12 solidarity initiatives.

- **Cultural sector:** 14 organizations contacted, 7 of them conducted an official visit in IDIBGI. Output: 3 charity concerts.

- **Mass media:** 5 mass media contacted. New media partners

- **Solidarity initiatives:** 52 people/organizations 38 contacted, + 400 people conducted a visit in IDIBGI. Output: 12 solidarity initiatives.



Public institutions



Media partners



Annexes

Clinical trials & observational studies by area (approved during 2019)

CARDIOLOGY

Observational studies

BAY-RIV-2017-01. Julia Roure Fernandez. "Factores de Riesgo Asociados con la progresión de la Insuficiencia Cardíaca (IC) en pacientes con fibrilación auricular tratados con un anticoagulante oral directo (rivaroxaban)".

RECABA. Maria Emilce Trucco. "Estudio observacional prospectivo de crioblación de las venas pulmonares en pacientes con Fibrilación Auricular (FA) en España. (Estudio post-autorización con dispositivo médico con marcado CE)".

LNC001. Maria Emilce Trucco. "Evaluación de seguridad y comportamiento eléctrico de las sondas INVICTA equipadas con conector DF4".

GENERAL SURGERY

Observational studies

BXU011443. Santiago Lopez-Ben. "Evaluación del resultado de HEMOPATCH: registro de observación prospectivo".

SANLARS. Maria Julia Gil Garcia. "Estudio clínico prospectivo aleatorizado cruzado para evaluar la eficacia de la neuromodulación sacra en el síndrome de resección anterior".

VASCULAR SURGERY

Observational studies

LOCOMOTIVE. Omar Andres Navarro. "LOCOMOTIVE ALL COMERS".

DIGESTIVE

Observational studies

PBF-677-3. Xavier Aldegue i Mante. "Ensayo clínico multicéntrico de fase IIa (prueba de concepto) aleatorizado, con doble enmascaramiento y controlado con placebo para evaluar la seguridad y eficacia del tratamiento oral con PBF-677 en pacientes con colitis ulcerosa de leve a moderada".

Clinical trials

PRV-6527-CD2a. Xavier Aldegue i Mante. "A Phase 2a, Multicenter, Randomized, Double-Blind, Placebo-Controlled,

Parallel Study to Evaluate the Efficacy and Safety of Oral PRV-6527 (JNJ-40346527), an Inhibitor of Colony Stimulating Factor-1 Receptor, in Subjects with Moderately to Severely Active Crohn's Disease - PROvention INvestigation in Crohn's Disease (PRINCE)".

I6T-MC-AMBG. Xavier Aldegue i Mante. "A Phase 3, Multicenter, Randomized, Double-Blind, Parallel-Arm, Placebo-Controlled Maintenance Study of Mirikizumab in Patients with Moderately to Severely Active Ulcerative Colitis".

IM011023. Xavier Aldegue i Mante. "A Phase 2 Randomized, Double-Blind, Placebo-Controlled Study of the Safety and Efficacy of BMS-986165 in Subjects with Moderate-to-Severe Crohn's Disease".

CECUM. David Busquets Casals. "Eficacia de los bolos intravenosos de corticoides más tratamiento con corticoides orales en comparación con corticoides orales en monoterapia para el tratamiento de la colitis ulcerosa moderada: ensayo clínico multicéntrico y aleatorizado".

I6T-MC-AMAN. Xavier Aldegue i Mante. "A phase 3, multicenter, randomized, double-blind, parallel, placebo-controlled induction study of mirikizumab in conventional-failed and biologic-failed patients with moderately to severely active ulcerative colitis".

CNT01275CRD3007. Xavier Aldegue i Mante. "Estudio de fase IIIb, multicéntrico, aleatorizado, enmascarado ciego y controlado con fármaco activo para comparar la eficacia y seguridad de ustekinumab frente a adalimumab en el tratamiento de pacientes con enfermedad de Crohn con actividad moderada o grave previamente no tratados con fármacos biológicos".

RPC01-3202. Xavier Aldegue i Mante. "Induction study #2 - a phase 3, multicenter, randomized, double blind, placebo controlled study of oral ozanimod as induction therapy for moderately to severely active crohn's disease".

RCP01-3204. Xavier Aldegue i Mante. "A Phase 3, Multicenter, Open-Label Extension Study of Oral Ozanimod for Moderately to Severely Active Crohn's Disease".

RPC01-3203. Xavier Aldegue i Mante. "A Phase 3, Multicenter, Randomized, Double-Blind, Placebo-Controlled Study of Oral Ozanimod as Maintenance Therapy for Moderately to Severely Active Crohn's Disease".

M14-430. David Busquets Casals. "Estudio multicéntrico aleatorizado, doble ciego y controlado con placebo de mantenimiento y de extensión a largo plazo, para evaluar la eficacia y la seguridad de upadacitinib (ABT-494) en sujetos con enfermedad de Crohn que han finalizado los estudios M14-431 o M14-433".

M14-431. David Busquets Casals. "Estudio de inducción multicéntrico, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia y la seguridad de upadacitinib (ABT-494) en sujetos con enfermedad de Crohn de moderada a grave que han tenido una respuesta insuficiente o intolerancia a un tratamiento biológico"

M14-433. David Busquets Casals. "Estudio de inducción multicéntrico, aleatorizado, doble ciego y controlado con placebo para evaluar la eficacia y la seguridad de upadacitinib (ABT-494) en sujetos con enfermedad de Crohn de moderada a grave que han tenido una respuesta insuficiente o intolerancia a un tratamiento biológico"

CHI-DIP-2016-01. Xavier Aldegue i Mante. "Efecto del dipropionato de beclometasona (DPB) en los niveles de calprotectina fecal en pacientes con colitis ulcerosa clínicamente inactiva con riesgo de recaída. Estudio BeCalCU"

ENDOCRINOLOGY

Observational Studies

SED1. Wifredo Ricart Engel. "Registro Nacional de Pacientes con Diabetes tipo 1"

TED-R13-002. Silvia Mauri Roca. "A prospective, multi-center registry for patients with short bowel syndrome"

Clinical trials

GL-GLAT1-3001. Eduardo Esteve Lafuente. "Estudio en fase III, abierto, aleatorizado y multicéntrico, para comparar la inmunogenicidad, eficacia y seguridad de la inyección de insulina glargina de Gan & Lee Pharmaceuticals con Lantus® (inyección de insulina glargina) en sujetos adultos con diabetes mellitus tipo 1"

CLINICAL HEMATOLOGY

Observational studies

FMS-ITK-2016-01. Miquel Sagües Serrano. "Estudio observacional prospectivo para evaluar la precocidad, estabilidad y profundidad de la respuesta molecular en pacientes recién diagnosticados de leucemia mieloide crónica en fase crónica (LMC-FC) tratados con inhibidores de la actividad tirosina-quinasa (ITK) como tratamiento de primera línea en la práctica clínica. Estudio relmc-nova"

1203-GITCG. Raquel Guardado Sánchez. "INtegratioN of trastuzumab, with or without pertuzumab, into periOperative chemotherApy of HER-2 posiTive stOmach caNcer: the INNOVATION-TRIAL"

CEL-MIE-2018-01. Yolanda González Montes. "Estudio retrospectivo sobre el tratamiento en primera línea del Mieloma Múltiple, en pacientes de nuevo diagnóstico no candidatos a trasplante de 2012 a 2016 según práctica clínica habitual en España"

GS-ES-312-4397. Josep Maria Roncero Vidal. "Evaluación retrospectiva no intervencional posterior a la autorización del uso de idelalisib en pacientes con leucemia linfocítica crónica (LLC) en recaída/refractaria (R/R) en España"

Clinical trials

C16029. Yolanda González Montes. "A Phase 2/3, Randomized, Open-Label Study Comparing Oral Ixazomib/Dexamethasone and Oral Pomalidomide/Dexamethasone in Relapsed and/or Refractory Multiple Myeloma"

G039942. Nicolas Kelleher. "A phase III, multicenter, randomized, double-blind, placebo-controlled trial comparing the efficacy and safety of polatuzumab vedotin in combination with rituximab and chp (R-CHP) versus rituximab and chop (R-CHOP) in previously untreated patients with diffuse large b-cell lymphoma"

54767414MMY3012. Yolanda González Montes. "Ensayo fase 3, randomizado, multicéntrico, para comparar daratumumab intravenoso frente a daratumumab subcutáneo en sujetos con mieloma múltiple en recaída o refractario"

M13-494. Yolanda González Montes. "Estudio fase 3, multicéntrico, aleatorizado y abierto de venetoclax y dexametasona en comparación con pomalidomida y dexametasona en sujetos con mieloma múltiple en recidiva o refractario con t(11;14) positivo"

GEM2017FIT. Yolanda González Montes. "Tratamiento de inducción con bortezomib, melfalán y prednisona (VMP) seguido de lenalidomida y dexametasona (RD) frente a carfilzomib, lenalidomida y dexametasona (KRD) más/menos daratumumab, 18 ciclos, seguido de tratamiento de consolidación y mantenimiento con lenalidomida y daratumumab: un ensayo clínico de fase III, multicéntrico, aleatorizado para pacientes adultos mayores, de entre 65 y 80 años, con buen estado general y mieloma múltiple de nuevo diagnóstico"

STOMATERAPEUTA NURSERY

Observational studies

KISS. Gloria Vaquer Casas. "Estudio clínico observacional postcomercialización, prospectivo e internacional del producto para ostomía Flexima®/Softima 3S®"

Annexes

INTERNAL MEDICINE

Clinical trials

POL7080-011. Jose Maria Sirvent. “Estudio fundamental abierto, multicéntrico, aleatorizado, con control activo y de grupos paralelos para investigar la eficacia, la seguridad, la tolerabilidad y la farmacocinética de la murepavadina combinada con un antibiótico contra pseudomonas frente a dos antibióticos contra pseudomonas en sujetos adultos con neumonía bacteriana asociada al respirador mecánico cuya causa sospechada o confirmada es una infección por Pseudomonasaeruginosa”.

NEFROLOGY

Clinical trials

204837. Jordi Calabia Martínez. “Estudio de fase 3, aleatorizado, doble ciego, con control activo, de grupos paralelos y multicéntrico en participantes en hemodiálisis con anemia causada por nefropatía crónica para evaluar la eficacia, seguridad y farmacocinética de daprodustat administrado tres veces por semana, en comparación con eritropoyetina humana recombinante, después de haber recibido eritropoyetina humana recombinante o sus análogos”

NEUROLOGY

Observational studies

SAN-ALE-2015-03. Lluís Ramio Torrenta. Observational study to evaluate changes in quality of life in patients with relapsing-remitting multiple sclerosis treated with alemtuzumab (Lemtrada)

Clinical trials

CL02-ORY-2001MS. Lluís Ramió Torrenta. “Randomized, double-blind, placebo-controlled, 3-arm, 36 weeks parallel-group study to evaluate the safety and tolerability of ORY-2001 in patients with Relapsing-Remitting Multiple Sclerosis (RRMS) and Secondary Progressive Multiple Sclerosis (SPMS)”

215MS202. Lluís Ramió Torrenta. “A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study in Subjects With Relapsing Multiple Sclerosis to Evaluate the Efficacy and Safety of BIIB033 as an Add-On Therapy to Anti-Inflammatory Disease-Modifying Therapies”

CON-001. Joaquin Serena Leal. “CONVINCE (COlchicine for preventioN of Vascular Inflammation in Non-CardioEmbolic stroke)”

CL2-44819-004. Joaquin Serena Leal. “Ensayo aleatorizado de eficacia y seguridad con S44819 oral tras un accidente isquémico cerebral reciente. Estudio de fase II internacional, multicéntrico, aleatorizado, doble ciego y controlado frente a placebo. Estudio RESTORE BRAIN”

WN29922. Antoni Tuorn Estrada. “Estudio de fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para evaluar la eficacia y seguridad de gantenerumab en pacientes con enfermedad de Alzheimer precoz (de prodrómica a leve)” y los sub-estudios: “Subestudio longitudinal de PET para amiloide asociado a estudio de fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para evaluar la eficacia y seguridad de gantenerumab en pacientes con enfermedad de Alzheimer precoz (de prodrómica a leve)” y “Subestudio exploratorio de PET para TAU asociado a: estudio de fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para evaluar la eficacia y seguridad de gantenerumab en pacientes con enfermedad de Alzheimer precoz (de prodrómica a leve)”

252LH301. Joaquín Serena Leal. “Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Phase 3 Study to Evaluate the Efficacy and Safety of Intravenous BIIB093 (Glibenclamide) for Severe Cerebral Edema following Large Hemispheric”

FMD-TRI-2017-01. Joaquín Serena Leal. “Estudio multicéntrico, aleatorizado, abierto, de grupos paralelos para estudiar la seguridad y no inferioridad de una nueva estrategia terapéutica (polipíldora cardiovascular de Fuster-CNIC-Ferrer) versus tratamiento habitual en la reducción del cLDL y la presión arterial en pacientes con enfermedad cardiovascular aterosclerótica: ensayo APOLO”.

ANAVEX2-73-PD-001. Berta Solano Vila. “A Phase II, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate the Safety, Tolerability, and Efficacy of ANAVEX2-73 for Cognitive Impairment in Parkinson's Disease with Dementia Patients”

MN39158. Lluís Ramió Torrenta. A single arm, open label multicentre extension study to evaluate the effectiveness and safety of ocrelizumab in patients with multiple sclerosis previously enrolled in a F. Hoffman-La Roche sponsored ocrelizumab phase IIIb/IV clinical trial. promotor F. Hoffmann-la Roche”

DROSPAS-1. Lluís Ramió Torrenta. “A phase III, multi-centre, randomised, double-blind, placebo-controlled, parallel-group clinical trial to investigate the efficacy and safety of BX-1 for the symptomatic relief of spasticity in patients with multiple sclerosis”, with the protocol code DroSpas-1”

COMB157G2399. Lluís Ramió Torrenta. “Estudio de extensión abierto, de brazo único y multicéntrico, para evaluar la seguridad, tolerabilidad y eficacia a largo plazo de ofatumumab, en pacientes con esclerosis múltiple que cursa con brotes”.

OFTALMOLOGY

Clinical trials

SHP640-301. Jordi Tarrus Bozal. "A Phase 3, Multi-center, Randomized, Double-Masked Study to Evaluate the Clinical Efficacy and Safety of SHP640 (PVP-Iodine 0.6% and Dexamethasone 0.1%) Ophthalmic Suspension Compared to PVP-Iodine and Placebo in the Treatment of Adenoviral Conjunctivitis"

SHP640-303. Jordi Tarrus Bozal. "A Phase 3, Multi-center, Randomized, Double-Masked Study to Evaluate the Clinical Efficacy and Safety of SHP640 (PVP-Iodine 0.6% and Dexamethasone 0.1%) Ophthalmic Suspension Compared to Placebo in the Treatment of Bacterial Conjunctivitis"

I.2016.010. Teresa Torrent. "Ensayo clínico de fase I/II, multicéntrico, aleatorizado, abierto, de dos brazos de tratamiento, para evaluar la eficacia y la seguridad del colirio de sangre de cordón umbilical en el tratamiento de la queratitis neurotrófica".

MEDICAL ONCOLOGY

Observational study

Health-EpiGEICAM. Joan Brunet Vidal. "Estilos de vida saludables y calidad de vida en mujeres con cáncer de mama"

GEICAM/2016-04. Sonia del Barco Berron. "Estudio observacional retrospectivo de evolución de casos de cáncer de mama en el varón y evaluación del riesgo de recidiva mediante secuenciación genética"

EXPRESSION VI. Pilar Barretina Ginesta. "Caroline meets HANNA – Holistic Analysis of Longterm-survival with Ovarian Cancer"

RING GECP 17/03. Joaquim Bosch Barrera. "Investigación de la mutación t790m en sangre mediante diferentes metodologías"

TESEO. Rut Porta Balanya. "Registry of thrombosis and neoplasia of seom/estudio epidemiológico observacional descriptivo sobre la trombosis asociada al cáncer: registro de trombosis y neoplasias de la SEOM"

ML40141. Pilar Barretina Ginesta. "Estudio observacional retrospectivo para evaluar las estrategias de tratamiento en práctica clínica y la evolución clínica de los pacientes con cáncer de ovario avanzado en España: estudio ovoc (evaluación objetiva del cáncer de ovario)"

Clinical studies

MITO-23. Pilar Barretina Ginesta. "Estudio en fase III aleatorizado

sobre trabectedina (ET 743) frente a la quimioterapia elegida por el clínico en pacientes con cáncer ovárico, peritoneal primario o tubárico con fenotipo de mutación en BRCA o BRCAness"

3475-671. Joaquim Bosch Barrera. "Ensayo de fase iii, aleatorizado y doble ciego de quimioterapia doble con platino +/- pembrolizumab (MK-3475) como tratamiento neoadyuvante/adyuvante en participantes con cáncer de pulmón no microcítico (CPNM) en estadio IIB O IIIA resecable (KEYNOTE-671)"

R2810-ONC-1676/GOG-3016. Pilar Barretina Ginesta. "An open-label, randomized, phase 3 clinical trial of regn2810 versus therapy of investigator's choice chemotherapy in recurrent or metastatic platinumrefractory cervical carcinoma"

EMR100070-005. Joaquim Bosch Barrera. "A Phase III, open-label, multicenter trial of avelumab (MSB0010718C) versus platinum based doublet as a first line treatment of recurrent or Stage IV PD L1+ non-small-cell lung cancer"

B9991001. Nuria Sala. "A phase 3, Multicenter, Multinational, Randomized, Open-Label, Parallel-ARM study of avelumab* (MSB0010718C) plus best supportive care versus best supportive care alone as a maintenance treatment in patients with locally advanced or metastatic urothelial cancer whose disease did not progress after completion of first-line platinum-containing chemotherapy".

GEINO 1602. Sonia del Barco Berron. "Phase Ib/II Multicentric Study Combining Glasdegib with temozolomide in patients with newly diagnosed Glioblastoma, safety and preliminary efficacy for the combination"

D0816C00020. Pilar Barretina Ginesta. "OPINION - A Phase IIIb, Single-arm, Open-label Multicentre Study Clinical Trial of Olaparib Maintenance Monotherapy in Platinum Sensitive Relapsed non- Germline BRCA Mutated Ovarian Cancer Patients who are in Complete or Partial Response Following Platinum based Chemotherapy"

GECP 17/05. Joaquim Bosch Barrera. "Ensayo clínico fase ii, no randomizado en primera línea de atezolizumab en combinación con carboplatino y pemetrexed en pacientes con cáncer de pulmón no microcítico estadio iv con metástasis cerebrales asintomáticas"

GECP 17/02. Joaquim Bosch Barrera. "Ensayo clínico fase ii abierto, multicéntrico, para evaluar la eficacia del retratamiento con pembrolizumab en segunda línea o posteriores, en pacientes con carcinoma de pulmón no microcítico avanzado"

GEMCAD-17-01. Xavier Hernandez Yague. "Estudio aleatorizado de fase II para evaluar la eficacia de FOLFIRI + panitumumab en el tratamiento en segunda línea de pacientes con cáncer colorrectal metastásico RAS no mutado que han recibido FOLFOX + panitumumab en primera línea de tratamiento"

Annexes

TTD-18-01. Xavier Hernandez Yague “Estudio de fase III, aleatorizado, secuencial y abierto, para evaluar la eficacia de FOLFOX + panitumumab seguido por FOLFIRI + bevacizumab (Secuencia 1) frente a FOLFOX + bevacizumab seguido por FOLFIRI + panitumumab (Secuencia 2) en pacientes con cáncer colorrectal metastásico no resecable, RAS nativo, tumor primario en lado izquierdo, no tratado previamente: CR-SEQUENCE”

GECP 17/04. Joaquim Bosch Barrera. “Ensayo clínico Fase II, para evaluar la efectividad de tipifarnib en pacientes con carcinoma de pulmón no microcítico avanzado escamoso con mutación HRAS”

IO102-012 (KN-764). Joaquim Bosch Barrera. “An Open-label, Randomized, Phase I/II Trial Investigating the Safety and Efficacy of IO102 in Combination with Pembrolizumab, with or without Chemotherapy, as First-line Treatment for Patients with Metastatic Non-Small Cell Lung Cancer”

GEM-SELIBORDARA. Yolanda González Montes. “Ensayo abierto, multicéntrico, de fase 2 de selinexor (KPT-330), bortezomib y dosis baja de dexametasona más daratumumab (SELIBORDARA) para el tratamiento de pacientes con mieloma múltiple en recaída y/o refractario”

ENGOT-Cx10/GEICO 68-C/BEAT cc. Pilar Barretina Ginesta. “Estudio aleatorizado fase III de quimioterapia con platino y paclitaxel mas bevacizumab y atezolizumab frente a quimioterapia con platino y paclitaxel mas bevacizumab en el carcinoma de cérvix metastásico (estadio IVB), persistente o recurrente”

CA209-9HX. Nuria Sala González. “PROSTRATEGY: A multi-arm, multi-stage, randomized phase II/III trial of immunotherapy strategies in metastatic hormone-sensitive prostate cancer”

GEOCA./2016-03. Joan Dorca Ribugent. “Estudio de largo seguimiento de pacientes con cáncer de mama incluidos en estudios en estadios precoces del grupo GEICAM”

MIN-002-1801. Sonia del Barco Berron. “A Phase IB Dose Finding Study of the Safety of 2Hydroxyoleic acid sodium salt (2-OHOA) Administered Orally in Combination with Temozolomide and Radiation Therapy (Concurrent Phase) or Temozolomide Alone (Maintenance Phase) in the First Line Treatment of Subjects with Glioblastoma”

ENGOT-OV41/GEICO69-O/ANITA. Pilar Barretina Ginesta. “Ensayo fase III, aleatorizado y doble ciego de quimioterapia basada en platino con o sin atezolizumab, seguida de mantenimiento con niraparib con o sin atezolizumab, en pacientes con cáncer de ovario, de trompa de Falopio o peritoneal recidivante e intervalo libre de tratamiento con platino (ILP) >6 meses”

RADIATION ONCOLOGY

Observational studies

GIC-RAD-2016-01. Maria Aranzazu Eraso. “OPTimizing Irradiation through Molecular Assessment of Lymph Node after primary systemic treatment (OPTIMAL IIa)”.

Clinical trials

IDR-OM-02. Jordi Marruecos. “A pivotal, double-blind, randomized, placebo-controlled, multinational study of sgx942 (DUSQUETIDE) for the treatment of oral mucositis in patients being treated with concomitant of the head and neck chemoradiation for the treatment of squamous cell carcinoma”.

PNEUMOLOGY

Observational studies

HO-16-16447. Marc Bonnin. “Carga de la enfermedad en pacientes con EPOC eosinófilica en España: Estudio observacional multicéntrico”

Clinical trials

INS1007-201. Montserrat Vendrell. “A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multi-Center Study to Assess the Efficacy, Safety and Tolerability, and Pharmacokinetics of INS1007 Administered Once Daily for 24 Weeks in Subjects with Non-Cystic Fibrosis Bronchiectasis - The Willow Study”

PRIMARY CASE

Observational trials

CHI-COR-2017. Jose Paredes Saura. “Estudio observacional transversal para Caracterizar La EPOC grAve en España”

RHEUMATOLOGIY

Observational studies

GP15-501. Patricia Reyner. “Estudio observacional de cohortes multicéntrico y prospectivo para evaluar la seguridad y efectividad en la práctica clínica real de Erelzi™, un biosimilar de etanercept (COMPACT)”

UROLOGY

Clinical trials

ALLN-177-301. Josep Comet-Batlle. "Estudio de fase III, randomizado y controlado con placebo para evaluar la seguridad y la eficacia de ALLN-177 en pacientes con hiperoxaluria entérica"

Lectures, Communications & Posters

Cardiovascular Genetics

COMMUNICATIONS

Authors (by signature order): Cortada, E., Serradesanferm, R., Riuró, H., Brugada, R., and Vergés, M.
Title: Trafficking and membrane dynamics of the sodium channel $\beta 2$ subunit.
Congress: II Jornades d'Investigadors Predoctorals de la UdG
Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): P. Jorda, A. Fernandez-Valledor, O. Campuzano, S. Prat, A. Garcia-Alvarez, L. Mont, M. Sitges, R. Brugada, J. Brugada, E. Arbelo.
Title: Challenges in preventing sudden cardiac death. The importance of familial background, genetic profiling and follow-up in specialised units
Congress: ESC Heart Failure 2019
Location: Athens (Greece)
Date: 2019

Authors (by signature order): P. Jorda, A. Fernandez-Valledor, E. Torrecilla, E. Arbelo, O. Campuzano, F. Perez-Villa, L. Mont, J. Brugada, R. Brugada, M. Sitges, A. Garcia-Alvarez.
Title: Ventricular hypertrophy in a family with sarcomeric hypertrophic cardiomyopathy: always of genetic origin?
Congress: ESC Heart Failure 2019
Location: Athens (Greece)
Date: 2019

Authors (by signature order): Rossi L., Cesar S., Fiol V., Campuzano O., Tarrado X., Brugada J., Sarquella-Brugada G.
Title: Cardiac Sympathetic Denervation As Adjuvant Treatment To Prevent Malignant Arrhythmias In Pediatric Population.
Congress: 53rd Annual Meeting for European Paediatric and Congenital Cardiology (AEPC 2019)
Location: Sevilla (Spain)
Date: 2019

Authors (by signature order): Georgia Sarquella-Brugada, Sergi Cesar Díaz, Victori Fiol Ramis, Anna Fernandez Falgueras, Josep Castellà, Ramon Brugada, Josep Brugada, Oscar Campuzano
Title: Session S-AB02 -Sudden Arrhythmic Death: Variants and Mechanisms-. S-AB02-03. Natural and Undetermined Sudden Death: Value of Post-mortem Genetic Investigation
Congress: 40th Annual Heart Rhythm Scientific Sessions
Location: San Francisco (California)
Date: 2019

Authors (by signature order): Pinsach-Abuin M, del Olmo B, Pérez A, Mates J, Zhang J, Merkurjev D, Allegue C, Konovalov S, Sheikh F, Duran M, Brugada R, Garcia-Bassets I, Pagans S
Title: Regulome-seq analysis of genetic variation at cis-regulatory regions of human cardiac genes
Congress: Jornada de Cromatina i Epigenètica
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Martinez-Moreno, R., Selga E., Carreras Gorgals, David., Sarquella Brugada, G., Brugada, R., Pérez G., Scornik, F.
Title: Cardiac sodium current is severely impaired in induced pluripotent stem cell-derived cardiomyocytes from Brugada Syndrome patients.
Congress: VII Congreso Red Española de Canales Iónicos
Location: Cáceres (Spain)
Date: 2019

AWARDS

Authors (by signature order): Rebecca Martínez.
Title: MOB 18 Short - Stay Grant
Congress: Universitat de Girona (UdG)
Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Eric Cortada.
Title: stay at the Department of Pharmacology - University of Michigan Medical School (Prof. Lori L. Isom), financed by "Ajut complementari per la Mobilitat d'investigadors UdG" (MOB) (MOB2019).
 Agency for Management of University and Research Grants (AGAUR): internationalization activity.
Congress: Universitat de Girona (UdG)
Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): L. Ausín, G. Claret, P. Velasco, A. Martínez-Planas, S. César, A. De Francisco, F. Camarasa, pel Grup de Treball de la Mort Sobtada Infantil de la SCP.
Title: Consens entre hospitals catalans per a l'abordatge dels episodis aparentment letals.
Congress: 25 Reunions Anuals de la Societat Catalana de Pediatri _ societat Catalana_
Location: Catalunya
Date: 2019

LECTURES

Authors (by signature order): Sara Pagans
Title: Regulome-seq analysis of genetic variation at cis-regulatory regions of human cardiac genes.
Congress: Jornada de Cromatina i Epigenètica
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Cortada, E., Brugada, R., and Vergés, M.
Title: Trafficking of the cardiac voltage-gated sodium channel is promoted by N-glycosylation of its $\beta 2$ subunit.
Congress: III Jornades d'Investigadors Predoctorals de la UdG

Cardiovascular Genetics

Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): David Carreras
Title: Hormone-induced maturation of human induced pluripotent stem cell-derived cardiomyocytes (iPS-CM) induces an increase in electrically-triggered and beta adrenergic response of calcium release.
Congress: III Jornades d'Investigadors Predoctorals de la UdG
Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Genética de la Cardiopatías Familiares: que sabemos y hacia donde vamos.
Congress: VII Jornada de Docencia e Investigación del CDB
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Autopsia Molecular.
Congress: Jornada Sobre Cardiopatías Familiares y Síndromes Asociados a Muerte Súbita.
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Genética: todo lo que tienes que saber y nadie se atrevió a contarte en media hora.
Congress: IX Curso de Enfermedades Genéticas Cardíacas.
Location: Girona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Tecnología genética en las Cardiopatías Familiares.
Congress: Sesión de Cardiopatías Familiares
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Muerte súbita cardiaca de origen genético. Proyecto MOSCAT
Congress: Sesiones del Institut Clínic Cardiovascular
Location: Barcelona (Catalunya, Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Brugada Syndrome. Campuzano O. Hospital Puerta de Hierro
Congress: II Iberian meeting of Inherited Cardiovascular Diseases.
Location: Madrid (Spain)
Date: 2019

Authors (by signature order): Oscar Campuzano
Title: Update on Genetic Basis of Laminopathies
Congress: LMNA consortium Meeting.

Location: Madrid (Spain)
Date: 2019

POSTERS

Authors (by signature order): Cortada, E., Brugada, R., and Vergés, M.
Title: Trafficking of the cardiac voltage-gated sodium channel is dependent on N-glycosylation of its $\beta 2$ subunit.
Congress: VII Meeting of the Spanish Network of Ionic Channels
Location: Cáceres (Spain)
Date: 2019

Authors (by signature order): Cortada, E, Serradesanferm, R., Brugada, R., and Vergés, M.
Title: Trafficking and membrane dynamics of the sodium channel $\beta 2$ subunit.
Congress: EMBO Workshop on Lysosomes & Metabolism
Location: Naples (Italy)
Date: 2019

Authors (by signature order): David Carreras; Rebecca Martinez-Moreno; Elisabet Selga; Ramon Brugada; Fabiana S. Scornik; Guillermo J. Perez.
Title: β -Adrenergic Pathway is Enhanced by Hormone-Induced Maturation of Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes (iPS-CM)
Congress: 63rd Annual Meeting of Biophysical Society
Location: Baltimore (USA)
Date: 06/2019

Authors (by signature order): David Carreras; Queralto Anglada; Rebecca Martínez-Moreno; Elisabet Selga; Ramon Brugada; Fabiana S. Scornik; Guillermo J. Pérez.
Title: Sarcoplasmic reticulum calcium release in human induced pluripotent stem cell-derived cardiomyocytes (iPS-CM) is enhanced by triiodothyronine and dexamethasone induced maturation.
Congress: VII Reunión de la Red Española de Canales Iónicos
Location: Cáceres (Spain)
Date: 05/2019

Authors (by signature order): Rebecca Martinez-Moreno, Elisabet Selga, David Carreras, Georgia Sarquella-Brugada, Ramon Brugada, Guillermo Perez, Fabiana Scornik.
Title: Cardiac sodium current is severely impaired in induced pluripotent stem cell-derived cardiomyocytes from Brugada syndrome patients.
Congress: -
Location: Baltimore (USA)
Date: 02/2019

Authors (by signature order): Rebecca Martinez-Moreno, Tae Yun Kim, Anatoli Y. Kabakov, Yi Chun Lu, Nil N. Turan, Bum-Rak Choi, Katja Odening, Karim Roder, Gideon Koren.
Title: Molecular Basis of Phenotypic Heterogeneity of Transgenic Rabbit Long QT 2 Colonies.
Congress: Poster in Annual Department of Medicine Research Forum Lecture & Poster Session.
Location: Providence (USA)

Lectures, Communications & Posters

Cardiovascular Genetics

Date: 05/2019

Authors (by signature order): Sarquella-Brugada G., Zambrano M.D., Cesar S., Fiol V., Fernandez-Falgueras A., Brugada R., Brugada J., Campuzano O.

Title: Early Detection of Sudden Infant Death Syndrome: Electrocardiogram, Genetic Analysis and Familial Assessment.

Congress: 53rd Annual Meeting for European Paediatric and Congenital Cardiology (AEPC 2019).

Location: Sevilla

Date: 2019

Authors (by signature order): Sarquella-Brugada G., Cesar S., Fiol V., Fernandez-Falgueras A., Castellà J., Brugada R., Brugada J., Campuzano O.

Title: Natural and Undetermined Sudden Death: Value of Post-mortem Genetic Investigation. Sevilla (España), 2019.

Congress: 53rd Annual Meeting for European Paediatric and Congenital Cardiology (AEPC 2019).

Location: Sevilla

Date: 2019

Authors (by signature order): Cuellar H., Cesar S., Fiol V., Campuzano O., Jordan I., Brugada J., Sarquella-Brugada G.

Title: Channelopathies in drowning or near-drowning events in pediatric population.

Congress: 53rd Annual Meeting for European Paediatric and Congenital Cardiology (AEPC 2019)

Location: Sevilla

Date: 2019

Authors (by signature order): Sarquella-Brugada G., Cesar S., Fiol V., Fernandez-Falgueras A., Castellà J., Brugada R., Brugada J., Campuzano O.

Title: Sudden Arrhythmic Death during Exercise: A Post-mortem Genetic Analysis.

Congress: 53rd Annual Meeting for European Paediatric and Congenital Cardiology (AEPC 2019).

Location: Sevilla

Date: 2019

Authors (by signature order): David Carreras, Queralt Anglada, Rebecca Martinez-Moreno, Elisabet Selga, Ramón Brugada, Fabiana S. Scornik, Guillermo J. Pérez.

Title: Sarcoplasmic reticulum calcium release in human induced pluripotent stem cell-derived cardiomyocytes (iPS-CM) is enhanced by triiodothyronine and dexamethasone-induced maturation.

Congress: -

Location: Cáceres

Date: 05/2019

Research in Vascular Health

POS

Authors (by signature order): Lidia Guzmán Heras, Ruth Martí Lluh, Anna Ponjoan Thans, Marc Comas Cufí, Guiem Frontera Juan, Fernando Rigo Carratalà, Luis García Ortiz, Lourdes Camós Llovet, Lia Alves Cabratosa, Rafel Ramos Blanes.

Title: Predicció del Risc vascular en població de edat avançada del mediterrani. Estudi PROTEO.

Congress: Jornadas Investigación redIAPP 2019.

Location: Instituto de Salud Carlos III (Salón Ernest Lluch) - Madrid

Date: 04/2019

Authors (by signature order): Martina Recalde Marcuard, Cyntia Beatriz Manzano Salgado, Yesika Díaz Rodríguez, Diana Puente Baliarda, M^a del Mar Garcia Gil, Daniel Prieto Alhambra, Talita Duarte Salles.

Title: Validation of cancer diagnoses in electronic health records in Catalonia: preliminary results from the Information System for Research in Primary Care (SIDIAP).

Congress: ICPE

Location: Filadelfia, Pensilvania

Date: 08/2019

Authors (by signature order): M. Malagón, S. Ramió-Pujol, M. Serrano, J. Amoedo, M. Serra-Pagès, A. Bahí, P. Gilabert, L. Torrealba, V. Piñol, M. Pineda, J. Saló, J. Guardiola, M. Navarro, G. Capellà, A. Castells, J. Garcia-Gil, X. Aldeguer, J. Brunet

Title: RAID-LS: A non-invasive tool based on a faecal bacterial signature for Lynch Syndrome surveillance.

Congress: International Society for Gastrointestinal Hereditary Tumours (InSiGHT)

Location: Auckland (NZ)

Date: 2018

Authors (by signature order): Leonardo Méndez Boo, Eduardo Hermosilla Pérez, M^a del Mar Garcia Gil, Talita Duarte Salles.

Title: Quality control of OMOP-CDM implementation in the Information System for Research in Primary Care (SIDIAP) platform.

Congress: European OHDSI Symposium.

Location: Rotterdam

Date: 03/2019

Digestive Diseases and Microbiota Research Group

COMMUNICATIONS

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Serra-Pagès M, Amoedo J, Oliver L, Bahí A, Guardiola J, Navarro M, Piñol V, Pineda M, Capellà G, Castells A, Garcia-Gil LJ, Aldeguer X, Brunet J.

Title: El uso de una nueva firma bacteriana fecal para la personalización del seguimiento del síndrome de Lynch

Congress: Semana de las enfermedades digestivas

Location: Santander (Spain)

Date: June 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: The gut microbiota could compensate enzymatic activity in patients with pancreatic exocrine insufficiency

Congress: 8th Gut Microbiota for Health

Location: Miami (USA)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, Garcia-Gil LJ, Aldeguer X

Title: RAID Dx: The first test based on fecal microbiota to differentiate Irritable Bowel Syndrome from Inflammatory Bowel Diseases.

Congress: 8th Gut Microbiota for Health

Location: Miami (USA)

Date: March 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: La microbiota intestinal podría compensar la actividad enzimática en pacientes con insuficiencia pancreática exocrina

Congress: 22nd Reunión Anual Asociación Española de Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Serra-Pagès M, Park E, Pollock N, Kelly C, Guardiola J, Moss A, Aldeguer X, Garcia-Gil LJ

Title: Diferencias en la microbiota intestinal entre pacientes con infección por *Clostridium difficile* y pacientes con enfermedad inflamatoria intestinal

Congress: 22nd Reunión Anual Asociación Española de Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Serra-Pagès M, Park E, Domènech E, Guardiola J, Moss A, Aldeguer X, Garcia-Gil LJ

Title: Las variaciones geográficas en la microbiota intestinal de una

población americana y otra europea no influyen en los resultados de RAID-Monitor

Congress: 22nd Reunión Anual Asociación Española de Gastroenterología

Location: Madrid (Spain)

Date: March 2019

LECTURES

Authors (by signature order): Oliver L, Ramió-Pujol S, Amoedo J, Malagón M, Serrano M, Bahí A, Lluansí A, Busquets D, Torrealba L, Serra-Pagès M, Aldeguer X, Garcia-Gil J.

Title: A novel grape-derived prebiotic selectively enhances abundance and metabolic activity of butyrate producing bacteria in fecal samples of inflammatory bowel disease and irritable bowel syndrome patients.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, Garcia-Gil LJ, Aldeguer X.

Title: RAID Dx: The first test based on fecal microbiota to confirm Irritable Bowel syndrome diagnosis.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Park E, Serra-Pagès M, Domènech E, Guardiola J, Moss A, Aldeguer X, Garcia-Gil LJ

Title: Intestinal microbiota differs between *Clostridium difficile* infection and Inflammatory Bowel disease patients in American population.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Amoedo J, Oliver L, Bahí A, Miquel-Cusachs JO, Gilabert P, Saló J, Guardiola J, Piñol V, Serra-Pagès M, Castells A, Aldeguer X, Garcia-Gil LJ

Title: La microbiota intestinal podría compensar la actividad enzimática en pacientes con insuficiencia pancreática exocrina

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: La microbiota intestinal podría compensar la actividad

Lectures, Communications & Posters

Digestive Diseases and Microbiota Research Group

enzimática en pacientes con insuficiencia pancreática exocrina

Congress: Semana de las enfermedades digestivas

Location: Cáceres

Date: June 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, Garcia-Gil LJ, Aldeguer X.

Title: RAID-Dx: El primer test para el diagnostico del Síndrome del Intestino Irritable basado en la microbiota fecal

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig-Amiel C, Oliver L, Gilabert P, Clos A, Mañosa M, Cañete F, Serra-Pagès M, Miquel-Cusachs JO, Torrealba L, Busquets D, Sabat M, Domènech E, Guardiola J, Garcia-Gil LJ, Aldeguer X.

Title: RAID-Monitor: Un nuevo método no invasivo para determinar la actividad endoscópica en pacientes con enfermedad inflamatoria intestinal

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

POSTERS

Authors (by signature order): Oliver L, Ramió-Pujol S, Amoedo J, Malagón M, Serrano M, Bahí A, Lluansí A, Busquets D, Torrealba L, Serra-Pagès M, Aldeguer X, Garcia-Gil J.

Title: A novel grape-derived prebiotic selectively enhances abundance and metabolic activity of butyrate producing bacteria in fecal samples of inflammatory bowel disease and irritable bowel syndrome patients.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Park E, Serra-Pagès M, Domènech E, Guardiola J, Moss A, Aldeguer X, Garcia-Gil LJ

Title: Intestinal microbiota differs between Clostridium difficile infection and Inflammatory Bowel disease patients in American population.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Amoedo J, Oliver L, Bahí A, Miquel-Cusachs JO, Gilabert P, Saló J, Guardiola J, Piñol V, Serra-Pagès M, Castells A, Aldeguer X, Garcia-Gil LJ

Title: La microbiota intestinal podría compensar la actividad enzimática en pacientes con insuficiencia pancreática exocrina

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: La microbiota intestinal podría compensar la actividad enzimática en pacientes con insuficiencia pancreática exocrina

Congress: Semana de las enfermedades digestivas

Location: Cáceres

Date: June 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig-Amiel C, Oliver L, Gilabert P, Clos A, Mañosa M, Cañete F, Serra-Pagès M, Miquel-Cusachs JO, Torrealba L, Busquets D, Sabat M, Domènech E, Guardiola J, Garcia-Gil LJ, Aldeguer X.

Title: RAID-Monitor: Un nuevo método no invasivo para determinar la actividad endoscópica en pacientes con enfermedad inflamatoria intestinal

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: The gut microbiota could compensate enzymatic activity in patients with pancreatic exocrine insufficiency

Congress: 8th Gut Microbiota for Health

Location: Miami (USA)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, Garcia-Gil LJ, Aldeguer X

Title: RAID Dx: The first test based on fecal microbiota to differentiate Irritable Bowel Syndrome from Inflammatory Bowel Diseases.

Congress: 8th Gut Microbiota for Health

Location: Miami (USA)

Date: March 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, Garcia-Gil LJ, Aldeguer X

Title: La microbiota intestinal podría compensar la actividad enzimática en pacientes con insuficiencia pancreática exocrina

Congress: 22nd Reunión Anual Asociación Española de Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Serra-Pagès M, Park E, Pollock N, Kelly C, Guardiola J, Moss A, Aldeguer X, Garcia-Gil LJ

Title: Diferencias en la microbiota intestinal entre pacientes con infección por Clostridium difficile y pacientes con enfermedad inflamatoria intestinal

Congress: 22nd Reunión Anual Asociación Española de

Digestive Diseases and Microbiota Research Group

Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Serra-Pagès M, Park E, Domènech E, Guardiola J, Moss A, Aldeguer X, García-Gil LJ

Title: Las variaciones geográficas en la microbiota intestinal de una población americana y otra europea no influyen en los resultados de RAID-Monitor

Congress: 22nd Reunión Anual Asociación Española de

Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Malagón M, Barras B, Ramió-Pujol S, Serrano M, Amoedo J, Serra-Pagès M, García-Gil LJ, Piñol V, Aldeguer X

Title: Estudio del efecto de la dieta en la microbiota intestinal en participantes del programa de cribado del cáncer colorrectal

Congress: 22nd Reunión Anual Asociación Española de

Gastroenterología

Location: Madrid (Spain)

Date: March 2019

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Serra-Pagès M, Amoedo J, Oliver L, Bahí A, Guardiola J, Navarro M, Pineda M, Capellà G, Castells A, García-Gil LJ, Piñol V, Aldeguer X, Brunet J

Title: RAID-LS: a non-invasive tool based on a faecal bacterial signature for lynch syndrome surveillance.

Congress: INSIGHT2019

Location: Auckland (New Zealand)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig-Amiel C, Oliver L, Gilabert P, Clos A, Mañosa M, Cañete F, Serra-Pagès M, Torrealba L, Miquel-Cusachs JO, Busquets JD, Sàbat M, Domènech E, Guardiola J, García-Gil LJ, Aldeguer X

Title: RAID-Monitor: A new non-invasive method to determine endoscòpic activity in Inflammatory Bowel Diseases.

Congress: 14th Congress of European Crohn's and Colitis Organisation (ECCO)

Location: Copenhagen (Denmark)

Date: March 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, García-Gil LJ, Aldeguer X

Title: RAID-Dx: The first test based on fecal microbiota to differentiate Irritable Bowel Syndrome from Inflammatory Bowel Diseases

Congress: 14th Congress of European Crohn's and Colitis Organisation (ECCO)

Location: Copenhagen (Denmark)

Date: March 2019

Authors (by signature order): Oliver L, Fort E, Ramió-Pujol S, Bahí A, Puig C, Llíros M, Serra-Pagès M, García-Gil LJ, Aldeguer X

Title: La microbiota intestinal podria compensar l'activitat enzimàtica en pacients amb insuficiència pancreàtica exocrina.

Congress: 28th Congrés de la societat Catalana de Digestologia

Location: Tarragona (Catalunya, Spain)

Date: January 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènec E, Guardiola J, Mearin F, García-Gil LJ, Aldeguer X

Title: RAID Dx: El primer test per al diagnòstic de la Síndrome de l'Intestí Irritable basat en la microbiota fecal.

Congress: 28th Congrés de la societat Catalana de Digestologia

Location: Tarragona (Catalunya, Spain)

Date: January 2019

Authors (by signature order): Malagon M, Barras B, Ramió-Pujol S, Serrano M, Amoedo J, Serra-Pagès M, García-Gil LJ, Piñol V, Aldeguer X

Title: Estudi de l'efecte de la dieta en la microbiota intestinal en participants del programa de cribratge del càncer colorectal.

Congress: 28th Congrés de la societat Catalana de Digestologia

Location: Tarragona (Catalunya, Spain)

Date: January 2019

ORAL

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, García-Gil LJ, Aldeguer X.

Title: RAID Dx: The first test based on fecal microbiota to confirm Irritable Bowel syndrome diagnosis.

Congress: United European Gastroenterology Week

Location: Barcelona

Date: October 2019

Authors (by signature order): Amoedo J, Ramió-Pujol S, Bahí A, Puig C, Oliver L, Torrealba L, Ibáñez-Sanz G, Clos A, Mañosa M, Cañete F, Marin I, Torres PF, Gilabert P, Miquel-Cusachs JO, Busquets D, Serra-Pagès M, Sàbat M, Serra J, Domènech E, Guardiola J, Mearin F, García-Gil LJ, Aldeguer X.

Title: RAID-Dx: El primer test para el diagnostico del Síndrome del Intestino Irritable basado en la microbiota fecal

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Serra-Pagès M, Amoedo J, Oliver L, Bahí A, Guardiola J, Navarro M, Piñol V, Pineda M, Capellà G, Castells A, García-Gil LJ, Aldeguer X, Brunet J.

Title: El uso de una nueva firma bacteriana fecal para la personalización del seguimiento del síndrome de Lynch

Lectures, Communications & Posters

Digestive Diseases and Microbiota Research Group

Congress: Semana de las enfermedades digestivas

Location: Santander

Date: June 2019

Authors (by signature order): Malagón M, Ramió-Pujol S, Serrano M, Serra-Pagès M, Amoedo J, Oliver L, Bahí A, Guardiola J, Navarro M, Pineda M, Capellà G, Castells A, Garcia-Gil LJ, Piñol V, Aldeguer X, Brunet J

Title: RAID-LS: a non-invasive tool based on a faecal bacterial signature for lynch syndrome surveillance.

Congress: INSIGHT2019

Location: Auckland (New Zealand)

Date: March 2019

Nutrition, Eumetabolism and Health

COMMUNICATIONS

Authors (by signature order): Arnoriaga-Rodríguez, M. et al.

Title: Gut función de genes ClpB bacteriana se asocia con inatke fibra dietética y la disminución de peso corporal

Congress: Comunicación oral presentada en el Congreso ESPEN 41a

Location: Cracovia (Polonia)

Date: 2019

LECTURES

Authors (by signature order): Contreras-Rodríguez O, Arnoriaga M, Blasco G, Biarnés C, Puig J, Rivera-Pinto J, Calle ML, De la Peña-Arteaga V, Soriano-Mas C, Fernandez-Real JM.

Title: Striatl structural covariance in Obesity and its relationship with the with the bacterial microbiome.

Congress: The32nd ECNP Congress

Location: Copenhagen (Denmark)

Date: 2019

Authors (by signature order): Miranda-Olivos R, Contreras-Rodríguez O, Arnoriaga M, Puig J, Blasco G, Biarnés C, Soriano-Mas C, Fernandez-Real JM.

Title: Structural covariance of the hypothalamic regions in obesity.

Congress: The32nd ECNP Congress

Location: Copenhagen (Denmark)

Date: 2019

Authors (by signature order): J. Latorre, J.M. Moreno-Navarrete, M. Buxò, M. Sabater, A. Lluch, F. Comas-Vila, M. Ballester, W. Ricart, F.J. Ortega, J.M. Fernández-Real.

Title: Analysis of long noncoding RNA profiles in human adipose tissue highlights the metabolic relevance of adipogenic linc-GALNTL6-4

Congress: Poster Presentation 55th Annual Meeting of the EASD

Location: Barcelona (Catalunya, Spain)

Date: 2019

Authors (by signature order): -

Title: Dieta, Obesitat i Microbiota

Congress: VII Jornadas Codinucat. III Congrés SCADC

Location: -

Date: 2019

POSTERS

Authors (by signature order): JJ Egozcue, Pawlowsky-Glahn, V., Arnoriaga-Rodríguez M., fillos Fernández-Real JM

Title: Bacteriana y la obesidad

Congress: 3er Taller de Estadística y Computacional Algorithmic. Center de Biología

Location: New York (USA)

Date: 2019

Nutrition, Eumetabolism and Health

Authors (by signature order): Hernández A., Arnoriaga, M. et al.

Title: El síndrome metabólico, la inflamación y la microbiota.

Congress: El XXX Congreso de la SED

Center de Biología

Location: Sevilla (SPain)

Date: 2019

Pediatric Endocrinology

COMMUNICATIONS

Authors (by signature order): Anna Prats-Puig, Maria Camós-

Carreras, Jose-Maria Martínez-Calcerrada, Berta Mas-Parés,

Lourdes Ibáñez, Judit Bassols, Abel Lopez-Bermejo

Title: El grosor de la intima media de la carótida se relaciona preferentemente con la grasa visceral (epicárdica y perirrenal) en niños prepuberales.

Congress: XLI Congreso Sociedad Española de Endocrinología Pediátrica

Location: Madrid (Spain)

Date: 22-24 mayo 2019

Authors (by signature order): Berta Mas-Pares, Silvia Xargay-

Torrent, Esther Lizarraga-Mollinedo, Ariadna Gomez-Vilarrubla,

Lourdes Ibáñez, Abel Lopez-Bermejo, Judit Bassols

Title: La obesidad pregestacional se asocia con un perfil diferencial de metilación de ADN en placenta y cordón umbilical

Congress: XLI Congreso Sociedad Española de Endocrinología Pediátrica

Location: Madrid (Spain)

Date: 22-24 May 2019

Authors (by signature order): Esther Lizarraga-Mollinedo, Gemma Carreras-Badosa, Xavier Remesar, Silvia Xargay-Torrent, Berta Mas-Pares, Anna Prats-Puig, Francis de Zegher, Lourdes Ibáñez, Abel Lopez-Bermejo, Judit Bassols

Title: Dysregulated gene expression profile in visceral adipose tissue of juvenile Wistar rats with catch-up growth: association with fat expansion and metabolic parameters

Congress: 58th Annual Meeting European Society of Pediatric Endocrinology

Location: Vienna (Austria)

Date: 19-21 September 2019

Authors (by signature order): Berta Mas-Pares, Silvia Xargay-Torrent, Ariadna Gomez-Vilarrubla, Esther Lizarraga-Mollinedo, Jose-María Martínez-Calcerrada, Alexandra Bonmatí-Santané, Francis de Zegher, Lourdes Ibáñez, Abel López-Bermejo, Judit Bassols

Title: DNA methylation signatures in placenta and umbilical cord: association with maternal obesity

Congress: 58th Annual Meeting European Society of Pediatric Endocrinology

Location: Vienna (Austria)

Date: 19-21 September 2019

POSTER

Authors (by signature order): Elsa Puerto-Carranza, Silvia Nuevo, Berta Roca, Anna Prats-Puig, Lourdes Ibáñez, Abel Lopez-Bermejo, Judit Bassols

Title: La ratio bilirrubina/triglicéridos predice cambios de hemoglobina glucosilada en niños sanos prepuberales

Congress: XLI Congreso Sociedad Española de Endocrinología Pediátrica

Location: Madrid (Spain)

Lectures, Communications & Posters

Pediatric Endocrinology

Date: 22-24 May 2019

Authors (by signature order): Sílvia Xargay-Torrent, Estefanía Dorado-Ceballos, Esther Lizárraga-Mollinedo, Berta Mas-Parés, Lourdes Ibáñez, Judit Bassols, Abel López-Bermejo
Title: Las concentraciones séricas de IGF-I predicen de forma independiente la tensión arterial en niños aparentemente sanos

Congress: XLI Congreso Sociedad Española de Endocrinología Pediátrica
Location: Madrid (Spain)
Date: 22-24 May 2019

Authors (by signature order): Elsa Puerto-Carranza, Silvia Nuevo, Berta Roca, Silvia Xargay-Torrent, Esther Lizárraga-Mollinedo, Berta Mas-Pares, Francis deZegher, Lourdes Ibáñez, Judit Bassols, Abel López Bermejo
Title: The bilirubin/triglycerides ratio predicts changes over time in glycated hemoglobin in prepubertal healthy children
Congress: 58th Annual Meeting European Society of Pediatric Endocrinology
Location: Vienna (Austria)
Date: 19-21 September 2019

Authors (by signature order): Sílvia Xargay-Torrent, Estefanía Dorado-Ceballos, Anna Benavides-Boixader, Esther Lizárraga-Mollinedo, Berta Mas-Parés, Mercè Montesinos-Costa, Francis de Zegher, Lourdes Ibáñez, Judit Bassols, Abel López-Bermejo
Title: Circulating Insulin-like Growth Factor-I independently predicts blood pressure in apparently healthy children
Congress: 58th Annual Meeting European Society of Pediatric Endocrinology
Location: Vienna (Austria)
Date: 19-21 September 2019

Authors (by signature order): Anna Prats-Puig, Silvia Xargay-Torrent, Maria Camos-Carreras, Gemma Carreras-Badosa, Jose-Maria Martinez-Calcerrada, Elena Riera, Francis deZegher, Lourdes Ibanez, Judit Bassols, Abel Lopez-Bermejo
Title: Carotid intima-media thickness relates rather to epicardial and perirenal fat than total body adiposity in apparently healthy children
Congress: 58th Annual Meeting European Society of Pediatric Endocrinology
Location: Vienna (Austria)
Date: 19-21 September 2019

COMMUNICATIONS

Authors (by signature order): Plana Pes M, Rojas Calvera E, Torrente Nieto A, Mota Casals S, Castellà i Dagà I, Obrador i Legares A, Salvans Sagué M, Marco Segarra E, Espuña Capote X, Buxó Pujolràs M, Torres Scianca DS; Ramos Blanes R, Orriols Martínez R

Respiratory Group

Title: STOP-BANG per a la detecció i discriminació de la gravetat de la síndrome d'apnea obstructiva del son en atenció primària
Congress: XXXVII Diada Pneumològica
Location: Terrassa (Catalunya, Spain)
Date: 4-6 April 2019

Authors (by signature order): Segovia Calero P, Sabater Talaverano G, Calderón López JC, Redondo Martín MJ, Navarrete Piñeiro M, Torrente Nieto A, Plana Pes M, Orriols Martínez R, Paz Bermejo M
Title: Impacto de una intervención combinada en pacientes epoc exacerbadores y sus cuidadores (familia experta).
Congress: XXXVII Diada Pneumològica
Location: Terrassa (Catalunya, Spain)
Date: 4-6 April 2019

Authors (by signature order): Rodríguez Gómez C, Plana Pes M, Rubio Garay M, Baldó Padró X, Sebastián Quetglas F.
Title: Anàlisis retrospectiu dels fenòmens tromboembòlics pulmonars postoperatoris en 547 reseccions majors consecutives per neoplàsia de pulmó sense profilaxis tromboembòlica.
Congress: XXXV Jornada de Cloenda Agrupació de Ciències Mèdiques i de la Salut
Location: Girona (Catalunya, Spain)
Date: 7 June 2019

Authors (by signature order): Torrente Nieto A, Rojas Calvera E, Plana Pes M, Mota Casals S, Obrador i Legares A, Orriols Martínez R.
Title: Nou mètode de cribatge i discriminació de la gravetat de la síndrome d'apnea obstructiva del son en atenció primària.
Congress: XXXV Jornada de Cloenda Agrupació de Ciències Mèdiques i de la Salut
Location: Girona (Catalunya, Spain)
Date: 7 June 2019

Authors (by signature order): Plana Pes M, Rojas Calvera E, Torrente Nieto A, Mota Casals S, Castellà i Dagà I, Obrador i Legares A, Salvans Sagué M, Marco Segarra E, Espuña Capote X, Buxó Pujolràs M, Torres Scianca DS; Ramos Blanes R, Orriols Martínez R.
Title: STOP-BANG: a method to detect obstructive sleep apnea and discriminate for severity in primary care.
Congress: ERS International Congress 2019
Location: Madrid (Spain)
Date: October 2019

LECTURES

Authors (by signature order): M. Vendrell
Title: Can bronchiectasis be a negative prognostic factor for airway diseases?
Congress: ERS course Masterclass in airway disease.
Location: Barcelona (Catalunya, Spain)
Date: 14 June 2019

Respiratory Group

Authors (by signature order): Ramon Orriols
Title: De la unitat al conjunt, i viceversa. XXXVII
Congress: XXXVII Diada Pneumològica.
Location: Terrassa (Catalunya, Spain)
Date: April 2019

Authors (by signature order): Ramon Orriols
Title: XXIII Patología Ocupacional Respiratoria
Congress: Hospital Universitario Vall d'Hebron
Location: Barcelona (Catalunya, Spain)
Date: 4 November 2019

POSTERS

Authors (by signature order): Torrente Nieto A, Rojas Calvera, E, Plana Pes M, Mota Casals S, Castellà i Dagà I, Obrador i Legares A, Salvans Sagué M, Marco Segarra E, Espuña Capote X, Buxó Pujolràs M, Torres Scianca DS; Ramos Blanes R, Orriols Martínez
Title: STOP-BANG como método de detección y discriminación de la gravedad del síndrome de apnea obstructiva del sueño en atención primaria.
Congress: 52º congreso nacional SEPAR
Location: Santiago de Compostela (Spain)
Date: 13-16 June 2019

Authors (by signature order): Segovia Calero P, Sabater Talaverano G, Calderón López JC, Redondo Martín MJ, Navarrete Piñeiro M, Torrente Nieto A, Plana Pes M, Orriols Martínez R, Paz Bermejo M
Title: Impacto de una intervención combinada en pacientes epoc exacerbadores y sus cuidadores (familia experta)
Congress: 52º congreso nacional SEPAR
Location: Santiago de Compostela (Spain)
Date: 13-16 June 2019

Authors (by signature order): Torrente A; Rojas E; Marco E; Mota S; Segovia P; Obrador A; Espuña.
Title: Utilitat de la pulsioximetria nocturna en el diagnòstic de la síndrome d'apnea del son en atenció primària
Congress: XXXVI Diada Pneumològica
Location: Lleida (Catalunya, Spain)
Date: 12-14 April 2018

Authors (by signature order): Ringshausen F, Chalmers JD, Polverino E, Blasi F, De Soyza A, Vendrell M, Goemmine P, Boersma W, Haworth C, Murris-Espin M, Dimakou K, Hill AT, Menendez R, Torres A, Welte T, Wilson R, Elborn S, Aliberti S, Loebinger M
Title: New isolation of non-tuberculous mycobacteria in patients with bronchiectasis - data from the European Bronchiectasis Registry (EMBARC)
Congress: ERS International Congress 2019
Location: Madrid (Spain)
Date: 30 September 2019

Authors (by signature order): Pierre-Régis Burgel, Eva Polverino, Charles Harworth, Marlène Murris-Espin, Katerina Dimakou,

Adam Hill, Michael Loebinger, Rosario Menendez, Antoni Torres, Tobias Welte, Francesco Blasi, Felix Ringshausen, Anthony De Soyza, Montserrat Vendrell, Wim Boersma, Robert Wilson, James D Chalmers, Joseph Stuart Elborn, Stefano Aliberti, Pieter Goeminne
Title: Risk factors for new P. aeruginosa isolation in bronchiectasis- data from the European Bronchiectasis Registry (EMBARC)
Congress: ERS International Congress 2019
Location: Madrid (Spain)
Date: 30 September 2019

Authors (by signature order): Rojas Calvera E, Torrente Nieto A, Plana Pes M, Obrador Lagares A, Torres Scianca DS, Mota Casals S, Castellà Dagà I, Marco Segarra E, Salvans Sagué M, Espuña Capote X, Comas Cufí M, Ramos Blanes R, Orriols Martínez R
Title: Comorbilidad cardiovascular en pacientes con síndrome de apnea-hipoapnea obstructiva del sueño en el ámbito de la medicina primaria
Congress: 53º congreso nacional SEPAR
Location: Sevilla (Spain)
Date: June 2019

Authors (by signature order): Torrente A, Muñoz G, Plana M, Segovia P, Buxó M, Motje M, Redondo M, Vendrell M.
Title: Screening non-tuberculous mycobacteria in patients with bronchiectasis
Congress: European Respiratory Congress
Location: Madrid (Spain)
Date: September 2019

Authors (by signature order): Torrente A, Muñoz G, Plana M, Segovia P, Buxó M, Motje M, Redondo M, Vendrell M.
Title: Cribatge de micobacteris no tuberculosos en pacients amb bronquiectasis
Congress: XXXVII Diada Pneumològica
Location: Terrassa (Catalunya, Spain)
Date: April 2019

Authors (by signature order): Torrente A; Muñoz G; Plana M; Segovia P; Motjé; Vendrell M.
Title: Aïllament de micobacteris no tuberculosos en bronquiectasis. Resultat del cribatge en 20 anys.
Congress: XXXV Jornada de Cloenda Agrupació de Ciències Mèdiques i de la Salut
Location: Girona (Catalunya, Spain)
Date: June 2019

Authors (by signature order): Rodriguez D, Esteban LL, Abad J, Montón C, Vendrell M, Lopez M.
Title: Evaluación segura de los residentes de neumología en Cataluña: Aproximación al marco europeo
Congress: IV Congreso Nacional SEFS (Sociedad Española de Formación sanitaria especializada)
Location: Barcelona (Catalunya, Spain)
Date: November 2019

Cerebrovascular Pathology

COMMUNICATIONS

Authors (by signature order): J. Serena, C. Gubern, Y. Silva, M. Terceño, S. Bashir, E. López-Arias, M. Rodríguez-Pérez, F. Campos, L. Pardo, M. Reina, X. Xifró, J. Castillo and T. Sobrino.
Title: Differential Protein Expression in Symptomatic vs. Asymptomatic Carotid Stenosis: Non-Invasive Identification of Vulnerable Plaque.
Congress: European Stroke Congress
Location: Milan (Italy)
Date: May 2019

Authors (by signature order): M. Alonso de Leciñana, Castellanos M, Ayo O, A. Morales, J. Rodríguez-Antigüedad, M. Millán, J.J. Mengual, J. Serena, J.F. Arenillas, B. Fuentes, F. Purroy, J. Krupinski; The Investigators of the RENISEN Registry. Stroke Project.
Title: Spanish Society of Neurology Stroke Group. Sex Differences in Stroke Features and Outcomes. Evidences from a Large Spanish Cohort Study.
Congress: European Stroke Congress
Location: Milan (Italy)
Date: May 2019

Authors (by signature order): C. Gubern, S. Bashir, L. Pardo, M. Reina, M. Terceño, Y. Silva and J. Serena.
Title: Evaluation Of Circulating miRNA As Potential Biomarkers Of Vulnerable Plaque In Patients With Carotid Stenosis.
Congress: European Stroke Congress
Location: Milan (Italy)
Date: May 2019

Authors (by signature order): S. Bashir, Y. Silva, M. Terceño, L. Pardo, M. Reina, C. Gubern and J. Serena.
Title: Factors Of Progression In Lacunar Infarcts: Can We Improve Their Outcome?
Congress: European Stroke Congress
Location: Milan (Italy)
Date: May 2019

Authors (by signature order): A. Nickel, S. Arlt, C.Z. Simonsen, F. Boutitie, J. Serena, V. Thijs, M. Ebinger, M. Endres, J.B. Fiebach, R. Lemmens, K.W. Muir, N. Nighoghossian, S. Pedraza, C. Gerloff and G. Thomalla.
Title: Lower Rate of Post-Stroke Depression in Participants of Randomized Controlled Wake Up Trial Treated With Alteplase.
Congress: European Stroke Congress
Location: Milan (Italy)
Date: May 2019

Authors (by signature order): Ávila-Gómez P, Vieites-Prado A, Dopico-López A, Bashir S, Fernández-Susavila H, Gubern C, Pérez-Mato M, Rodríguez-Castro E, Iglesias-Rey R, Serena J, Bustamante A, Wellmann S, Montaner J, Hervella P, Castillo J, Campos F.
Title: Cold Stress Protein RBM3 responds to Hypothermia in Ischemic Stroke.
Congress: III Congreso de la Red INVICTUS+

Location: Santiago de Compostela (Spain)

Date: 7-9 October 2019

Authors (by signature order): J. Serena, C. Gubern*, Y. Silva, M. Terceño, S. Bashir, E. López-Arias, M. Rodríguez-Pérez, F. Campos, L. Pardo, M. Reina, X. Xifró, J. Castillo, T. Sobrino.
Title: Differential protein expression in symptomatic vs. Asymptomatic carotid stenosis: non-invasive identification of vulnerable plaque.

Congress: III Congreso de la Red INVICTUS+

Location: Santiago de Compostela (Spain)

Date: 7-9 October 2019

Authors (by signature order): Campo D, de la Riva P, de Arce AM, Purroy F, Fuentes B, Arenillas JF, Krupinski J, Gómez-Choco M, Palomeras E, Martinez M, Martí-Fàbregas J, Castillo J, Ustrell X, Tejada J, Masjuan J, Garcés M, Serena J.
Title: Tratamiento de reperusión en el ictus isquémico agudo por disección espontánea cerebral y cervical: descripción de los resultados de un estudio nacional multicéntrico.
Congress: LXXI Reunión Anual Sociedad Española Neurología
Location: Sevilla (Spain)
Date: 19-23 November 2019

LECTURES

Authors (by signature order): J. Serena
Title: Diagnóstico de la estenosis carotídea.
Congress: LXX Reunión Anual de la Sociedad Española de Neurología: Curso de Experto en Neurosonología.
Location: Alicante (Spain)
Date: 25 October 2019

Authors (by signature order): J. Serena
Title: Enfermedad carotídea.
Congress: XXVI Curso de Enfermedades Cerebrovasculares para médicos residentes de neurología.
Location: Cruces, Barakaldo. Bizkaia (Spain)
Date: 7-9 October 2019

Authors (by signature order): J. Serena
Title: Relació FA-ictus.
Congress: Jornada de presentació de la Ruta assistencial de la fibril·lació auricular a la Regió Sanitària Girona.
Location: Girona (Catalunya, Spain)
Date: 4 October 2019

Authors (by signature order): J. Serena
Title: Actualización científica del FOP en 2018. Evidencias científicas: perspectiva desde Neurología
Congress: Diálogos EPIC: Cierre Percutáneo del Foramen Oval.
Location: Madrid (Spain)
Date: 6-11-2018

Authors (by signature order): J. Serena
Title: Highlights post European Stroke Conference
Congress: Highlights post European Stroke Conference.

Lectures, Communications & Posters

Cerebrovascular Pathology

Location: Barcelona (Catalunya, Spain)

Date: 12 June 2019

Authors (by signature order): J. Serena

Title: Diagnòstic de la MVC i tipus d'ictus.

Congress: 11e Edició Curs d'atenció d'infermeria a la persona afectada de malaltia vascular cerebral.

Location: Barcelona (Catalunya, Spain)

Date: 4 June 2019

Authors (by signature order): J. Serena

Title: Identificació de la placa vulnerable en estenosi caròtida mitjançant biomarcadors en sang perifèrica: aproximació proteòmica.

Congress: Sociedad Catalana de Neurología. Reunión Interhospitalaria Expertos en Patología Cerebrovascular.

Location: Girona (Catalunya, Spain)

Date: 5 April 2019

Authors (by signature order): J. Serena

Title: Actualización Científica del Foramen Oval Permeable: Perspectiva desde Neurología.

Congress: Conferencias Grup de Recerca Biomèdica en Malalties del Cor (GREC) de l'IMIM i el Servei de Cardiologia i Neurologia de l'Hospital del Mar.

Location: Barcelona (Catalunya, Spain)

Date: 22 March 2019

Medical Imaging

COMMUNICATIONS

Authors (by signature order): L. Schlemm^{1,2,3}, A. Kufner⁴

, A.H. Nave^{1,2,3,5}, B. Florent^{6,7}, C. Gerloff⁸, G. Thomalla⁸, C.Z. Simonsen⁹, I. Ford¹⁰, R. Lemmens^{11,12,13}, K.W. Muir¹⁴, N.

Nighoghossian^{15,16}, S. Pedraza¹⁷, M. Ebinger¹⁸, M. Endres¹

Title: Smoking paradox revisited: current smoking does not modify treatment effect of thrombolysis in mri-selected patients with acute ischemic stroke and unknown time of symptom onset

Congress: ESOC 2019

Location: Vienna (Austria)

Date: 12-15 May 2019

Authors (by signature order): Cheng¹, F. Boutitie², A. Wouters³

, J. Fiebach⁴, M. Ebinger⁵, M. Endres⁶, J. Fiehler⁷, V. Thijs⁸, R. Lemmens⁹, K. Muir¹⁰, N. Nighoghossian¹¹, S. Pedraza¹², C.

Simonsen¹³, C. Gerloff¹, G. Thomalla¹;

Title: Signal intensity in fluid-attenuated inversion recovery (flair) and treatment effects in the wakeup trial **Congress:** ESOC 2019

Location: Vienna (Austria)

Date: 12-15 May 2019

LECTURES

Authors (by signature order): B. Domènech-Ximenes, V. Cuba

Camasca, J. Daunis-i-Estadella, S. Pedraza Gutierrez, J.M.

Fernández-Real, J. Puig Alcàntara

Title: Carotid plaque and neurovascular events. Weight loss in obesity, impact on carotid intima media thickness and cardiovascular risk factors: a longitudinal study.

Congress: ESR Congress

Location: Vienna (Austria)

Date: 26 Feb-3 March 2019

Authors (by signature order): B. Domènech-Ximenes

Title: Subependymal venous anatomy evaluation by 3T-MRI in a cohort of neonates

Congress: ESR Congress

Location: Vienna (Austria)

Date: 26 Feb-3 March 2019

Authors (by signature order): G. Carbo¹, L. Valls Masot¹, G.

Sanchez¹, V. Garriga², V. Cheranovskiy³, A. Gimeno⁴, C. V. Nadal¹, A. Maroto¹, S. Pedraza

Title: Acute emphysematous abdomino-pelvic infections

Congress: ESR Congress

Location: Vienna (Austria)

Date: 26 Feb-3 March 2019

Authors (by signature order): Molina Arcas, G. Carbo, G. Laguillo Sala, S. Pedraza

Title: Acute Blunt polytrauma: spectrum of traumatic lesions from head to pelvis using body-CT

Congress: ESR Congress

Location: Vienna (Austria)

Date: 26 Feb-3 March 2019

Medical Imaging

Authors (by signature order): Fiebach , I. Galinovic , F. Boutitie , K. Villringer , B. Cheng , A. Wouters , M. Ebinger , M. Endres , J. Fiehler , V. Thijs , R. Lemmens , K.W. Muir , N. Nighoghossian, C.Z. Simonsen, C. Gerloff , G. Thomalla , S. Pedraza

Title: Vessel occlusion does not modify treatment effect of intravenous alteplase in the wake-up trial

Congress: ESOC 2019

Location: Vienna (Austria)

Date: 12-15 May 2019

Authors (by signature order): Nickel, S. Arlt, C.Z. Simonsen, F. Boutitie, J. Serenar, V. Thijs, M. Ebinger, M. Endres, J.B. Fiebach, R. Lemmens, K.W. Muir, N. Nighoghossian, S. Pedraza, C. Gerloff and G. Thomalla.

Title: Lower rate of post-stroke depression in participants of randomized controlled wake up trial treated with alteplase

Congress: ESOC 2019

Location: Vienna (Austria)

Date: 12-15 May 2019

Authors (by signature order): Galinovic¹ , F. Boutitie² , J. Fiebach¹ , K. Villringer¹ , B. Cheng³ , M. Ebinger⁴ , M. Endres⁵ , J. Fiehler⁶ , I. Ford⁷ , V. Thijs⁸ , R. Lemmens⁹ , K.W. Muir¹⁰ , N. Nighoghossian¹¹ , S. Pedraza¹² , C.Z. Simonsen¹³ , C. Gerloff³ , G. Thomalla³

Title: Outcome of intravenous thrombolysis in infarcts of infratentorial localization in the wake-up trial

Congress: ESOC 2019

Location: Vienna (Austria)

Date: 12-15 May 2019

Neurodegeneration and Neuroinflammation

COMMUNICATIONS

Authors (by signature order): Muñoz-San Martín M, Robles-Cedeño R, Jimenez-Mateos E, Gómez I, Perkal H, Quintana 4, Ramió-Torrentà LI

Title: Expresión diferencial de miRNAs entre pacientes con EM primaria progresiva en función de la presencia de actividad inflamatoria

Congress: LXXI Reunión Anual de la Sociedad Española de Neurología

Location: Sevilla (Spain)

Date: 20-22 November 2019

POSTERS

Authors (by signature order): González del Río M, Merchan Ruiz M

Title: Consumo de cannabis y esclerosis múltiple: estudio exploratorio en la región sanitaria de Girona

Congress: SEDENE

Location: Sevilla (Spain)

Date: 20-22 November 2019

Authors (by signature order): Salavedra-Pont J; Quintana E; Coll-Martinez C; Robles-Cedeño R; Ramió-Torrentà LI; Gich J.

Title: The root cause of memory deficit in Multiple Sclerosis

Congress: 34th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)

Location: Stockholm (Sweden)

Date: 10-14 September 2019

Authors (by signature order): Coll-Martinez C; Quintana E; Salavedra-Pont J; Gómez I; Muñoz San-Martin M; Fernandez Díaz E; García J; Robles-Cedeño R; Villar LM; Ramió-Torrentà LI; Gich J.

Title: Lipid-specific oligoclonal IgM bands and cognition in the early stages of multiple sclerosis

Congress: LXXI Reunión Anual de la Sociedad Española de Neurología

Location: Sevilla (Spain)

Date: 20-22 November 2019

Authors (by signature order): Coll Martinez, C; Salavedra Pont, J; Noguera Carrión, C; Rivero Pagès, M; Quintana Camps, E; Robles Cedeño, R; Ramió Torrentà, LI; Gich Fullà, J

Title: Percepción del déficit cognitivo en pacientes con Esclerosis Múltiple.

Congress: LXXI Reunión Anual de la Sociedad Española de Neurología

Location: Sevilla (Spain)

Date: 20-22 November 2019

Authors (by signature order): Quintana E, Muñoz-San Martín M, Torras S, Robles-Cedeño R, Tomàs-Roig J, Celarain N, Gómez I,

Lectures, Communications & Posters

Neurodegeneration and Neuroinflammation

Perkal H, Ramió-Torrentà LI

Title: A circulating miRNA signature as a potential prognostic biomarker in RIS patients

Congress: 34th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)

Location: Sevilla (Spain)

Date: 10-14 September 2019

Authors (by signature order): Muñoz-San Martín M, Robles-Cedeño R, Tomàs-Roig J, Celarain N, Gómez I, Perkal H, Quintana E, Ramió-Torrentà LI

Title: Differential expression of miRNAs between active and not active primary progressive MS patients

Congress: 34th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)

Location: Stockholm (Sweden)

Date: 10-14 September 2019

Authors (by signature order): Robles Cedeño, R, Quintana Camps E, Faixedas Brunsoms D, Tomé Alonso M, Jurado Pérez R, Oriol Montes J, de Haro Martin LI, Ramió-Torrentà LI

Title: Optimizing time management in a specialized multiple sclerosis unit: experience based on a real-time computerized healthcare process

Congress: 34th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)

Location: Stockholm (Sweden)

Date: 10-14 September 2019

Authors (by signature order): Solano Vila B., Cots Foraster A., Montserrat Roses M.

Title: Can Safinamide help to stabilize dopaminergic treatment in Parkinson disease?

Congress: 2019 International Movement Disorders Society congress

Location: Nice (France)

Date: 22-26 September 2019

Descriptive epidemiology, genetics and cancer prevention

COMMUNICATION

Authors (by signature order): D. Redondo-Sánchez; M.J. Sánchez; M. Rodríguez-Barranco; M.C. Carmona-García; R. Marcos-Gragera; M.A. Luque-Fernández.

Title: Pattern of comorbidities among colorectal cancer patients and impact on treatment and short-term survival.

Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS).

Location: Oviedo (Asturias, Spain)

Date: 3-6 September 2019

Authors (by signature order): A. Ameijide; J. Galceran; M. Chico; A.I. Marcos; R. Marcos-Gragera; M.J. Sánchez; J. Perucha; P. Franch; M.D. Chirlaque.

Title: Estimación de la Incidencia de Cáncer en España, 2019 XXXVIII.

Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS).

Location: Oviedo (Asturias, Spain)

Date: 3-6 September 2019

Authors (by signature order): Trama A; Gatta G; Van Eycken L; Visser O; Chirlaque Lopez MD; Navarro Sanchez C; Marcos-Gragera R; Walsh PM; López-Briones C; Capoccia R.

Title: Improving Registration of Rare Cancers: The Proposal of the Joint Action on Rare Cancers (JARC).

Congress: GRELL Ascension Meeting 2019.

Location: Lisboa (Portugal)

Date: 29-31 May 2019

Authors (by signature order): Pamela Minicozzi; Liesbet Van Eycken; Florence Molinie; Kaire Innos; Marcela Guevara; Rafael Marcos-Gragera; Clara Castro; Elisabetta Rapiti; Alexander Katalinic

Title: Stage I/IIA Breast Cancers: Comorbidity Affects Treatments and Outcomes

Congress: GRELL Ascension Meeting 2019.

Location: Lisboa (Portugal)

Date: 29-31 May 2019

Authors (by signature order): Borrás J.M; Corral J; Galceran J; Marcos-Gragera R; Vilardell L; Sola J; Ameijide A; Carulla M; Cardo X; Izquierdo A; Espinas J.A

Title: From Theory to practise: assessing the use of radiotherapy in population based cancer registries.

Congress: 38th Annual Meeting of the European Society for Radiotherapy and Oncology (ESTRO).

Location: Milan (Italy)

Date: 26-30 March 2019

Descriptive epidemiology, genetics and cancer prevention

Authors (by signature order): Primary Author: Jaume Galceran, Co-author: Rafael Marcos-Gragera
Title: Estimates of Cancer Incidence in Spain, 2019
Congress: NAACCR / IACR Combined Annual Conference 2019
Location: Vancouver (Canada)
Date: 9-13 June 2019

Authors (by signature order): Jaume Galceran; Marià Carulla; Fernando Almela; Matilde Chico; Ana Isabel Marcos; Rafael Marcos-Gragera; María José Sánchez; Josefina Perucha; Paula Franch; Spanish Network of Cancer Registries (REDECAN).
Title: Estimates of Cancer Incidence in Spain 2019
Congress: GRELL Ascension Meeting 2019.
Location: Lisboa (Portugal)
Date: 2019

Authors (by signature order): Serdà Ferrer BC
Title: Defining Quality of Life across the cancer continuum.
Congress: World Congress on Nursing and Healthcare
Location: London (England)
Date: 12 March 2019

Authors (by signature order): M.G.Torras Boatella; E. Canals Subirats; A. Vidal Milla; C. Muñoz-Montplet; M. Puigdemont Guinart; E. Gonzalez Muñoz.
Title: Mejora de la calidad del proceso clínico-Asistencial del càncer de recto mediante auditories clíniques., Proyecto ACOR.
Congress: XXXVII Congreso SECA
Location: San Sebastián (País Vasco, Spain)
Date: 23-25 October 2019

Authors (by signature order): M. Recalde; C.B. Manzano-Salgado; Y. Díaz; D. Puente; M. García-Gil; R. Marcos-Gragera; J. Galceran; M. Posso; T. Duarte-Salles; et al.
Title: Validation of cancer diagnoses in the information system for research in primary care (sidiap): the importance of including cases from a hospital discharge database.
Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS).
Location: Oviedo (Asturias, Spain)
Date: 03-06 September 2019

Authors (by signature order): J.C. Flores; E. Gracia-Lavedan; P. Amiano; T. Dierssen-Sotos; R. Marcos-Gragera; M.M. Rodríguez-Suárez; P. García Martín; G. Castaño-Vinyals; D. Casabonne; et al.
Title: Dietary Inflammatory Index and Chronic Lymphocytic Leukaemia in the Mcc-Spain Study
Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS).
Location: Oviedo (Asturias, Spain)
Date: 03-06 September 2019

Authors (by signature order): Rafael Marcos-Gragera
Title: Registros poblacionales del cáncer como instrumento de vigilancia epidemiológica: Estimación de la incidencia de cáncer en España
Congress: Congreso internacional de ginecología oncológica “Innovación, tecnología y humanización para el control del cancer” del 85 aniversario del Instituto Nacional de cancerologia de Colombia
Location: Bogotá (Colombia)
Date: 27-30 August 2019

Authors (by signature order): Diaz Santa; Rocío Rodriguez Romanos; Gemma Osca Gelis; R Coll Jorda; M Pratcorona; C Puig Moret; L Escoda Teigell; I Heras; M Arnan; S Vives; O Salamero; N Lloveras Guelque; J Bargay; A Sampol; David Cruz Garcia; A Garcia; MT Quiñones; J Sierra; J Esteve; M Tormo; E Tuset Andujar; David Gallardo Giralte
Title: El genotipo UGT1A1 influye en la supervivencia de las pacientes con leucemia aguda mieloblástica de riesgo intermedio citogenético.
Congress: LXI Congreso Nacional de la Sociedad Española de Hematología y Hemoterapia
Location: Valencia (Spain)
Date: 24-26 October 2019

Authors (by signature order): Yolanda González Montes; Gemma Osca Gelis; Rocío Rodríguez Romanos; Francesa Llopis Puigmartí; Oriol Rocafiguera; A Sureda Balari; V Clapes Puig; C Baca Cano; L Escoda Teigell; J Sarra Escarre; David Cruz Garcia; Isabel Granada Font; David Gallardo Giralte.
Title: Salud digital: Influencia de los polimorfismos genéticos de las moléculas moduladoras de la respuesta immune en la supervivencia de los pacientes con mieloma múltiple (MM)
Congress: LXI Congreso Nacional de la Sociedad Española de Hematología y Hemoterapia
Location: Valencia (Spain)
Date: 24-26 October 2019

Authors (by signature order): Arantxa Eraso
Title: Des-intensificación y personalización de la radioterapia en cáncer de mama: ¿una utopía alcanzable? (radioterapia intraoperatoria como paradigma del cambio)
Congress: 4º Congreso Español de Mama
Location: Madrid (Spain)
Date: 17-19 October 2019

Authors (by signature order): J.M. Borrás; R. Font; J. Solà; M. Macià; M. Arenas; R. Verges; A. Eraso; V. Tuset; A. Biete; J.M. Solé; N. Farré; A. Pedro; M. Mira; J.A. Espinàs.
Title: Assessment of non-adherence to external radiotherapy treatment in cancer patients in Catalonia, Spain
Congress: ESTRO 38
Location: Milan (Italy)
Date: 26-30 April 2019
Authors (by signature order): J.M. Borrás; J. Prades; M. Algara; J.A. Espinàs; B. Farrús; M. Arenas; V. Reyes; V. García-Reglero; M.J. Cambra; E. Rubio Calatayud; L. Anglada; A. Eraso; A. Pedro;

Lectures, Communications & Posters

Descriptive epidemiology, genetics and cancer prevention

M.J. Fuentes-Raspall; V. Tuset.

Title: Understanding variations in the use of hypofractionated radiotherapy for breast cancer

Congress: ESTRO 38

Location: Milan (Italy)

Date: 26-30 April 2019

Authors (by signature order): V.Walker; A.Crijns; J.Langendijk; D.Spoor; R.Vliegenthart; S.Combs; M.Mayingier; K.Borm; A.Eraso; F.Guedea; M.Fiuza; S.Constantino Rosa Santos; R.Tamarat; D.Laurier; J.Ferrières; E.Cardis; E.Mousseaux.

Title: Radiotherapy-induced cardiotoxicity in breast cancer patients: New approaches of early detection and prediction based on cardiac imaging and circulating biomarkers (European MEDIRAD EARLY-HEART study)

Congress: Journées Européennes de la Société Française de Cardiologie 2019

Location: Paris (France)

Date: 16-19 February 2019

POSTERS

Authors (by signature order): Adelaida Garcia-Velasco; M^a Carmen Carmona-Garcia; Antonia Bianca; Helena Teixidor; Marc Valero; Raquel Liñan; Walter Carbajal; Montserrat Puigdemont; Loreto Vilardell; Rafael Marcos-Gragera.

Title: Incidence and Trends of Pancreatic Cancer (PC) in Girona: a population-based study from the Girona Cancer Registry (1994-2015).

Congress: ASCO GI 2019 (San Francisco, California, United States)

Location: San Francisco (California, United States)

Date: 17-19 January 2019

Authors (by signature order): Miguel Ángel Luque-Fernandez; Daniel Redondo-Sánchez; Miguel Rodríguez Barranco; M^a Carmen Carmona-Garcia; Rafael Marcos-Gragera; María José Sánchez

Title: Patrón de comorbilidades y factores de riesgo asociados en pacientes con cáncer colorrectal en España. Estudio CoMCoR

Congress: I Congreso de Investigadores del Parque Tecnológico de la Salud (PTS)

Location: Granada (Spain)

Date: 13-15 February 2019

Authors (by signature order): Mireia Obón-Santacana; Esther Gracia-Lavedan; Amaia Molinuevo; Gemma Castaño-Vinyals; Javier Llorca; Rafael Marcos-Gragera; José Juan Jimenez; Juan Alguacil; Vicente Martín; Beatriz Perez; José Ma Huerta; Eva Ardanaz; Dolores Salas; Adonina Tardón; Dora Romaguera; Victor Moreno; Silvia San José; Nuria Aragonés; Marian Pollán; Manolis Kogevinas; Pilar Amiano.

Title: Dietary inflammatory index, dietary non-enzymatic antioxidant capacity and colorectal and breast cancer risk (MCC-Spain Study).

Congress: I Jornada científica CIBERESP 2019 (CIBERESP:

Centro de Investigación Biomédica en Red, Epidemiología y Salud Pública). **Location:** Madrid (Spain)

Date: 14 November 2019

Authors (by signature order): M. Guevara; A. Molinuevo; D. Salmerón; R. Marcos-Gragera; M. J. Sánchez; M. D. Chirlaque; A. Lopez de Munain; J. R. Quirós; F. Almela; M. Chico; R. Jiménez; J. Perucha; M. C. Sánchez-Contador; D. Rojas; A. Alemán; J. Galceran; E. Ardanaz; N. Larrañaga

Title: Recent trends in cancer survival in adult patients in Spain.

Congress: Jornada científica CIBERESP 2019 (CIBERESP: Centro de Investigación Biomédica en Red, Epidemiología y Salud Pública).

Location: Madrid (Spain)

Date: 14 November 2019

Authors (by signature order): Pablo Fernández Navarro; Javier González Palacios; Mario González Sánchez; Daniel Redondo Sánchez; Miguel Rodríguez Barranco; Olivier Nuñez; Miguel Ángel Luque Fernández; Rafa Marcos Gragera; Jaume Galcerán; Eva Ardanaz; Arantxa López de Munain; Antonio Mateos; Rosario Jiménez; Fernando Almela; Marina Pollán; María José Sánchez. **Title:** GEO_CIBER: a geocoding tool for the cancer surveillance program (VICA)..

Congress: Jornada científica CIBERESP 2019 (CIBERESP: Centro de Investigación Biomédica en Red, Epidemiología y Salud Pública).

Location: Madrid (Spain)

Date: 14 November 2019

Authors (by signature order): M. Recalde; C.B. Manzano-Salgado; Y. Díaz; D. Puente; M. García-Gil; R. Marcos-Gragera; J. Galceran; M. Posso; T. Duarte-Salles.

Title: Validation of cancer diagnoses in the information system for research in primary care (sidiap): the importance of including cases from a hospital discharge database.

Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS)

Location: Oviedo (Asturias, Spain)

Date: 3-6 September 2019

Authors (by signature order): Martina Recalde; Cyntia B. Manzano-Salgado; Yesika Díaz; Diana Puente; Maria del Mar Garcia-Gil; Daniel Prieto-Alhambra; Rafael Marcos-Gragera; Jaume Galceran; Margarita Cynthia Posso Rivera; Francesc Macià; Talita Duarte-Salles.

Title: Validation of cancer diagnoses in electronic health records in Catalonia: preliminary results from the Information System for Research in Primary Care (SIDIAP)

Congress: 35th International Conference on Pharmacoepidemiology & Therapeutic risk management. Pennsylvania Convention Center, Philadelphia, PA.

Location: Pennsylvania (United States)

Date: 24-28 August 2019

Descriptive epidemiology, genetics and cancer prevention

Authors (by signature order): Marta Solans; Yolanda Benavente; Adela Castelló; Marina Pollán; Rafael Marcos-Gragera; Marc Saez; Delphine Casabonne; on behalf of the EPIC and MCC-Spain groups.

Title: Assessing the role of dietary patterns in the etiology of lymphoid neoplasms

Congress: CIBERESP Annual Scientific Meeting

Location: Madrid (Spain)

Date: 2019

Authors (by signature order): Daniel Redondo-Sanchez; María José Sánchez; Miguel Rodríguez-Barranco; M Carmen Carmona-García; Rafael Marcos-Gragera; Miguel Angel Luque-Fernandez.

Title: Pattern of Comorbidities Among Colorectal Cancer Patients and Impact on Treatment and Short-Term Survival.

Congress: GRELL Ascension Meeting 2019.

Location: Lisboa (Portugal)

Date: 2019

Authors (by signature order): Fatemeh Saberi Hosnijeh, Delphine Casabonne, Alexandra Nieters, Marta Solans, Sabine Naudin, Pietro Ferrari, James D. Mckay, Roel Vermeulen, on behalf of EPIC members

Title: An exposome wide analyses on B cell lymphoma.

Congress: ISEE (International Society for Environmental Epidemiology) Conference.

Location: Utrecht (The Netherlands)

Date: 25-28 August 2019

Authors (by signature order): Lopez Vidal A; de Pablo Gonzalez A; Roselló Serrano A; Fuentes-Raspall R; Auñon Sanz MC; Eraso Urien A.

Title: Moderate hypofractionated radiotherapy with VMAT and SIB in prostate cancer.

Congress: XX Congreso de la Asociación Española de Oncología Radioterápica (SEOR).

Location: Santiago de Compostela (Spain)

Date: 2 August 2019

Authors (by signature order): J. Bosch-Barrera, N. Priego, M. Puigdemont, E. Sais, N. Quer, A. Izquierdo, A. Hernández, E. Cuyàs, A. Carbó, E. Teixidor, S. Verdura, A. Roselló, S. Pedraza, J. Brunet, A. Calvo, J. Menéndez, M. Valiente.

Title: Targeting STAT3-positive reactive astrocytes with silibinin in the therapeutic landscape of non –small-cell lung cancer with brain metastasis.

Congress: World Conference on Lung Cancer 2019

Location: Barcelona (Catalunya, Spain)

Date: 10 September 2019

Authors (by signature order): Pablo Fernández Navarro; Javier González Palacios; Mario González Sánchez; Daniel Redondo Sánchez; Miguel Rodríguez Barranco; Olivier Nuñez; Miguel Ángel Luque Fernández; Rafael Marcos-Gragera; Jaume Galcerán; Eva Ardanaz; Arantxa López de Munain; Antonio Mateos; Rosario Jiménez; Fernando Almela; Marina Pollán; María José Sánchez.

Title: GEO_CIBER: a geocoding tool for the cancer surveillance

program (VICA).

Congress: Jornada científica CIBERESP 2019 (CIBERESP: Centro de Investigación Biomédica en Red, Epidemiología y Salud Pública).

Location: Madrid (Spain)

Date: 14 November 2019

Authors (by signature order): J. Bosch-Barrera, A. Hernández, N. Priego, M. Puigdemont, E. Sais, N. Quer, A. Izquierdo, E. Cuyàs, H. Pla, A. Roqué, S. Verdura, A. Roselló, S. Pedraza, J. Brunet, A. Calvo, M. Valiente, J. Menéndez

Title: Oncologic treatments and outcomes for small-cell lung cancer patients with brain metastases.

Congress: World Conference on Lung Cancer 2019

Location: Barcelona (Catalunya, Spain)

Date: 7-10 September 2019

Authors (by signature order): Miguel Sagüés Serrano; Gemma Osca Gelis; N Estrada; R Vallansot; C Boque Genovard; M López Brunsó; Joan Buch Villa; Johanna Díaz Santa; A Fernández; S Guerra Prio; A Marull Arnall; P Tejerina Fontaina; G Mateu Esquerda; C Moret Puig; MT Quiñones Rocés; Francesa Llopis Puigmartí; L Zamora Plana; Blanca Xicoy Cirici

Title: Uso de Ruxolitinib en pacientes diagnosticados de policitemia vera (PV): Experiencia del Institut Català d'Oncologia

Congress: LXI Congreso Nacional de la Sociedad Española de Hematología y Hemoterapia

Location: Valencia (Spain)

Date: 24-26 October 2019

Authors (by signature order): J. Bosch-Barrera, A. Hernández, N. Priego, M. Puigdemont, E. Sais, N. Quer, A. Izquierdo, E. Cuyàs, H. Pla, A. Roqué, S. Verdura, A. Roselló, S. Pedraza, J. Brunet, A. Calvo, M. Valiente, J. Menéndez

Title: Oncologic treatments and outcomes for small-cell lung cancer patients with brain metastases.

Congress: World Conference on Lung Cancer 2019

Location: Barcelona (Catalunya, Spain)

Date: 10 September 2019

Authors (by signature order): Jordi Rubió-Casadevall; Rafael Marcos-Gragera; Marià Carulla, Alberto Ameijide; Josep Gumà; Laia Llauradó; Montserrat Puigdemont; Jaume Galceran.

Title: Second cancers after a head & neck cancer: a population-based study in Tarragona and Girona.

Congress: GRELL Ascension Meeting 2019

Location: Lisboa (Portugal)

Date: 29-31 May 2019

Authors (by signature order): Sergio Moral; Nuria Coma; Arantxa Eraso; Esther Ballesteros; Gemma Viñas; Josep Maria Frigola; Manel Morales; Rocio Robles; Xavier Albert; Paula Fluvià; Aleix Fort; Pau Vilardell; Ingrid Romera-Martínez; Ramón Brugada.

Title: Efecto cardioprotector de los inhibidores de la enzima convertidora de angiotensina y betabloqueantes en la prevención de cardiotoxicidad: revisión sistemática y metaanálisis de estudios aleatorizados

Lectures, Communications & Posters

Descriptive epidemiology, genetics and cancer prevention

Congress: Congreso de las Enfermedades Cardiovasculares

Location: Barcelona (Catalunya, Spain)

Date: 17-19 October 2019

Authors (by signature order): A. Lopez Vidal; A. De Pablo Gonzalez; A. Roselló Serrano; R. Fuentes Raspall; MC Auñón Sanz; A. Eraso Urien.

Title: Moderate Hypofractionated Radiotherapy with SIB-VMAT

Technique: Toxicity analysis

Congress: XX SEOR

Location: Santiago de Compostela (Spain)

Date: 5-7 June 2019

Authors (by signature order): A. De Pablo Gonzalez; A. Lopez Vidal; A. Roselló Serrano; R. Fuentes Raspall; MC Auñón Sanz; A. Eraso Urien.

Title: Outcomes of risk-adapted fraccionated SBRT for stage I-II Non-small cell lung cancer.

Congress: XX SEOR

Location: Santiago de Compostela (Spain)

Date: 5-7 June 2019

General and Digestive Surgery

COMMUNICATIONS

Authors (by signature order): S.Lopez-Ben ; M Albiol, L Falgueras, E Castro, M Casellas

Title: laparoscopic resection in clinically significant portal hypertension patients. A comparative unicenter study

Congress: 2nd World Congress of the International laparoscopic Liver Society.

Location: Tokio (Japan)

Date: 5-9 November 2019

Authors (by signature order): S.Lopez-Ben ; M Albiol, L Falgueras, E Castro, M Casellas

Title: Impact of cumulative ischemia time with intermittent use of Pringle Maneuver on early surgical outcomes in laparoscopic hepatectomies. A biinstitutional study of 217 patients

Congress: 2nd World Congress of the International laparoscopic Liver Society.

Location: Tokio (Japan)

Date: 5-9 November 2019

Authors (by signature order): J Girones, JI Rodriguez, A Ranea, A Quiles, G Laguillo, A Codina

Title: Surgery in lymph node recurrence in papillary thyroid cancer. Utility of intraoperative ultrasound

Congress: 8th European Society of Endocrine Surgeons

Location: Granada (Spain)

Date: 16-18 May 2019

Authors (by signature order): J Girones, G Mearelli, JI Rodriguez, A Ranea, G Laguillo, A Quiles, A Rubio, N Ferran, I Ferrer, A Codina

Title: Application 3D printing in parathyroid surgery

Congress: 8th European Society of Endocrine Surgeons

Location: Granada (Spain)

Date: 16-18 May 2019

LECTURES

Authors (by signature order): A.Codina

Title: The experience of centralizing the treatment of colorectal cancer

Congress: XII Russian School of Colorectal Surgery

Location: Moscow (Russia)

Date: 7-9 June 2019

Metabolism and Cancer

LECTURES

Authors (by signature order): Javier A. Menendez
Title: Metformin: a metabolo-epigenetic drug for cancer therapy
Congress: 6th meeting of the International Society of Cancer Metabolism (ISCaM)
Location: Braga (Portugal)
Date: 17-18 October 2019

Authors (by signature order): Javier A. Menendez
Title: Efectos anti-tumorales del aceite de oliva
Congress: Ciclo de Conferencias LA CIENCIA DE LA DIETA MEDITERRÁNEA
Location: Barcelona (Catalunya, Spain)
Date: 20 February 2019

Authors (by signature order): Bosch-Barrera, A. Hernández, N. Priego, M. Puigdemont, E. Sais, N. Quer, A. Izquierdo, E. Cuyàs, H. Pla, A. Roqué, V. Garriga, D. Garcia, S. Verdura, A. Roselló, S. Pedraza, J. Brunet, A. Calvo, M. Valiente, J. Menéndez.
Title: Oncologic treatments and outcomes for small-cell lung cancer patients with brain metastases
Congress: 2019 IASLC 20th World Conference on Lung Cancer
Location: Barcelona (Catalunya, Spain)
Date: 7-10 September 2019

Authors (by signature order): J. Bosch-Barrera, N. Priego, M. Puigdemont, E. Sais, N. Quer, A. Izquierdo, A. Hernández, E. Cuyàs, A. Carbó, E. Teixidor, S. Verdura, D. Garcia, A. Roselló, V. Garriga, S. Pedraza, J. Brunet, A. Calvo, J. Menendez, M. Valiente.
Title: Targeting STAT3-positive reactive astrocytes with silibinin in the therapeutic landscape of non-small cell lung cancer with brain metastases
Congress: 2019 IASLC 20th World Conference on Lung Cancer
Location: Barcelona (Catalunya, Spain)
Date: 7-10 September 2019

Authors (by signature order): Neibla Priego, Lucía Zhu, Catia Monteiro, Manon Mulders, David Wasilewski, Wendy Bindeman, Laura Doglio, Elena Martínez-Saez, Santiago Ramón y Cajal, Coral Fustero-Torre, Elena Piñero-Yáñez, Aurelio Hernández-Laín, Valeria Poli, Javier A. Menéndez, Ricardo Soffietti, Joaquim Bosch-Barrera, Manuel Valiente.
Title: Stat3 labels a subpopulation of reactive astrocytes required for brain metastasis
Congress: AACR Annual Meeting 2019
Location: Atlanta (Georgia, USA)
Date: March 29 - April 3, 2019

Control engineering and intelligent systems-medicine and healthcare.

LECTURES

Authors (by signature order): Beatriz López
Title: IA for the social good
Congress: Debate CSIC, Ciencia y Futuro. Round Table
Location: Madrid (Spain)
Date: 10 October 2019

Authors (by signature order): Beatriz López
Title: L'impacte de la intel·ligència artificial en el món de la salut
Congress: Zona Jornades Jo Innovo, Hospital Universitari Vall de Hebron. Round Table
Location: Barcelona (Catalunya, Spain)
Date: 16 May 2019

Authors (by signature order): Beatriz López
Title: Medicina i Intel·ligència Artificial: Les dues cares d'una tecnologia
Congress: Cicle de conferències "UdG Medicina 10anys"
Location: Girona (Catalunya, Spain)
Date: 21 March 2019

Authors (by signature order): Beatriz López
Title: Artificial Intelligence in Practice: Personalized Adaptive Bolus Recommender System for Type 1 Diabetes.
Congress: Digital Health and Wellness Summit (@4YFN, Mobile World Congress)
Location: Barcelona (Catalunya, Spain)
Date: 26-27 February 2019

POSTERS

Authors (by signature order): Clare Martin, Arantza Aldea, Bedour Alshaigy, Parizad Avari, David Duce, Mercè Fernández-Balsells, José Manuel Fernández-Real, Rachel Harrison, Pau Herrero, Narvada Jugnee, Chengyuan Lui, Beatriz López, Joaquim Massana, Yenny Leal, Monika Reddy, Marion Waite, Marzena Wos and Nick Oliver.
Title: Application of Usability Engineering to the Development of a Personalised Decision Support System for Type 1 Diabetes Self-Management.
Congress: The 12th International Conference on Advanced Technologies and Treatments for Diabetes ATTD2019 (Published: DIABETES TECHNOLOGY & THERAPEUTICS, Volume: 21, Pages: A73-A73, Supplement: 1.<https://doi.org/10.1089/dia.2019.2525>. abstracts ISSN: 1520-9156)
Location: Berlin (Germany)
Date: 20-23 February 2019

Authors (by signature order): Guillem Hernández, Beatriz López
Title: Improving Emotions Prediction with Sequence Representations of Psychophysiological Data.
Congress: Engineering in Medicine and Biology Conference (EMBC)
Location: Berlin (Germany)
Date: 23-27 July 2019

Lectures, Communications & Posters

Control engineering and intelligent systems- medicine and healthcare.

Authors (by signature order): Guillem Hernández, Beatriz López
Title: Improving Emotions Prediction with Sequence Representations of Psychophysiological Data.

Congress: Engineering in Medicine and Biology Conference (EMBC)

Location: Berlin (Germany)

Date: 23-27 July 2019

Authors (by signature order): Natalia Mordvanyuk, Beatriz López, Montserrat Reixach, Marta Fabrellas, Montserrat Planella, Carles Cordon, Nuria Simon, Anna Duran, Josep Perapoch, Judit Bassols, Abel López-Bermejo

Title: NoaH: Supporting Premature Babies Care with Mobile Phones

Congress: MSF Peadriatics Days

Location: Stockholm (Sweden)

Date: 5-6 April 2019

Health promotion, Elders and carers, woman, gender and health emergencies.

COMMUNICATIONS

Authors (by signature order): Iniesta, C; Santiñà, M; Ramon, I; Briansó, M; Simón, R; Sera, M; Juvinyà, D; Fernández, M; Pérez, AC; Ibañez, R; Balletster, M.

Title: Evolution of the Strategic Plan of the HPH Catalunya Network

Congress: 27th International Conference on Health Promoting Hospitals & Health Services

Location: Poland

Date: 2019

Authors (by signature order): Santiñà, M; Iniesta, C; Simón, R; Pérez, AC; Ramón, I; Serra, M; Fernández, M; Briansó, M; Juvinyà, D; Ibañez, R; Luengo, A.

Title: Facilitating the evolution of the network HPH-Cat using the brand methodology.

Congress: 27th International Conference on Health Promoting Hospitals & Health Services

Location: Poland

Date: 2019

Authors (by signature order): Mantas, S; Lluch, MT; Juvinyà, D.

Title: The perception of health from the salutogenic perspective in healthcare workers

Congress: 27th International Conference on Health Promoting Hospitals & Health Services

Location: Poland

Date: 2019

Authors (by signature order): Juvinyà, D; Santiñà, M; Simon, R; Bertran, C; Pérez, AC; Carbonell S; Romero, V; Mestre, H; Navarro, G; Peña, M; Ramírez, R; Iniesta, C

Title: Evaluation of standards on health promoting hospitals related with the accreditation criteria of the Catalan hospitals system

Congress: 27th International Conference on Health Promoting Hospitals & Health Services

Location: Poland

Date: 2019

Authors (by signature order): Miguel Angel Robles, M; Bertran Noguer, C.

Title: The Spanish MS Expert Patient Programme

Congress: 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis and 24th Annual Conference of Rehabilitation in MS

Location: Sweden

Date: 2019

Authors (by signature order): Pons-Baños, J; Ballester-Ferrando, D; Serra- Millàs, M; Riesco-Miranda, L; Puigoriol-Juvanteny, E; Coll- Negre, M; Escoté-Llobet, S

Title: Follow -up in the mental health service of the patients admitted in a suicidal behavior case management program

Congress: 30th World Congress of the International Association for Suicide Prevention (IASP2019)

Location: England

Date: 2019

Authors (by signature order): Colillas-Malet, E; Prat, G; Espelt, A; Juvinyà, D

Title: Sentido de coherencia y calidad de vida de las personas con trastorno mental severo.

Congress: XXXVII Reunión Anual de la Sociedad Española de Epidemiología (SEE), XIV Congresso da Associação Portuguesa de Epidemiologia (APE) y XVIII Congreso de la Sociedad Española de Salud Pública y Administración

Location: Spain

Date: 2019

Authors (by signature order): Malagon Aguilera, C; Bonmatí Tomàs, A; Bosch Farré, C; Bertran Nogue, C; Juvinyà Canal D.

Title: Promoción de la salud y estilos de vida saludables de las personas con problemas de salud mental en la provincia de Girona

Congress: XXIII Encuentro Internacional de Investigación en Cuidados

Location: Spain

Date: 2019

POSTERS

Authors (by signature order): M.Martínez, E.Sureda, M.Homs, M.E.Sala, J.Brunso, J.Gispert, J.Figueras, B.Comas, M.Custey, E.Muntada, I.Mestres, E.Ortega, J.Carreras, M.Casamitjà, M.Lloveras, L.L.Ramió, J.Serra, M.Jover, T.Anglada, E.Carabellido, O.Costa, S.Reixach, M.Calm, M.Rustullet, D.Pujol, D.Juvinyà, E.Capell, P.Guerrero, M.Pastor.

Title: Creem vincles intergeneracionals.

Congress: XXII Jornada ACEBA 2011-2019 Salut a totes les Polítiques

Location: Spain

Date: 2019

Authors (by signature order): Serdà i Ferrer, BC

Title: Quality of life and prostate cancer. A proactive management with a rehabilitation programme

Congress: World Confederation for Physical Therapy Congress 2019

Location: Switzerland

Date: 2019

Authors (by signature order): Grau-Pellicer M.; Campos-Martí C.; Casimiro-Arias N.; Chamarro-Lusar A.; Medina-Casanovas J.; Rodríguez-Villanueva V.; Yedra-Galindo S.; Serdà i Ferrer B-C.

Title: Evaluating the efficacy of aerobic exercise on improving physical condition and quality of life after a stroke.

Congress: World Confederation for Physical Therapy Congress 2019

Location: Switzerland

Date: 2019

Health promotion, Elders and carers, woman, gender and health emergencies.

Authors (by signature order): Grau-Pellicer M.; Chamarro-Lusar A.; Medina-Casanovas J.; Serdà i Ferrer B-C.

Title: Assessing quality of life of stroke survivors after physiotherapy. Comparison of two scales.

Congress: World Confederation for Physical Therapy Congress 2019

Location: Switzerland

Date: 2019

Authors (by signature order): Judit Pons-Baños, David Ballester-Ferrando, Montserrat Serra-Millàs, Lola Riesco-Miranda, Emma Puigoriol-Juventeny, Montserrat Coll-Negre, Santiago Escoté-Llobet

Title: Drug use/abuse/dependence on patients admitted in a suicidal behavior case management program

Congress: 30th World Congress of the International Association for Suicide Prevention (IASP 2019)

Location: England

Date: 2019

Lectures, Communications & Posters

Health Psychology. Risk behavior

LECTURES

Authors (by signature order): Gras, M.E., Planes y Font-Mayolas, S.
Title: Uso del móvil por parte de los peatones en las vías públicas
Congress: IV Congreso Nacional de Psicología
Location: Vitoria (Pais Vasco, Spain)
Date: 21-24 July 2019

Authors (by signature order): Planes, M. Gras, M.E. y Font-Mayolas, S.
Title: El control percibido como variable relevante en el uso del móvil que hacen los peatones.
Congress: IV Congreso Nacional de Psicología
Location: Vitoria (Pais Vasco, Spain)
Date: 21-24 July 2019

Authors (by signature order): Patiño, J., Hernández-Serrano, O., Gras, M.E. y Font-Mayolas, S.
Title: Prevención secundaria del consumo de drogas entre jóvenes y adolescentes.
Congress: IV Congreso Nacional de Psicología
Location: Vitoria (Pais Vasco, Spain)
Date: 21-24 July 2019

Authors (by signature order): Salamó, A., Gras, M.E., Patiño, J. Arboix, M. y Font-Mayolas, S.
Title: Uso y abuso de alcohol y predicción de intención de consumo futuro entre adolescentes de secundaria.
Congress: IV Congreso Nacional de Psicología
Location: Vitoria (Pais Vasco, Spain)
Date: 21-24 July 2019

Authors (by signature order): Planes, M., Gras, M.E., Hernández-Serrano, O., Font-Mayolas, S y Cufí, P.
Title: Violencia sexual: ¿Aprendizaje por la experiencia y construcción de una norma?
Congress: I Congreso Internacional de Sexualidad
Location: Castellon (Spain)
Date: 17-18 October 2019

Authors (by signature order): Gras, M.E., Planes, M., Hernández-Serrano, O., Font-Mayolas, S. y Pons, I.
Title: Aceptación y tolerancia frente a distintas formas de coacción sexual. El papel de la experiencia previa
Congress: I Congreso Internacional de Sexualidad
Location: Castellon (Spain)
Date: 17-18 October 2019

Computer Vision and Robotics

COMMUNICATIONS

Authors (by signature order): J. Bernal, K. Kushibar, S. Valverde, M.Cabezas, M. Salem, J. Salvi, A. Oliver, Xavier Lladó
Title: Six-month infant brain magnetic resonance image tissue segmentation using multi-atlas segmentation with joint label fusion and convolutional neural networks
Congress: Medical Imaging.MICCAI Workshop
Location: Xina
Date: 13-17 October 2019

POSTERS

Authors (by signature order): M. Salem, S. Valverde, M. Cabezas, D. Pareto, A. Oliver, J. Salvi, A. Rovira, X. Lladó
Title: Detecting the appearance of new T2-w multiple sclerosis lesions in longitudinal studies using Deep convolutional neural network
Congress: Multiple Sclerosis, 2019
Location: Stockholm (Sweden)
Date: 11-13 September 2019

Authors (by signature order): M. Salem, S. Valverde, M. Cabezas, D. Pareto, A. Oliver, J. Salvi, A. Rovira, X. Lladó
Title: Lesion synthesis for extending MRI training datasets and improving automatic multiple sclerosis lesion segmentation
Congress: Multiple Sclerosis, 2019
Location: Stockholm (Sweden)
Date: 11-13 September 2019

Authors (by signature order): S. González-Villà, S. Valverde, M. Cabezas, Y. Huo, A. Oliver, Ll. Ramió-Torrentà, B.A. Landman, B.A, X. Lladó
Title: An end to end automated pipeline for brain structure segmentation in multiple sclerosis patients
Congress: Multiple Sclerosis, 2019
Location: Stockholm (Sweden)
Date: 11-13 September 2019

Authors (by signature order): M. Cabezas, S. Valverde, A. Clèrigues, M. Salem, K. Kushibar, J. Bernal, A. Oliver, J. Salvi and X. Lladó
Title: Brain tumour segmentation and prediction via CNNs
Congress: Medical Imaging. MICCAI Workshop
Location: Xina
Date: 13-17 October 2019

Authors (by signature order): D. Pareto, J. Alonso, M. Alberich, T. Kober, B. Maréchal, X. Lladó, A. Rovira
Title: Quantitative comparison of brain volume measures as determined from MP2RAGE and MPRAGE images
Congress: Multiple Sclerosis, 2019
Location: Stockholm (Sweden)
Date: 11-13 September 2019

Statistics and Data Analysis

COMMUNICATIONS

Authors (by signature order): Martín-Fernández JA; Raju NJ; Egozcue JJ; Olea RA; Pawlowsky-Glahn V
Title: Dealing with the original units for the estimates in compositional data analysis: the case of groundwater data in eastern part of Sonbhadra District, Uttar Pradesh, India
Congress: 20th Annual Conference of the International Association for Mathematical Geosciences
Location: Pennsylvania (USA)
Date: 10-16 August 2019

Authors (by signature order): Egozcue JJ; Pawlowsky-Glahn V; Molayemat H
Title: Correlations, subcompositional coherence, and misinterpretations
Congress: 20th Annual Conference of the International Association for Mathematical Geosciences
Location: Pennsylvania (USA)
Date: 10-16 August 2019

Authors (by signature order): Rivera-Pinto J; Calle ML; Egozcue JJ; Pawlowsky-Glahn V; Paredes R; Noguera M
Title: Selbal: an R package for the identification of microbial signatures
Congress: 3rd Workshop on Statistical and Algorithmic Challenges in Microbiome Data Analysis
Location: New York (USA)
Date: 1-2 April 2019

Authors (by signature order): Calle ML; Rivera-Pinto J; Susín A; Pawlowsky-Glahn V; Egozcue JJ
Title: Weighted Kernel machine regression for microbiome compositional data analysis
Congress: 3rd Workshop on Statistical and Algorithmic Challenges in Microbiome Data Analysis
Location: New York (USA)
Date: 1-2 April 2019

Authors (by signature order): D. Re, M. Comas-Cufí, S. Thió-Henestrosa
Title: CoDaPack: Integration with R
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

Authors (by signature order): GalvánFemenía, I. ; Graffelman, J. ; Torrents, D. ; Sumoy, L. ; Moreno, V. ; de Cid, R.
Title: **Principal balances for metabolite genome- wide association analysis in the GCAT cohort.**
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

LECTURES

Authors (by signature order): Pawlowsky-Glahn, V., Egozcue JJ.
Title: Compositional data in geostatistics. A log-ratio based framework to analyze regionalized compositions.
Congress: 20th Annual Conference of the International Association for Mathematical Geosciences
Location: Pennsylvania (USA)
Date: 10-16 August 2019.

Authors (by signature order): Pawlowsky-Glahn, V., Egozcue JJ.
Title: Why are microbiome data compositional?
Congress: B-Debate, The Barcelona Debates on the Human Microbiome
Location: Barcelona (Catalunya, Spain)
Date: 20-21 June 2019

Authors (by signature order): Calle ML; J Rivera-Pinto; JJ Egozcue; V Pawlowsky-Glahn; R Paredes; M Noguera-Julian
Title: Kernel machine regression for microbiome compositional data.
Congress: The 8th International Workshop on Compositional Data Analysis, CoDaWork 2019
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June 2019

Authors (by signature order): Graffelman J; V Pawlowsky-Glahn; JJ Egozcue and A Buccianti
Title: Compositional canonical correlation analysis
Congress: The 8th International Workshop on Compositional Data Analysis, CoDaWork 2019
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June 2019

Authors (by signature order): Martín-Fernández JA; Pawlowsky-Glahn V; Egozcue JJ
Title: Estimando el centro de un conjunto de Datos Composicionales en sus unidades originales
Congress: SEIO 2019 | XXXVIII Congreso Nacional de Estadística e Investigación Operativa
Location: Alcoi (Valencia, Spain)
Date: 3-6 September 2019

Authors (by signature order): Egozcue JJ; Pawlowsky-Glahn V; Martín-Fernández JA; Ortego MI
Title: Beyond binary linear association of compositional parts.
Congress: SEIO 2019 | XXXVIII Congreso Nacional de Estadística e Investigación Operativa
Location: Alcoi (Valencia, Spain)
Date: 3-6 September 2019

Authors (by signature order): McKinley JM; Cox S; Mueller U; Atkinson PM; Ofterdinger U; Jackson C; Cocerva T; Doherty R; Fogarty D; Egozcue JJ; Pawlowsky-Glahn V
Title: Multivariate Investigation Of Rural And Urban Soil Geochemistry And Incidences Of Renal Disease.
Congress: SEGh 2019 | 35th International Conference on

Lectures, Communications & Posters

Statistics and Data Analysis

Geochemistry and Health
Location: Manchester (Great Britain)
Date: 1-5 July 2019

Simons Foundation
Location: New York (USA)
Date: 1-2 April, 2019

POSTERS

Authors (by signature order): Pawlowsky-Glahn V; Egozcue JJ; Arnoriaga M; Fern_andez-Real JM.
Title: Can the equilibrium of bacterial phyla predict obesity?
 B-Debate
Congress: The Barcelona Debates on the Human Microbiome.
 COSMOCAIXA
Location: Barcelona (Catalunya, Spain)
Date: 20-21 June 2019

Authors (by signature order): Maldonado WFL; Egozcue JJ; Pawlowsky-Glahn V.
Title: No-Arbitrage Matrix of Exchange Rates. 8th International Workshop on Compositional Data Analysis
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

Authors (by signature order): Maldonado WFL; Egozcue JJ; Pawlowsky-Glahn V.
Title: Independence test for compositional tables.
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

Authors (by signature order): Molayemat H; Torab FM; Pawlowsky-Glahn V; Egozcue JJ; Morshedy AH.
Title: Comparison of compositional and noncompositional approaches in delineating spatial geochemical anomalies.
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

Authors (by signature order): Martín-Fernández JA; Raju NJ; Egozcue JJ; Pawlowsky-Glahn V; Olea RA.
Title: How to recover the original units for the estimates in compositional data analysis?
Congress: CoDaWork 2019. The 8th International Workshop on Compositional Data Analysis.
Location: Terrassa (Catalunya, Spain)
Date: 3-8 June, 2019

Authors (by signature order): Egozcue JJ; Pawlowsky-Glahn V; Arnoriaga M; Fernandez-Real JM
Title: Bacterial phyla and obesity: how to find a predictive balance?
Congress: Third Workshop on Statistical and Algorithmic Challenges in Microbiome Data Analysis, MDAW2019. The

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HR EXCELLENCE IN RESEARCH

