

ANNUAL SCIENTIFIC
REPORT **2015**

research
science
innovation
commitment



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Foreword

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Introduction

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Introduction

Over the course of 2015, 279 research projects have been carried out. Of this total, 207 were competitive projects, 184 of them being funded by Spanish entities and 23 by international entities. Likewise, 125 clinical trials and 80 observational studies were conducted. The biobank of Hospital Sant Joan de Déu continued being part of the Biobanks Spanish network RETICS (Thematic Network for Cooperative Health Research) funded by the Carlos III Health Institute (ISCIII). We would like to make special mention to our research groups' firm will to foster networking and **collaborative research**, as is made evident by their presence in cooperative research structures promoted by the Carlos III Health Institute. Indeed, in 2015 we were part of the Centre for Biomedical Network Research on the areas of Rare Diseases (CIBERER), Diabetes (CIBERDEM), and Mental Health (CIBERSAM). We have also participated in the thematic networks on primary healthcare (RedIAPP), on maternal and children's health and development (SAMiD), and on innovation in medical and healthcare technologies (ITEMAS).

In the **European context**, we have participated in several initiatives promoted by the European Commission and others, including a total of 9 research projects. We coordinate three of these projects: one H2020-funded project, one from the 7th Framework Programme and one from ERAMUS+ programme. As partners, we collaborate in projects funded from H2020, SANCO Public Health Programme and Erasmus+. Other European funders are the European Centre for Disease Prevention and Control and European Foundation for the Study of Diabetes. **At International level**, we participate in one project funded by the US- National Health Institute NIH.

During the course of year 2015, 69 projects were granted. Over these projects, 60 were funded by Spanish entities and 9 were funded by International entities, being 1 of them a coordinated project under Horizon 2020 Programme.

This year 2015 we highlight the creation of the "Institut de Recerca Sant Joan de Déu", as an important event for our organization. The institute is composed of research groups from Institut de Biomedicina and Institut de Neurociències of Universitat de Barcelona, Centre de Recerca en Enginyeria Biomèdica of Universitat Politècnica de Catalunya, the Hospital Sant Joan de Déu and Research Foundation Sant Joan de Déu.

Emili Bargalló Angerri
 Director of the Foundation

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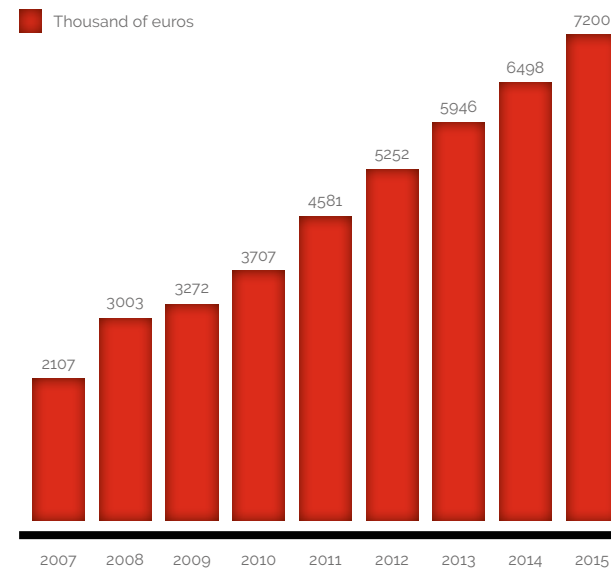
Services and infrastructures

The Sant Joan de Déu Research Foundation makes available to its researchers a set of fundamental services and infrastructures for the performance of their Projects.

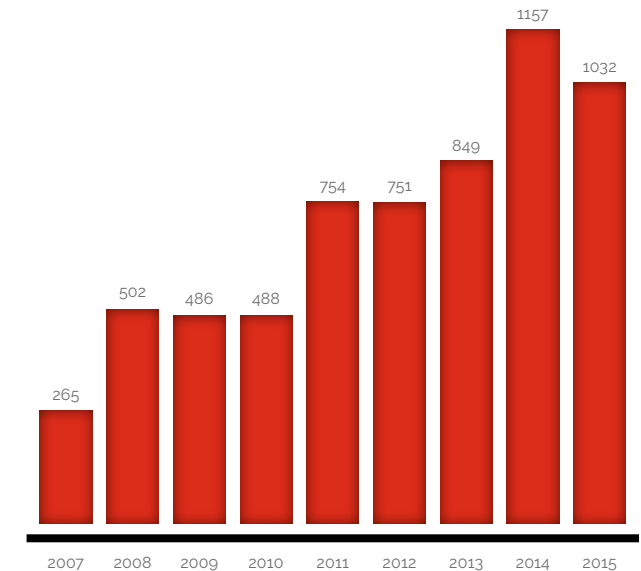
In order to facilitate high-level research, the Foundation offers its professionals technical, scientific and support services as well as the most suitable infrastructures required to carry out their work:

- Methodological and statistical support.
- Neurological tissue bank, paediatric biological tissues bank and tumour bank.
- Library.
- Animal housing facility.
- Molecular diagnosis laboratory.
- Sequencing unit.

Financial resources management



Impact factor





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AREA

Paedriatic neuroscience

- Groups
- Projects
- Clinical Trials
- Publications
- Supervised theses
- Networks

PKU and other intermediary metabolism defects

The fact that our hospital is a reference centre for phenylketonuria in Catalonia has allowed us to carry out an in-depth study of the pathophysiological mechanisms involved in this disorder and to try out new treatments aimed to improve its metabolic control and neurological prognosis. On the basis of these studies, we have reached the conclusion that some neuropsychological and neurological changes are associated, on the one hand, with metabolic control, and on the other, with antioxidant deficiencies. We have begun new treatments (with tetrahydrobiopterin) on our

phenylketonuria patients, which have provided a better metabolic control and the possibility of freeing our patients from the special diet they were following. The follow-up of this treatment will be an important subject of study in the next three years. In connection with other intermediary metabolism defects, our work on metabolism disorders of homocysteine and other amino acids, which is primarily focused on characterising new disorders and new phenotypic presentations, may be noted.

Research team

Coordinator Jaume Campistol
Researchers Rafael Artuch, Rosa Gassió, Maria Julieta González, Sílvia Meavilla,
Carmen Fons, Camila Garcia Volpe, Rose Colome,
Aida Ormazabal, Cristina Sierra

Neurometabolic disorders with expression in the CNS

We have been studying neurotransmitter related disorders deficiencies since 2003 while serving various hospital centres in Spain, Portugal, Greece, Argentina, Turkey and India, among other countries. Basically, we study dopamine and serotonin defects and quite recently we have also turned our attention to GABA. From the clinical standpoint, our patients present severe encephalopathies which are detected by specifically studying these neurotransmitters in cerebrospinal fluid (CSF). Our main focus is diagnosis within a very clear therapeutic approach since many of these disorders have a treatment that can improve or normalise the patient's clinical condition. We have received several FIS grants to study this area, being the most recent addressed to the description of brain connectivity and brain mapping of these disorders. We are co-

founders of the I-NTD project, (<http://www.intd-online.org/>), the international working group for the study of neurotransmitter defects, which has started a world patients' registry and different research projects.

Moreover, some aspects of translational research are now also an important part of our research with the inclusion of studies of CSF proteomics and of cell lines of tyrosine hydroxylase (a limiting enzyme in dopamine synthesis) deficiency. We have been able to add these new procedures to our research thanks to the establishment in the last recent years of the laboratory of synaptic metabolism and the project "connecting the growing brain" who aims to study patterns of synaptic communication in neuropaediatric disorders (<http://www.connectingthegrowingbrain.com/>).

Research team

Coordinator Àngels García-Cazorla
 Researchers Alba Tristán, Anna López, Inés Medina, Elisenda Cortès-Saladelafont, Mercedes Casado, Alfonso Oyarzábal

Mitochondrial energy metabolism

In this research group we have analysed the clinical and biochemical aspects of mitochondrial encephalomyopathies in childhood caused by changes in oxidative phosphorylation, studying as well the effects of treatment with various therapies. This line of research has been possible thanks to stable collaborations with reference centres within the framework of

the Centre for Biomedical Network Research on Rare Diseases (CIBERER) network, and thanks to the performance of research projects financed by FIS. We have carried out a research line for the diagnosis of primary and secondary deficiencies of coenzyme Q. This group has been possible thanks to the three FIS projects that have been consecutively obtained for research on this subject.

Research team

Coordinator Rafael Artuch
 Researchers Carmen Fons, Raquel Montero, Mar O'Callaghan,
 Federico Ramos, Delia Yubero

Applied research in neuromuscular disorders

Our research group are currently focused on two main areas: (1) Muscular dystrophies, including Duchenne muscular dystrophy (DMD) and congenital muscular dystrophies (CMD), with a special focus on the role of the extracellular matrix and collagen VI. (2) Mitochondrial diseases including mitochondrial DNA depletion syndromes affecting muscle. In both cases, by means of "omics" techniques, bioinformatics and cell models, the gene expression footprint of patients' muscle

has been determined in comparison to healthy muscle. This has allowed the identification of new pathophysiological mechanisms, diagnostic markers and therapeutic targets for these disorders. In collaboration with the University of Barcelona and CIBERDEM, we have described a new function for collagen VI in the regulation of glucose metabolism in muscle cells and adipocytes. This finding forms the basis of a pending patent.

Research team

Coordinator Cecilia Jiménez-Mallebrera
 Researchers Andrés Nascimento, Cristina Jou, Carlos Ortez, Mónica Llano-Diez,
 Ma Angels Rodríguez García, Sergi García, Lidia Alvarez

Movement disorders of genetic and neurometabolic origin

The Research Group on Paediatric Neurosciences forms part of the Integral Unit for the Study of Movement Disorders Caused by Rare Diseases. This unit, which is directed jointly by Hospital Sant Joan de Déu and Hospital Clínic de Barcelona, has been designated as a Reference Integral Unit by the Spanish National Health System. This group is focused on research on rare diseases of genetic and neurometabolic origin which occur with movement disorders in childhood. Such movement disorders can occur in isolated form or in association with other neurodevelopmental problems, and they are a major cause of physical disability in children. The research on this group of disorders is addressed to clinical characterisation, identification of new biomarkers, and molecular studies to identify new genetic defects.

Two consecutive FIS projects have been carried out in the last 5 years with their focus on the study of defects of the genes responsible for the transport, synthesis and processing of vitamins. Thiamine and cerebral folate deficiencies affect the developing central nervous system and may produce clinical conditions of acute and/or progressive encephalopathy, mitochondrial energy deficiency and cerebral myelination disorders. Their identification is a priority since the early administration of high doses of these vitamins may bring about an immediate recovery from symptoms and revert brain lesions. Thanks to these projects, we have established blood and cerebrospinal fluid biomarkers for their identification. Indeed, thanks to these findings, our hospital has become a reference centre in this field and we have taken part in the identification of new phenotypes associated with genetic defects.

Research team

Coordinator Belén Perez-Dueñas
 Researchers Jordi Muchart, Darió Ortigoza, Pilar Poo, Merche Serrano

Neurogenetics and molecular medicine

The group of "Neurogenetics and Molecular Medicine" (NeuroGene) investigates the molecular basis of neurodevelopmental diseases and how the central and peripheral nervous systems work. The experimental approach includes genetic and genomic analyses, the cell biology and the study of the pathophysiology using animal models. NeuroGene is a new research group created in 2015 by the confluence of Dr. F. Palau, CSIC research professor coming from the Institute of Biomedicine of Valencia, Dr. J. Hoenicka, NHS investigator coming from the 12 de Octubre Hospital Research Institute in Madrid, and Dr. J. Armstrong and Dr. M. Serrano, originally located at the Sant Joan de Déu Childrens Hospital. NeuroGene's scientific work has the vocation of clinical translation within the Pediatric Institute for Rare Diseases (IPER) and transfers the knowledge generated to the National Health System. Researchers have tight relationship and projects with the Genetic and Molecular Medicine Department of Sant Joan de Déu Childrens Hospital.

The group's strategy is based on three fundamental aspects of the research activity: (1) Making science focused on the area of neurological and mental illnesses in paediatrics and adult medicine. (2) Develop scientific lines that combine established knowledge with novel and risky hypothesis under frontier science. (3) Develop a translational research model and biomedical innovation in the field of rare diseases based on the research about proposals or clinical hypotheses, and implement diagnostic and therapeutic services as instruments of the clinical translational and the interactions with biomedical industry. Research lines: Genetics and pathophysiology of neuropsychiatric disorders (Parkinson's disease, addictive disorders) [Dr. J. Hoenicka]; Genetics and pathophysiology of neuromuscular diseases (Charcot-Marie-Tooth neuropathy disease, Friedreich's ataxia) [Dr. F. Palau]; Genetics and pathophysiology of Rett Syndrome [Dr. J. Armstrong]; and Natural history and genomics of neurodevelopmental diseases (congenital disorders of glycosylation, Menkes disease, intellectual disability) [Dr. M. Serrano, Dr. F. Palau and Dr. J. Hoenicka].

Research team

Coordinator	Dr. Janet Hoenicka
Principal Investigators	Francesc Palau, Janet Hoenicka, Judith Armstrong, Mercedes Serrano
Researchers	Laura Domínguez, Lara Cantarero, Xotchilt Castro, Loreto Martorell, María del Mar Pérez Iribarne, Isabel Plensa, Antonio Martínez Monseny, Nuria Brandi, Laura Blasco, Azahara Civera, Sílvia Vidal
Technicians	Dolores López, Ana López, Lidia Álvarez, Paola Pacheco, Jordi Genovès, Montserrat Naudó, Daniel Castillo, Patricia Peral, Teresa Zabala, Lluïsa Ramírez

Projects

- "Connecting the growing brain": synaptic dysfunctions underlying neuropaediatric diseases. Fundació Privada BioRegió de Catalunya. November 2015. PI: Àngels García Cazorla.
- Difference in the cognitive and behavioural profile in children with FASD (Foetal Alcohol Spectrum Disorder) and ADHD in two age groups: phenotypic and neuroimaging correlation. Fundació Alicia Koplowitz. November 2015 - November 2017. PI: Anna Maria Sans Fitó.
- Observational study to assess the response of oral salbutamol in patients affected by type 2 spinal muscular atrophy. Clientes Diversos. May 2015 - May 2017. PI: Andrés Nascimento Osorio.
- CIBER - PIER: Instituto Pediátrico de Enfermedades Raras. Centro de Investigación Biomédica en Red (CIBER). May 2015 - December 2016. PI: Francesc Palau.
- Short stay José Castillejo. Ministerio de educación. April 2015 - July 2015. PI: Belén Pérez Dueñas.
- Myopathies associated with collagen VI deficiency: natural history, functional assessment and identification of new diagnostic and prognostic markers. Fundación Andrés Marcio, niños contra la Laminopatía. March 2015 - March 2018. PI: Cecilia Jiménez Mallebrera.
- Rio Hortega. Beneficiari: Elisenda Cortés. Instituto de Salud Carlos III (ISCIII). March 2015 - March 2017. PI: Àngels García Cazorla.
- Neurodegeneration with Brain Iron Accumulation: Clinical Assessment and Genetic Characterization by means of a Spanish Multi-Centre Research Network. Fundació La Marató de TV3. March 2015 - March 2018. PI: Belén Pérez Dueñas.
- Pantothenate Kinase Associated Neurodegeneration: Clinical Assessment and Genetic Characterization by means of a Multi-Centre Research Network. Retrophin, Inc. March 2015 - January 2017. PI: Belén Pérez Dueñas.
- Mitochondrial encephalomyopathies and secondary deficiencies of coenzyme Q10: Studies on paediatric patients and on cellular and murine models. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Rafael Artuch Iriberrí.
- Severe neurological disorders in childhood. Banco Bilbao Vizcaya Argentaria, S.A. January 2015 - December 2015. PI: Rafael Artuch Iriberrí.
- Genetic studies on metabolic minority diseases. OSSJD - Obra Social Sant Joan de Déu. January 2015 - December 2016. PI: Rafael Artuch Iriberrí.
- Study of trace elements (Cu, Zn, Se and Mn) in cerebrospinal fluid of paediatric subjects and analysis of related biomarkers. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Aida Ormazabal Herrero.
- Pre-doctoral health research training contract. Beneficiario: Alba Tristan. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2018. PI: Àngels García Cazorla.
- Radiological and clinical quantitative assessment in PMM2-CDG patients through a national network of practitioners. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Mercedes Serrano Gimaré.
- Duplication of MECP2: genetic and clinical study on Spanish patients. Asociación Miradas que hablan Duplicación Mecp2. January 2015 - January 2016. PI: Judith Silvia Armstrong Morón.
- Severe childhood neurological disorders. Fundación Banco Bilbao Vizcaya Argentaria. November 2014 - November 2015. PI: Rafael Artuch.
- Identification of populations showing high linear correlations between biochemical variables. SAF2013-50139-EXP. Ministerio de Ciencia e Innovación (MINECO). September 2014 - August 2015. PI: Rafael Artuch.
- Cellular model for the study and treatment of excitatory/inhibitory synaptic unbalance in Rett syndrome. Obra Social Sant Joan de Déu. September 2014 - August 2017. PI: Àngels García-Cazorla.
- Study of defects of thiamine transport and metabolism associated with recurrent childhood encephalopathies. FI grant: Beneficiari: Juan Dario Ortigoza. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. May 2014 - April 2017. PI: Belén Pérez-Dueñas.
- Study of defects of thiamine transport and metabolism associated with recurrent childhood encephalopathies. Hospital Sant Joan de Déu Barcelona. March 2014 - March 2017. PI: Belén Pérez-Dueñas.
- Exome sequencing for discovery of candidate genes in Rett and Rett variants. Associació Catalana de la Síndrome de Rett - ACSR. January 2014 - . PI: Judith Armstrong Morón.

- Research Group on Paediatric Neurosciences and Metabolism. SGR 2014. 2014SGR1150. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. January 2014 - December 2016. PI: Jaume Campistol.
- Role of collagen VI and biglycan in muscle homeostasis: regulation of muscle fibre size and metabolism. Implications for muscular dystrophies. PI13/00837. Instituto de Salud Carlos III. January 2014 - December 2016. PI: Cecilia Jiménez-Mallebrera.
- Research activity intensification programme in the Spanish National Health System 2013. INT13/00212. Instituto de Salud Carlos III. January 2014 - January 2015. PI: Rafael Artuch.
- Reina Sofia Foundation for Rett Syndrome. Fundación Reina Sofia. May 2013 -. PI: Judith Armstrong.
- Role of collagen VI in muscle homeostasis: regulation of muscle fibre size and of glucose and fatty acid metabolism. Hospital Sant Joan de Déu Barcelona. April 2013 - April 2016. PI: Cecilia Jiménez-Mallebrera.
- Inherited NeuRoMetabolic Diseases INFORMATION NETWORK. InNerMeD-I-Network. European Commission. April 2013 - September 2015. PI: Àngels García-Cazorla.
- Biomarkers of cerebral neurotransmission alteration in paediatric encephalopathies of genetic origin: studies on patients and on a cellular mode. Instituto de Salud Carlos III (ISCIII). January 2013 - December 2015. PI: Àngels García-Cazorla.
- Dissection of the mitochondrial pathophysiology of Charcot-Marie-Tooth disease. Ministerio de Economía y Competitividad (MINECO). January 2013 - December 2016. PI: Francesc Palau.
- Study of defects in the transport and metabolism of thiamine associated with recurrent encephalopathies in childhood. Instituto de Salud Carlos III (ISCIII). January 2013 - December 2015. PI: Belén Pérez-Dueñas.
- Study of biochemical markers of dopaminergic and serotonergic neurotransmission in relation to neurological and neuropsychological changes in phenylketonuria. Instituto de Salud Carlos III (ISCIII). January 2013 - December 2015. PI: Jaume Campistol.
- Study of RNA in CSF in Rett patients; new diagnostic approaches. Fondo Biorett. January 2013 - December 2015. PI: Judith Armstrong.
- Predoctoral PFIS grant - Phenotypic and molecular characterisation of coenzyme Q deficiency syndrome. Instituto de Salud Carlos III. September 2012 - September 2016. PI: Rafael Artuch.
- Neuropsychological rehabilitation in children with moderate or severe TBI. Randomised study; conference addressed to parents, to children via robotics and control group. Fundació La Marató de TV3. February 2012 - February 2015. PI: M^a Pilar Poo.
- Phenotypic and molecular characterisation of coenzyme Q deficiency syndrome. Instituto de Salud Carlos III (ISCIII). January 2012 - March 2015. PI: Rafael Artuch.
- Application of Global Gene Expression Analysis and Functional Genomics to the Study of the Physiopathology, Treatment and Diagnosis of Pediatric Myopathies. Instituto de Salud Carlos III (ISCIII). April 2010 - April 2016. PI: Cecilia Jiménez-Mallebrera.
- Glutaric aciduria type 1. Fundació El Somni dels Nens. May 2009 -. PI: Jaume Campistol.
- Clinical study of the natural history of Sanfilippo syndrome (MPS-III). Associació de les Mucopolisacàridosis i les síndromes Relacionades. March 2009 -. PI: Mercè Pineda.

Clinical trials

- Surveillance protocol of Cystadane® (Orphan Europe), in collaboration with the European Network, and register for homocystinurias and methylation deficiency (E-HOD). May 2015 -. PI: Silvia Maria Meavilla.
- Simulated procedure-controlled double-blind randomised phase 3 study to assess the clinical effectiveness and safety of ISIS 396443 administered via intrathecal route in paediatric patients with late-onset spinal muscular atrophy. March 2015 -. PI: Andrés Nascimento.
- Phase III extension trial of ataluren (PTC124) in terminator mutation dystrophinopathy patients. PTC Therapeutics, Inc September 2014 -. PI: Andrés Nascimento.
- Observational, Ambispective Natural History Study of Patients with Mucopolysaccharidosis Type IIIA (MPS IIIA) or San-filippo Syndrome Type A. July 2014 -. PI: Mercè Pineda.
- Phase III, multi-centre, double-blind, prospective, randomised, controlled, multiple-treatment study to evaluate the efficacy and safety of Dysport in the paediatric treatment of upper limb spasticity. May 2014 -. PI: Xenia Alonso.
- Prospective, cross-sectional, longitudinal study with additional retrospective review of clinical records to evaluate the clinical and biochemical characteristics and evolution of the disorder in mucopolysaccharidosis type IIIB patients. INC Research UK Limited. March 2014 -. PI: M^a del Mar OCallaghan.
- Phase IV, open, single-cohort study of long-term neurocognitive (NC) results in children aged 4-5 years with phenylketonuria treated with sapropterin dihydrochloride (Kuvan®) for 7 years. Merck KGaA. February 2014 -. PI: Jaume Campistol.
- Retrospective review of the clinical records of deceased patients with mucopolysaccharidosis type IIIB. January 2014 -. PI: M^a del Mar OCallaghan.
- Epidemiological study to evaluate the severity of RSV infection in patients with severe neurological disorders. January 2014 -. PI: Andrés Nascimento.
- Study of the natural history of molybdenum cofactor deficiency and isolated sulphite oxidase deficiency. October 2013 -. PI: María Julieta.
- Phase 3 study on the efficacy and safety of ataluren (PTC124) in patients with terminator mutation dystrophinopathy. PTC Therapeutics. July 2013 -. PI: Andrés Nascimento.
- International disease register with data on manifestations, interventions and results in patients with tuberous sclerosis complex (TOSC). Novartis Farmacèutica. November 2012 -. PI: Jaume Campistol.
- Multi-centre, open, long-term follow-up study to evaluate the safety and efficacy of brivaracetam as adjuvant treatment in paediatric patients with epilepsy. October 2012 -. PI: Francesc Xavier Sanmartí/ Alia Ramírez.
- Open study on terminator mutation dystrophinopathy patients previously treated with ataluren (PTC124®). Hospital Sant Joan de Déu Barcelona; PTC Therapeutics. October 2012 -. PI: Jaume Colomer/Andres Nascimento.
- Register of patients with Niemann-Pick disease, type C. Actelion Pharmaceuticals España. February 2011 -. PI: Mercè Pineda.
- European paediatric-maternal register of adults on Kuvan® (KAMPER). Merck. March 2010 -. PI: Jaume Campistol.

Publications

- Als LC, Picouto MD, Hau SM, Nadel S, Cooper M, Pierce CM, Kramer T, Garralda ME. Mental and physical well-being following admission to pediatric intensive care. *Pediatr. Crit. Care Med.* 2015. FI: 2,338(Q1).
- Amador-Campos JA, Aznar Casanova JA, Ortiz Guerra JJ, Moreno Sánchez M, Medina Peña A. Assessing Attention Deficit by Binocular Rivalry. *J Atten Disord* 2015. 19: 1064-1073. FI: 3,779(Q1).
- Bachmann-Gagescu R, Dempsey JC, Phelps IG, O'Roak BJ, Knutzen DM, Rue TC, Ishak GE6, Isabella CR, Gorden N, Adkins J, Boyle EA, de Lacy N, O'Day D, Alswaid A, Ramadevi A R, Lingappa L, Lourenço C, Martorell L, Garcia-Cazorla À, Ozyürek H, Haliloğlu G, Tuysuz B, Topçu M; University of Washington Center for Mendelian Genomics, Chance P, Parisi MA, Glass IA, Shendure J, Doherty D. Joubert syndrome: a model for untangling recessive disorders with extreme genetic heterogeneity. *J Med Genet* 2015. 52: 514-522. FI: 6,335(Q1).
- Campistol J, Plecko B. Treatable newborn and infant seizures due to inborn errors of metabolism. *Epileptic Disord.* 2015. 17: 229-242. FI: 0,954(Q4).
- Campistol J. Neurological manifestations in metabolic diseases. *Arq Neuro-Psiquiat* 2015. 73: 59-63. FI: 0,843(Q4).
- Candela S, Puerta P, Alamar M, Barcik U, Guillén A, Muchart J, García-Fructuoso G, Ferrer-Rodríguez E. Epidemiología y clasificación de los quistes aracnoideos en niños. *Neurocirugia (Astur)* 2015. 26: 234-240. FI: 0,293(Q4).
- Cassis L, Cortés-Saladelafont E, Molero-Luis M, Yubero D, González MJ, Herrero AO, Fons C, Jou C, Sierra C, Castejon Ponce E, Ramos F, Armstrong J, O'Callaghan MM, Casado M, Montero R, Olivas SM, Artuch R, Barić I, Bartoloni F, Bellettato CM, Bonifazi F, Ceci A, Cvitanović-Šojat L, Dali CI, D'Avanzo F, Fumic K, Giannuzzi V, Lampe C, Scarpa M, Garcia-Cazorla À. Review and evaluation of the methodological quality of the existing guidelines and recommendations for inherited neurometabolic disorders. *Orphanet J. Rare Dis.* 2015. 10: 164-0. FI: 3,358(Q2).
- Catalán-García M, Garrabou G, Morén C, Guitart-Mampel M, Gonzalez-Casacuberta I, Hernando A, Gallego-Escuredo J, Yubero D, Villaroya F, Montero R, O-Callaghan AS, Cardellach F, Grau J. BACE-1, PS-1 and sAPP β levels are increased in plasma from sporadic inclusion body myositis patients: surrogate biomarkers among inflammatory myopathies. *Mol Med* 2015. FI: 4,508(Q1).
- Couce ML, Ramos F, Bueno MA, Díaz J, Meavilla SM, Bóveda MD, Fernández-Marmiesse A, Garcia-Cazorla A. Evolution of maple syrup urine disease in patients diagnosed by newborn screening versus late diagnosis. *Eur. J. Paediatr. Neurol.* 2015. 19: 652-659. FI: 2,301(Q2).
- Crow YJ, Chase DS, Lowenstein Schmidt J, Szykiewicz M, Forte GM, Gornall HL, Oojageer A, Anderson B, Pizzino A, Helman G, Abdel-Hamid MS, Abdel-Salam GM, Ackroyd S, Aeby A, Agosta G, Albin C, Allon-Shalev S, Arellano M, Ariaudo G, Aswani V, Babul-Hirji R, Baildam EM, Bahi-Buisson N, Bailey KM, Barnerias C, Barth M, Battini R, Beresford MW, Bernard G, Bianchi M, Billette de Villemeur T, Blair EM, Bloom M, Burlina AB, Carpanelli ML, Carvalho DR, Castro-Gago M, Cavallini A, Cereda C, Chandler KE, Chitayat DA, Collins AE, Sierra Corcoles C, Cordeiro NJ, Crichiutti G, Dabydeen L, Dale RC, D'Arrigo S, De Goede CG, De Laet C, De Waele LM, Denzler I, Desguerre I, Devriendt K, Di Rocco M, Fahey MC, Fazzi E, Ferrie CD, Figueiredo A, Gener B, Goizet C, Gowrinathan NR, Gowrishankar K, Hanrahan D, Isidor B, Kara B, Khan N, King MD, Kirk EP, Kumar R, Lagae L, Landrieu P, Lauffer H, Laugel V, La Piana R, Lim MJ, Lin JP, Linnankivi T, Mackay MT, Marom DR, Marques Lourenço C, McKee SA, Moroni I, Morton JE, Moutard ML, Murray K, Nabbout R, Nampoothiri S, Nunez-Enamorado N, Oades PJ, Olivieri I, Ostergaard JR, Pérez-Dueñas B, Prendiville JS, Ramesh V, Rasmussen M, Régál L, Ricci F, Rio M, Rodriguez D, Roubertie A, Salvatici E, Segers KA, Sinha GP, Soler D, Spiegel R, Stödberg TI, Straussberg R, Swoboda KJ, Suri M, Tacke U, Tan TY, te Water Naude J, Wee Teik K, Thomas MM, Till M, Tonduti D, Valente EM, Van Coster RN, van der Knaap MS, Vassallo G, Vijzelaar R, Vogt J, Wallace GB, Wassmer E, Webb HJ, Whitehouse WP, Whitney RN, Zaki MS, Zuberi SM, Livingston JH, Rozenberg F, Lebon P, Vanderver A, Orcesi S, Rice GI. Characterization of Human Disease Phenotypes Associated with Mutations in TREX1, RNASEH2A, RNASEH2B, RNASEH2C, SAMHD1, ADAR, and IFIH1. *Am J Med Genet* 2015. 167: 296-312. FI: 2,159(Q3).
- Fernandes TG, Duarte ST, Ghazvini M, Gaspar C, Santos DC, Porteira AR, Rodrigues GM, Haupt S, Rombo DM, Armstrong J, Sebastião AM, Gribnau J, Garcia-Cazorla À, Brüstle O, Henrique D, Cabral JM, Diogo MM. Neural commitment of human pluripotent stem cells under defined conditions recapitulates neural development and generates patient-specific neural cells. *Biotechnol J* 2015. 10: 1578-1588. FI: 3,490(Q1).

- Garcia-Cazorla A, Cortés Saladelafont E, Duarte S. Comunicación neuronal y metabolismo sináptico en epilepsia infantil. *Rev. Neurologia* 2015. 60: 219-228. FI: 0,830(Q4).
- Garcia-Cazorla A, Mochel F, Lamari F, Saudubray JM. The clinical spectrum of inherited diseases involved in the synthesis and remodeling of complex lipids. A tentative overview. *J. Inherit. Metab. Dis.* 2015. 38: 19-40. FI: 3,365(Q2).
- González Jiménez D, Muñoz Codoceo R, Garriga García M, Molina Arias M, Alvarez Beltran M, Garcia Romero R, Martinez Costa C, Meavilla Olivas SM, Peña Quintana L, Gallego Gutierrez S, Marugan de Miguelsanz JM, Suarez Cortina L, Castejón Ponce EN, Leis Trabazo R, Martin Cruz F, Diaz Martin JJ, Bousoño Garcia C. Vitamina D y colonizaciones pulmonares crónicas en pacientes pediátricos y adultos jóvenes con fibrosis quística. *Nutr. Hosp.* 2015. 32: 1629-1635. FI: 1,040(Q4).
- Guerra-Prado D, Mardomingo-Sanz ML, Ortiz-Guerra JJ, García-García P, Soler-López B. Evolución del estrés familiar en niños con trastorno por déficit de atención con hiperactividad. *An Pediatr (Barc)* 2015. 83: 328-335. FI: 0,833(Q4).
- Hole M, Underhaug J, Diez H, Ying M, Røhr ÅK, Jorge-Finnigan A, Fernández-Castillo N, Garcia-Cazorla A, Andersson KK, Teigen K, Martinez A. Discovery of compounds that protect tyrosine hydroxylase activity through different mechanisms. *Biochim Biophys Acta* 2015. 1854: 1078-1089. FI: 2,747(Q2).
- Jaffer F, Avbersek A, Vavassori R, Fons C, Campistol J, Stagnaro M, De Grandis E, Veneselli E, Rosewich H, Gianotta M, Zucca C, Ragona F, Granata T, Nardocci N, Mikati M, Helseth AR, Boelman C, Minassian BA, Johns S, Garry SI, Scheffer IE, Gourfinkel-An I, Carrilho I, Aylett SE, Parton M, Hanna MG, Houlden H, Neville B, Kurian MA, Novy J, Sander JW, Lambiase PD, Behr ER, Schyns T, Arzimanoglou A, Cross JH, Kaski JP, Sisodiya SM. Faulty cardiac repolarization reserve in alternating hemiplegia of childhood broadens the phenotype. *Brain* 2015. 138: 2859-2874. FI: 9,196(Q1).
- Juan-Mateu J, Gonzalez-Quereda L, Jose Rodriguez M, Baena M, Verdura E, Nascimento A, Ortez C, Baiget E, Gallano P. DMD Mutations in 576 Dystrophinopathy Families: A Step Forward in Genotype-Phenotype Correlations. *PLoS One* 2015. FI: 3,234(Q1).
- Kölker S, Cazorla AG, Valayannopoulos V, Lund AM, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Augoustides-Savvopoulou P, Aksglaede L, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Chabrol B, Chakrapani A, Chapman K, I Saladelafont EC, Couce ML, de Meirleir L, Dobbelaere D, Dvorakova V, Furlan F, Gleich F, Gradowska W, Grünewald S, Jalan A, Häberle J, Haege G, Lachmann R, Laemmle A, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, de Baulny HO, Ortez C, Peña-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Burgard P. Erratum to: The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 1: the initial presentation. *J. Inherit. Metab. Dis.* 2015. 38: 1155-1156. FI: 3,365(Q2).
- Kölker S, Garcia-Cazorla A, Valayannopoulos V, Lund AM, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Augoustides-Savvopoulou P, Aksglaede L, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Chabrol B, Chakrapani A, Chapman K, I Saladelafont EC, Couce ML, de Meirleir L, Dobbelaere D, Dvorakova V, Furlan F, Gleich F, Gradowska W, Grünewald S, Jalan A, Häberle J, Haege G, Lachmann R, Laemmle A, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, de Baulny HO, Ortez C, Peña-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Burgard P. The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 1: the initial presentation. *J. Inherit. Metab. Dis.* 2015. 38: 1041-1057. FI: 3,365(Q2).
- Kölker S, Valayannopoulos V, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Boy SP, Rasmussen MB, Burgard P, Chabrol B, Chakrapani A, Chapman K, Cortés I Saladelafont E, Couce ML, de Meirleir L, Dobbelaere D, Furlan F, Gleich F, González MJ, Gradowska W, Grünewald S, Honzik T, Hörster F, Ioannou H, Jalan A, Häberle J, Haege G, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, Murphy E, de Baulny HO, Ortez C, Pedrón CC, Pintos-Morell G, Pena-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Lund AM, Garcia-Cazorla A. The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 2: the evolving clinical phenotype. *J. Inherit. Metab. Dis.* 2015. 38: 1059-1074. FI: 3,365(Q2).
- Kölker S, Valayannopoulos V, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Boy SP, Rasmussen MB, Burgard P, Chabrol B, Chakrapani A, Chapman K, Cortés I Saladelafont E, Couce ML, de Meirleir L, Dobbelaere D, Furlan F, Gleich F, González MJ, Gradowska W, Grünewald S, Honzik T, Hörster F, Ioannou H, Jalan A, Häberle J, Haege G, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, Murphy E, de Baulny HO, Ortez C, Pedrón CC, Pintos-Morell G, Pena-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams

- Lachmann R, Laemmle A, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, de Baulny HO, Ortez C, Peña-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Staufner C, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Burgard P. Erratum to: The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 1: the initial presentation. *J. Inherit. Metab. Dis.* 2015. 38: 1155-1156. FI: 3,365(Q2).
- Kölker S, Garcia-Cazorla A, Valayannopoulos V, Lund AM, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Augoustides-Savvopoulou P, Aksglaede L, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Chabrol B, Chakrapani A, Chapman K, I Saladelafont EC, Couce ML, de Meirleir L, Dobbelaere D, Dvorakova V, Furlan F, Gleich F, Gradowska W, Grünewald S, Jalan A, Häberle J, Haege G, Lachmann R, Laemmle A, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, de Baulny HO, Ortez C, Peña-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Staufner C, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Burgard P. The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 1: the initial presentation. *J. Inherit. Metab. Dis.* 2015. 38: 1041-1057. FI: 3,365(Q2).
- Kölker S, Valayannopoulos V, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Boy SP, Rasmussen MB, Burgard P, Chabrol B, Chakrapani A, Chapman K, Cortés I Saladelafont E, Couce ML, de Meirleir L, Dobbelaere D, Furlan F, Gleich F, González MJ, Gradowska W, Grünewald S, Honzik T, Hörster F, Ioannou H, Jalan A, Häberle J, Haege G, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, Murphy E, de Baulny HO, Ortez C, Pedrón CC, Pintos-Morell G, Pena-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams M, Lund AM, Garcia-Cazorla A. The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 2: the evolving clinical phenotype. *J. Inherit. Metab. Dis.* 2015. 38: 1059-1074. FI: 3,365(Q2).
- Kölker S, Valayannopoulos V, Burlina AB, Sykut-Cegielska J, Wijburg FA, Teles EL, Zeman J, Dionisi-Vici C, Barić I, Karall D, Arnoux JB, Avram P, Baumgartner MR, Blasco-Alonso J, Boy SP, Rasmussen MB, Burgard P, Chabrol B, Chakrapani A, Chapman K, Cortés I Saladelafont E, Couce ML, de Meirleir L, Dobbelaere D, Furlan F, Gleich F, González MJ, Gradowska W, Grünewald S, Honzik T, Hörster F, Ioannou H, Jalan A, Häberle J, Haege G, Langereis E, de Lonlay P, Martinelli D, Matsumoto S, Mühlhausen C, Murphy E, de Baulny HO, Ortez C, Pedrón CC, Pintos-Morell G, Pena-Quintana L, Ramadza DP, Rodrigues E, Scholl-Bürgi S, Sokal E, Summar ML, Thompson N, Vara R, Pinera IV, Walter JH, Williams

M, Lund AM, Garcia-Cazorla A. Erratum to: The phenotypic spectrum of organic acidurias and urea cycle disorders. Part 2: the evolving clinical phenotype. *J. Inherit. Metab. Dis.* 2015. 38: 1157-1158. FI: 3,365(Q2).

- Molero M, Serrano M, O'Callaghan M, Sierra C, Pérez-Dueñas B, Garcia-Cazorla A, Artuch R. Clinical, etiological and therapeutic aspects of cerebral folate deficiency. *Expert Rev. Neurother.* 2015. 15: 793-802. FI: 2,783(Q2).
- Nakagawa K, Gonzalez-Roca E, Souto A, Kawai T, Umebayashi H, Campistol J, Cañellas J, Takei S, Kobayashi N, Callejas-Rubio JL, Ortego-Centeno N, Ruiz-Ortiz E, Rius F, Anton J, Iglesias E, Jimenez-Treviño S, Vargas C, Fernandez-Martin J, Calvo I, Hernández-Rodríguez J, Mendez M, Dordal MT, Basagaña M, Bujan S, Yashiro M, Kubota T, Koike R, Akuta N, Shimoyama K, Iwata N, Saito MK, Ohara O, Kambe N, Yasumi T, Izawa K, Kawai T, Heike T, Yagüe J, Nishikomori R, Aróstegui JI. Somatic NLRP3 mosaicism in Muckle-Wells syndrome. A genetic mechanism shared by different phenotypes of cryopyrin-associated periodic syndromes. *Ann Rheum Dis* 2015. 74: 603-610. FI: 10,377(Q1).
- Natera-de Benito D, Fons C, Ulate-Campos A, Martorell L, Poo P. Clinical and genomic characterization of two patients with a duplication of 9q34: comparison and review of the literature. *Clin Dysmorphol* 2015. 24: 38-43. FI: 0,608(Q4).
- Nissenkorn A, Levy-Drummer RS, Bondi O, Renieri A, Villard L, Mari F, Mencarelli MA, Lo Rizzo C, Meloni I, Pineda M, Armstrong J, Clarke A, Bahi-Buisson N, Mejaski BV, Djuric M, Craiu D, Djukic A, Pini G, Bisgaard AM, Melegh B, Vignoli A, Russo S, Angheliescu C, Veneselli E, Hayek J, and Ben-Zeev B. Epilepsy in Rett syndrome-lessons from the Rett networked database. *Epilepsia* 2015. 56: 569-576. FI: 4,571(Q1).
- O'Callaghan M, Emperador S, Pineda M, López-Gallardo E, Montero R, Yubero D, Jou C, Jimenez-Mallebrera C, Nascimento A, Ferrer I, Garcia-Cazorla A, Ruiz-Pesini E, Montoya J, Artuch R. Mutation loads in different tissues from six pathogenic mtDNA point mutations. *Mitochondrion* 2015. 22: 17-22. FI: 3,249(Q2).
- Ormazabal A, Casado M, Molero M, Montoya J, Rahman S, Aylett S, Hargreaves I, Heales S, Artuch R. Can folic acid have a role in mitochondrial disorders?. *Drug Discov. Today* 2015. 20: 1349-1354. FI: 6,691(Q1).
- Ortez C, Duarte ST, Ormazabal A, Serrano M, Pérez A, Pons R, Pineda M, Yapici Z, Fernández-Alvarez E, Domingo-Jiménez R, De Castro P, Artuch R, Garcia-Cazorla A. Cerebrospinal fluid synaptic proteins as useful biomarkers in tyrosine hydroxylase deficiency. *Mol. Genet. Metab.* 2015. 114: 34-40. FI: 2,625(Q2).

- Paco S, Casserras T, Rodríguez MA, Jou C, Puigdelloses M, Ortez C, Diaz-Manera J, Gallardo E, Colomer J, Nascimento A, Kalko SG, Jimenez-Mallebrera C. Transcriptome Analysis of Ullrich Congenital Muscular Dystrophy Fibroblasts Reveals a Disease Extracellular Matrix Signature and Key Molecular Regulators. *PLoS One* 2015. FI: 3,234(Q1).
- Panagiotakaki E, De Grandis E, Stagnaro M, Heinzen EL, Fons C, Sisodiya S, de Vries B, Goubau C, Weckhuysen S, Kemlink D, Scheffer I, Lesca G, Rabilloud M, Klich A, Ramirez-Camacho A, Ulate-Campos A, Campistol J, Giannotta M, Moutard ML, Doummar D, Hubsch-Bonneaud C, Jaffer F, Cross H, Gurrieri F, Tiziano D, Nevsimalova S, Nicole S, Neville B, van den Maagdenberg AM, Mikati M, Goldstein DB, Vavassori R, Arzimanoglou A; Italian IBAHC Consortium; French AHC Consortium; International AHC Consortium. Clinical profile of patients with ATP1A3 mutations in Alternating Hemiplegia of Childhood-a study of 155 patients. *Orphanet J. Rare Dis.* 2015. 10: 123-0. FI: 3,358(Q2).
- Patterson MC, Mengel E, Vanier MT, Schwierin B, Muller A, Cornelisse P, Pineda M. Stable or improved neurological manifestations during miglustat therapy in patients from the international disease registry for Niemann-Pick disease type C: an observational cohort study. *Orphanet J. Rare Dis.* 2015. 10: 65-0. FI: 3,358(Q2).
- Piard J, Aral B, Vabres P, Holder-Espinasse M, Mégarbané A, Gauthier S, Capra V, Pierquin G, Callier P, Baumann C, Pasquier L, Baujat G, Martorell L, Rodriguez A, Brady AF, Boralevi F, González-Enseñat MA, Rio M, Bodemer C, Philip N, Cordier MP, Goldenberg A, Demeer B, Wright M, Blair E, Puzenat E, Parent P, Sznajder Y, Francannet C, DiDonato N, Boute O, Barlogis V, Moldovan O, Bessis D, Coubes C, Tardieu M, Cormier-Daire V, Sousa AB, Franques J, Toutain A, Tajir M, Elalaoui SC, Geneviève D, Thevenon J, Courcet JB, Rivière JB, Collet C, Gigot N, Faivre L, Thauvin-Robinet C. Search for ReCQL4 mutations in 39 patients genotyped for suspected Rothmund-Thomson/Baller-Gerold syndromes. *Clin. Genet.* 2015. 87: 244-251. FI: 3,931(Q2).
- Reddy P, Ocampo A, Suzuki K, Luo J, Bacman SR, Williams SL, Sugawara A, Okamura D, Tsunekawa Y, Wu J, Lam D, Xiong X, Montserrat N, Esteban CR, Liu GH, Sancho-Martinez I, Manau D, Civico S, Cardellach F, O'Callaghan M, Campistol J, Zhao H, Campistol JM, Moraes CT, Izpisua Belmonte JC. Selective elimination of mitochondrial mutations in the germline by genome editing. *Cell* 2015. 161: 459-469. FI: 32,242(Q1).
- Romani M, Mancini F, Micalizzi A, Poretti A, Miccinilli E, Accorsi P, Avola E, Bertini E, Borgatti R, Romaniello R, Ceylaner S, Coppola G,

D'Arrigo S, Giordano L, Janecke AR, Lituania M, Ludwig K, Martorell L, Mazza T, Odent S, Pinelli L, Poo P, Santucci M, Signorini S, Simonati A, Spiegel R, Stanzial F, Steinlin M, Tabarki B, Wolf NI, Zibordi F, Boltshauser E, Valente EM. Oral-facial-digital syndrome type VI: is C5orf42 really the major gene?. *Hum Genet* 2015. 134: 123-126. FI: 4.824(Q1).

- Sariego-Jamardo A, Garcia-Cazorla A, Artuch R, Castejón E, D. Garcia-Arenas, Molero M, Ormazabal A, Sanmarti FX. Efficacy of the Ketogenic Diet for the Treatment of Refractory Childhood Epilepsy: Cerebrospinal Fluid Neurotransmitters and Amino Acid Levels. *Pediatr. Neurol.* 2015. 53: 422-426. FI: 1.695(Q2).
- Serrano M, de Diego V, Muchart J, Cuadras D, Felipe A, Macaya A, Velázquez R, Poo MP, Fons C, O'Callaghan MM, García-Cazorla A, Boix C, Robles B, Carratalá F, Girós M, Briones P, Gort L, Artuch R, Pérez-Cerdá C, Jaeken J, Pérez B, Pérez-Dueñas B. Phosphomannomutase deficiency (PMM2-CDG): ataxia and cerebellar assessment. *Orphanet J. Rare Dis.* 2015. 10: 138-0. FI: 3.358(Q2).
- Táboas-Pereira MA, Paredes-Mercado C, Alonso-Curcó X, Badosa-Pagès J, Muchart J, Póo P. Tratamiento de la sialorrea en niños con patología neurológica. *Rev. Neurologia* 2015. 61: 66-70. FI: 0.830(Q4).
- Toma C, Torrico B, Hervás A, Salgado M, Rueda I, Valdés-Mas R, Buitelaar JK, Rommelse N, Franke B, Freitag C, Reif A, Pérez-Jurado LA, Battaglia A, Mazzone L, Bacchelli E, Puente XS, Cormand B. Common and rare variants of microRNA genes in autism spectrum disorders. *World J Biol Psychiatry* 2015. 16: 376-386. FI: 4.183(Q1).

- Torrico B, Fernández-Castillo N, Hervás A, Milà M, Salgado M, Rueda I, Buitelaar JK, Rommelse N, Oerlemans AM, Bralten J, Freitag CM, Reif A, Battaglia A, Mazzone L, Maestrini E, Cormand B, Toma C. Contribution of common and rare variants of the PTCHD1 gene to autism spectrum disorders and intellectual disability. *Eur J Hum Genet* 2015. 23: 1694-1701. FI: 4.349(Q1).
- Vallejo-Torres L, Castilla I, Couce ML, Pérez-Cerdá C, Martín-Hernández E, Pineda M, Campistol J, Arrospide A, Morris S, Serrano-Aguilar P. Cost-Effectiveness Analysis of a National Newborn Screening Program for Biotinidase Deficiency. *Pediatrics* 2015. FI: 5.473(Q1).
- Yubero D, Montero R, Armstrong J, Espinós C, Palau F, Santos-Ocaña C, Salviati L, Navas P, Artuch R. Molecular diagnosis of coenzyme Q(10) deficiency. *Expert Rev Mol Diagn* 2015. 15: 1049-1059. FI: 3.516(Q1).
- Yubero D, Montero R, Ramos M, Neergheen V, Navas P, Artuch R, Hargreaves I. Determination of urinary coenzyme Q10 by HPLC with electrochemical detection: Reference values for a paediatric population. *Biofactors* 2015. 41: 424-430. FI: 4.592(Q1).

2

AREA

Paediatric
neuroscience

Groups

Projects

Clinical Trials

Publications

Supervised theses

Networks

Supervised theses

- Synaptic Dysfunction In Early Encephalopathies: From Genes to Function. Doctoral Candidate: Sofia Duarte. Director: Àngels Garcia-Cazorla. November 2015.

Networks

- Centre for Biomedical Network Research on Rare Diseases (CIBERER). Ministry of Economy and Competitiveness. Carlos III Health Institute.
- Spanish Charcot-Marie-Tooth Consortium (TREAT-CMT). Carlos III Health Institute (ISCIII) and International Rare Diseases Research Consortium (IRDiRC).
- European Treat-NMD Network.



3

AREA

Molecular and cellular biology of developmental tumours

Groups
Projects
Clinical Trials
Publications
Networks

Preclinical pharmacology and drug release in solid paediatrics tumours

Development of preclinical disease models (neuroblastoma, diffuse intrinsic pontine glioma/DIPG, rhabdomyosarcoma, Ewing's sarcoma, retinoblastoma) on the basis of biobank samples. Study of new treatments (pharmacological, biological and immunotherapy)

in preclinical models of paediatric solid tumours. Study of the penetration of chemotherapeutic agents in preclinical models of paediatric solid tumours. Development of new chemotherapy release systems in paediatric solid tumours.

Research team

Coordinator Ángel Montero-Carcaboso
 Researchers Sonia Paco, Carles Monterrúbio, Nagore Gené Olaciregui, Guillem Pascual Pasto, Guillermo Chantada, Ofelia Cruz, Andrés Morales, Andreu Parareda
 Technician Mònica Vilà Ubach

Paediatric Leukaemia and Blood disorders

The primary goal is to deepen our understanding of the origin and molecular bases of paediatric haematological malignancies with a view to transferring new diagnostic, prognostic and therapeutic tools to clinical practice. We seek to conduct translational and

easily applicable research both on leukaemias and bone marrow failure syndromes, and on non-neoplastic blood changes, haemoglobin disorders and coagulation disorders.

Research team

Coordinator Mireia Camós
 Researchers Roberta Malatesta, Nerea Vega García, Anna Alonso Saladrigues, Montse Mesegué Medà, María Trabazo del Castillo, Montse Torreadell Burriel, Anna Ruiz-Llobet, Rubén Berrueco Moreno, Albert Català Temprano, Julia Marsal Ricomà, Isabel Badell Serra, Susana Rives Solà
 Technician Camino Estella Aguado

3

AREA

Molecular and
cellular biology
of developmental
tumours

Groups

Projects

Clinical Trials

Publications

Networks

Neuroblastoma and Personalized Medicine

Our group has two primary goals: (1) to identify new therapeutic targets in neuroblastoma, and (2) to provide a personalised treatment to paediatric patients affected by relapsed/refractory solid tumours, on the basis of the knowledge of their genetic changes. Important aspects of our activity are the assessment of

the calcium-sensor receptor and parathyroid hormone-related protein (PTH-RP) as new therapeutic targets in neuroblastoma, and the analysis of combined therapies based on the knowledge of the interaction of these molecules with the various altered signalling pathways in neuroblastoma.

Research team

Coordinator	Carmen de Torres
Researchers	Silvia Mateo Lozano, Carlos J. Rodríguez Hernández, Marta García López
Technician	Noelia Salvador

Translational genomics

Integration of the knowledge of the genome and of medicine to improve therapeutic strategies. The aim is to use "omics" technologies to identify the underlying molecular mechanisms of

the biology and clinical-pathological behaviour of developmental tumours, as a possibility for the development of diagnostic, prognostic and treatment-response biomarkers.

Research team

Coordinator	Cinzia Lavarino
Researchers	Soledad Gómez, Laura García, Alicia Garrido, Hector Salvador
Technician	Isadora Lemos

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Sarcoma and histiocytosis

The main areas of research include: 1) the study of the origin of sarcoma and phenotypic and genotypic characterization of the various clinical subtypes; 2) the existence of precursor or tumour stem cells; 3) improved treatment of patients with sarcomas

through the study of pre-clinical pharmacology; 4) Development of therapies targeted at the IgF1r pathway; 5) the study of directed therapies and molecular pathways in histiocytosis.

Research team

Coordinator	Jaume Mora
Researchers	M ^a Inmaculada Hernández Muñoz, Sara Sanchez Molina, Elisabet Figuerola Bou, Sara Perez Jaume, Estela Prada Varela, Veronica Celis, Moira Garraus
Technician	M ^a Jesus Nagel Moyano

Projects

- Cure4RB. Ministerio de Economía Y Competitividad (MINECO). July 2015 - December 2018. PI: Angel Montero Carcaboso.
- CEBIOTEX. Cebiotex S.L. October 2015 - April 2016. PI: Angel Montero Carcaboso.
- Adverse genetic changes in acute paediatric leukaemia. Fundación Pelayo. October 2015 - September 2016. PI: Mireia Camós Guijosa.
- Pilot study of the infusion of gene-modified autologous T lymphocytes expressing anti-CD19 in patients with treatment-resistant or refractory CD19+ lymphoma or leukaemia. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Susana Rives Solà.
- Assessment of calcium-sensor receptor and parathyroid hormone-related protein (PTHrP) as new therapeutic targets in neuroblastoma. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Carmen De Torres Gómez-Pallete.
- Epigenetics in the pathogenesis of neuroblastoma: new molecular perspectives for development of therapeutic strategies. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Cinzia Lavarino.
- Translational research program in diffuse intrinsic pontine gliomas. Hospital Sant Joan de Déu - Esplugues HSJD. April 2014 - April 2017. PI: Angel Montero-Carcaboso.
- Genetic and epigenetic study of the regulatory molecular pathways of haematopoietic progenitor cells in paediatric leukaemias with rearrangement of the MLL gene. Fundación CRIS de Investigación para Vencer el Cáncer. March 2014 - March 2017. PI: Mireia Camos.
- 2014SGR1398 Developmental tumours research group. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. January 2014 - December 2016. PI: Jaume Mora.
- Translational research programme on diffuse intrinsic pontine. Contrato Miguel Servet I. Instituto de Salud Carlos III. January 2014 - January 2019. PI: Angel Montero-Carcaboso.
- Translational research program in diffuse intrinsic pontine. Proyecto asociado a contrato Miguel Servet I. Instituto de Salud Carlos III. January 2014 - December 2016. PI: Angel Montero-Carcaboso.
- Search, validation and clinical translation of new therapeutic targets based on the study of genomics and integrative proteomics in Ewing's sarcoma. Asociación Española Contra el Cáncer. October 2013 - September 2018. PI: Jaume Mora.
- Study of molecular pathways regulating haematopoietic progenitor cells in paediatric leukaemias with rearrangement of gene MLL. Hospital Sant Joan de Déu - Esplugues HSJD. March 2013 - February 2016. PI: Mireia Camos.
- Study of molecular pathways regulating haematopoietic progenitor cells in paediatric leukaemias with rearrangement of gene MLL. Instituto de Salud Carlos III. January 2013 - December 2015. PI: Mireia Camos.
- Molecular mechanisms involved in the development of paediatric leukaemias. Fundación Científica de la Asociación Española Contra el Cáncer (AECC); Fundación Instituto Mar de Investigaciones Médicas. September 2012 - August 2015. PI: Mireia Camos.
- CHD5, PAFAH1B1 and NME1: Markers for prognosis and prediction of therapeutic response in neuroblastoma. Chemoresistance mechanisms. Hospital Sant Joan de Déu - Esplugues HSJD. April 2012 - March 2015. PI: Cinzia Lavarino.
- CHD5, PAFAH1B1 and NME1: Markers for prognosis and prediction of therapeutic response in neuroblastoma. Chemoresistance mechanisms. Instituto de Salud Carlos III (ISCIII). January 2012 - December 2015. PI: Cinzia Lavarino.
- Limited distribution of drugs in tumoral microenvironment as the cause of chemoresistance in neuroblastoma. Fundación Banco Bilbao Vizcaya Argentaria. January 2012 - December 2015. PI: Angel Montero-Carcaboso.
- Limited distribution of drugs in tumoral microenvironment as the cause of chemoresistance in neuroblastoma. Call for proposals: National R&D&I Programme, Fundamental Research Projects Subprogramme 2011; Category A: Young Researcher. Ministerio de Ciencia e Innovación. January 2012 - December 2015. PI: Angel Montero-Carcaboso.
- Neuroblastoma NEN. Associació de familiars i amics de pacients amb neuroblastoma. January 2012 -. PI: Cinzia Lavarino.
- Research on Ewings sarcoma - Asociación Pablo Ugarte. Asociación Pablo Ugarte. May 2011 -. PI: Jaume Mora.
- Neuroblastoma Chemo. Chemotherapy of neuroblastoma. Marie Curie Fellowship PIRGo8-GA-2010-276998 European Commission. March 2011 - March 2015. PI: Angel Montero-Carcaboso.

Clinical trials

- Multi-centre single-group phase II trial to determine the effectiveness and safety of CTL019 in paediatric patients with relapsed/refractory acute B-cell lymphoblastic leukaemia. December 2015 -. PI: Susana Rives.
- Long-term follow-up of patients treated with CAR T-cell therapy targeted at CD19 based on lentiviral vectors. December 2015 -. PI: Susana Rives.
- Placebo-controlled randomised phase III clinical trial to assess the effectiveness and safety of MK 0517/fosaprepitant and ondansetron versus ondansetron in the prevention of chemotherapy-induced nausea and vomiting (CINV) in paediatric patients receiving emetogenic chemotherapy. October 2015 -. PI: Jaume Mora.
- Open multi-centre early-phase study of the safety and pharmacokinetics of anti-pd-l1 (mpdl3280a) antibody in paediatric patients and young adults with previously treated solid tumours. October 2015 -. PI: Jaume Mora.
- Uncontrolled open multi-centre phase III study to assess the pharmacokinetics, safety and effectiveness of BAY 94-9027 for the prophylaxis and treatment of haemorrhages in previously treated children (age < 12 years) with severe haemophilia A. October 2015 -. PI: Ruben Berruenco.
- Open multi-centre phase 2 study to assess the pharmacokinetics, pharmacodynamics, safety and activity of azacitidine and to compare azacitidine with historical controls in paediatric subjects with new diagnosis of advanced myelodysplastic syndrome or juvenile myelomonocytic leukaemia before hematopoietic stem cell transplantation. September 2015 -. PI: Albert Català.
- Single-dose trial to assess the formulation of rivaroxaban in dry powder for oral suspension in children from age 6 months to 12 years with previous thrombosis. July 2015 -. PI: Ruben Berruenco.
- Phase I-II study of vinblastine in combination with nilotinib in children, adolescents and young adults with refractory or recurrent low-grade glioma. May 2015 -. PI: Ofelia Cruz.
- International Randomised Controlled Trial of Chemotherapy for the Treatment of Recurrent and Primary Refractory Ewing Sarcoma. April 2015 -. PI: Jaume Mora.
- Multi-centre international clinical programme for the diagnosis and treatment of children, adolescents and young adults with Ependymoma (SIOP EP-II). March 2015 -. PI: Ofelia Cruz.
- Uncontrolled open multi-centre phase III study to assess the safety of BAY 81-8973 in children with severe haemophilia A under prophylactic treatment. January 2015 -. PI: Ruben Berruenco.
- Open single-arm study to evaluate the long-term safety and efficacy of romiplostim in thrombocytopaenic paediatric patients with immune thrombocytopaenic purpura (ITP). AMGEN. October 2014 -. PI: Ruben Berruenco.
- Open randomised active comparator-controlled clinical trial to evaluate the safety, efficacy, and pharmacokinetic and pharmacodynamic properties of oral rivaroxaban during 30 days of treatment, in children with diverse manifestations of venous thrombosis. Bayer Pharma AG. September 2014 -. PI: Ruben Berruenco.
- Multi-centre randomised open active comparator-controlled clinical trial to evaluate the efficacy and safety of rivaroxaban at a dose adjusted to the age and weight of children with acute venous thromboembolism. Bayer Pharma AG. September 2014 -. PI: Ruben Berruenco.
- Multi-centre open single-arm two-part phase I/IIA study to determine the safety, tolerability and pharmacokinetics of oral dabrafenib in children between the ages of 12 months and 18 years with advanced solid tumours and positive BRAF V600 mutation. Glaxosmithkline. September 2014 -. PI: Jaume Mora.
- Uncontrolled single-centre phase II clinical trial of dinutuximab (CH 14.18) with the cytokines GM-SCF (granulocyte-macrophage colony-stimulating factor) and IL-2 in patients with high-risk neuroblastoma who are not candidates for other immunotherapy trials. Fundació Privada per a la Recerca i la Docència Sant Joan de Déu. May 2014 -. PI: Jaume Mora.
- Project for updating the study on congenital haemophilia in Spain (PUCHS). Retrospective non-interventionist multi-centre study of the prevalence of haemophilia in Spain. Novo Nordisk Pharma. May 2014 -. PI: Teresa Toll.
- Multi-centre open phase I increasing-dose study of a single group, with monitoring of efficacy, to evaluate vemurafenib

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(ro5185426) in children and adolescents with surgically incurable and unresectable melanoma in stage iiiic or iv presenting BRAF V600 mutations. F. Hoffmann- La Roche Ltd; Hospital Sant Joan de Déu - Esplugues HSJD; Quintiles. February 2014 -. PI: Ofelia Cruz.

- Formation of a Spanish cohort of childhood cancer survivors: SPAIN-CCSS cohort. January 2014 -. PI: Héctor Salvador.
- Randomised open comparative combined phase 1/2 dose-finding study to evaluate the efficacy and safety of plerixafor together with standard regimes for mobilisation of haematopoietic stem cells in peripheral blood, and subsequent harvest by apheresis, versus only standard regimes for mobilisation in paediatric patients between the ages of 2 and 18 years with solid tumours meeting requirements for autologous transplantations. January 2014 -. PI: Susana Rives.
- Observational prospective study of the expression of ABCB1/P-glycoprotein as a factor for the biological stratification of non-metastatic osteosarcoma of the extremities. Grupo Español de Investigación en Sarcoma. January 2014 -. PI: Jaume Mora.
- Phase II study of ipilimumab in children and adolescents (from 12 to <18 years) with unresectable malignant melanoma in stage III or stage IV, previously treated or untreated. Bristol-Myers Squibb International Corporation (BMSIC); Hospital Sant Joan de Déu - Esplugues HSJD. November 2013 -. PI: Ofelia Cruz.
- Rare sarcomas register: A tool to help to evaluate the number of cases of each subtype and their therapeutic orientation by the Spanish Research Group on Sarcomas (GEIS). Grupo Español de Investigación en Sarcoma. November 2013 -. PI: Jaume Mora.
- Prospective multi-centre phase II trial with gemcitabine and rapamycin as second-line treatment of metastatic osteosarcoma. GEIS 29. January 2013 -. PI: Jaume Mora.
- Monoclonal chimeric recombinant CH 14.18 antibody. April 2013 -. PI: Jaume Mora.
- Phase I/II study of sunitinib in young patients with advanced digestive stroma tumour. Cetir Centre Mèdic; Hospital Sant Joan de Déu - Esplugues HSJD; Pfi zer, S.L.U. April 2013 -. PI: Ofelia Cruz.
- Controlled randomised open multi-centre phase III study to evaluate the safety and efficacy of oral LDE225 versus temozolomide in recurrent medulloblastoma patients with activation of the Hh pathway. Hospital Sant Joan de Déu - Esplugues HSJD; Novartis Farmacèutica. April 2013 -. PI: Ofelia Cruz.
- Multi-centre adaptive randomised open phase IB study of the pharmacokinetics and pharmacodynamics of oseltamivir (Tamiflu®) in the treatment of influenza in immunocompromised patients between the ages of 0 and 18 years, with confirmed influenza infection. F. Hoffmann- La Roche; Hospital Sant Joan de Déu - Esplugues HSJD. January 2013 -. PI: Ruben Berruoco.
- Active comparator-controlled randomised partly masked phase IV study to evaluate the pharmacokinetics and pharmacodynamics, safety and tolerability of fosaprepitant in paediatric patients for the prevention of emetogenic chemotherapy-induced nausea and vomiting (CINV). Hospital Sant Joan de Déu - Esplugues HSJD; Merck, Sharp & Dohme de España. October 2012 -. PI: Jaume Mora.
- Intergroup study for children and adolescents with non-Hodgkin's B lymphoma or lymphoblastic B-cell leukaemia; evaluation of effectiveness and safety of rituximab in high-risk patients. Hospital Sant Joan de Déu - Esplugues HSJD; Sociedad Española de Hematología y Oncología Pediátricas. July 2012 -. PI: Veronica Celis.
- Randomised open comparative multi-centre phase II study of bevacizumab treatment in paediatric patients with recently diagnosed supratentorial high-grade glioma. F. Hoffmann-La Roche. April 2012 -. PI: Ofelia Cruz.
- Multi-centre paediatric register of disease in essential thrombocythaemia (ET). Shire Pharmaceuticals Iberica. May 2011 -. PI: Teresa Toll.
- Prospective multi-centre uncontrolled phase II clinical trial of intensive chemotherapy, surgery and radiotherapy in tumours of the Ewing's sarcoma family in children, adolescents and adults. Ministerio de Sanidad y Política Social. January 2010 - June 2015. PI: Jaume Mora.
- First intergroup international study of classic Hodgkin's lymphoma in children and adolescents. Euronet-PHL-C1 January 2009 -. PI: Ofelia Cruz.

Publications

- Barneda-Zahonero B, Collazo O, Azagra A, Fernández-Duran I, Serra-Musach J, Islam AB, Vega-García N, Roberta Malatesta, Camós M, Gómez A, Román-González L, Vidal A, López-Bigas N, Villanueva A, Esteller M, and Parra M. The transcriptional repressor HDAC7 promotes apoptosis and c-Myc downregulation in particular types of leukemia and lymphoma. *Cell Death Dis* 2015. FI: 5,014(Q2).
- Battle J, Pérez-Rodríguez A, Corrales I, López-Fernández MF, Rodríguez-Trillo Á, Lourés E, Cid AR, Bonanad S, Cabrera N, Moret A, Parra R, Mingot-Castellano ME, Balda I, Altisent C, Pérez-Montes R, Fisac RM, Iruin G, Herrero S, Soto I, de Rueda B, Jiménez-Yuste V, Alonso N, Vilarinho D, Arija O, Campos R, Paloma MJ, Bermejo N, Toll T, Mateo J, Arribalzaga K, Marco P, Palomo Á, Sarmiento L, Iñigo B, Nieto Mdel M, Vidal R, Martínez MP, Aguinaco R, César JM, Ferreira M, Garcia-Frade J, Rodríguez-Huerta AM, Cuesta J, Rodríguez-González R, García-Candel F, Cornudella R, Aguilar C, Borrás N, Vidal F. Molecular and clinical profile of von Willebrand disease in Spain (PCM-EVW-ES): Proposal for a new diagnostic paradigm. *Thromb. Haemost.* 2015. 115: 40-50. FI: 4,984(Q1).
- Berrueto R, Alonso-Saladríguez A, Martorell-Sampol L, Catala A, Ruiz-Llobet A, Toll T, Torredadell M, Naudo M, Camós M, and Rives S. Outcome and toxicities associated to chemotherapy in children with acute lymphoblastic leukemia and Gilbert syndrome. Usefulness of UGT1A1 mutational screening. *Pediatr Blood Cancer* 2015. 62: 1195-1201. FI: 2,386(Q1).
- Cockle JV, Picton S, Levesley J, Ilett E, Carcaboso AM, Short S, Steel LP, Melcher A, Lawler SE, and Brüning-Richardson A. Cell migration in paediatric glioma: characterisation and potential therapeutic targeting. *Br J Cancer* 2015. 112: 693-703. FI: 4,836(Q1).
- Espinoza-Castañeda M, Escosura-Muñiz AD, Chamorro A, de Torres C, and Merkoçi A. Nanochannel array device operating through Prussian blue nanoparticles for sensitive label-free immunodetection of a cancer biomarker. *Biosens Bioelectron* 2015. 67: 107-114. FI: 6,409(Q1).
- Gómez S, Castellano G, Mayol G, Suñol M, Queiros A, Bibikova M, Nazor KL, Loring JF, Lemos I, Rodríguez E, de Torres C, Mora J, Martín-Subero JI, Lavarino C. DNA methylation fingerprint of neuroblastoma reveals new biological and clinical insights. *Epigenomics* 2015. 7: 1137-1153. FI: 4,649(Q1).
- Gómez S, Castellano G, Mayol G, Queiros A, Martín-Subero JI, Lavarino C. DNA methylation fingerprint of neuroblastoma reveals new biological and clinical insights. *Genom Data*. 2015;5:360-3.
- Garzón M, García-Fructuoso G, Suñol M, Mora J, and Cruz O. Low-grade gliomas in children: single institutional experience in 198 cases. *Childs Nerv Syst* 2015. 31: 1447-1459. FI: 1,114(Q3).
- Malatesta R, Vega-García N, Rives S, Catala A, Berrueto R, Torredadell M, Estella Aguado C, Alonso Saladríguez A, Trabazo del Castillo M, Mesegue Meda M, Ruiz-Llobet A, Bigas Salvans A, and Camós M. PROGNOSTIC IMPACT OF THE EXPRESSION OF THE GENE LEF1 IN PAEDIATRIC PATIENTS WITH ACUTE LEUKEMIA. *Haematologica* 2015. 100: 256-257. FI: 5,814(Q1).
- Menacho-Márquez M, Rodríguez-Hernandez CJ, Villaronga MA, Pérez-Valle J, Gadea J, Belandia B, and Murguía JR. eIF2 kinases mediate β -lapachone toxicity in yeast and human cancer cells. *Cell Cycle* 2015. 14: 630-640. FI: 4,565(Q2).
- Monterrubio C, Paco S, Vilà-Ubach M, Rodríguez E, Glisoni R, Lavarino C, Schaiquevich P, Sosnik A, Mora J, and Carcaboso AM. Combined Microdialysis-Tumor Homogenate Method for the Study of the Steady State Compartmental Distribution of a Hydrophobic Anticancer Drug in Patient-Derived Xenografts. *Pharm. Res.* 2015. 32: 2889-2900. FI: 3,420(Q1).
- Mora J, Cruz O, Lavarino C, Rios J, Vancells M, Parareda A, Salvador H, Suñol M, Carrasco R, Guillen A, Mañé S, and de Torres C. Results of induction chemotherapy in children older than 18 months with stage-4 neuroblastoma treated with an adaptive-to-response modified N7 protocol (mN7). *Clin Transl Oncol* 2015. 17: 521-529. FI: 2,077(Q3).
- Mora J, Modak S, Cheung NK, Meyers P, de Alava E, Kushner B, Magnan H, Tirado OM, Laquaglia M, Ladanyi M, and Rosai J. Desmoplastic small round cell tumor 20 years after its discovery. *Future Oncol* 2015. 11: 1071-1081. FI: 2,477(Q3).
- Mora J, Suñol M, Rodríguez E, de Torres C. Vascular tumors preceding Ewing sarcoma. *Clinico-pathological observations*. *Sarcoma Res Int.* 2015;2(3): 1021.
- Morales La Madrid A, Hashizume R, Kieran MW. Future Clinical Trials in DIPG: Bringing Epigenetics to the Clinic. *Front Oncol.* 2015;5:148.

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- Niemeyer CM, Loh ML, Cseh A, Cooper T, Dvorak CC, Chan R, Xicoy B, Germing U, Kojima S, Manabe A, Dworzak M, De Moerloose B, Stary J, Smith OP, Masetti R, Catala A, Bergstraesser E, Ussowicz M, Fabri O, Baruchel A, Cavé H, Zwaan M, Locatelli F, Hasle H, van den Heuvel-Eibrink MM, Flotho C, and Yoshimi A. Criteria for evaluating response and outcome in clinical trials for children with juvenile myelomonocytic leukemia. *Haematologica* 2015. 100: 17-22. FI: 5,814(Q1).
- Ordóñez JL, Amaral AT, Carcaboso AM, Herrero-Martin D, del Carmen García-Macias M, Sevillano V, Alonso D, Pascual-Pasto G, San-Segundo L, Vila-Ubach M, Rodrigues T, Fraile S, Teodosio C, Mayo-Iscar A, Aracil M, Galmarini CM, Tirado OM, Mora J, de Álava E. The PARP inhibitor olaparib enhances the sensitivity of Ewing sarcoma to trabectedin. *Oncotarget* 2015. 6: 18875-18890. FI: 6,359(Q1).
- Piquer Gibert M, Alsina L, Giner Muñoz MT, Cruz Martínez O, Ruiz Echevarria K, Dominguez O, Plaza Martín AM, Arostegui JI, de Valles G, Juan Otero M, Martín-Mateos MA. Non-

Hodgkin lymphoma in pediatric patients with common variable immunodeficiency. *Eur J Pediatr*. 2015;174(8):1069-76.FI: 1,791(Q2).

- Puerta P, Guillén A, Mora J, Suñol M, Ferrer E. Isolated Skull Metastasis of Ewings Sarcoma in a Child. *Austin J Cancer Clin Res*. 2015;2(5): 1046.
- Salman Z, Kushner BH, Cheung NKV, Basu E, Roberts S, Wolden S, Mora J, and Modak S. CURETTAGE FOR FOCAL HIGH-RISK SKELETAL NEUROBLASTOMA RESISTANT TO CHEMOTHERAPY AND RADIOTHERAPY. *Pediatr Blood Cancer* 2015. 62: 334-0. FI: 2,386(Q19).
- Veldhuijzen van Zanten SE, van Meerwijk CL, Jansen MH, Twisk JW, Anderson AK, Coombes L, Breen M, Hargrave OJ, Hemsley J, Craig F, Cruz O, Kaspers GJ, van Vuurden DG, Hargrave DR; SIOPE DIPG Network. Palliative and end-of-life care for children with diffuse intrinsic pontine glioma: results from a London cohort study and international survey. *Neuro Oncol*. 2016;18(4):582-8.FI: 7,317(Q1).

Networks

- Innovative Therapies for Children with Cancer. European consortium.



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Metabolic endocrinology

The Metabolic Endocrinology Group includes the research lines on ovarian hyperandrogenism, insulin resistance, obesity, metabolic syndrome and diabetes. Of special note within this scope is the research line on foetal growth restriction, with potential irreversible

consequences for children's development. The study of the subsequent stages, from intrauterine life through adolescence, will allow setting up preventative strategies to delay or avoid the development of the associated complications.

Research team

Coordinator Lourdes Ibáñez
 Researchers Paula Casano, Marta Díaz, Giorgia Sebastiani, Jovita Quilez, Rita Malpique

Perinatal origin of adult diabetes: animal models

The Developmental Origins of Health and Disease hypothesis proposes that early-life environmental exposures increase the risk of adult chronic diseases such as obesity and type 2 diabetes. The specific molecular mechanisms that lead to such long-lasting effects remain poorly characterized. Our laboratory aims to understand the molecular mechanisms that might link early neonatal overfeeding/childhood obesity and later

risk of obesity and diabetes. To achieve this objective we combine work with animal models (mouse) and human clinical cohorts. A major emphasis in the laboratory is exploring the potential role of Epigenetic mechanisms, including DNA methylation and small non-coding RNAs, in mediating adult programming of disease risk and even transgenerational inheritance of diabetes risk in response to nutritional imbalances during development.

Research team

Coordinator Josep Jiménez-Chillaron
 Researchers Rubén Díaz Naderi, Marta Ramon Krauel, Sílvia Ribó, Ivonne Palacios
 Technician Judith Cebrià

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Neonatal physiopathology

Genetic potential and foetal environment may have irreversible consequences for a person's development and they may be the origin of disorders in the adult. The study of factors that influence the various stages of life: periconceptual, intrauterine, perinatal and postnatal will allow advances to be made in our knowledge

of the conditioning factors which may interfere with correct development. Moreover, the follow-up of the nutritional and health-related interventions carried out on babies up to their adolescence and adulthood will permit medical teams to develop better treatments and preventive strategies.

Research team

Coordinator	Alfredo García-Alix
Technician	Thais Agut, Marta Camprubi, Isabel Iglesias, Martín Iriondo, Ana Martín, Africa Pertierra, Ana Riverola

Projects

- Doctorat Industrial 2015. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. December 2015 - December 2018. PI: Lourdes Ibañez Toda.
- Prematurity - CCD. Clientes Diversos. September 2015 - December 2020. PI: Martin Iriondo Sanz.
- Maternal diet, microbiome and infant feeding practice: roles in initializing the fetal gut microbiome and establishing the infant gut microbiome. Icahn School of Medicine at Mount Sinai. July 2015 - July 2018. PI: Lourdes Ibañez Toda.
- Intensificació 2014_Dra. Lourdes Ibañez. Instituto de Salud Carlos III (ISCIII). February 2015 - February 2016. PI: Lourdes Ibañez Toda.
- Merck Agreement: 2nd Update Conference on Small for Gestational Age. Merck S.L.U. January 2015 - December 2016. PI: Lourdes Ibañez Toda.
- Prevention and treatment of hyperandrogenism associated with hyperinsulinism in girls in childhood and adolescence: a treatment focused on adipose tissue. Ministerio de Economía Y Competitividad (MINECO). January 2015 - January 2016. PI: Lourdes Ibañez Toda.
- Childhood obesity and risk of metabolic syndrome in the adult: epigenetic mechanisms. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: José Carlos Jiménez Chillarón.
- We will improve the life of children with diabetes. Banco Bilbao Vizcaya Argentaria, S.A. January 2015 - December 2015. PI: Ruben Díaz Naderi.
- Modifying maternal nutrition during lactation to improve offspring life-course health outcomes. Ajinomoto Co., Inc. January 2015 - January 2017. PI: Carles Lerin Martinez.
- Intelligent monitoring of premature newborn patients hospitalised in intensive care units. Ministerio de Economía Y Competitividad (MINECO). January 2015 - January 2016. PI: Ana Riverola De Veciana.
- Improving the life of children with diabetes. Fundación Banco Bilbao Vizcaya Argentaria. November 2014 - November 2015. PI: Ruben Díaz.
- Evaluation of cardiovascular risk in the first two years of life in children born large or small for their gestational age. Fundación Salud 2000. May 2014 - April 2017. PI: Lourdes Ibañez.
- Programme for intensification of research activity in the Spanish National Health System 2013. INT13/00095. Instituto de Salud Carlos III. February 2014 - February 2015. PI: Lourdes Ibañez.
- Early biomarkers of the safety and efficacy of nutritional support in extremely preterm infants (EPI). PI13/01562. Instituto de Salud Carlos III. January 2014 - December 2016. PI: Isabel Iglesias.
- Effect of prenatal and perinatal changes on postnatal development. Disorders of foetal origin. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. SGR 2014. 2014SGR512. January 2014 - December 2016. PI: Lourdes Ibañez.
- Research personnel training, candidate: Luis Miguel Río. Ministerio de Ciencia e Innovación (MINECO). 2013 - 2017. PI: Carles Lerin.
- IRBETAINE-CIG Molecular mechanisms underlying the development of insulin resistance: role of betaine supplementation. European Commission. July 2013 - August 2015. PI: Carles Lerin.
- Ramon y Cajal researcher, Dr. Carles Lerin. Ministerio de Ciencia e Innovación (MINECO). July 2013 - January 2016. PI: Carles Lerin.
- Metabolic and biochemical effects of betaine on insulin sensitivity and physical exercise. Ministerio de Ciencia e Innovación (MINECO). January 2013 - January 2017. PI: Carles Lerin.
- Fire Squadron Grant 2012 Newborns. Hospital Sant Joan de Déu Barcelona. May 2012 - April 2015. PI: Isabel Iglesias.
- Non-genomic inheritance of diabetes in a mouse model of neonatal overnutrition: potential role of epigenetic mechanisms. Instituto de Salud Carlos III. January 2012 - January 2017. PI: Josep Jiménez-Chillarón.
- Genetic determinants of prenatal and postnatal growth: association with early markers of cardiovascular and metabolic syndrome risk. Instituto de Salud Carlos III. January 2012 - December 2015. PI: Lourdes Ibañez.
- Metabolic and biochemical effects of betaine on insulin sensitivity and physical exercise. Ministerio de Ciencia e Innovación. January 2012 - December 2015. PI: Carles Lerin.
- Prognostic factors of brain injury in fetuses with early restricted intrauterine growth. Instituto de Salud Carlos III. January 2012 - December 2015. PI: Antonio Vela.

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- Non-genomic inheritance of diabetes in a mouse model of neonatal overnutrition: potential role of epigenetic mechanisms. Instituto de Salud Carlos III. January 2012 - August 2015. PI: Josep Jiménez-Chillarón.
- Perinatal nutrition in males programmes lipogenic gene expression in their descendants through epigenetic mechanisms. Ministerio de Ciencia e Innovación. January 2012 - December 2015. PI: Josep Jiménez-Chillarón.
- Miguel Servet Contracts. Instituto de Salud Carlos III. 2015 - 2015. PI: Josep Jiménez-Chillarón.

- Study to determine the suitability of preparing a practical clinical guide on hypoxic-ischaemic encephalopathy. Agencia Informació, Avaluació i Qualitat en Salut. December 2011 -. PI: Alfredo Garcia-Alix.
- Fund for scientific advance and innovation in children's diabetes. Fundació Caixa d'Estalvis i Pensions de Barcelona. January 2011 - 2015. PI: Ruben Diaz.
- Multi-centre study on postnatal growth restriction in extreme preterm infants (<1500gr) in Spanish Neonatal Intensive Care Units. Follow-up to the age of 2 years. Bebe Due España. January 2005 - December 2018. PI: Martin Iriondo.

Clinical trials

- Placebo-controlled double-blind randomised phase 3 study to assess the effectiveness and safety of a human monoclonal antibody, REGN2222, in the prevention of human syncytial virus (HRSV) infection, under medical care in premature newborns. November 2015 -. PI: Martin Iriondo.
- Treatment with recombinant growth hormone (rGH) in short patients born small-for-gestational-age (SGA) followed at Hospital Sant Joan de Déu: Analysis of early predictors of good response useful in clinical practice - WI191603. Fundació Privada per a la Recerca i la Docència Sant Joan de Déu. November 2014 -. PI: Lourdes Ibáñez.
- Treatment with recombinant growth hormone (rGH) in patients with GH deficiency, controlled at Hospital Sant Joan de Déu: analysis of early markers of good response which are useful in clinical practice. October 2015 -. PI: Marta Ramon.
- Newborns with extremely low gestational age assigned at random, blindly, to be resuscitated with 21% vs 60% oxygen: influence on mortality and chronic disorders in the neonatal period. October 2015 -. PI: Marta Ramon.
- Placebo-controlled double-blind randomised phase 3 trial of beloranib on obese subjects with Prader-Willi syndrome to assess eating behaviour, total body weight and safety over 52 weeks. September 2015 - March 2016. PI: Marta Ramon.

- AC201503 - NN304-4093 26-week open randomised multi-centre trial on 2 parallel groups to investigate the effectiveness and safety of insulin detemir versus NPH insulin (neutral protamin Hagedorn insulin) in combination with metformin and diet/exercise in glycaemic control in children and adolescents with type 2 diabetes insufficiently controlled with metformin ± other oral antidiabetics ± basal insulin. January 2015 - December 2015. PI: Marta Ramon.
- Identification of circulating microRNAs in short children born small for gestational age: Relationship with pre- and postnatal growth and metabolic parameters. October 2014 -. PI: Abel López-Bermejo. Investigator: Lourdes Ibáñez.
- Randomised, open, active-controlled, multinational, dose-escalation trial investigating safety, tolerability, pharmacokinetics and pharmacodynamics of a single dose of long-acting growth hormone (NNC0195-0092) compared with daily dosing of Norditropin® SimpleXx® in children with growth hormone deficiency. Novo Nordisk. January 2014 -. PI: Lourdes Ibáñez.
- Obesity. Sanofi-Aventis. January 2014 - December 2015. PI: Marta Ramon-Krauel.
- Prospective, open, randomised clinical trial with two groups of patients to evaluate the efficacy and safety of the combination of ethinyl estradiol and levonorgestrel versus the combination of low

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doses pioglitazone, spironolactone and metformin in adolescents with ovarian hyperandrogenism and hyperinsulinism: effects on ovulatory function, chronic inflammation parameters, markers of cardiovascular risk and of development of Type 2 diabetes. Fundació Privada per a la Recerca i la Docència Sant Joan de Déu. January 2013 -. PI: Lourdes Ibáñez.

- Follow-up study until attainment of adult size in patients included in the phase III Study with Omnitrope® on treatment of Spanish children with growth hormone deficiency. Sandoz Farmacèutica. October 2012 -. PI: Marta Ramon-Krauel.
- GHLiquid-3676 (NNH-SOM-2012-01). NordiNet® International outcome study (IOS). Novo Nordisk Pharma. October 2012 -. PI: Lourdes Ibáñez.
- Retrospective study on the influence of GH treatment onset age on height gain in children born SGA. GH-RAST Study. Pfizer. May 2012 -. PI: Lourdes Ibáñez.
- Descriptive, multi-centre, cross-sectional epidemiologic study of the reference values of IGF-1, IGFBP3 and ALS in a healthy Spanish paediatric population, according to chronological age, sex and pubertal stage, as per Protocol no. IPSINC-2011-01, in which their characteristics are defined. Ipsen Pharma. October 2011 -. PI: Ruben Diaz.
- Epidemiologic study of the early diagnosis of invasive candidiasis in very low-weight preterm newborns. CANDI-NEO Study. Astellas Pharma. June 2011 -. PI: Ana Alarcon.

- Phase II, randomised, parallel-group, placebo-controlled, double-blind clinical trial to evaluate the safety and efficacy of dietary supplementation with tryptophan in weight reduction and its neuropsychological effects on obese adolescents. Ministerio de Sanidad y Política Social. January 2011. PI: Marta Ramon-Krauel.
- Effects on markers of cardiovascular risk of addition of metformin to the treatment with growth hormone of prepubertal patients with background of low birth weight for gestational age without postnatal height recovery. January 2010 -. PI: Paula Casano.
- "Base de datos del foro europeo de Increlex (mecasermin (derivada del ADNr) inyectable) en el retraso del crecimiento: Registro de pacientes europeos para vigilar la eficacia y la seguridad a largo plazo de Increlex. Eu-IGFD": European Increlex® [injectable mecasermin (rDNA derived)] Growth Forum database on growth restriction: Registry of European patients to monitor the long-term efficacy and safety of Increlex. Eu-IGFD. February, 2009 -. PI: Marta Ramon Krauel.
- International Cooperative Study on Growth. October 2007 -. PI: Rubén Díaz.
- Genetics and Neuroendocrinology of Short Stature International Study. June 2007 -. PI: Rubén Diaz.

Publications

- Arnáez J, Vega C, Garcia-Alix A, Gutiérrez EP, Caserío S, Jiménez MP, Castañón L, Esteban I, Hortelano M, Hernández N, Serrano M, Prada T, Diego P, Barbadiño F: Grupo ARAHIP. Multicenter program for the integrated care of newborns with perinatal hypoxic-ischemic insult (ARAHIP). *An Pediatr (Barc)* 2015. 82: 172-182. FI: 0,833(Q4).
- Balcells C, Del Río R, Rianza L, Rebollo M, Rodríguez-Fanjul J, Camprubí M. Lung ultrasound: a useful tool for the follow-up of neonatal localized interstitial emphysema. *J. Pediatr.* 2015. 166: 1543-0. FI: 3,790(Q1).
- Borrás Pérez V, López-Siguero JP, Martínez G, Corripio R, Fernández JM, Labarta JI, Ferrer M, Cabrinety N, Prieto P, Ramón-Krauel M, Bosch J, Espino R, Palla Garcia M, Rebollo FJ. A follow-up study to monitor adult height among Spanish children with growth hormone deficiency who received biosimilar human recombinant growth hormone (Omnitrope®) during a phase III clinical trial. *Adv Ther* 2015. 32: 148-156. FI: 2,272(Q3).

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- Carreras-Badosa G, Bonmati A, Ortega FJ, Mercader JM, Guindo-Martinez M, Torrents D, Prats-Puig A, Martinez-Calcerrada JM, Platero-Gutierrez E, De Zegher F, Ibáñez L, Fernandez-Real JM, Lopez-Bermejo A, Bassols J. Altered circulating miRNA expression profile in pregestational and gestational obesity. *J. Clin. Endocrinol. Metab.* 2015. 100: 1446-1456. FI: 6,209(Q1).
- de Zegher F, Díaz M, Ibáñez L. Association between long telomere length and insulin sensitization in adolescent girls with hyperinsulinemic androgen excess. *JAMA Pediatr.* 2015. 169: 787-788. FI: 7,148(Q1).
- de Zegher F, Díaz M, Ibáñez L. Long telomeres after long insulin sensitization in adolescent girls with hyperinsulinemic androgen excess: results of a randomized trial over 24 months. *JAMA Pediatr.* 2015. FI: 7,148(Q1).
- Díaz M, Bassols J, López-Bermejo A, de Zegher F, Ibáñez L. Metformin treatment to reduce central adiposity after prenatal growth restraint: A placebo-controlled pilot study in prepubertal children. *Pediatr. Diabetes* 2015. 16: 538-545. FI: 2,569(Q1).
- Díaz M, Bassols J, Sebastiani G, López-Bermejo A, Ibáñez L, de Zegher F. Circulating GLP-1 in infants born small-for-gestational-age: breast-feeding versus formula-feeding. *Int. J. Obes.* 2015. 39: 1501-1503. FI: 5,004(Q1).
- Ferrero S, Mazarico E, Valls C, Di Gregorio S, Montejo R, Ibáñez L, Gomez-Roig MD. Relationship between Foetal Growth Restriction and Maternal Nutrition Status Measured by Dual-Energy X-Ray Absorptiometry, Leptin, and Insulin-Like Growth Factor. *Gynecol Obstet Invest* 2015. 80: 54-59. FI: 1,696(Q3).
- García-Muñoz Rodrigo F, Diez Recinos AL, García-Alix Pérez A, Figueras Aloy J, Vento Torres M. Changes in Perinatal Care and Outcomes in Newborns at the Limit of Viability in Spain: The EPI-SEN Study. *Neonatology* 2015. 107: 120-129. FI: 2,649(Q1).
- García-Muñoz Rodrigo F, García-Alix A, Figueras-Aloy J, Saavedra Santana P, Grp Español SEN1500. New population curves in spanish extremely preterm neonates (vol 81, pg 114, 2014). *An Pediatr (Barc)* 2015. 82: 122-123. FI: 0,833(Q4).
- García-Muñoz Rodrigo F, García-Alix A, García Hernandez JA, Figueras-Aloy J, Grp SEN1500. Morbidity and mortality in newborns at the limit of viability in Spain: A population based study (vol 80, pg 356, 2014). *An Pediatr (Barc)* 2015. 82: 121-122. FI: 0,833(Q4).
- Iglesias-Platas I, Martín Trujillo A, Court F, Monk D. Distinct promoter methylation and isoform-specific expression of RASFF1A in placental biopsies from complicated pregnancies. *Placenta* 2015. 36: 397-402. FI: 2,710(Q1).
- Iriondo Sanz M, Sánchez Luna M, Botet Mussons F, Martínez-Astorquiza T, Lailla Vicens JM, Figueras Aloy J. Atención del parto en el agua. Consenso de la Sociedad Española de Neonatología y de la Sección de Medicina Perinatal de la Sociedad Española de Obstetricia y Ginecología. *An Pediatr (Barc)* 2015. 82: 1-3. FI: 0,833(Q4).
- Jiménez-Chillarón JC, Nijland MJ, Ascensão AA, Sardão VA, Magalhães J, Hitchler MJ, Domann FE, Oliveira PJ. Back to the future: transgenerational transmission of xenobiotic-induced epigenetic remodeling. *Epigenetics* 2015. 10: 259-273. FI: 4,780(Q1).
- Martín-Ancel A, Balaguer A, García-Alix A. Duration of resuscitation in neonates with Apgar scores at 10 minutes of less than 3 in the hypothermia era. *An Pediatr (Barc)* 2015. 82: 129-130. FI: 0,833(Q4).
- Moore GE, Ishida M, Demetriou C, Al-Olabi L, Leon LJ, Thomas AC, Abu-Amero S, Frost JM, Stafford JL, Chaoqun Y, Duncan AJ, Baigel R, Brimiouille M, Iglesias-Platas I, Apostolidou S, Aggarwal R, Whittaker JC, Syngelaki A, Nicolaidis KH, Regan L, Monk D, Stanier P. The role and interaction of imprinted genes in human fetal growth. *Philos Trans R Soc B-Biol Sci* 2015. 370: 20140074-0. FI: 7,055(Q1).
- Moreno M, Fernández V, Monllau JM, Borrell V, Lerin C, de la Iglesia N. Transcriptional Profiling of Hypoxic Neural Stem Cells Identifies Calcineurin-NFATc4 Signaling as a Major Regulator of Neural Stem Cell Biology. *Stem Cell Reports* 2015. 5: 157-165. FI: 5,365(Q1).
- Prats-Puig A, Gispert-Sauch M, Díaz-Roldán F, Carreras-Badosa G, Osiniri I, Planella-Colomer M, Mayol L, de Zegher F, Ibáñez L, Bassols J, López-Bermejo A. Neutrophil-to-lymphocyte ratio: an inflammation marker related to cardiovascular risk in children. *Thromb. Haemost.* 2015. 114: 727-734. FI: 4,984(Q1).
- Samino S, Vinaixa M, Díaz M, Beltran A, Rodríguez MA, Mallol R, Heras M, Cabre A, Garcia L, Canela N, de Zegher F, Correig X, Ibáñez L, Yanes O. Metabolomics reveals impaired maturation of HDL particles in adolescents with hyperinsulinaemic androgen excess. *Sci Rep* 2015. 5: 11496-0. FI: 5,578(Q1).
- Sanchez-Delgado M, Martín-Trujillo A, Tayama C, Vidal E, Esteller M, Iglesias-Platas I, Deo N, Barney O, Maclean K, Hata K, Nakabayashi K, Fisher R, Monk D. Absence of Maternal Methylation in Biparental Hydatidiform Moles from Women with NLRP7 Maternal-Effect Mutations Reveals Widespread Placenta-Specific Imprinting. *PLoS Genet.* 2015. FI: 7,528(Q1).
- Sánchez-Infantes D, Gallego-Escuredo JM, Díaz M, Aragonés G, Sebastiani G, López-Bermejo A, de Zegher F, Domingo P, Villarroya F, Ibáñez L. Circulating FGF19 and FGF21 surge in early infancy from infra- to supra-adult concentrations. *Int. J. Obes.* 2015. 39: 742-746. FI: 5,004(Q1).

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- Sebastiani G, Díaz M, Bassols J, Aragonés G, López-Bermejo A, de Zegher F, Ibáñez L. The sequence of prenatal growth restraint and post-natal catch-up growth leads to a thicker intima-media and more pre-peritoneal and hepatic fat by age 3-6 years. *Pediatr. Obes.* 2015 . FI: 4,573(Q1).
- Tarrado X, Saura L, Bejarano M, Ribó JM, Castañón M. Thoracoscopic Segmentectomy of Methylene Blue Dyed Intralobar Sequestrations. *Ann Thorac Surg* 2015. 99: 51-52. FI: 3,849(Q1).

- Verd S, Porta R, Botet F, Gutiérrez A, Ginovart G, Barbero AH, Ciurana A, Plata II. Hospital Outcomes of Extremely Low Birth Weight Infants After Introduction of Donor Milk to Supplement Mother's Milk. *Breastfeed Med* 2015. 10: 150-155. FI: 1,248(Q3).
- Witche SF, Oberfield S, Rosenfield RL, Codner E, Bonny A, Ibáñez L, Pena A, Horikawa R, Gomez-Lobo V, Joel D, Tfayli H, Arslanian S, Dabadghao P, Garcia Rudaz C, Lee PA. The Diagnosis of Polycystic Ovary Syndrome during Adolescence. *Horm. Res. Paediatr.* 2015. 83: 376-389. FI: 1,573(Q2).

Supervised theses

- Etiopathogenic factors in arterial cerebral infarction in newborns. Doctoral Candidate: J Arnaez. Director: Alfredo García-Alix. September 2015.
- Body composition and endocrine-metabolic profile in children born large for gestational age. Doctoral Candidate: Miriam Pérez Cruz. Director: Lourdes Ibáñez. March 2015.

Networks

- CIBERDEM: Centre for Biomedical Network Research on Diabetes and Associated Metabolic Disorders. PI: Lourdes Ibáñez.



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Vaccine-preventable diseases

The human species' first contact with many microorganisms takes place in childhood, when children have not been infected and have not developed the disease. Vaccination in early ages of life has proven to be an effective tool in the fight against infectious diseases. In order to evaluate the best vaccination strategies in a specific population, a good molecular characterization of the microorganisms circulating in the respective community is essential since microorganisms diversify genetically to adapt themselves as well as possible to a specific environment. The overall objective is to try to improve the diagnosis and characterization of pediatric infectious diseases through specific, sensitive, rapid, simple and inexpensive techniques.

Our research is divided into two lines of action: (1) epidemiologic surveillance of vaccine-preventable diseases, and (2) diagnostic innovation.

The general goal of the first line is the molecular epidemiologic surveillance of three pathologies with a significant rate of occurrence among children: pneumococcal disease, whooping

cough and meningococcal disease.

- Evaluation of conjugate vaccines in the prevention of pneumococcal disease.

- Host-pathogen interaction in the development of invasive diseases produced by pathobionts such as *S. pneumoniae*.

With respect to the infectious disease diagnostic line, the new isothermal molecular expansion techniques allow the development of molecular devices in point-of-care format without manipulation by the user. These techniques are valuable tools in the optimisation of processes in both the outpatient and inpatient settings, in public healthcare as well as in the care of individual patients. Additionally, photonics-based technology allows the development of high-precision automated optical devices, significantly improving the sensitivity of today's microscopes.

The general goal is to improve the diagnosis and characterisation of paediatric infectious diseases by means of sensitive, specific, rapid, simple and low-cost techniques.

Research team

Coordinator Carmen Muñoz-Almagro

Researchers Pedro Brotons de los Reyes, Ana Valero, Mariona Fernández de Sevilla, Juan José García-García, Susana Hernández-Bou, Cristian Launes, Cristina Esteva, María Andrés, Desiree Henares, Miriam Triviño, Anny Camelo

Technician Carlos Cisneros, Amaresh Pérez Argüello, Jessica Saucedo

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Vertical transmitted infections and infections in vulnerable patients

The general goal of the research on vertical transmission infections and infections in vulnerable patients is to widen our knowledge of the natural history, transmission-associated factors, diagnosis,

prognosis and treatment of infections which are transmitted from mother to child (human immunodeficiency virus, hepatitis B and C virus, acute cytomegalovirus infection, toxoplasma).

Research team

Coordinator Claudia Fortuny

Tuberculosis

Research on the adherence and toxicity associated with first-line anti-tuberculosis drugs in the paediatric age, on the pharmacokinetic characteristics of these drugs on newborns and pre-school children, on the new tuberculosis diagnostic techniques in healthy children, on children from high tuberculosis endemic areas and on immunosuppressed children, and on the clinical-epidemiological

characteristics of tuberculosis in childhood in our area. Research on the epidemiological and clinical characteristics of infections by non-tuberculous mycobacteria in the pediatric age. Reference unit for the performance of clinical trials on new diagnostic methods and therapeutic strategies for tuberculosis in the paediatric age.

Research team

Coordinator Antoni Noguera-Julian
Researchers Joan Lluís Vinent Genestar, Eneritz Velasco Arnaitz, Maria Goretti López Ramos, Aina Martínez Planas, Eva Maria Guix Comellas, Sílvia Simó Nebot

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Systemic inflammatory response in the paediatric age

The research is focused on the study of the immunologic mechanisms involved in primary and secondary immunodeficiencies, autoinflammatory diseases and paediatric systemic autoimmune diseases.

The various lines of work include the study of primary immunodeficiencies and especially those which are centred on innate immunity (Toll-IL-1R and IL-12/IFN-gamma pathways) and which explain part of the susceptibility to common infections in paediatrics; the study of paediatric common variable immunodeficiency; and the analysis of phenotypes and genotypes. Work is also carried out to improve the knowledge and management of secondary immunodeficiency in paediatric patients and in pregnant women (a research line on the effects on the newborn's immune system of treatment with anti-TNF alpha antibodies in expectant mothers with inflammatory bowel disease). Other lines of work involve the study of autoinflammatory syndromes such as mevalonate kinase deficiency or hyper-IgD syndrome, cryopyrin-associated autoinflammatory syndrome

(CAPS) or familial Mediterranean fever, and autoimmune diseases such as uveitis associated with juvenile idiopathic arthritis, juvenile dermatomyositis, and paediatric vasculitis disorders such as Kawasaki disease.

The goals of this group also include the identification of the genes causing disorders, the study of the involvement of epigenetics and the microbiome, and the recognition of pathogenic pathways, which will allow the development of new treatment proposals.

The groups approach is based on translational research, for which reason its lines of work are carried out at patients side, striving to improve their quality of life. To this end the group has the close cooperation of other practitioners of Hospital Sant Joan de Déu Barcelona and of other prestigious national and international institutions.

The Study Group on Immune Dysfunction Disorders in Paediatrics (GEMDIP) has been recognised as an emerging research group by AQU Catalunya (Agency for the Quality of the University System of Catalonia).

Research team

Coordinator Jordi Anton
Researchers Laia Alsina, Rosa Bou, Estibaliz Iglesias, Judith Sánchez, Joan Calzada, Violeta Bittermann, Angela Deyà, Mónica Piquer, Anna Esteve-Solé

Projects

- A narrow repertoire of transcriptional modules responsive to pyogenic bacteria is impaired in patients carrying loss-of-function mutations in MYD88 or IRAK4. Colegio de Médicos de Córdoba. December 2015 - December 2016. PI: Laia Alsina Manrique de Lara.
- WINDBIOME_Aerial micro-biome diversity and their role in Kawasaki disease. Fundació Privada Daniel Bravo Andreu. December 2015 - December 2018. PI: Jordi Antón López.
- The Utility of the FilmArray Respiratory Panel Test for the Rational Use of Resources in the Pediatric Intensive Care Unit (PICU). BioFire Diagnostics, LLC. December 2015 - November 2016. PI: Carmen Muñoz Almagro.
- Luminex Evaluation Study. Luminex B.V. June 2015 - November 2015. PI: Carmen Muñoz Almagro.
- Setting up a sentinel system to assess the burden of whooping cough in EU/EEA. Service Agreement. European Centre for Disease Prevention and Control (ECDC). September 2015 - September 2016. PI: Carmen Muñoz Almagro.
- Assessment of somatic mosaicism in the NOD2 gene in seronegative juvenile idiopathic arthritis. Acadèmia de Ciències Mèdiques i de la Salut de Catalunya i de Balears. July 2015 - June 2017. PI: Estibaliz Iglesias Jimenez.
- Low-cost photonic reader for rapid detection of invasive bacterial diseases (REDSEA). Fundació Privada CELLEX. June 2015 - June 2016. PI: Carmen Muñoz Almagro.
- M-BAE_Training programme on infections of paediatric patients subjected to allogeneic transplantation of haematopoietic precursors. Instituto de Salud Carlos III (ISCIII). April 2015 - May 2015. PI: Antoni Noguera Julián.
- Contracts for intensification of the research activity in the National Health System (SNS) 2014. Beneficiario: Carmen Muñoz. Instituto de Salud Carlos III (ISCIII). April 2015 - April 2016. PI: Carmen Muñoz Almagro.
- Contrato Sara Borrell_Beneficiario: Irene Latorre. Instituto de Salud Carlos III (ISCIII). January 2015 - November 2015. PI: Carmen Muñoz Almagro.
- Phase IIA open clinical trial on absorption of an isoniazid suspension of 10 mg/ml for treatment of tuberculosis infection in children under the age of 6 years. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Antoni Noguera Julián.
- Pharmacological treatment of tuberculosis in infants under the age of 6 months: validation of the single daily dose of isoniazid at 10mg/kg of weight. Fundación Mercedes Armengou Riera (MAR). January 2015 - December 2016. PI: Antoni Noguera Julián.
- Determination of haptoglobin levels in synovial fluid of the temporomandibular joint (TMJ) in patients with juvenile idiopathic arthritis. Correlation with exploratory findings and magnetic resonance imaging with contrast medium. Sociedad Española de Reumatología. January 2015 - December 2016. PI: Estibaliz Iglesias Jimenez.
- Be a hope donor. Banco Bilbao Vizcaya Argentaria, S.A. January 2015 - December 2015. PI: Jordi Antón López.
- Diagnosis of tuberculosis infection in paediatric patients under treatment with tumour necrosis factor alpha inhibitors: comparative study between tuberculin test and IGRA tests. Sociedad Española de Reumatología. January 2015 - December 2016. PI: Joan Calzada Hernández.
- Development of new genetic diagnostic techniques by means of high-performance sequencers, and their application to the diagnosis of osteogenesis imperfecta. Sociedad Española de Reumatología. January 2015 - December 2016. PI: Rosa Bou i Torrent.
- Evaluation of somatic mosaicism in the NOD2 gene in seronegative juvenile idiopathic arthritis. Sociedad Española de Reumatología Pediátrica. December 2014 - December 2016. PI: Estibaliz Iglesias.
- Utility of 256-channel multi-slice computed tomography to evaluate cardiac involvement in Kawasaki disease. Sociedad Española de Reumatología Pediátrica. December 2014 - December 2016. PI: Joan Calzada.
- Analysis of autoinflammatory mechanisms mediated by the NF- κ B pathway and the inflammasome/caspase-1/IL-1 axis in juvenile idiopathic arthritis with negative antinuclear antibodies. Societat Catalana de Reumatologia. June 2014 - June 2016. PI: Estibaliz Iglesias.

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- Study of the primary and secondary defects of the IL12-IFN γ -TNF α pathway with susceptibility to intracellular microorganism infection. Hospital Sant Joan de Déu Barcelona. March 2014 - February 2017. PI: Laia Alsina.
- Analysis of autoinflammatory mechanisms mediated by the NF- κ B pathway and the inflammasome/caspase-1/IL-1 axis in juvenile idiopathic arthritis with negative antinuclear antibodies. 2nd Honourable mention. Beca Mutual Mèdica. January 2014 - December 2015. PI: Estibaliz Iglesias.
- Analysis of autoinflammatory mechanisms mediated by the NF- κ B pathway and the inflammasome/caspase-1/IL-1 axis in juvenile idiopathic arthritis with negative antinuclear antibodies. Sociedad Española de Reumatología. January 2014 - December 2015. PI: Estibaliz Iglesias.
- Defects in innate immunity and coinfection with respiratory virus: the perfect storm for developing invasive pneumococcal disease in children? Instituto de Salud Carlos III. PI13/01729. January 2014 - December 2016. PI: Carmen Muñoz-Almagro.
- Longitudinal study of mitochondrial DNA mutations in children exposed to HIV (infected and non-infected) and to antiretroviral drugs. Instituto de Salud Carlos III. PI13/01738. January 2014 - December 2016. PI: Clàudia Fortuny.
- Consolidated group on infectious diseases in the paediatric age. Consolidated research group on infectious diseases in the paediatric age. 2014SGR505. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. January 2014 - December 2016. PI: Carmen Muñoz-Almagro.
- Identification of prognostic factors in muscle biopsy for the diagnosis of patients with juvenile dermatomyositis. Sociedad Española de Reumatología Pediátrica. January 2014 - December 2015. PI: Estibaliz Iglesias.
- Validation of the single daily dose of isoniazid at 10 mg/kg weight in newborns under the age of 3 months. Instituto de Salud Carlos III. PIC14/00228. January 2014 - December 2016. PI: Antoni Noguera.
- RESPOC. Fast, cost-effective, user-friendly point of care (POC) instrument for detection of respiratory pathogens, including *Streptococcus pneumoniae*. European Commission. December 2013 - May 2016. PI: Carmen Muñoz-Almagro.
- Molecular diagnosis of food allergy to shellfish in the paediatric population. Sociedad Española de Inmunología Clínica, Alergia y Asma Pediátrica. November 2013 - November 2015. PI: Olga Dominguez.
- Study of the primary and secondary defects of the IL-12/IFN- γ /TNF- α pathway with susceptibility to infection by intracellular micro-organisms. Instituto de Salud Carlos III (ISCIII). PI12/01990. January 2013 - December 2015. PI: Laia Alsina.
- Validation of the Minimally Invasive Autopsy (MIA) tool for cause of death investigation in developing countries. Bill & Melinda Gates Foundation. December 2012 - December 2015. PI: Carmen Muñoz-Almagro.
- SHARE-Single HUB and Access Point for Paediatric Rheumatology in Europe (SHARE). European Commission. September 2012 - August 2015. PI: Jordi Antón.
- Support technician at the Sequencing Unit. Instituto de Salud Carlos III (ISCIII). CA11/00447. Beneficiary: Cristina Esteva. April 2012 - April 2015. PI: Carmen Muñoz-Almagro.
- Use of dried-blood spot (DBS) samples for detection and molecular surveillance of *Streptococcus pneumoniae* in developing countries. Hospital Sant Joan de Déu - Esplugues HSJD. April 2012 - March 2015. PI: Carmen Muñoz-Almagro.
- Effectiveness of 13-valent pneumococcal conjugate vaccine in the prevention of invasive pneumococcal disease in children. A matched case-control study. Instituto de Salud Carlos III (ISCIII). PI11/02081. January 2012 - December 2015. PI: Juan José García-García.
- Predoctoral training grants in health research. Beneficiary: Eva del Amo. Instituto de Salud Carlos III (ISCIII). FI11/00720. September 2011 - September 2015. PI: Carmen Muñoz-Almagro.
- Reference laboratory for molecular epidemiologic monitoring of meningococcal disease, invasive pneumococcal disease and pertussis. Agència de Salut Pública de Catalunya. January 2011 - December 2015. PI: Carmen Muñoz-Almagro.
- Intensification for healthcare activity. Fundación Godia. PI: Carmen Muñoz-Almagro.

Clinical trials

- Strategy for maintenance of HIV suppression in children with elvitegravir + darunavir/ritonavir. December 2015 -. PI: Clàudia Fortuny.
- Placebo-controlled double-blind randomised multi-centre study to assess the effectiveness and safety of STG320 sublingual tablets of house dust mite allergen extracts in adults and adolescents with house dust mite allergic rhinitis. November 2015 -. PI: Maria Teresa Giner.
- Assessment of prevalence of unidentified mucopolysaccharidosis I, II, IVA and VI in patients with juvenile idiopathic arthritis with low inflammatory markers. November 2015 -. PI: Jordi Antón.
- Tolerance to the introduction of a formula based on highly hydrolysed whey proteins enriched with *Lactobacillus fermentum* (Damira-Pro1®) in children with allergy to cows milk protein. November 2015 -. PI: Ana M^a Plaza.
- Placebo-controlled double-blind study with parallel groups for 52 weeks to assess the effectiveness and safety of a fixed dose of 110 mg of reslizumab via subcutaneous route in patients with uncontrolled asthma and a high concentration of eosinophils in blood. October 2015 -. PI: Ana M^a Plaza.
- Open multi-centre phase Ib study to investigate the pharmacokinetics, pharmacodynamics and safety of tocilizumab after subcutaneous administration in patients with systemic juvenile idiopathic arthritis. September 2015 -. PI: Jordi Antón.
- PID-RSV study: epidemiological study on the rate of acute respiratory infections (ARI) caused by syncytial respiratory virus (SRV) requiring hospitalisation in paediatric populations with primary immunodeficiency (PID). September 2015 -. PI: Laia Alsina.
- National retrospective-prospective multi-centre study on the value of IGRAs in the diagnosis of adenitis caused by non-tuberculous mycobacteria, and on its various therapeutic approaches. July 2015 -. PI: Antoni Noguera.
- Study on the safety, tolerability and pharmacokinetics of two formulations of posaconazole (POS) via intravenous route (IV) and in powder for oral suspension, in immunosuppressed paediatric patients with neutropaenia. July 2015 -. PI: Clàudia Fortuny.
- Active-control multi-centre randomised single-blind study to assess the safety, tolerability, pharmacokinetics and effectiveness of ceftazidime and avibactam when provided with metronidazole versus meropenem in children from age 3 months to under 18 years with complicated intra-abdominal infections (cIAIs). July 2015 -. PI: Clàudia Fortuny Guash.
- Phase I study to assess the pharmacokinetics and safety of tocilizumab (TCZ) in patients under the age of 2 years with active systemic juvenile idiopathic arthritis (SJIA). June 2015 -. PI: Jordi Antón.
- Phase III study of tedizolid phosphate for 6 days from i.v. to oral in comparison to the comparator for 10 days in subjects aged 12 to < 18 years with complicated skin and skin structure infection (cSSSI). May 2015 -. PI: Juan José García.
- Phase IIa multi-centre trial to assess the effectiveness and safety of anakinra in patients with Kawasaki disease resistant to intravenous immunoglobulin. April 2015 -. PI: Jordi Antón.
- Double-blind randomised multi-centre study with parallel groups, controlled with vehicle to assess safety and effectiveness of calcitriol 3 mcg/g in ointment applied twice daily for 8 weeks in paediatric patients (aged 2 to 12 years) with mild to moderate plaque psoriasis. March 2015 - March 2016. PI: M^o Asunción Vicente Villa.
- Study to assess the financial impact of rotavirus (RV) at Catalan hospital centres. March 2015 - November 2015. PI: Juan José García.
- Open multi-centre study to assess the safety, tolerability, pharmacokinetics and effectiveness of ceftaroline in newborns and infants under 60 days of age with late-onset sepsis. March 2015 -. PI: Clàudia Fortuny.
- Crossover controlled randomised multi-centre trial to assess the hypoallergenicity of a new amino acid-based formula in children allergic to cows milk. March 2015 -. PI: Ana M^a Plaza Martín.
- Influence of immunogenicity of anti-TNF drugs on the effectiveness of treatment in juvenile idiopathic arthritis using serum calprotectin as activity marker of the disorder. Multi-centre trial. "ITACA Study". February 2015 -. PI: Jordi Antón.
- TBTC Study 36 - Platform for assessment of results of tuberculosis treatment. Observational study of treated individuals with pulmonary tuberculosis (TB). February 2015 -. PI: Antoni Noguera.

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- PCP00147 - Dysphagia area. Promoter: FRESENIUS. Fresenius Kabi España, S.A.U. January 2015 - April 2016. PI: Javier Martin De Carpi.
- Randomised phase 3 multi-centre study with parallel groups, masked from the researcher, to investigate the safety and effectiveness of fidaxomicin in oral suspension or tablets every 12 hours, and vancomycin in oral solution or capsules every 6 hours for 10 days, in paediatric subjects with diarrhoea associated with *Clostridium difficile*. January 2015 -. PI: Clàudia Fortuny.
- β -SPECIFIC 4 patients: Paediatric efficacy and safety study with canakinumab as first-line treatment. Open study on the efficacy and safety of dose reduction or dose interval lengthening of canakinumab (ACZ885) in patients with systemic juvenile idiopathic arthritis (SJIA). November 2014 -. PI: Rosa Bo/Jordi Antón.
- Prospective, multi-centre, single-arm study to evaluate the efficacy, safety and pharmacokinetics of denosumab in children with osteogenesis imperfecta. October 2014 -. PI: Rosa Bou.
- Retrospective study of food-allergic patients (milk and/or eggs and/or vegetables) treated with omalizumab as sole treatment or associated with oral immunotherapy based on a multi-centre register (OmaBase). August 2014 -. PI: Ana M^a Plaza.
- Long-term extension study to evaluate the safety and efficacy of tocilizumab administered subcutaneously to patients with polyarticular juvenile idiopathic arthritis and systemic juvenile idiopathic arthritis. June 2014 -. PI: Rosa Bou Torrent.
- Randomised, double-blind, placebo-controlled study of canakinumab in patients with hereditary periodic fevers (TRAPS, HIDS or FMFrc) with randomised withdrawal/frequency reduction of the dose and subsequent long-term open treatment phase. Novartis Farmacèutica. May 2014 -. PI: Jordi Antón.
- Tolerance to 2 highly hydrolysed childrens milk formulas based on rice proteins and casein in children with allergy to cows milk proteins. Biosearch. May 2014 -. PI: Ana M^a Plaza.
- Validation of the daily single dose of isoniazid at 10 mg/kg of weight in newborns aged under 3 months. April 2014 -. PI: Antoni Noguera.
- Spanish Register of Uveitis Associated with Juvenile Idiopathic Arthritis. Sociedad Española de Reumatología. April 2014 -. PI: Jordi Antón.
- CEntroS Project for Early Assistance for Respiratory Allergy (CESAR Project). Stallergenes Ibérica. March 2014 -. PI: Ana M.^a Plaza.
- Continued access to darunavir/ritonavir (DRV/rtv) for children aged 3 years or more and adolescents infected by HIV-1. March 2014 -. PI: Clàudia Fortuny.
- Phase 2/3, multi-centre, open, multi-cohort, two-part study to evaluate the pharmacokinetics, safety and antiviral activity of elvitegravir (EVG) administered with a base regime (BR) containing a protease inhibitor reinforced with ritonavir (IP/r) in paediatric subjects infected by HIV-1, previously treated with antiretrovirals. Gilead Sciences; Hospital Sant Joan de Déu Barcelona. February 2014 -. PI: Clàudia Fortuny.
- Double-blind randomised multi-centre comparative clinical trial to evaluate the effectiveness, safety and pharmacokinetics of daptomycin in comparison to the active reference treatment in paediatric patients with acute haematogenous osteomyelitis caused by gram-positive organisms. December 2013 -. PI: Juan José García-García.
- Phase III, randomised, double-blind, placebo-controlled study to determine the efficacy, safety and tolerability of lebrikizumab in adolescent patients with uncontrolled asthma treated with inhaled corticosteroids and a second control drug. F. Hoffmann- La Roche; Hospital Sant Joan de Déu Barcelona. November 2013 -. PI: Ana M^a Plaza.
- Multi-centre long-term follow-up study of HLH patients who have been treated with NI-0501, an anti-interferon gamma monoclonal antibody. Novimmune. November 2013 -. PI: Laia Alsina.
- Phase III, multi-centre, open clinical trial to evaluate the pharmacokinetics, efficacy and safety of abatacept administered subcutaneously (s.c.) in children and adolescents with polyarticular juvenile idiopathic arthritis and inadequate response (IR) to biological or non-biological disease-modifying antirheumatic drugs (DMARDs). Bristol-Myers Squibb International Corporation (BMSIC); Hospital Sant Joan de Déu - Esplugues HSJD. September 2013 -. PI: Jordi Antón.
- Multi-centre, randomised, placebo-controlled, double-blind study on parallel groups to evaluate the safety, efficacy and pharmacokinetics of belimumab, an anti-BLyS human monoclonal antibody, plus standard therapy, in paediatric patients with systemic lupus erythematosus (SLE). Glaxosmithkline. September 2013 -. PI: Jordi Antón.
- Phase Ib, multi-centre, open study to investigate the pharmacokinetics, pharmacodynamics and safety of tocilizumab after subcutaneous administration to patients with polyarticular juvenile idiopathic arthritis. Roche Farma. July 2013 -. PI: Jordi Antón.
- Phase 1/2, two-stage, open study on a single group to determine the safety, pharmacokinetics and efficacy of telaprevir in combination with peginterferon alfa-2b and ribavirin in

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paediatric subjects aged 3 to 17 years infected by genotype 1 hepatitis C virus. Hospital Sant Joan de Déu Barcelona; Vertex Pharmaceuticals Incorporated. June 2013 -. PI: Clàudia Fortuny.

- Comparative evaluation of the safety and efficacy of daptomycin versus standard treatment in paediatric patients aged 2 to 17 years with bacteraemia caused by *Staphylococcus aureus*. PharmaNet GmbH. May 2013 -. PI: Antoni Noguera.
- Multi-centre, single-arm, open pilot study to explore the safety, tolerability, pharmacokinetics and efficacy of multiple intravenous administrations of NI-0501, an anti-interferon gamma monoclonal antibody (anti-IFN), in paediatric patients with reactivated primary haemophagocytic lymphohistiocytosis. Novimmune. April 2013 -. PI: Laia Alsina.
- Phase III contact follow-up trial comparing the diagnostic functioning of C-Tb versus QuantiFERON®-TB Gold In-Tube, in combination with a randomised double-blind safety analysis in different parts of the body with C-Tb versus 2 TU of Tuberculin PPD RT23SSI (PPD). Statens Serum Institute. February 2013 -. PI: Antoni Noguera.
- Open extension study to evaluate the long-term safety of etanercept in children and adolescents with extended oligoarticular juvenile idiopathic arthritis, enthesitis-related arthritis or psoriatic arthritis, who previously took part in Protocol 0881A1-3338-WW (B1801014). Pfizer. January 2012 -. PI: Jordi Antón.
- Pharmacovigilance in patients with juvenile idiopathic arthritis (PHARMACHILD) under treatment with biological drugs and/or methotrexate. Register of the Pediatric Rheumatology International Trials Organization (PRINTO)/Pediatric Rheumatology European Society (PRES). January 2012 -. PI: Jordi Antón.
- International, multi-centre, prospective, single-arm, open study to evaluate the safety, efficacy and pharmacokinetics of atazanavir (ATV) powder potentiated with ritonavir (RTV) liquid with an optimised combination of nucleosides in children infected by HIV, untreated or previously treated with antiretrovirals, aged from 3 months to 8 years (Pediatric Atazanavir International Clinical Evaluation: the PRINCE II study). Bristol-Myers Squibb International Corporation (BMSIC). December 2011 -. PI: Clàudia Fortuny.

- Short cycle therapy (SCT) (5 days on/2 days off) in young people infected by HIV-1 (PENTA 16). Fondazione Penta; Hospital Sant Joan de Déu Barcelona. December 2011 -. PI: Clàudia Fortuny.
- Evaluation of early treatment in children with juvenile idiopathic arthritis: retrospective analysis. September 2011 -. PI: Jordi Antón.
- Multi-centre, randomised, double-blind study with dual simulation to evaluate two doses of adalimumab versus methotrexate (MTX) in paediatric patients with chronic plaque psoriasis (Ps). Abbott Laboratories. March 2011 -. PI: M^a Asunción Vicente.
- Multi-centre, longitudinal post-commercialisation observational register of long-term efficacy and safety of Humira® (adalimumab) in children with moderately to severely active polyarticular or polyarticular-course juvenile idiopathic arthritis (JIA). (STRIVE STUDY). Abbott Laboratories. May 2010 -. PI: Jordi Antón.
- Open extension study with canakinumab (ACZ885) in patients with systemic juvenile idiopathic arthritis and active systemic manifestations. Novartis Farmacéutica. June 2009 -. PI: Jordi Antón.
- Open, multi-centre trial on multiple-dose administration pharmacokinetics and on safety and efficacy during 48 weeks of maraviroc in combination with an optimised base treatment designed for subjects aged 2 to 18 years infected by HIV-1 with CCR5 tropism who previously received treatment with antiretrovirals. Pfizer. April 2009 -. PI: Clàudia Fortuny.

Publications

- Alsina L, Basteiro MG, de Paz HD, Iñigo M, de Sevilla MF, Triviño M, Juan M, Muñoz-Almagro C. Recurrent Invasive Pneumococcal Disease in Children: Underlying Clinical Conditions, and Immunological and Microbiological Characteristics. *PLoS One* 2015. FI: 3,234(Q1).
- Anton J, Calvo I, Fernández-Martin J, Gamir ML, Merino R, Jimenez-Treviño S, Sevilla B, Cabades F, Bou R, Arostegui JI. Efficacy and safety of canakinumab in cryopyrin-associated periodic syndromes: results from a Spanish cohort. *Clin Exp Rheumatol* 2015. FI: 2,724(Q2).
- Baquero-Artigao F, Mellado Peña MJ, del Rosal Rabes T, Noguera Julián A, Goncé Mellgren A, de la Calle Fernández-Miranda M, Navarro Gómez ML; Working Group on gestational, congenital, and postnatal tuberculosis, Spanish Society of Pediatric Infectious Diseases (PFIC). Guía de la Sociedad Española de Infectología Pediátrica sobre tuberculosis en la embarazada y el recién nacido (ii): profilaxis y tratamiento. *An Pediatr (Barc)* 2015. FI: 0,833(Q4).
- Baquero-Artigao F, Mellado Peña MJ, Del Rosal Rabes T, Noguera Julián A, Goncé Mellgren A, de la Calle Fernández-Miranda M, Navarro Gómez ML; Working Group on gestational, congenital, and postnatal tuberculosis, Spanish Society of Pediatric Infectious Diseases (PFIC). Guía de la Sociedad Española de Infectología Pediátrica sobre tuberculosis en la embarazada y el recién nacido (I): epidemiología y diagnóstico. *Tuberculosis congénita. An Pediatr (Barc)* 2015. FI: 0,833(Q4).
- Berti E, Thorne C, Noguera-Julian A, Rojo P, Galli L, de Martino M, Chiappini E. The new face of the pediatric HIV epidemic in Western countries: demographic characteristics, morbidity and mortality of the pediatric HIV-infected population. *Pediatr Infect Dis J* 2015. 34: 7-13. FI: 2,723(Q1).
- Boom V, Anton J, Lahdenne P, Quartier P, Ravelli A, Wulfraat NM, Vastert SJ. Evidence-based diagnosis and treatment of macrophage activation syndrome in systemic juvenile idiopathic arthritis. *Pediatr Rheumatol Online J* 2015. 13: 55-0. FI: 1,607(Q2).
- Bou R, Adán A, Borrás F, Bravo B, Calvo I, De Inocencio J, Díaz J, Escudero J, Fonollosa A, de Viciuña CG, Hernández V, Merino R, Peralta J, Rúa MJ, Tejada P, Antón J. Clinical management algorithm of uveitis associated with juvenile idiopathic arthritis: interdisciplinary panel consensus. *Rheumatol Int* 2015. 35: 777-785. FI: 1,516(Q3).
- Cabrerizo M, Trallero G, Pena MJ, Cilla A, Megias G, Muñoz-Almagro C, Del Amo E, Roda D, Mensalvas AI, Moreno-Docón A, García-Costa J, Rabella N, Omeñaca M, Romero MP, Sanbonmatsu-Gámez S, Pérez-Ruiz M, Santos-Muñoz MJ, Calvo C; study group of "Enterovirus and parechovirus infections in children under 3years-old, Spain" Pl12-00904 Comparison of epidemiology and clinical characteristics of infections by human parechovirus vs. those by enterovirus during the first month of life. *Eur. J. Pediatr.* 2015. 174: 1511-1516. FI: 1,890(Q2).
- Calvo I, Antón J, Bustabad S, Camacho M, de Inocencio J, Gamir ML, Graña J, La Cruz L, Robledillo JC, Medrano M, Merino R, Modesto C, Nuñez E, Rúa MJ, Torrente-Segarra V, Vargas C, Carmona L, Loza E. Consensus of the Spanish society of pediatric rheumatology for transition management from pediatric to adult care in rheumatic patients with childhood onset. *Rheumatol Int* 2015. 35: 1615-1624. FI: 1,516(Q3).
- Calzada-Hernández J, Anton-López J, Bou-Torrent R, Iglesias-Jiménez E, Ricart-Campos S, Martín de Carpi J; Carmen García de Viciuña Muñoz de la Nava, Torrente-Segarra V, Sánchez-Manubens J, Giménez-Roca C, Rozas-Quesada L, Juncosa-Morros MT, Fortuny C, Noguera-Julian A. Tuberculosis in pediatric patients treated with anti-TNFa drugs: a cohort study. *Pediatr Rheumatol Online J* 2015. 13: 54-0. FI: 1,607(Q2).
- Carrasco-Colom J, Jordan I, Alsina L, Garcia-Garcia JJ, Cambra-Lasaosa FJ, Martín-Mateos MA, Juan M, Muñoz-Almagro C. Association of Polymorphisms in IRAK1, IRAK4 and MyD88, and Severe Invasive Pneumococcal Disease. *Pediatr Infect Dis J* 2015. 34: 1008-1013. FI: 2,723(Q1).
- Crespo I, Toledo D, Soldevila N, Jordán I, Solano R, Castilla J, Caylà JA, Godoy P, Muñoz-Almagro C, Domínguez Á; Working Group on the Transmission of Pertussis in Households. Characteristics of Hospitalized Cases of Pertussis in Catalonia and Navarra, Characteristics of Hospitalized Cases of Pertussis in Catalonia and Navarra, Two Regions in the North of Spain. *PLoS One* 2015. FI: 3,234(Q1).
- del Amo E, Selva L, de Sevilla MF, Ciruela P, Brotons P, Triviño M, Hernandez S, Garcia-Garcia JJ, Domínguez Á, Muñoz-Almagro

C. Estimation of the invasive disease potential of *Streptococcus pneumoniae* in children by the use of direct capsular typing in clinical specimens. *Eur J Clin Microbiol Infect Dis* 2015. 34: 705-711. FI: 2,668(Q2).

• Domínguez J, Latorre I. Aplicación y utilidad actual de las técnicas de interferón- γ en el diagnóstico de la tuberculosis. *Enferm Infecc Microbiol Clin* 2015. 33: 15-19. FI: 2,172(Q3).

• Falcón-Neyra L, Benmarzouk-Hidalgo OJ, Madrid L, Noguera-Julian A, Fortuny C, Neth O, López-Cortés L. No differences of immune activation and microbial translocation among HIV-infected children receiving combined antiretroviral therapy or protease inhibitor monotherapy. *Medicine (Baltimore)* 2015. FI: 5,723(Q1).

• Fortuny C, Deyà-Martínez Á, Chiappini E, Galli L, de Martino M, Noguera-Julian A. Metabolic and renal adverse effects of antiretroviral therapy in HIV-infected children and adolescents. *Pediatr Infect Dis J* 2015. 34: 36-43. FI: 2,723(Q1).

• Giancane G, Ter Haar NM, Wulffraat N, Vastert SJ, Barron K, Hentgen V, Kallinich T, Ozdogan H, Anton J, Brogan P, Cantarini L, Frenkel J, Galeotti C, Gattorno M, Grateau G, Hofer M, Kone-Paut I, Kuemmerle-Deschner J, Lachmann HJ, Simon A, Demirkaya E, Feldman B, Uziel Y, Ozen S. Evidence-based recommendations for genetic diagnosis of familial Mediterranean fever. *Ann Rheum Dis* 2015. 74: 635-641. FI: 10,377(Q1).

• Giménez-Roca C, Iglesias E, Torrente-Segarra V, Bou R, Sánchez-Manubens J, Calzada-Hernández J, Hernández S, Ricart S, Antón J. Efficacy and safety of TNF-alpha antagonists in children with juvenile idiopathic arthritis who started treatment under 4 years of age. *Rheumatol Int* 2015. 35: 323-326. FI: 1,516(Q3).

• Gomez B, Hernandez-Bou S, Garcia-Garcia JJ, Mintegi S; Bacteraemia Study Working Group from the Infectious Diseases Working Group, Spanish Society of Pediatric Emergencies (SEUP). Bacteremia in previously healthy children in emergency departments: clinical and microbiological characteristics and outcome. *Eur J Clin Microbiol Infect Dis* 2015. 34: 453-460. FI: 2,668(Q2).

• Guix-Comellas EM, Rozas-Quesada L, Force-Sanmartín E, Estrada-Masllorens JM, Galimany-Masclans J, Noguera-Julian A. Influence of nursing interventions on adherence to treatment with antituberculosis drugs in children and young people: research protocol. *J Adv Nurs* 2015. 71: 2189-2199. FI: 1,741(Q1).

• Kreins AY, Ciancanelli MJ, Okada S, Kong XF, Ramirez-Alejo N, Kilic SS, El Baghdadi J, Nonoyama S, Mahdavian SA, Ailal F,

Bousfiha A, Mansouri D, Nieves E, Ma CS, Rao G, Bernasconi A, Sun Kuehn H, Niemela J, Stoddard J, Deveau P, Cobat A, El Azbaoui S, Sabri A, Lim CK, Sundin M, Avery DT, Halwani R, Grant AV, Boisson B, Bogunovic D, Itan Y, Moncada-Velez M, Martínez-Barricarte R, Migaud M, Deswarte C, Alsina L, Kotlarz D, Klein C, Müller-Fleckenstein I, Fleckenstein B, Cormier-Daire V, Rose-John S, Picard C, Hammarstrom L, Puel A, Al-Muhsen S, Abel L, Chaussabel D, Rosenzweig SD, Minegishi Y, Tangye S, Bustamante J, Casanova JL, Boisson-Dupuis S. Human TYK2 deficiency: Mycobacterial and viral infections without hyper-IgE syndrome. *J. Exp. Med.* 2015. 212: 1641-1662. FI: 12,515(Q1).

• Launes C, Armero G, Anton A, Hernandez L, Gimferrer L, Cisneros C, Jordan I, Muñoz-Almagro C. Molecular epidemiology of severe respiratory disease by human rhinoviruses and enteroviruses at a tertiary paediatric hospital in Barcelona, Spain. *Clin Microbiol Infect* 2015. 21: 5-7. FI: 5,768(Q1).

• Martínez Monseny A, Bobillo Pérez S, Martínez Planas A, García García JJ. Papel de las exploraciones complementarias y de la monitorización domiciliaria en los pacientes de riesgo de episodio aparentemente letal, apneas y síndrome de muerte súbita del lactante. *An Pediatr (Barc)* 2015. 83: 104-108. FI: 0,833(Q4).

• Martínez-Bonet M, Puertas MC, Fortuny C, Ouchi D, Mellado MJ, Rojo P, Noguera-Julian A, Muñoz-Fernández MA, Martínez-Picado J. Establishment and Replenishment of the Viral Reservoir in Perinatally HIV-1-infected Children Initiating Very Early Antiretroviral Therapy. *Clin Infect Dis* 2015. 61: 1169-1178. FI: 8,886(Q1).

• Morén C, Noguera-Julian A, Garrabou G, Rovira N, Catalán M, Bañó M, Guitart-Mampel M, Tobías E, Hernández S, Cardellach F, Miró Ó, Fortuny C. Mitochondrial disturbances in HIV pregnancies. *Aids* 2015. 29: 5-12. FI: 5,554(Q1).

• Moreno-Pérez D, Andrés Martín A, Tagarro García A, Escribano Montaner A, Figuerola Mulet J, García García JJ, Moreno-Galdó A, Rodrigo Gonzalo de Lleria C, Ruiz Contreras J, Saavedra Lozano J; en representación de la Sociedad Española de Infectología Pediátrica (SEIP), Sociedad Española de Neumología Pediátrica (SENP) y el Comité Asesor de Vacunas de la Asociación Española de Pediatría (CAV-AEP). Neumonía adquirida en la comunidad: tratamiento ambulatorio y prevención. *An Pediatr (Barc)* 2015. 83: 1-7. FI: 0,833(Q4)*.

• Moreno-Pérez D, Andrés Martín A, Tagarro García A, Escribano Montaner A, Figuerola Mulet J, García García JJ, Moreno-Galdó A, Rodrigo Gonzalo de Lleria C, Saavedra Lozano J. Neumonía adquirida en la comunidad: tratamiento de los casos complicados y en situaciones especiales. Documento de consenso de la

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Sociedad Española de Infectología Pediátrica (SEIP) y Sociedad Española de Neumología Pediátrica (SENP). *An Pediatr (Barc)* 2015; 83: 1-11. FI: 0,833(Q4).

- Noguera-Julian A, Morén C, Rovira N, Garrabou G, Catalán M, Sánchez E, Cardellach F, Miró Ó, Fortuny C. Decreased Mitochondrial Function Among Healthy Infants Exposed to Antiretrovirals During Gestation, Delivery and the Neonatal Period. *Pediatr Infect Dis J* 2015. 34: 1349-1354. FI: 2,723(Q1).
- Noyola DE, Alarcón A, Noguera-Julian A, Muntasell A, Muñoz-Almagro C, García J, Mur A, Fortuny C, López-Botet M. Dynamics of the NK-cell subset redistribution induced by cytomegalovirus infection in preterm infants. *Hum Immunol* 2015. 76: 118-123. FI: 2,138(Q3).
- Ombrello MJ, Remmers EF, Tachmazidou I, Grom A, Foell D, Haas JP, Martini A, Gattorno M, Özen S, Prahalad S, Zeff AS, Bohnsack JF, Mellins ED, Ilowite NT, Russo R, Len C, Hilario MO, Oliveira S, Yeung RS, Rosenberg A, Wedderburn LR, Anton J, Schwarz T, Hinks A, Bilginer Y, Park J, Cobb J, Satorius CL, Han B, Baskin E, Signa S, Duerr RH, Achkar JP, Kamboh MI, Kaufman KM, Kottyan LC, Pinto D, Scherer SW, Alarcón-Riquelme ME, Docampo E, Estivill X, GüLA; British Society of Pediatric and Adolescent Rheumatology (BSPAR) Study Group; Childhood Arthritis Prospective Study (CAPS) Group; Randomized Placebo Phase Study of Rilonecept in sJIA (RAPPORT) Investigators; Sparks-Childhood Arthritis Response to Medication.
- Study (CHARMS) Group; Biologically Based Outcome Predictors in JIA (BBOP) Group, de Bakker PI, Raychaudhuri S, Langefeld CD, Thompson S, Zeggini E, Thomson W, Kastner DL, Woo P; International Childhood Arthritis Genetics (INCHARGE) Consortium. HLA-DRB1*11 and variants of the MHC class II locus are strong risk factors for systemic juvenile idiopathic arthritis. *Proc. Natl. Acad. Sci. U. S. A.* 2015. 112: 15970-15975. FI: 9,674(Q1)".
- Palladino C, Gómez ML, Soler-Palacín P, González-Tomé MI, De Ory SJ, Espiau M, Hoyos SP, León-Leal JA, Méndez M, Moreno-Pérez D, Guasch CF, Sierra AM, Guruceta IP, Guillén SM, Briz V; CoRISpe Working Group. Off-label use of maraviroc in HIV-1-infected paediatric patients in clinical practice. *Aids* 2015. 29: 2155-2159. FI: 5,554(Q1).
- Piquer Gibert M, Alsina L, Giner Muñoz MT, Cruz Martínez O, Ruiz Echevarria K, Dominguez O, Plaza Martín AM, Arostegui JI, de Valles G, Juan Otero M, Martín-Mateos MA. Non-Hodgkin lymphoma in pediatric patients with common variable immunodeficiency. *Eur. J. Pediatr.* 2015. 174: 1069-1076. FI: 1,890(Q2).
- Ricart S, Garcia-Garcia JJ, Marcos MA. Reply. *Pediatr Infect Dis J* 2015. 34: 800-801. FI: 2,723(Q1).
- Rodà D, Pérez-Martínez E, Cabrerizo M, Trallero G, Martínez-Planas A, Luaces C, García-García JJ, Muñoz-Almagro C, Launes C. Clinical characteristics and molecular epidemiology of Enterovirus infection in infants <3months in a referral paediatric hospital of Barcelona. *Eur. J. Pediatr.* 2015. 174: 1549-1553. FI: 1,890(Q2).
- Rosé CD, Pans S, Casteels I, Anton J, Bader-Meunier B, Brissaud P, Cimaz R, Espada G, Fernandez-Martin J, Hachulla E, Harjacek M, Khubchandani R, Mackensen F, Merino R, Naranjo A, Oliveira-Knupp S, Pajot C, Russo R, Thomée C, Vastert S, Wulffraat N, Arostegui JI, Foley KP, Bertin J, Wouters CH. Blau syndrome: cross-sectional data from a multicentre study of clinical, radiological and functional outcomes. *Rheumatology* 2015. 54: 1008-1016. FI: 4,475(Q1).
- Rousaud A, Fortuny C, Lonca M, Blanch J. Transferring HIV-infected Adolescents to an Adult Outpatient Clinic. Implementation of a Standardized Protocol. *Eur Psychiatry* 2015. FI: 3,439(Q1).
- Sala-Farré MR, Arias-Varela C, Recasens-Recasens A, Simó-Sanahuja M, Muñoz-Almagro C, Pérez-Jové J. Pertussis epidemic despite high levels of vaccination coverage with acellular pertussis vaccine. *Enferm Infecc Microbiol Clin* 2015. 33: 27-31. FI: 2,172(Q3).
- Sánchez-Fauquier A, González-Galán V, Arroyo S, Rodà D, Pons M, Garcia JJ. Norovirus-associated encephalitis in a previously healthy 2-year-old girl. *Pediatr Infect Dis J* 2015. 34: 222-223. FI: 2,723(Q1).
- Sollai S, Noguera-Julian A, Galli L, Fortuny C, Deyá Á, de Martino M, Chiappini E. Strategies for the prevention of mother to child transmission in Western countries: an update. *Pediatr Infect Dis J* 2015. 34: 14-30. FI: 2,723(Q1)".
- ter Haar NM, Oswald M, Jeyaratnam J, Anton J, Barron KS, Brogan PA, Cantarini L, Galeotti C, Grateau G, Hentgen V, Hofer M, Kallinich T, Kone-Paut I, Lachmann HJ, Ozdogan H, Özen S, Russo R, Simon A, Uziel Y, Wouters C, Feldman BM, Vastert SJ, Wulffraat NM, Benseler SM, Frenkel J, Gattorno M, Kuemmerle-Deschner JB. Recommendations for the management of autoinflammatory diseases. *Ann Rheum Dis* 2015. 74: 1636-1644. FI: 10,377(Q1).
- Torner N, Soldevila N, Garcia JJ, Launes C, Godoy P, Castilla J, Dominguez A; CIBERESP Cases and Controls in Pandemic Influenza Working Group, Spain. Effectiveness of non-pharmaceutical measures in preventing pediatric influenza: a case-control study. *BMC Public Health* 2015. 15: 543-0. FI: 2,264(Q2).

5

AREA

Infectious
diseases and
systemic
inflammatory
response
in pediatrics

Groups

Projects

Clinical Trials

Publications

Supervised theses

Networks

Supervised theses

- Kidney function in paediatric patients infected by HIV. Study of new biomarkers and their possible relation to inflammatory markers of the infection. Doctoral Candidate: Angela Deyà. Director: Anton Noguera and Clàudia Fortuny. October 2015.
- Neuropsychological profile at age 6-8 years in healthy children of mothers with HIV or HCV. infection. Doctoral Candidate: Roser Colomé. Director: Clàudia Fortuny. July 2015.

Networks

- Centre for Biomedical Network Research of Epidemiology and Public Health (CIBERESP).Ministry of Economy and Competitiveness. Carlos III Health Institute.



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AREA

Health Mental

Etiopathogeny and treatment of severe mental disorders
Impact, risk and prevention of mental disorders
Healthcare technologies and results in primary care and mental health

Etiopathogeny and treatment of severe mental disorders

Impact, risk and prevention of mental disorders
Healthcare technologies and results in primary care and mental health

Etiopathogeny and treatment of severe mental disorders

Schizophrenia, the most paradigmatic mental disorder, affects about 1% of the population and is one of the disorders of this type that causes the greatest disability. It has been estimated that severe mental disorders affect 2.8% of the population. Engaged in research on people who suffer severe mental disorders, our group is formed by a multidisciplinary team (with members from the

spheres of psychiatry, psychology, nursing, biology, social work, etc.). Ours is a broad field of study, covering subjects ranging from gene expression factors to psychosocial interventions. We belong to the Centre for Biomedical Network Research on Mental Health (CIBERSAM), financed by the Carlos III Health Institut.

Research team

Coordinator Judith Usall and Susana Ochoa
 Researchers Montserrat Dolz, Antonio Manuel Alba Muñoz, Hilari Andres, Mora, Belen Arranz Martín, Adela Berrozpe Blasco, Gildas Brebion, Ines Campo Ferreiro, Emma Casas Anguera, Marta Coromina Sadurní, Jorge Cuevas Esteban, Ruth Cunill Clotet, Núria del Cacho Ortega, Gemma Escartin Martín, Gemma Escuder Romeva, Alexandrina Foix Sanjuan, Mar Garcia Franco, María Elena Huerta Ramos, Marcia Irazabal Jiménez, Raquel López Carrilero, Francisco Martínez Zambrano, Eva Miquel Fernandez, Christian Núñez Leáñez, María Trinidad Peláez Martínez, María Dolores Picouto González, Elena Rubio Abadal, Luis San Molina, Sara Siddi, Jordina Tor Fabra, Elia Vila Andreu, Regina Vila Badia, Sonia Vilamala Anton, Ellen Corstenbosch, José Ángel Alda, Mar Alvarez, Fernando Lacasa, Josep Lluís Matalí, María Angels Mairena, Daniel Muñoz, Marta Pardo, Bernardo Sanchez, Eduardo Serrano, Ana Sintés, María Diez, Isabel Rueda, Neus Elias

Projects

- Neurobiological stress markers for psychosis risk: the role of cortisol and prolactin. Fundación Alicia Koplowitz. November 2015 - October 2017. PI: Montserrat Dolz Abadia.
- Assessment of the effectiveness of assertive community treatment targeted at persons with severe mental disorders in the Housing First programme. Beneficiaria: Inés Campo Ferreira. Parc Sanitari de Sant Joan de Déu - September 2015 - September 2017. PI: Alexandrina Foix Sanjuan.
- A longitudinal study on the evolution of the needs of people treated in prison psychiatric units. Parc Sanitari de Sant Joan de Déu. January 2015 - December 2016. PI: Gemma Escuder Romeva.
- Neurofunctional bases of inner speech disorder in verbal hallucinations. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Gildas Brebion.
- m-RESIST_Mobile Therapeutic Attention for Patients with Treatment Resistant Schizophrenia. European Commission. January 2015 - December 2017. PI: Judith Usall Rodie.

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- Aspects of the approach to patients with incipient psychosis connected with improved clinical and social prognosis upon 1 year of treatment. Assessment of the new Incipient Psychosis programme of the Sant Joan de Déu Health Care Park. Parc Sanitari de Sant Joan de Déu - January 2015 - December 2016. PI: Maria Trinidad Peláez Martínez.
- Effectiveness of Individualised Metacognitive Training (MCT+) in persons with short-progression psychosis. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Susana Ochoa Güerre.
- Research Fellowship: Christian Núñez Leánez. Ministerio de Ciencia e Innovación (MINECO). July 2014 - March 2015. PI: Christian Núñez.
- Río Hortega research training contract. Instituto de Salud Carlos III (ISCIII). May 2014 - May 2016. PI: Josep Maria Haro. Beneficiary: Elena Rubio.
- Unusual psychic experiences and jumping to conclusions in the clinical and general populations. Parc Sanitari de Sant Joan de Déu - Serveis de Salut Mental. February 2014 - February 2015. PI: Gildas Brebion.
- Effectiveness of the metacognitive training programme in the improvement of the social and occupational inclusion of people with a first psychotic episode. Fundació Caixa d'Estalvis i Pensions de Barcelona. February 2014 - January 2016. PI: Susana Ochoa.
- Prolactin levels in patients with a first psychotic episode without antipsychotic treatment with secondary sexual and reproductive effects. Cross-sectional and follow-up study after three months. Parc Sanitari de Sant Joan de Déu - Serveis de Salut Mental. September 2013 - January 2015. PI: Núria del Cacho.
- Evaluation of treatment needs of users of the psychosocial rehabilitation services from the standpoint of users, their families and service professionals. Parc Sanitari de Sant Joan de Déu. February 2013 - December 2015. PI: Sonia Vilamala.
- Multimedia adaptation of REPYFLEC cognitive remediation treatment for persons with schizophrenia. OSSJD - Obra Social Sant Joan de Déu. January 2013 -. PI: Aida Farreny.
- Transcriptional regulation by psychoactive drugs in rat neurons and astrocytes. Collaboration agreement with IPROTEOS. November 2012 -. PI: Belén Ramos.
- Proteomics in Severe Psychiatric Disorders. Industex - Obra Social Sant Joan de Déu. September 2012 -. PI: Belén Ramos.

- Multi-centre longitudinal study on clinical, cognitive and neuroimaging characteristics in children and adolescents with Psychosis Risk Syndrome. Instituto de Salud Carlos III. January 2012 - December 2015. PI: Montserrat Dolz.
- Clinical and neurobiological determinants of second episodes of schizophrenia. Longitudinal study of first psychotic episodes. Instituto de Salud Carlos III. January 2012 - December 2015. PI: Judith Usall.
- Hallucinations and source memory impairment in schizophrenia patients and non-clinical individuals. Instituto de Salud Carlos III. January 2010 - January 2016. PI: Gildas Brebion.

Clinical trials

- Observational study to prospective cohort of patients with persistent symptoms of schizophrenia to describe the course and the burden of disease. September 2015 - November 2015. PI: Belén Arranz.
- Factores clínicos y neuropsicológicos asociados a la respuesta a antipsicóticos de segunda generación en niños y adolescentes diagnosticados de primer episodio del espectro esquizofrénico de inicio precoz. January 2015 -. PI: Luis San.
- Multi-centre, flexible-dose, open extension study with a duration of 104 weeks to evaluate the long-term safety and efficacy of lurasidone in paediatric patients with schizophrenia and patients with irritability associated with autistic disorder. July 2014 -. PI: Luis San.
- Multi-centre, fixed-dose, placebo-controlled, double-blind, parallel, randomised study with a duration of 6 weeks to evaluate the efficacy and safety of lurasidone in adolescent patients with schizophrenia. June 2014 -. PI: Luis San.
- Cross-sectional study with retrospective review of patients with persistent symptoms of schizophrenia to estimate the use of medical resources and the burden of the disorder. F. Hoffmann- La Roche. September 2013 -. PI: Belén Arranz.
- Healthcare- and social cost of handling the attention deficit hyperactivity disorder. Shire Pharmaceuticals Iberica. December 2012 -. PI: José Ángel Alda.
- Phase 4, open, multi-centre study of safety during 2 years of treatment with lisdexamfetamine dimesylate in children and adolescents aged 6 to 17 years with attention deficit hyperactivity disorder (ADHD). Shire Pharmaceuticals Iberica. August 2011 -. PI: José Ángel Alda.

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**Publications**

- Barajas A, Ochoa S, Obiols JE, Lalucat-Jo L. Gender differences in individuals at high-risk of psychosis: a comprehensive literature review. *ScientificWorldJournal* 2015. 2015: 430735-0. FI: 1,219(Q2).
- Brebion G, Stephan-Otto C, Huerta-Ramos ME, Ochoa S, Usall J, Abellán-Vega H, Roca M, Haro JM. Visual encoding impairment in patients with schizophrenia: contribution of reduced working memory span, decreased processing speed, and affective symptoms. *Neuropsychology* 2015. 29: 17-24. FI: 3,269(Q1).
- Brebion G, Stephan-Otto C, Usall J, Huerta-Ramos ME, Perez Del Olmo M, Cuevas-Esteban J, Haro JM, Ochoa S. Association of auditory-verbal and visual hallucinations with impaired and improved recognition of colored pictures. *Neuropsychology* 2015. 29: 667-674. FI: 3,269(Q1).
- Caprile C, Cuevas-Esteban J, Ochoa S, Usall J, Navarra J. Mixing apples with oranges: Visual attention deficits in schizophrenia. *J Behav Ther Exp Psychiatry* 2015. 48: 27-32. FI: 2,312(Q2).
- Cernis E, Vassos E, Brebion G, McKenna PJ, Murray RM, David AS, MacCabe JH. Schizophrenia patients with high intelligence: A clinically distinct sub-type of schizophrenia?. *Eur Psychiatry* 2015. 30: 628-632. FI: 3,439(Q1).
- Ciocca G, Usall J, Dolz M, Limoncin E, Gravina GL, Carosa E, Sánchez B, Barajas A, Baños I, Huerta E, Farreny A, Franchi C, Group G, and Ochoa S. Sexual dysfunctions in people with first-episode psychosis assessed according to a gender perspective. *Riv Psichiatr* 2015. 50: 239-244. FI: 0,723(Q4).
- Cunill R, Castells X, Tobias A, Capellà D. Pharmacological treatment of attention deficit hyperactivity disorder with co-morbid drug dependence. *J Psychopharmacol* 2015. 29: 15-23. FI: 3,593(Q1).
- Cunill R, Castells X. Trastorno por déficit de atención con hiperactividad. *Med Clin (Barc)* 2015. 144: 370-375. FI: 1,417(Q2).
- Garcia-Amador M1, Merchán-Naranjo J, Tapia C, Moreno C, Castro-Fornieles J, Baeza I, de la Serna E, Alda JA, Muñoz D, Andrés Nestares P, Cantarero CM, Arango C. Neurological adverse effects of antipsychotics in children and adolescents. *J. Clin. Psychopharmacol.* 2015. 35: 686-693. FI: 3,243(Q2).
- Huerta-Ramos ME, Ochoa S, Roca M, Miquel E, and Usall J. The effect of raloxifene on symptoms and cognitive functioning in a postmenopausal schizophrenia patient: a case report. *Arch Womens Ment Health* 2015. 18: 259-261. FI: 2,164(Q3).
- Lacasa F, Mitjavila M, Ochoa S, and Balluerka N. The relationship between attachment styles and internalizing or externalizing symptoms in clinical and nonclinical adolescents. *An. Psicol.* 2015. 31: 422-432. FI: 0,504(Q3).
- Masa-Font R, Fernández-San-Martín MI, Martín López LM, Alba Muñoz AM, Oller Canet S, Martín Royo J, San Emeterio Echevarría L, Olona Tabueña N, Ibarra Jato M, Barroso García A, González Tejón S, Tajada Vitales C, Díaz Mújica B, Viñas Cabrera L, Sanchis Catalán R, Salvador Barbarroja T. The effectiveness of a program of physical activity and diet to modify cardiovascular risk factors in patients with severe mental illness after 3-month follow-up: CAPICOR randomized clinical trial. *Eur Psychiatry* 2015. 30: 1028-1036. FI: 3,439(Q1).
- Mayoral F, Berrozpe A, de la Higuera J, Martínez-Jambrina JJ, de Dios Luna J, Torres-Gonzalez F. Efficacy of a family intervention program for prevention of hospitalization in patients with schizophrenia. A naturalistic multicenter controlled and randomized study in Spain. *Rev. Psiquiatr. Salud Ment.* 2015. 8: 83-91. FI: 1,622(Q3).
- McGrath JJ, Saha S, Al-Hamzawi A, Alonso J, Bromet EJ, Bruffaerts R, Caldas-de-Almeida JM, Chiu WT, de Jonge P, Fayyad J, Florescu S, Gureje O, Haro JM, Hu C, Kovess-Masfety V, Lepine JP, Lim CC, Mora ME, Navarro-Mateu F, Ochoa S, Sampson N, Scott K, Viana MC, Kessler RC. Psychotic Experiences in the General Population: A Cross-National Analysis Based on 31,261 Respondents From 18 Countries. *JAMA Psychiatry* 2015. 72: 697-705. FI: 12,008(Q1).
- Montañés-Rada F, Gastaminza-Pérez X, Catalá MA, Ruiz-Sanz F, Ruiz-Lázaro PM, Herreros-Rodríguez O, García-Giral M, Ortiz-Guerra J, Alda JA, Mojarro-Práxedes D, Cantó-Diez T, Mardomingo-Sanz MJ, Sasot-Llevadot J, Ibáñez-Bordas RM, Soto-López A, Pàmies-Massana M, Rey-Sánchez F, Ferrin-Erdozáin M, Graell-Bernal M, Granada-Jiménez O, Morey-Canyelles J, Romera-Torrens M, Rubio-Morell B. GEITDAH consensus on conduct disorders in children and adolescents. *Rev. Neurologia* 2015. 61: 167-182. FI: 0,830(Q4).
- Muñoz-Negro JE, Ibanez-Casas I, de Portugal E, Ochoa S, Dolz M, Haro JM, Ruiz-Veguilla M, de Dios Luna Del Castillo J, and Cervilla JA. A dimensional comparison between delusional disorder, schizophrenia and schizoaffective disorder. *Schizophr Res* 2015. 169: 248-254. FI: 3,923(Q1).
- Núñez C, Stephan-Otto C, Cuevas-Esteban J, Haro JM, Huerta-Ramos ME, Ochoa S, Usall J, Brebion G. Effects of caffeine intake and smoking on neurocognition in schizophrenia. *Psychiatry Res.* 2015. 230: 924-931. FI: 2,467(Q2).

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- Ribas-Siñol M, Del Prado-Sanchez N, Claramunt-Mendoza J, Civit-Ramirez M, Canalías-Perez O, Ochoa S. Troubled adolescents: substance abuse and mental disorder in young offenders. *Actas Esp. Psiquiatri.* 2015. 43: 197-204. FI: 1,200(Q3).
- Rubio-Abadal E, Ochoa S, Barajas A, Bano I, Del Cacho N, Dolz M, Sánchez B, and Usall J. Birth Weight and Obstetric Complications Determine Age at Onset in First Episode of Psychosis. *Eur Psychiatry* 2015. FI: 3,439(Q1).
- Rubio-Abadal E, Ochoa S, Barajas A, Baños I, Dolz M, Sánchez B, Del Cacho N, Carlson J, Huerta-Ramos ME, and Usall J. Birth weight and obstetric complications determine age at onset in first episode of psychosis. *J Psychiatr Res* 2015. 65: 108-114. FI: 3,957(Q1).
- San L, Serrano M, Cañas F, Romero SL, Sánchez-Cabezudo Á, and Villar M. Towards a pragmatic and operational definition of relapse in schizophrenia: A Delphi consensus approach. *Int. J. Psychiat. Clin.* 2015. 19: 90-98. FI: 1,391(Q3).
- Sasot-Llavadot J, Ibáñez-Bordas RM, Soto-López A, Montañés-Rada F, Gastaminza-Pérez X, Alda-Diez JA, Cantó-Diez T, Catalá MA, Ferrin-Erdozáin M, García-Giral M, Graell-Bernal M, Granada-Jiménez O, Herreros-Rodríguez Ó, Mardomingo-Sanz MJ, Mojarro-Práxedes D, Morey-Canyelles J, Ortiz-Guerra J, Pàmies-Massana M, Rey-Sánchez F, Romera-Torrens M, Rubio-Morell B, Ruiz-Lázaro PM, Ruiz-Sanz F; Grupo de Especial Interés en el Trastorno por Déficit de Atención/Hiperactividad (GEITDAH). Consenso del GEITDAH sobre los trastornos de conducta en niños y adolescentes. *Rev. Neurología* 2015. 61: 167-182. FI: 0,830(Q4).

Supervised thesis

- Effect of raloxifene on neuropsychological functioning in postmenopausal women with schizophrenia. Doctoral Candidate: Elena Huerta. Director: Judith Usall. November 2015.
- ADHD and sleep disorders in children. Doctoral Candidate: Laura Baget. Director: José Ángel Alda. June 2015.
- Study of psychic malaise in parents of children with ADHD vs parents of healthy controls. Doctoral Candidate: L Astiasuainzarra. Director: José Ángel Alda. June 2015.

Networks

- Centre for Biomedical Research on Mental Health (CIBERSAM), Ministry of Economy and Competitiveness (MINECO) - Instituto Carlos III.

Health Mental

Etiopathogeny and treatment
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Impact, risk and prevention of mental disorders

Mental disorders are the group of illnesses with the greatest impact on the population's health in the most economically-developed countries, as has been stated by the World Health Organisation and in the Global Burden of Disease study. Between 20% and 30% of all people suffer a mental disorder at some point in their life. In many cases, this disorder is highly incapacitating. Our interdisciplinary research group, comprising psychiatrists, psychologists, statisticians, sociologists and basic researchers, studies the factors that provide protection against or increase the risk of suffering mental disorders, as well as the therapies to treat them, with the aim of improving preventive and therapeutic strategies. In recent years, being aware of the importance of mental health in the

achievement of a physically, mentally and socially healthy ageing process, we are devoting special attention to the study of health histories in order to determine the factors which favour active healthy ageing and the precise time when an intervention can improve the course of each individual's health. We seek to translate all this knowledge into healthcare innovations which can be easily incorporated into our healthcare and social support systems. Our group is part of the Centre for Biomedical Research Network on Mental Health (CIBERSAM), financed by the Institute of Health Carlos III and is recognised as a consolidated research group by the Government of Catalonia (AGAUR - Agency for Management of University and Research Grants)

Research team

Coordinator Josep Maria Haro
 Researchers Jaume Aguado, Joan Domènech, Ai Koyanagi, Elvira Lara Perez, Maria Victoria Maliandi, Maria Victoria Moneta, Ruben Moreno Bote, Jordi Navarra Ordoño, Carla Obradors Tarragó, Beatriz Olaya Guzmán, Laura Puigcerver Navarro, Albert Sánchez Niubó, Ziggi Santini, Sara Siddi, Stefano Tyrovolas

Projects

- Slow oscillation dynamics: experiments, analysis, models and therapeutic interventions. (MINECO). December 2015 - April 2016. PI: Ruben Moreno Bote.
- Human Resources MINECO_Juan de la Cierva grants Incorporation. Beneficiario: Gabriela Mochol. Ministerio de Economía Y Competitividad (MINECO). October 2015 - April 2016. PI: Ruben Moreno Bote.
- PATHWAYS_PARTicPlation To Healthy Workplaces And inclusive Strategies in the Work Sector. European Commission. May 2015 - April 2018. PI: Josep Maria Haro Abad.
- ATHLOS_Ageing Trajectories of Health: Longitudinal Opportunities and Synergies. European Commission. May 2015 - April 2020. PI: Josep Maria Haro Abad.
- Pre-doctoral grant - FI AGAUR. Gestió d'Ajuts Universitaris i de Recerca. February 2015 - January 2018. PI: Ruben Moreno Bote.
- Pre-doctoral mobility grants for brief stays at R&D centres. Ministerio de Economía Y Competitividad (MINECO). February 2015 - December 2015. PI: Laura Puigcerver Navarro.
- Study of the effect of nutrition on the fragility of elderly persons. OSSJD - Obra Social Sant Joan de Déu. January 2015 - December 2015. PI: Josep Maria Haro Abad.
- Ageing. Dr. Josep Maria Haro. OSSJD - Obra Social Sant Joan de Déu. January 2015 - December 2016. PI: Josep Maria Haro Abad.
- Post-residency grants 2014 PSSJD Elena Rubio. Parc Sanitari de Sant Joan de Déu. May 2014 - May 2016. PI: Josep Maria Haro.

Health Mental

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- Metacognitive training (MCT) effectiveness in people with long-evolution psychosis treated in community rehabilitation services. Parc Sanitari de Sant Joan de Déu -Serveis de Salut Mental. February 2014 - February 2015. PI: Mar García Franco.
- Sant Boi Ageing Study. Ajuntament de Sant Boi. November 2014 - October 2015. PI: Josep Maria Haro.
- Pre-doctoral grants. University teacher training 2013: Elvira Lara Pérez. Ministerio de Educación. September 2014 - September 2018. PI: Josep Maria Haro.
- Post-residency grant 2014 PSSJD: Elena Rubio. Parc Sanitari de Sant Joan de Déu. May 2014 - May 2016. PI: Josep Maria Haro.
- Neuropsychiatric disorders in the elderly. Instituto de Salud Carlos III. March 2014 - March 2019. PI: Ai Koyanagi.
- Doctor training contracts. Beneficiary: Laura Puigcerver. Ministerio de Ciencia e Innovación (MINECO). January 2014 - January 2018. PI: Jordi Navarra.
- The role of variability in neuronal activity in perception, decisions and trust. Ministerio de Ciencia e Innovación (MINECO). January 2014 - December 2016. PI: Ruben Moreno.
- Support for research groups 2014. Impact and risk factors of mental disorders. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. January 2014 - December 2016. PI: Josep Maria Haro.
- Contracting grant I3 Jordi Navarra. Ministerio de Ciencia e Innovación (MINECO). November 2013 - November 2016. PI: Jordi Navarra.
- Motor changes underlying attention deficit hyperactivity disorder (ADHD): diagnostic implications. Fundación Alicia Koplowitz. October 2013 - November 2015. PI: Jordi Navarra.
- Functional connectivity and decoding in neuronal circuits of the primary visual cortex and the hippocampus. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. April 2013 - March 2016. Beneficiary: Ramon Nogueira Mañas. PI: Ruben Moreno.
- MARATONE Mental Health Training through Research Network in Europe. European Commission. April 2013 - March 2017. PI: Josep Maria Haro.
- European Innovation Partnership on Active and Healthy Ageing EIP AHA Committee. European Commission. March 2013 -. PI: Josep Maria Haro.
- Impact of chronic mental disorders and of psychiatric disorders on disability and quality of life in elderly patients. Ministerio de Educación. March 2013 - March 2017. Beneficiary: Noé Garín Escrivà. PI: Josep Maria Haro.

- Health condition, quality of life and well-being in ageing: a longitudinal study. Instituto de Salud Carlos III. January 2013 - December 2015. PI: Josep Maria Haro.
- Spatial Recoding of Sound. Ministerio de Ciencia e Innovación (MINECO). January 2013 - December 2015. PI: Jordi Navarra.
- Post-doctoral contracts IISC III Sara Borrell. Instituto de Investigación Sanitaria Carlos III. 2013-2015. PI: Josep Maria Haro.
- Observational study of prospective cohort of patients with persistent symptoms of schizophrenia to describe the course and burden of the disorder. F. Hoffmann- La Roche Ltd. September 2012 -. PI: Josep Maria Haro.
- Computational Neuroscience. Ministerio de Ciencia e Innovación (MINECO). July 2011 - July 2016. PI: Ruben Moreno.
- CoNeuron. Drawing neuronal circuits without seeing them. European Commission. March 2011 - March 2015. PI: Ruben Moreno.
- Roadmap for Mental Health Research in Europe (ROAMER). European Commission. 2011-2015. PI: Josep Maria Haro.
- Lilly collaboration agreement. Eli Lilly and Company Limited. December 2010 -. PI: Josep Maria Haro.
- Centre for Biomedical Network Research on Mental Health (CIBERSAM). Instituto de Salud Carlos III (ISCIII). January 2008 -. PI: Josep Maria Haro.

Publications

- Ansoleaga B, Garcia-Esparcia P, Pinacho R, Haro JM, Ramos B, Ferrer I. Decrease in olfactory and taste receptor expression in the dorsolateral prefrontal cortex in chronic schizophrenia. *J Psychiatr Res* 2015. 60: 109-116. FI: 3,957(Q1).
- Belger M, Argimon JM, Dodel R, Haro JM, Wimo A, Reed C. Comparing Resource Use In Alzheimer's Disease Across Three European Countries - 18-Month Results of The Geras Study. *Value Health* 2015. FI: 3,279(Q1).
- Boyd A, Van de Velde S, Pivette M, Ten Have M, Florescu S, O'Neill S, Caldas-de-Almeida J, Vilagut G, Haro JM, Alonso J, Kovess-Masfety V. Gender differences in psychotropic use across Europe: Results from a large cross-sectional, population-based study. *Eur Psychiatry* 2015. 30: 778-788. FI: 3,439(Q1).
- Bruffaerts R, Demyttenaere K, Kessler RC, Tachimori H, Bunting B, Hu C, Florescu S, Haro JM, Lim CC, Kovess-Masfety V, Levinson

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D, Medina Mora ME, Piazza M, Piotrowski P, Posada-Villa J, Salih Khalaf M, ten Have M, Xavier M, Scott KM. The associations between preexisting mental disorders and subsequent onset of chronic headaches: a worldwide epidemiologic perspective. *J Pain* 2015. 16: 42-52. FI: 4,010(Q1).

- Bruffaerts R, Posada-Villa J, Al-Hamzawi AO, Gureje O, Huang Y, Hu C, Bromet EJ, Viana MC, Hinkov HR, Karam EG, Borges G, Florescu SE, Williams DR, Demyttenaere K, Kovess-Masfety V, Matschinger H, Levinson D, De Girolamo G, Ono Y, de Graaf R, Oakley Browne M, Bunting B, Xavier M, Haro JM, Kessler RC. Proportion of patients without mental disorders being treated in mental health services worldwide. *Br J Psychiatry* 2015. 206: 101-109. FI: 7,991(Q1).
- Brébion G, Stephan-Otto C, Usall J, Huerta-Ramos E, Perez del Olmo M, Cuevas-Esteban J, Haro JM, Ochoa S. Association of auditory-verbal and visual hallucinations with impaired and improved recognition of colored pictures. *Neuropsychology*. 2015 Sep;29(5):667-74. doi: 10.1037/neu0000169. Epub 2015 Jan 26. PubMed PMID: 25621537. FI: 2,879(Q1).
- Brébion G, Stephan-Otto C, Huerta-Ramos E, Ochoa S, Usall J, Abellán-Vega H, Roca M, Haro JM. Visual encoding impairment in patients with schizophrenia: contribution of reduced working memory span, decreased processing speed, and affective symptoms. *Neuropsychology*. 2015 Jan;29(1):17-24. FI:2,879(Q1).
- Dodel R, Belger M, Reed C, Wimo A, Jones RW, Happich M, Argimon JM, Bruno G, Vellas B, Haro JM. Determinants of societal costs in Alzheimer's disease: GERASstudybaseline results. *Alzheimers Dement* 2015. 11: 933-945. FI: 12,407(Q1).
- GBD 2013 Risk Factors Collaborators, Forouzanfar MH, Alexander L, Anderson HR, Bachman VF, Biryukov S, Brauer M, Burnett R, Casey D, Coates MM, Cohen A, Delwiche K, Estep K, Frostad JJ, Astha KC, Kyu HH, Moradi-Lakeh M, Ng M, Slepak EL, Thomas BA, Wagner J, Aasvang GM, Abbafati C, Abbasoglu Ozgoren A, Abd-Allah F, Abera SF, Aboyans V, Abraham B, Abraham JP, Abubakar I, Abu-Rmeileh NM, Aburto TC, Achoki T, Adelekan A, Adofo K, Adou AK, Adsuar JC, Afshin A, Agardh EE, Al Khabouri MJ, Al Lami FH, Alam SS, Alasfoor D, Albittar MI, Alegretti MA, Aleman AV, Alemu ZA, Alfonso-Cristancho R, Alhabib S, Ali R, Ali MK, Alla F, Allebeck P, Allen PJ, Alsharif U, Alvarez E, Alvis-Guzman N, Amankwaa AA, Amare AT, Ameh EA, Ameli O, Amini H, Ammar W, Anderson BO, Antonio CA, Anwari P, Argešanu Cunningham S, Arnlöv J, Arsenijevic VS, Artaman A, Asghar RJ, Assadi R, Atkins LS, Atkinson C, Avila MA, Awuah B, Badawi A,

Bahit MC, Bakfalouni T, Balakrishnan K, Balalla S, Balu RK, Banerjee A, Barber RM, Barker-Collo SL, Barquera S, Barregard L, Barrero LH, Barrientos-Gutierrez T, Basto-Abreu AC, Basu A, Basu S, Basulaiman MO, Batis Ruvalcaba C, Beardsley J, Bedi N, Bekele T, Bell ML, Benjet C, Bennett DA, Benzian H, Bernabé E, Beyene TJ, Bhala N, Bhalla A, Bhutta ZA, Bikbov B, Bin Abdulhak AA, Blore JD, Blyth FM, Bohensky MA, Bora Başara B, Borges G, Bornstein NM, Bose D, Boufous S, Bourne RR, Brainin M, Brazinova A, Breitborde NJ, Brenner H, Briggs AD, Broday DM, Brooks PM, Bruce NG, Brugha TS, Brunekreef B, Buchbinder R, Bui LN, Bukhman G, Bulloch AG, Burch M, Burney PG, Campos-Nonato IR, Campuzano JC, Cantoral AJ, Caravanos J, Cárdenas R, Cardis E, Carpenter DO, Caso V, Castañeda-Orjuela CA, Castro RE, Catalá-López F, Cavalleri F, Çavlin A, Chadha VK, Chang JC, Charlson FJ, Chen H, Chen W, Chen Z, Chiang PP, Chimed-Ochir O, Chowdhury R, Christophi CA, Chuang TW, Chugh SS, Cirillo M, Claßen TK, Colistro V, Colomar M, Colquhoun SM, Contreras AG, Cooper C, Cooperrider K, Cooper LT, Coresh J, Courville KJ, Criqui MH, Cuevas-Nasu L, Damsere-Derry J, Danawi H, Dandona L, Dandona R, Dargan PI, Davis A, Davitoiu DV, Dayama A, de Castro EF, De la Cruz-Góngora V, De Leo D, de Lima G, Degenhardt L, del Pozo-Cruz B, Dellavalle RP, Deribe K, Derrett S, Des Jarlais DC, Dessalegn M, deVeber GA, Devries KM, Dharmaratne SD, Dherani MK, Dicker D, Ding EL, Dokova K, Dorsey ER, Driscoll TR, Duan L, Durrani AM, Ebel BE, Ellenbogen RG, Elshrek YM, Endres M, Ermakov SP, Erskine HE, Eshrati B, Esteghamati A, Fahimi S, Faraon EJ, Farzadfar F, Fay DF, Feigin VL, Feigl AB, Fereshtehnejad SM, Ferrari AJ, Ferri CP, Flaxman AD, Fleming TD, Foigt N, Foreman KJ, Paleo UF, Franklin RC, Gabbe B, Gaffkin L, Gakidou E, Gamkrelidze A, Gankpé FG, Gansevoort RT, Garcia-Guerra FA, Gasana E, Geleijnse JM, Gessner BD, Gething P, Gibney KB, Gillum RF, Ginawi IA, Giroud M, Giussani G, Goenka S, Goginashvili K, Gomez Dantes H, Gona P, Gonzalez de Cosio T, González-Castell D, Gotay CC, Goto A, Gouda HN, Guerrant RL, Gughani HC, Guillemin F, Gunnell D, Gupta R, Gupta R, Gutiérrez RA, Hafezi-Nejad N, Hagan H, Hagstromer M, Halasa YA, Hamadeh RR, Hammami M, Hankey GJ, Hao Y, Harb HL, Haregu TN, Haro JM, Havmoeller R, Hay SI, Hedayati MT, Heredia-Pi IB, Hernandez L, Heuton KR, Heydarpour P, Hijar M, Hoek HW, Hoffman HJ, Hornberger JC, Hosgood HD, Hoy DG, Hsairi M, Hu G, Hu H, Huang C, Huang JJ, Hubbell BJ, Huiart L, Hussein A, Iannarone ML, Iburg KM, Idrisov BT, Ikeda N, Innos K, Inoue M, Islami F, Ismayilova S, Jacobsen KH, Jansen HA, Jarvis DL, Jassal SK, Jauregui A, Jayaraman S, Jeemon P, Jensen PN, Jha V, Jiang F, Jiang G, Jiang Y, Jonas JB, Juel K, Kan H, Kany Roseline SS, Karam NE, Karch A, Karema CK, Karthikeyan G, Kaul A, Kawakami N, Kazi DS, Kemp AH, Kengne AP, Keren A, Khader YS, Khalifa SE, Khan

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EA, Khang YH, Khatibzadeh S, Khonelidze I, Kieling C, Kim D, Kim S, Kim Y, Kimokoti RW, Kinfu Y, Kinge JM, Kissela BM, Kivipelto M, Knibbs LD, Knudsen AK, Kokubo Y, Kose MR, Kosen S, Kraemer A, Kravchenko M, Krishnaswami S, Kromhout H, Ku T, Kuate Defo B, Kucuk Bicer B, Kuipers EJ, Kulkarni C, Kulkarni VS, Kumar GA, Kwan GF, Lai T, Lakshmana Balaji A, Lalloo R, Lallukka T, Lam H, Lan Q, Lansingh VC, Larson HJ, Larsson A, Laryea DO, Lavados PM, Lawrynowicz AE, Leasher JL, Lee JT, Leigh J, Leung R, Levi M, Li Y, Li Y, Liang J, Liang X, Lim SS, Lindsay MP, Lipshultz SE, Liu S, Liu Y, Lloyd BK, Logroscino G, London SJ, Lopez N, Lortet-Tieulent J, Lotufo PA, Lozano R, Lunevicius R, Ma J, Ma S, Machado VM, MacIntyre MF, Magis-Rodriguez C, Mahdi AA, Majdan M, Malekzadeh R, Mangalam S, Mapoma CC, Marape M, Marcenes W, Margolis DJ, Margono C, Marks GB, Martin RV, Marzan MB, Mashal MT, Masiye F, Mason-Jones AJ, Matsushita K, Matzopoulos R, Mayosi BM, Mazorodze TT, McKay AC, McKee M, McLain A, Meaney PA, Medina C, Mehndiratta MM, Mejia-Rodriguez F, Mekonnen W, Melaku YA, Meltzer M, Memish ZA, Mendoza W, Mensah GA, Meretoja A, Mhimbira FA, Micha R, Miller TR, Mills EJ, Misganaw A, Mishra S, Mohamed Ibrahim N, Mohammad KA, Mokdad AH, Mola GL, Monasta L, Montañez Hernandez JC, Montico M, Moore AR, Morawska L, Mori R, Moschandreas J, Moturi WN, Mozaffarian D, Mueller UO, Mukaigawara M, Mullany EC, Murthy KS, Naghavi M, Nahas Z, Naheed A, Naidoo KS, Naldi L, Nand D, Nangia V, Narayan KM, Nash D, Neal B, Nejjari C, Neupane SP, Newton CR, Ngalesoni FN, Ngirabega Jde D, Nguyen G, Nguyen NT, Nieuwenhuijsen MJ, Nisar MI, Nogueira JR, Nolla JM, Nolte S, Norheim OF, Norman RE, Norrving B, Nyakarahuka L, Oh IH, Ohkubo T, Olusanya BO, Omer SB, Opio JN, Orozco R, Pagcatipunan RS Jr, Pain AW, Pandian JD, Panelo CI, Papachristou C, Park EK, Parry CD, Paternina Caicedo AJ, Patten SB, Paul VK, Pavlin BI, Pearce N, Pedraza LS, Pedroza A, Pejin Stokic L, Pekerikli A, PereiraDM, Perez-Padilla R, Perez-Ruiz F, Perico N, Perry SA, Pervaiz A, Pesudovs K, Peterson CB, Petzold M, Phillips MR, Phua HP, Plass D, Poenaru D, Polanczyk GV, Polinder S, Pond CD, Pope CA, Pope D, Popova S, Pourmalek F, Powles J, Prabhakaran D, Prasad NM, Qato DM, Quezada AD, Quistberg DA, Racapé L, Rafay A, Rahimi K, Rahimi-Movaghar V, Rahman SU, Raju M, Rakovac I, Rana SM, Rao M, Razavi H, Reddy KS, Refaat AH, Rehm J, Remuzzi G, Ribeiro AL, Riccio PM, Richardson L, Riederer A, Robinson M, Roca A, Rodriguez A, Rojas-Rueda D, Romieu I, Ronfani L, Room R, Roy N, Ruhago GM, Rushton L, Sabin N, Sacco RL, Saha S, Sahathevan R, Sahraian MA, Salomon JA, Salvo D, Sampson UK, Sanabria JR, Sanchez LM, Sánchez-Pimienta TG, Sanchez-Riera L, Sandar L, Santos IS, Sapkota A, Satpathy M, Saunders JE, Sawhney M, Saylan MI, Scarborough P, Schmidt JC, Schneider IJ, Schöttker B, Schwebel DC, Scott JG, Seedat S, Sepanlou SG, Serdar B, Servan-Mori EE,

Shaddick G, Shahraz S, Levy TS, Shangguan S, She J, Sheikhbahaei S, Shibuya K, Shin HH, Shinohara Y, Shiri R, Shishani K, Shiuie I, Sigfusdottir ID, Silberberg DH, Simard EP, Sindi S, Singh A, Singh GM, Singh JA, Skirbekk V, Sliwa K, Soljak M, Soneji S, Søreide K, Soshnikov S, Sposato LA, Sreeramareddy CT, Stapelberg NJ, Stathopoulou V, Steckling N, Stein DJ, Stein MB, Stephens N, Stöckl H, Straif K, Stroumpoulis K, Sturua L, Sunguya BF, Swaminathan S, Swaroop M, Sykes BL, Tabb KM, Takahashi K, Talongwa RT, Tandon N, Tanne D, Tanner M, Tavakkoli M, Te Ao BJ, Teixeira CM, Téllez Rojo MM, Terkawi AS, Texcalac-Sangrador JL, Thackway SV, Thomson B, Thorne-Lyman AL, Thrift AG, Thurston GD, Tillmann T, Tobollik M, Tonelli M, Topouzis F, Towbin JA, Toyoshima H, Traebert J, Tran BX, Trasande L, Trillini M, Trujillo U, Dimbuene ZT, Tsilimbaris M, Tuzcu EM, Uchendu US, Ukwaja KN, Uzun SB, van de Vijver S, Van Dingenen R, van Gool CH, van Os J, Varakin YY, Vasankari TJ, Vasconcelos AM, Vavilala MS, Veerman LJ, Velasquez-Melendez G, Venketasubramanian N, Vijayakumar L, Villalpando S, Violante FS, Vlassov VV, Vollset SE, Wagner GR, Waller SG, Wallin MT, Wan X, Wang H, Wang J, Wang L, Wang W, Wang Y, Warouw TS, Watts CH, Weichenthal S, Weiderpass E, Weintraub RG, Werdecker A, Wessells KR, Westerman R, Whiteford HA, Wilkinson JD, Williams HC, Williams TN, Woldeyohannes SM, Wolfe CD, Wong JQ, Woolf AD, Wright JL, Wurtz B, Xu G, Yan LL, Yang G, Yano Y, Ye P, Yenewsew M, Yentür GK, Yip P, Yonemoto N, Yoon SJ, Younis MZ, Younoussi Z, Yu C, Zaki ME, Zhao Y, Zheng Y, Zhou M, Zhu J, Zhu S, Zou X, Zunt JR, Lopez AD, Vos T, Murray CJ. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015 Dec 5;386(10010):2287-323. [FI:44,002\(Q1\)](#).

- Forsman AK, Wahlbeck K, Aarø LE, Alonso J, Barry MM, Brunn M, Cardoso G, Cattan M, de Girolamo G, Eberhard-Gran M, Evans-Lacko S, Fiorillo A, Hansson L, Haro JM, Hazo JB, Hegerl U, Katschnig H, Knappe S, Luciano M, Miret M, Nordentoft M, Obradors-Tarragó C, Pilgrim D, Ruud T, Salize HJ, Stewart-Brown SL, Tómasson K, van der Feltz-Cornelis CM, Ventus DB, Vuori J, and Värnik A. Research priorities for public mental health in Europe: recommendations of the ROAMER project. *Eur J Public Health* 2015. 25: 249-254. [FI: 2,591\(Q1\)](#).
- Garin N, Velasco C, De Pourcq JT, Lopez B, Gutierrez MM, Haro JM, Felio A, Mangues MA, and Trilla A. Corrigendum: Recreational drug use among individuals living with HIV in Europe: review of the prevalence, comparison with the general population and HIV guidelines recommendations. *Front Microbiol* 2015. 6: 1229-0. [FI: 3,989\(Q1\)](#).

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- Garin N, Velasco C, T De Pourcq J, Lopez B, Gutierrez MM, Haro JM, Feliu A, Mangues MA, Trilla A. Recreational drug use among individuals living with HIV in Europe: review of the prevalence, comparison with the general population and HIV guidelines recommendations. *Front Microbiol* 2015. 6: 690-0. FI: 3,989(Q1).
- GBD 2013 DALYs and HALE Collaborators, Murray CJ, Barber RM, Foreman KJ, Abbasoglu Ozgoren A, Abd-Allah F, Abera SF, Aboyans V, Abraham JP, Abubakar I, Abu-Raddad LJ, Abu-Rmeileh NM, Achoki T, Ackerman IN, Ademi Z, Adou AK, Adsuar JC, Afshin A, Agardh EE, Alam SS, Alasfoor D, Albittar MI, Alegretti MA, Alemu ZA, Alfonso-Cristancho R, Alhabib S, Ali R, Alla F, Allebeck P, Almazroa MA, Alsharif U, Alvarez E, Alvis-Guzman N, Amare AT, Ameh EA, Amini H, Ammar W, Anderson HR, Anderson BO, Antonio CA, Anwar P, Arnlöv J, Arsic Arsenijevic VS, Artaman A, Asghar RJ, Assadi R, Atkins LS, Avila MA, Awuah B, Bachman VF, Badawi A, Bahit MC, Balakrishnan K, Banerjee A, Barker-Collo SL, Barquera S, Barregard L, Barrero LH, Basu A, Basu S, Basulaiman MO, Beardley J, Bedi N, Beghi E, Bekele T, Bell ML, Benjet C, Bennett DA, Bensenor IM, Benzian H, Bernabé E, Bertozzi-Villa A, Beyene TJ, Bhala N, Bhalla A, Bhatta ZA, Bienhoff K, Bikbov B, Biryukov S, Blore JD, Blosser CD, Blyth FM, Bohensky MA, Bolliger IW, Bora Başara B, Bornstein NM, Bose D, Boufous S, Bourne RR, Boyers LN, Brainin M, Brayne CE, Brazinova A, Breitborde NJ, Brenner H, Briggs AD, Brooks PM, Brown JC, Brughla TS, Buchbinder R, Buckle GC, Budke CM, Bulchis A, Bulloch AG, Campos-Nonato IR, Carabin H, Carapetis JR, Cárdenas R, Carpenter DO, Caso V, Castañeda-Orjuela CA, Castro RE, Catalá-López F, Cavalleri F, Çavlin A, Chadha VK, Chang JC, Charlson FJ, Chen H, Chen W, Chiang PP, Chimed-Ochir O, Chowdhury R, Christensen H, Christophi CA, Cirillo M, Coates MM, Coffeng LE, Coggeshall MS, Colistro V, Colquhoun SM, Cooke GS, Cooper C, Cooper LT, Coppola LM, Cortinovis M, Criqui MH, Crump JA, Cuevas-Nasu L, Danawi H, Dandona L, Dandona R, Dansereau E, Dargan PI, Davey G, Davis A, Davitoliu DV, Dayama A, De Leo D, Degenhardt L, Del Pozo-Cruz B, Dellavalle RP, Deribe K, Derrett S, Des Jarlais DC, Dessalegn M, Dharmaratne SD, Dherani MK, Diaz-Torné C, Dicker D, Ding EL, Dokova K, Dorsey ER, Driscoll TR, Duan L, Duber HC, Ebel BE, Edmond KM, Elshrek YM, Endres M, Ermakov SP, Erskine HE, Eshrati B, Esteghamati A, Estep K, Faraon EJ, Farzadfar F, Fay DF, Feigin VL, Felson DT, Fereshhtehnejad SM, Fernandes JG, Ferrari AJ, Fitzmaurice C, Flaxman AD, Fleming TD, Foigt N, Forouzanfar MH, Fowkes FG, Paleo UF, Franklin RC, Fürst T, Gabbe B, Gaffkin L, Gankpé FG, Geleijnse JM, Gessner BD, Gething P, Gibney KB, Giroud M, Giussani G, Gomez Dantes H, Gona P, González-Medina D, Gosselin RA, Gotay CC, Goto A, Gouda HN, Graetz N, Gugnani HC, Gupta R, Gupta R, Gutiérrez RA, Haagsma J, Hafezi-Nejad N, Hagan H, Halasa YA, Hamadeh

RR, Hamavid H, Hammami M, Hancock J, Hankey GJ, Hansen GM, Hao Y, Harb HL, Haro JM, Havmoeller R, Hay SI, Hay RJ, Heredia-Pi IB, Heuton KR, Heydarpour P, Higashi H, Hijar M, Hoek HW, Hoffman HJ, Hosgood HD, Hossain M, Hotez PJ, Hoy DG, Hsairi M, Hu G, Huang C, Huang JJ, Husseini A, Huynh C, Iannarone ML, Iburg KM, Innos K, Inoue M, Islami F, Jacobsen KH, Jarvis DL, Jassal SK, Jee SH, Jeemon P, Jensen PN, Jha V, Jiang G, Jiang Y, Jonas JB, Juel K, Kan H, Karch A, Karema CK, Karimkhani C, Karthikeyan G, Kassebaum NJ, Kaul A, Kawakami N, Kazanjan K, Kemp AH, Kengne AP, Keren A, Khader YS, Khalifa SE, Khan EA, Khan G, Khang YH, Kieling C, Kim D, Kim S, Kim Y, Kinfu Y, Kinge JM, Kivipelto M, Knibbs LD, Knudsen AK, Kokubo Y, Kosen S, Krishnaswami S, Kuate Defo B, Kucuk Bicer B, Kuipers EJ, Kulkarni C, Kulkarni VS, Kumar GA, Kyu HH, Lai T, Lalloo R, Lallukka T, Lam H, Lan Q, Lansingh VC, Larsson A, Lawrynowicz AE, Leasher JL, Leigh J, Leung R, Levitz CE, Li B, Li Y, Li Y, Lim SS, Lind M, Lipshultz SE, Liu S, Liu Y, Lloyd BK, Lofgren KT, Logroscino G, Looker KJ, Lortet-Tieulent J, Lotufo PA, Lozano R, Luzac RM, Lunevicius R, Lyons RA, Ma S, Macintyre MF, Mackay MT, Majdan M, Malekzadeh R, Marcenes W, Margolis DJ, Margono C, Marzan MB, Masci JR, Mashal MT, Matzopoulos R, Mayosi BM, Mazorodze TT, McGill NW, Mcgrath JJ, Mckee M, McLain A, Meaney PA, Medina C, Mehndiratta MM, Mekonnen W, Melaku YA, Meltzer M, Memish ZA, Mensah GA, Meretoja A, Mhimbira FA, Micha R, Miller TR, Mills EJ, Mitchell PB, Mock CN, Mohamed Ibrahim N, Mohammad KA, Mokdad AH, Mola GL, Monasta L, Montañez Hernandez JC, Montico M, Montine TJ, Mooney MD, Moore AR, Moradi-Lakeh M, Moran AE, Mori R, Moschandreas J, Moturi WN, Moyer ML, Mozaffarian D, Msemburi WT, Mueller UO, Mukaigawara M, Mullany EC, Murdoch ME, Murray J, Murthy KS, Naghavi M, Naheed A, Naidoo KS, Naldi L, Nand D, Nangia V, Narayan KM, Nejjari C, Neupane SP, Newton CR, Ng M, Ngalesoni FN, Nguyen G, Nisar MI, Nolte S, Norheim OF, Norman RE, Norrving B, Nyakarahuka L, Oh IH, Ohkubo T, Ohno SL, Olusanya BO, Opio JN, Ortblad K, Ortiz A, Pain AW, Pandian JD, Panelo CI, Papachristou C, Park EK, Park JH, Patten SB, Patton GC, Paul VK, Pavlin BI, Pearce N, Pereira DM, Perez-Padilla R, Perez-Ruiz F, Perico N, Pervaiz A, Pesudovs K, Peterson CB, Petzold M, Phillips MR, Phillips BK, Phillips DE, Piel FB, Plass D, Poenaru D, Polinder S, Pope D, Popova S, Poulton RG, Pourmalek F, Prabhakaran D, Prasad NM, Pullan RL, Qato DM, Quistberg DA, Rafay A, Rahimi K, Rahman SU, Raju M, Rana SM, Razavi H, Reddy KS, Refaat A, Remuzzi G, Resnikoff S, Ribeiro AL, Richardson L, Richardus JH, Roberts DA, Rojas-Rueda D, Ronfani L, Roth GA, Rothenbacher D, Rothstein DH, Rowley JT, Roy N, Ruhago GM, Saeedi MY, Saha S, Sahraian MA, Sampson UK, Sanabria JR, Sandar L, Santos IS, Satpathy M, Sawhney M, Scarborough P, Schneider IJ, Schöttker B, Schumacher AE, Schwebel DC, Scott JG, Seedat S, Sepanlou

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- SG, Serina PT, Servan-Mori EE, Shackelford KA, Shaheen A, Shahraz S, Shamah Levy T, Shangguan S, She J, Sheikhbahaei S, Shi P, Shibuya K, Shinohara Y, Shiri R, Shishani K, Shiue I, Shrimel MG, Sigfusdottir ID, Silberberg DH, Simard EP, Sindi S, Singh A, Singh JA, Singh L, Skirbekk V, Slepak EL, Sliwa K, Soneji S, Søreide K, Soshnikov S, Sposato LA, Sreeramareddy CT, Stanaway JD, Stathopoulou V, Stein DJ, Stein MB, Steiner C, Steiner TJ, Stevens A, Stewart A, Stovner LJ, Stroumpoulis K, Sunguya BF, Swaminathan S, Swaroop M, Sykes BL, Tabb KM, Takahashi K, Tandon N, Tanne D, Tanner M, Tavakkoli M, Taylor HR, Te Ao BJ, Tediosi F, Temesgen AM, Templin T, Ten Have M, Tenkorang EY, Terkawi AS, Thomson B, Thorne-Lyman AL, Thrift AG, Thurston GD, Tillmann T, Tonelli M, Topouzis F, Toyoshima H, Traebert J, Tran BX, Trillini M, Truelsen T, Tsilimbaris M, Tuzcu EM, Uchendu US, Ukwaja KN, Undurraga EA, Uzun SB, Van Brakel WH, Van De Vijver S, van Gool CH, Van Os J, Vasankari TJ, Venketasubramanian N, Violante FS, Vlassov VV, Vollset SE, Wagner GR, Wagner J, Waller SG, Wan X, Wang H, Wang J, Wang L, Warouw TS, Weichenthal S, Weiderpass E, Weintraub RG, Wenzhi W, Werdecker A, Westerman R, Whiteford HA, Wilkinson JD, Williams TN, Wolfe CD, Wolock TM, Woolf AD, Wulf S, Wurtz B, Xu G, Yan LL, Yano Y, Ye P, Yentür GK, Yip P, Yonemoto N, Yoon SJ, Younis MZ, Yu C, Zaki ME, Zhao Y, Zheng Y, Zonies D, Zou X, Salomon JA, Lopez AD, Vos T. Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: quantifying the epidemiological transition. *Lancet* 2015. 386: 2145-2191. FI: 45,217(Q1).
- Gilabert-Juan J, Rosa Sáez A, Lopez-Campos G, Sebastiá-Ortega N, González-Martínez R, Costa J, Haro JM, Callado LF, Javier Meana J, Nacher J, Sanjuán J, and Moltó MD. Semaphorin and plexin gene expression is altered in the prefrontal cortex of schizophrenia patients with and without auditory hallucinations. *Psychiatry Res.* 2015. 229: 850-857. FI: 2,467(Q2).
 - Hardt J, Bernert S, Matschinger H, Angermeier MC, Vilagut G, Bruffaerts R, de Girolamo G, de Graaf R, Haro JM, Kovess V, and Alonso J. Suicidality and its relationship with depression, alcohol disorders and childhood experiences of violence: results from the ESEMeD study. *J. Affect. Disord.* 2015. 175: 168-174. FI: 3,383(Q1).
 - Haro JM, Altamura C, Corral R, Elkis H, Evans J, Malla A, Krebs M, Zink M, Bernasconi C, Lalonde J, Nordstroem A. Understanding the impact of persistent symptoms in schizophrenia: Cross-sectional findings from the Pattern study. *Schizophr Res* 2015. 169: 234-240. FI: 3,923(Q1).
 - Hong J, Novick D, Montgomery W, Moneta MV, Dueñas H, Peng X, Haro JM. Health-related quality of life in patients with depression treated with duloxetine or a selective serotonin reuptake inhibitor

in a naturalistic outpatient setting. *Patient Prefer Adherence* 2015. 9: 1481-1490. FI: 1,676(Q2).

- Koyanagi A, Moneta MV, Garin N, Olaya B, Ayuso-Mateos JL, Chatterji S, Leonardi M, Sainio P, Galas A, Haro JM. The association between obesity and severe disability among adults aged 50 or over in nine high-income, middle-income and low-income countries: a cross-sectional study. *BMJ Open* 2015. FI: 2,271(Q2).
- Koyanagi A, Stickley A, Haro JM. Psychotic-Like Experiences and Nonsuicidal Self-Injury in England: Results from a National Survey. *PLoS One* 2015. FI: 3,234(Q1).
- Koyanagi A, Stickley A, Haro JM. Subclinical psychosis and suicidal behavior in England: Findings from the 2007 Adult Psychiatric Morbidity Survey. *Schizophr Res* 2015. 168: 62-67. FI: 3,923(Q1).
- Koyanagi A, Stickley A, Garin N, Miret M, Ayuso-Mateos JL, Leonardi M, Koskinen S, Galas A, Haro JM. The association between obesity and back pain in nine countries: a cross-sectional study. *BMC Public Health.* 2015 Feb 11;15:123. FI: 2,2264(Q2).
- Koyanagi A, Stickley A. The association between psychosis and severe pain in community-dwelling adults: Findings from 44 low- and middle-income countries. *J Psychiatr Res* 2015. 69: 19-26. FI: 3,957(Q1).
- Koyanagi A, Stickley A. The Association between Sleep Problems and Psychotic Symptoms in the General Population: A Global Perspective. *Sleep* 2015. 38: 1875-1885. FI: 4,591(Q1).
- Koyanagi al, Stickley A, Garin N, Miret M, Ayuso-Mateos JL, Leonardi M, Koskinen S, Galas A, Haro JM. The association between obesity and back pain in nine countries: a cross-sectional study. *BMC Public Health* 2015. 15: 123-0. FI: 2,264(Q2).
- Lara E, Garin N, Ferrari AJ, Tyrovolas S, Olaya B, Sánchez-Riera L, Whiteford HA, and Haro JM. The Spanish Burden of Disease 2010: Neurological, mental and substance use disorders. *Rev. Psiquiatr. Salud Ment.* 2015. 8: 207-217. FI: 1,622(Q3).
- Lara E, Olaya B, Garin N, Ayuso-Mateos JL, Miret M, Moneta MV, and Haro JM. Is cognitive impairment associated with suicidality? A population-based study. *Eur. Neuropsychopharmacol.* 2015. 25: 203-213. FI: 4,369(Q1).
- Lopez-Anton R, Santabarbara J, De-la-Camara C, Gracia-Garcia P, Lobo E, Marcos G, Pirez G, Saz P, Haro JM, Rodriguez-Manas L, Modrego PJ, Dewey ME, and Lobo A. Mild cognitive impairment diagnosed with the new DSM-5 criteria: prevalence and associations with non-cognitive psychopathology. *Acta Psychiatr. Scand.* 2015. 131: 29-39. FI: 5,605(Q1).

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- Miret M, Cabello M, Marchena C, Mellor-Marsa B, Caballero FF, Obradors-Tarrago C, Haro JM, and Ayuso-Mateos JL. The state of the art on European well-being research within the area of mental health. *Int J Clin Hlth Psyc* 2015. 15: 171-179. FI: 2,850(Q1).
- Novick D, Montgomery WS, Aguado J, Peng X, Brugnoli R, Haro JM. Which somatic symptoms are associated with an unfavorable course in Chinese patients with major depressive disorder?. *Asia Pac Psychiatry* 2015. 7: 427-435. FI: 0,630(Q4).
- Novick D, Hong J, Montgomery W, Dueñas H, Gado M, and Haro JM. Predictors of remission in the treatment of major depressive disorder: real-world evidence from a 6-month prospective observational study. *Neuropsychiatr Dis Treat* 2015. 11: 197-205. FI: 2,154(Q3).
- Novick D, Montgomery W, Bertsch J, Peng X, Brugnoli R, and Haro JM. Impact of painful physical symptoms on depression outcomes in elderly Asian patients. *Int Psychogeriatr* 2015. 27: 305-312. FI: 1,934(Q2).
- Novick D, Montgomery W, Cheng Y, Moneta MV, Haro JM. Impact of Negative Symptoms on Quality of Life in Patients with Schizophrenia. *Value Health* 2015. FI: 3,279(Q1).
- Novick D, Montgomery W, Moneta MV, Duenas H, Yue L, Haro JM. Impact of Pain and Remission on the Functioning of Patients with Depression. *J Ment Health Policy Econ* 2015. 18: 30-31. FI: 1,323(Q3).
- Novick D, Montgomery W, Moneta MV, Peng X, Brugnoli R, and Haro JM. Antidepressant medication treatment patterns in Asian patients with major depressive disorder. *Patient Prefer Adherence* 2015. 9: 421-428. FI: 1,676(Q2).
- Novick D, Montgomery W, Moneta MV, Peng X, Brugnoli R, Haro JM. Chinese patients with major depression: Do concomitant pain symptoms affect quality of life independently of severity of depression?. *Int. J. Psychiat. Clin.* 2015. 19: 174-181. FI: 1,391(Q3).
- Novick D, Montgomery W, Treuer T, Aguado J, Kraemer S, Haro JM. Relationship of insight with medication adherence and the impact on outcomes in patients with schizophrenia and bipolar disorder: results from a 1-year European outpatient observational study. *BMC Psychiatry* 2015. 15: 189-0. FI: 2,210(Q3).
- Núñez C, Stephan-Otto C, Cuevas-Esteban J, Haro JM, Huerta-Ramos ME, Ochoa S, Usall J, Brebion G. Effects of caffeine intake and smoking on neurocognition in schizophrenia. *Psychiatry Res.* 2015. 230: 924-931. FI: 2,467(Q2).
- Ochoa S, Martínez-Zambrano F, García-Franco M, Vilamala S, Ribas M, Arenas O, García-Morales E, Álvarez I, Escartin G, Vilellas R, Escandell MJ, Martínez-Raves M, López-Arias E, Cunyat C, Haro JM. Development and validation of the Self-Stigma Questionnaire (SSQ) for people with schizophrenia and its relation to social functioning. *Compr Psychiatry* 2015. 62: 93-99. FI: 2,252(Q2).
- Olaya B, Alonso J, Atwoli L, Kessler RC, Vilagut G, and Haro JM. Association between traumatic events and post-traumatic stress disorder: results from the ESEMeD-Spain study. *Epidemiol Psychiatr Sci* 2015. 24: 172-183. FI: 3,907(Q1).
- Olaya B, Moneta MV, Pez O, Bitfoi A, Carta MG, Eke C, Goelitz D, Keyes KM, Kuijpers R, Lesinskiene S, Mihova Z, Otten R, Fermanian C, Haro JM, Kovess V. Country-level and individual correlates of overweight and obesity among primary school children: a cross-sectional study in seven European countries. *BMC Public Health* 2015. 15: 475-0. FI: 2,264(Q2).
- Pinacho R, Saia G, Fusté M, Meléndez-Pérez I, Villalta-Gil V, Haro JM, Gill G, and Ramos B. Phosphorylation of transcription factor specificity protein 4 is increased in peripheral blood mononuclear cells of first-episode psychosis. *PLoS One* 2015. FI: 3,234(Q1).
- Pinacho R, Saia G, Meana JJ, Gill G, and Ramos B. Transcription factor SP4 phosphorylation is altered in the postmortem cerebellum of bipolar disorder and schizophrenia subjects. *Eur. Neuropsychopharmacol.* 2015. 25: 1650-1660. FI: 4,369(Q1).
- Preti A, Corrias I, Gabbrielli M, Lai V, Muratore T, Pintus E, Pintus M, Sanna S, Scanu R, Tronci D, Vellante M, Siddi S, Petretto DR, and Carta MG. The independence of schizotypy from affective temperaments--a combined confirmatory factor analysis of SPQ and the short TEMPS-A. *Psychiatry Res.* 2015. 225: 145-156. FI: 2,467(Q2).
- Preti A, Siddi S, Vellante M, Scanu R, Muratore T, Gabrielli M, Tronci D, Masala C, Rita Petretto D. Bifactor structure of the schizotypal personality questionnaire (SPQ). *Psychiatry Res.* 2015. 230: 940-950. FI: 2,467(Q2).
- Rapado-Castro M, Pazos Á, Fañanás L, Bernardo M, Ayuso-Mateos JL, Leza JC, Berrocoso E, de Arriba J, Roldán L, Sanjuán J, Pérez V, Haro JM, Palomo T, Valdizan EM, Micó JA, Sánchez M, and Arango C. Building up careers in translational neuroscience and mental health research: Education and training in the Centre for Biomedical Research in Mental Health. *Rev. Psiquiatr. Salud Ment.* 2015. 8: 65-74. FI: 1,622(Q3).
- Reed C, Barrett A, Lebec J, Dodel R, W Jones R, Vellas B, Wimo A, Argimon JM, Bruno G, Haro JM. How Useful are Eq-5d And Zbi In Assessing The Impact Of Caring for Alzheimer's Disease Patients?. *Value Health* 2015. FI: 3,279(Q1).

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- Santabàrbara J, Lopez-Anton R, Marcos G, De-la-Cámara C, Lobo E, Saz P, Gracia-García P, Ventura T, Campayo A, Rodríguez-Mañás L, Olaya B, Haro JM, Salvador-Carulla L, Sartorius N, and Lobo A. Degree of cognitive impairment and mortality: a 17-year follow-up in a community study. *Epidemiol Psychiatr Sci* 2015. 24: 503-511. FI: 3.907(Q1).
- Santini Z I, Koyanagajai A, Tyrovolas S, and Haro JM. The association of relationship quality and social networks with depression, anxiety, and suicidal ideation among older married adults: Findings from a cross-sectional analysis of the Irish Longitudinal Study on Ageing (TILDA). *J. Affect. Disord.* 2015. 179: 134-141. FI: 3.383(Q1).
- Santini ZI, Ai Koyanagajai, Tyrovolas S, Mason C, and Haro JM. The association between social relationships and depression: a systematic review. *J. Affect. Disord.* 2015. 175: 53-65. FI: 3.383(Q1).
- Santini ZI, Koyanagi A, Tyrovolas S, Haro JM, Fiori KL, Uwakwa R, Thiagarajan JA, Webber M, Prince M, Prina AM. Social network typologies and mortality risk among older people in China, India, and Latin America: A 10/66 Dementia Research Group population-based cohort study. *Soc Sci Med* 2015. 147: 134-143. FI: 2.890(Q1).
- Stickley A, Koyanagajai A, Koposov R, Blatný M, Hrdlicka M, Schwab-Stone M, and Ruchkin V. Correlates of weapon carrying in school among adolescents in three countries. *Am J Health Behav* 2015. 39: 99-108. FI: 1.202(Q3).
- Stickley A, Koyanagajai A, Roberts B, and McKee M. Urban-rural differences in psychological distress in nine countries of the former Soviet Union. *J. Affect. Disord.* 2015. 178: 142-148. FI: 3.383(Q1).
- Stickley A, Koyanagajai A, Roberts B, Goryakin Y, McKee M. Crime and subjective well-being in the countries of the former Soviet Union. *BMC Public Health* 2015. 15: 1010-0. FI: 2.264(Q2).
- Stickley A, Koyanagajai A, Roberts B, Leinsalu M, Goryakin Y, and McKee M. Smoking status, nicotine dependence and happiness in nine countries of the former Soviet Union. *Tob Control* 2015. 24: 190-197. FI: 5.933(Q1).
- Stickley A, Koyanagajai A, Roberts B, Murphy A, Kizilova K, and McKee M. Male solitary drinking and hazardous alcohol use in nine countries of the former Soviet Union. *Drug Alcohol Depend* 2015. 150: 105-111. FI: 3.423(Q1).
- Sun X, Pinacho R, Saia G, Punko D, Meana JJ, Ramos B, and Gill G. Transcription factor Sp4 regulates expression of nervous wreck 2 to control NMDAR1 levels and dendrite patterning. *Dev. Neurobiol.* 2015. 75: 93-108. FI: 3.370(Q2).
- Swain NR, Lim CC, Levinson D, Fiestas F, de Girolamo G, Moskalewicz J, Lepine JP, Posada-Villa J, Haro JM, Medina-Mora ME, Xavier M, Iwata N, de Jonge P, Bruffaerts R, O'Neill S, Kessler RC, Scott KM. Associations between DSM-IV mental disorders and subsequent non-fatal, self-reported stroke. *J Psychosom Res* 2015. 79: 130-136. FI: 2.736(Q2).
- Tyrovolas S, Haro JM, Mariolis A, Piscopo S, Valacchi G, Makri K, Zeimbekis A, Tyrovola D, Bountziouka V, Gotsis E, Metallinos G, Tur JA, Matalas A, Lionis C, Polychronopoulos E, and Panagiotakos D. The Role of Energy Balance in Successful Aging Among Elderly Individuals: The Multinational MEDIS Study. *J Aging Health* 2015. 27: 1375-1391. FI: 1.477(Q2).
- Tyrovolas S, Koyanagajai A, Garin N, Olaya B, Ayuso-Mateos JL, Miret M, Chatterji S, Tobiasz-Adamczyk B, Koskinen S, Leonardi M, and Haro JM. Determinants of the components of arterial pressure among older adults—the role of anthropometric and clinical factors: a multi-continent study. *Atherosclerosis* 2015. 238: 240-249. FI: 3.994(Q1).
- Tyrovolas S, Koyanagajai A, Garin N, Olaya B, Ayuso-Mateos JL, Miret M, Chatterji S, Tobiasz-Adamczyk B, Koskinen S, Leonardi M, and Haro JM. Diabetes mellitus and its association with central obesity and disability among older adults: a global perspective. *Exp Gerontol* 2015. 64: 70-77. FI: 3.485(Q1).
- Tyrovolas S, Koyanagajai A, Olaya B, Ayuso-Mateos JL, M. Miret, S. Chatterji, B. Tobiasz-Adamczyk, S. Koskinen, M. Leonardi, and Haro JM. The role of muscle mass and body fat on disability among older adults: A cross-national analysis. *Exp Gerontol* 2015. 69: 27-35. FI: 3.485(Q1).
- Wykes T, Haro JM, Belli SR, Obradors-Tarragó C, Arango C, Ayuso-Mateos JL, Bitter I, Brunn M, Chevreur K, Demotes-Mainard J, Elfeddali I, Evans-Lacko S, Fiorillo A, Forsman AK, Hazo JB, Kuepper R, Knappe S, Leboyer M, Lewis SW, Linszen D, Luciano M, Maj M, McDaid D, Miret M, Papp S, Park AL, Schumann G, Thornicroft G, van der Feltz-Cornelis C, van Os J, Wahlbeck K, Walker-Tilley T, Wittchen HU; ROAMER consortium. Mental health research priorities for Europe. *Lancet Psychiatry.* 2015 Nov;2(11):1036-42. FI: 5.756(Q1).
- Zorrilla I, Aguado J, Haro JM, Barbeito S, López Zurbano S, Ortiz A, López P, and Gonzalez-Pinto A. Cannabis and bipolar disorder: does quitting cannabis use during manic/mixed episode improve clinical/functional outcomes?. *Acta Psychiatr. Scand.* 2015. 131: 100-110. FI: 5.605(Q1).

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Supervised theses

- SP transcription factors in psychotic disorders. Doctoral Candidate: Raquel Pinacho. Director: Josep Maria Haro. July 2015.
- Distribution of multiple chronic conditions and their impact on the Spanish population. Doctoral Candidate: Noé Garin. Director: Josep Maria Haro. April 2015.

Networks

- Centre for Biomedical Research Network on Mental Health (CIBERSAM). Ministry of Economy and Competitiveness (MINECO) - Carlos III Health Institute.
- European Innovation Partnership on Active and Healthy Ageing (the Partnership). European Commission.

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Healthcare technologies and results in primary care and mental health

Healthcare technologies and results in primary care and mental health (PRISMA)

This research team conducts projects relating to the field of epidemiology, analysis of the effectiveness and suitability of treatments, mental health determinants, and economic effects on society. Analyses are made of both illnesses and the treatments applied to them in specific contexts.

1. Evaluation of the prevalence of mental illnesses and of the needs of the people who suffer them, in both the general population and specific populations (primary care, prison care).
2. Evaluation of the effectiveness of intervention in primary care:

anti-depressive treatment, psycho-education, pharmaceutical intervention, etc.

3. Description of the population for which the primary care physicians prescribe antidepressant medications and description of the treatment pattern.
4. Evaluation of how health determinants influence the presentation and/or evolution of mental illnesses.
5. Economic evaluation of the impact of mental illnesses on society.
6. Evaluation of interdisciplinary cooperation in primary care.

Research team

Coordinator Antoni Serrano
 Researchers Ignacio Aznar Lou, Luisa Baladón Higuera, Vanessa Barneda, Alexia Camuñas Palacín, Eugenia Cardeñosa Valera, Albert Feliu Soler, Rita Fernández Vergel, Maria Montserrat Gil Gribau, Ana Maria Jové Massó, Cristina López Ortiz, Martin Knapp, Juan Vicente Luciano Devis, Maria Antonia March Pujol, Juan Manuel Mendive Arbeloa, Maria Teresa Peñarrubia María, Maria Rubio Valera, Luis Salvador-Carulla, Enric Vicens Pons

Projects

- Mobility abroad grants. Sociedad Española de Psiquiatría. September 2015 - November 2015. PI: Alexia Camuñas Palacín.
- M-BAE_The economic evaluation of the INFAP project: Cost-effectiveness of active monitoring vs antidepressants for major depression in primary health care: a 12-month non-randomized controlled trial. Instituto de Salud Carlos III (ISCIII). June 2015 - February 2016. PI: Maria Rubio Valera.
- The problem of non-starting of pharmacological treatment: evaluation by mixed methods. Instituto de Salud Carlos III. January 2015 - January 2017. PI: Maria Rubio.
- Clinical and economic evaluation of the integration of a pharmacist into a multidisciplinary home-care team. Beca del Colegio Oficial de Farmacéuticos de Barcelona. January - December 2015. PI: Maria Rubio.
- Miguel Servet TPIo I (Contrato)- Beneficiario: Juan Vicente Luciano. Instituto de Salud Carlos III (ISCIII). January 2015 - January 2020. PI: Juan Vicente Luciano Devis.
- Miguel Servet TPIo I (Proyecto Asociado) Cost-effectiveness of a Mindfulness-Based Stress Reduction (MBSR) treatment for fibromyalgia syndrome: A 12-month randomised, controlled trial. Instituto de Salud Carlos III (ISCIII). January 2015 - January 2018. PI: Juan Vicente Luciano Devis.
- The problem of non-initiation of pharmacological treatment: assessment by combined methods. Instituto de Salud Carlos III (ISCIII). January 2015 - December 2017. PI: Maria Rubio Valera.
- Mental Health Training Through Research Network In Europe (MARATONE) Period: 2013 to 2017. Funded by 7MP European Union FP7-PEOPLE-2012-ITN (316795). PI: Ludwig-Maximilians (Universitaet Muenchen). Researchers: CIBER consortium for

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the Mental Health thematic area, Fondazione IRCCS Istituto Neurologico Carlo Besta, Instytut Psychiatrii i Neurologii, Kings College London, Deutsche Lufthansa AG, London School of Economics and Political Science (Martin Knapp), National Suicide Research Foundation, Parc Sanitari Sant Joan de Déu (JM Haro, A. Serrano-Blanco, S. Ochoa), Siemens AG, Schweizer Paraplegiker-Forschung AG, Universität Leipzig, Oulun Yliopisto.

- Preventive activities and health promotion in primary care. RETICS (redIAPP). Ministerio de Sanidad y Consumo, Instituto de Salud Carlos III, Red (RD12/0005/008). 2013-2017. Node de Salut Mental i Atenció Primària (grup PRISMA-CAT). PI: Antoni Serrano-Blanco.
- Study of the typology and costs of interventions associated with containment in acute psychiatric crises in the hospital environment. Ferrer. January 2013 - December 2015. PI: Antoni Serrano-Blanco.
- Unfulfilled needs in elderly persons hospitalised for the first time in an acute psychiatric unit: Relation to quality of life and use of healthcare and social resources. Parc Sanitari de Sant Joan de Déu. February 2013 - December 2015. PI: Antoni Serrano-Blanco.
- Genetic, practitioner- and patient-related factors and their interaction as associated with the therapeutic success of an intervention to prevent major depression in primary care. PredictD-EVAL study. PI12/02755. Instituto de Salud Carlos III. 2013-2015. PI: Juan Bellón.
- OBERTAMENT project on combating the stigma against mental illness. Obertament. 2012-2016. PI: Antoni Serrano-Blanco, Maria Rubio.
- Cost-effectiveness of a non-pharmacological intervention vs. pharmacology (fluoxetine, escitalopram or venlafaxine) in major depression in Spanish primary care (INFAP study). Instituto de Salud Carlos III. January 2012 - December 2015. PI: Antoni Serrano-Blanco.

Clinical Trials

- Post-authorisation observational study to assess the safety of ADASUVE® (Loxapine for Staccato inhaler) in persons agitated in regular clinical practice. July 2015 . PI: Antonio Serrano.
- Post-injection syndrome in schizophrenia patients receiving olanzapine long-acting injection. Lilly. June 2014-June 2015. PI: Antonio Serrano-Blanco.

- Observational, multi-centre, open-label, prospective study and 6 weeks of follow-up to evaluate the variation of severity of the illness of schizophrenia patients requiring, as per usual clinical practice, treatment with extended-release injectable paliperidone palmitate on hospitalisation in the acute unit due to relapse. Janssen - Cilag. May 2013-May 2015. PI: Antonio Serrano-Blanco.

Publications

- Aguado J, Luciano JV, Cebolla A, Serrano-Blanco A, Soler J, Garcia-Campayo J. Bifactor analysis and construct validity of the five facet mindfulness questionnaire (FFMQ) in non-clinical Spanish samples. *Front Psychol* 2015. 6: 404-0. FI: 2,560(Q1).
- Aurigena Antunes de Araújo, Susana Barbosa Ribeiro, Ana Cely Souza dos Santos, Telma Maria Araújo Moura Lemos, Caroline Addison Xavier Medeiros, Gerlane Coelho Bernardo Guerra, Raimundo Fernandes de Araújo Júnior, Antoni Serrano-Blanco, Maria Rubio-Valera. Quality of life and hormonal, biochemical, and anthropometric changes in olanzapine and risperidone users. *Psych Q* 2015; 29 (FI:1,430) (Q3).
- Baladon L, Fernández A, Rubio-Valera M, Cuevas-Esteban J, Palao DJ, Bellon JA, Serrano-Blanco A. Prevalence of mental disorders in non-demented elderly people in primary care [corrected]. *Int Psychogeriatr* 2015. 27: 757-768. FI: 1,934(Q2).
- Bellón JA, Moreno-Peral P, Motrico E, Rodríguez-Morejón A, Fernández A, Serrano-Blanco A, Zabaleta-Del-Olmo E, Conejo-Cerón S. Effectiveness of psychological and/or educational interventions to prevent the onset of episodes of depression: A systematic review of systematic reviews and meta-analyses. *Prev Med* 2015; 76 Suppl. FI: 3,086(Q1).
- Fernández A, Moreno-Peral P, Zabaleta-Del-Olmo E, Bellon JA, Aranda-Regules JM, Luciano JV, Serrano-Blanco A, and Rubio-Valera M. Is there a case for mental health promotion in the primary care setting? A systematic review. *Prev Med* 2015. 76 Suppl: 11. FI: 3,086(Q1).
- Fernández A, Salinas-Perez JA, Gutierrez-Colosia MR, Prat-Pubill B, Serrano-Blanco A, Molina C, Jorda E, Garcia-Alonso CR, and Salvador-Carulla L. Use of an integrated Atlas of Mental Health Care for evidence informed policy in Catalonia (Spain). *Epidemiol Psychiatr Sci* 2015. 24: 512-524. FI: 3,907(Q1).
- Fernandez A, Sturmberg J, Lukersmith S, Madden R, Torkfar G, Colagiuri R, Salvador-Carulla L: Evidence-based medicine:

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is it a bridge too far? Health Res Policy Syst 2015;13:66. FI: 1.810 (Q2).

- Moreno-Peral P, Conejo-Cerón S, Fernández A, Berenguera A, Martínez-Andrés M, Pons-Vigués M, Motrico E, Rodríguez-Martin B, Bellón JA, and Rubio-Valera M. Primary care patients' perspectives of barriers and enablers of primary prevention and health promotion-a meta-ethnographic synthesis. PLoS One 2015;10 . FI: 3,234(Q1).
- Juan C. Pascual; Nerea Palomares; Ángela Ibáñez; Maria J. Portella; Rocío Arza; Albert Feliu-Soler; Marina Díaz-Marsá; Jerónimo Saiz-Ruiz; Joaquim Soler; Jose L. Carrasco. Efficacy of Cognitive Rehabilitation on psychosocial functioning in Borderline Personality Disorder: A randomized controlled trial.BMC Psychiatry 2015; 15 (1): 255 FI:2.21 (Q3).
- Rubio-Valera M, Beneitez I, Peñarrubia-María MT, Luciano JV, Mendive JM, McCrone P, Knapp M, Sabés-Figuera R, Katarzyna Kocyan, García-Campayo J, and Serrano-Blanco A. Cost-effectiveness of active monitoring versus antidepressants for major depression in primary health care: a 12-month non-randomized controlled trial (INFAP study). BMC Psychiatry 2015. 15: 63-0. FI: 2,210(Q3).
- Rubio-Valera M, Luciano JV, Ortiz JM, Salvador-Carulla L, Gracia A, and Serrano-Blanco A. Health service use and costs associated with aggressiveness or agitation and containment in adult psychiatric care: a systematic review of the evidence. BMC Psychiatry 2015. 15: 35-0. FI: 2,210(Q3).
- Serrano Ripoll MJ, Oliván-Blázquez B, Vicens-Pons E, Roca M, Gili M, Leiva A, García-Campayo J, Demarzo MP, García-Toro M. Lifestyle change recommendations in major depression: Do they work? J. Affect. Disord. 2015. 183: 221-228. FI: 3,383(Q1).

Supervised theses

- Improving quality of life by preventing depression in primary care: a cost-benefit study of a preventive intervention on depression in primary care. The PredictD-CCRT study. Doctoral Candidate: Juan Manuel Mendive. Director: Antonio Serrano. January 2015.

Networks

- Red de Investigación en Actividades Preventivas y Promoción de la Salud (redIAPP). Ministry of Economy and Competitiveness (MINECO).



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Emerging groups and groups under training

General Medicine
Foetal/Paediatric Diseases and environment
Social Sphere

GENERAL MEDICINE

Research and innovation in surgery

This group is engaged in research on the illnesses in which surgical treatment occurs at some point in the care process. Due to its multidisciplinary character, this group is formed by a team of people from different spheres of medicine (including experts in general and digestive surgery, traumatology, gynaecology, urology, image diagnosis, endocrinology and nutrition, among others), who

are coordinated to focus their skills on the various areas of interest to the group's research. The group has a wide-ranging scope of study, including pathophysiological, epidemiological and risk-related factors as well as the critical analysis of the various aspects of surgical therapeutics.

Research team

Coordinator Oscar Izquierdo
 Researchers Maria Roca Cambra Martín, Manuel Carreras Martínez, Juan Castellano Robles, Manuel Céspedes Pérez, Jordi Comajuncosa Camp, Raul de Diego Burillo, Laia Estalella Mercadé, Laura García de Miguel, Pere J Gris Garriga, Judith Hermoso Bosch, Jaime Jimeno Fraile, Jose Luis López Negre, Eva Maria Martínez Franco, Josep Ramón Mendez Paredes, Rolando Anastasio Orbeal Saez, Joan Urgellés, Arnau Valls Esteve, Helena Vallverdú Cartié.

Projects

- Effect of external neurolysis of the peripheral nerves on the occurrence of ulcers in diabetic polyneuropathy. Parc Sanitari de Sant Joan de Déu. February 2014 - February 2015. PI: Oscar Izquierdo.
- Prospective randomised study of the utility of a change of position of the umbilical trocar on the incidence of surgical wound infection in laparoscopic cholecystectomy. Parc Sanitari de Sant Joan de Déu. February 2014 - February 2015. PI: Judit Hermoso.
- Relation between serum levels of progesterone, estradiol and relaxin and the occurrence of faecal incontinence symptoms during pregnancy and the post-delivery period. Instituto de Salud Carlos III). January 2014 - December 2016. PI: Eva Maria Martínez.
- Support for research groups 2014. Surgery Research and Innovation Group. Agència de Gestió d'Ajuts Universitaris i de Recerca. January 2014 - December 2016. PI: David Parés.
- Impact of the use of information and communication technologies (ICTs) in the management of the surgery waiting list: a randomised clinical trial. Parc Sanitari de Sant Joan de Déu. February 2013 - December 2015. PI: David Parés.

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General Medicine
Foetal/Paediatric Diseases
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Clinical Trials

- Low molecular weight heparin (LMWH) for the prevention of complications derived from placental insufficiency in at-risk patients without thrombophilia: randomised multi-centre study. ACNC0005. September 2011 -. PI: Raul De Diego.

Publications

- Castellanos J, Muñoz-Mahamud E, Domínguez E, Del Amo P, Izquierdo O, Fillat P. Long-term effectiveness of corticosteroid injections for trigger finger and thumb. *J Hand Surg Am* 2015. 40: 121-126. FI: 1,667(Q2).
- Correa J, Jimeno J, Vallverdu H, Bizzoca C, Collado-Roura F, Estalella L, Hermoso J, Silva N, Sánchez-Pradell MC, and Parés D. Correlation between intraoperative surgical diagnosis of complicated acute appendicitis and the pathology report: clinical implications. *Surg Infect (Larchmt)* 2015. 16: 41-44. FI: 1,448(Q3).
- Parés D, Martínez Franco E, Lorente N, Víguer Rovira J, López-Negre JL, Mendez J. Prevalence of Fecal Incontinence in Women During Pregnancy: A Large Cross-Sectional Study. *Dis. Colon Rectum* 2015. 58: 1098-1103. FI: 3,749(Q1).

Clinical and epidemiological research on high-prevalence disorders

This is a multidisciplinary group of researchers, all of whom work with high-prevalence illnesses. These are disorders with a high morbidity-mortality that form a steadily growing part of all hospitals' activity. The group is composed of specialists with long clinical experience who deal regularly with illnesses of this type. This research group has recently taken up a new line involving critical

patients. The common goal of the group is to conduct clinical research, striving to make new clinical findings in order to improve and simplify diagnostic and/or therapeutic techniques. It also seeks to increase the epidemiological research carried out on our area in order to expand the knowledge about the incidence, prevalence and risk factors of high-prevalence illnesses.

Research team

Coordinator Luis Lores
 Researchers Elisabeth Arellano Marcuello, Nuria Berrocal Izquierdo, Ernesto Bragulat Baur, Antonio Callen Soto, Anna Capellà Llovera, Xavier Casas García, Alejandra Fernández Trujillo, M^a Araceli González Cuevas, Rosana Hernando Salvador, Mireia Junyent Priu, Jaime Llopis Cañameras, Pablo Marchena Iglesias, Juan Manuel Nicolás Valero, M^a Teresa Pascual Pape, Edwin Percy Resantes Sangay, Bernabé Robles del Olmo, Julián Rodríguez Larrea, César Romero Menor, Elisabet Rovira Prat

Projects

- Impact of ageing on the expression of key genes in the skeletal muscle mitochondria. Parc Sanitari de Sant Joan de Déu -. January 2015 - December 2016. PI: Luis Lores Obradors.
- Development of a computer application suitable for the microbial ecosystem of each hospital centre with a view to improving antibiotic prescription. Parc Sanitari de Sant Joan de Déu . January 2015 - December 2016. PI: Vicenç Díaz de Brito.
- Impact of strengthening basic hygiene measures on multi-resistant microorganisms in long-term centres and private residences. Parc Sanitari Sant Joan de Déu (PSSJD), social-healthcare centres and private residences in the area of influence of PSSJD. Beneficiary: Amara Ródenas. Fundació Mutuam - Conviure 2013, 2014 - 2015. PI: Vicenç Díaz de Brito.

Clinical trials

- Estudio multicéntrico, aleatorizado, doble ciego, doblemente enmascarado, controlado con tratamiento activo, de grupos paralelos para comparar la seguridad de Rivaroxabán frente al Ácido Acetilsalicílico en combinación con Clopidogrel o Ticagrelor en pacientes con Síndrome Coronario Agudo. (GEMINI ACS 1). May 2015 -. PI: César Romero.
- Evaluación, en pacientes con procesos médicos, de rivaroxaban frente a placebo en la reducción del riesgo de tromboembolismo venoso después del alta hospitalaria. (MARINER). May 2015 -. PI: Pablo Marchena.
- Estudio multicéntrico observacional para determinar el perfil y manejo del tratamiento antitrombótico de los pacientes con fibrilación auricular no valvular que acuden a los servicios de medicina interna de los hospitales españoles (estudio PERFILAR). June 2015 -. PI: Pablo Marchena.
- Global Anticoagulant Registry in the FIELD observing treatment and outcomes in patients with treated acute Venous Thromboembolic Events in the real world. October 2015 -. PI: Pablo Marchena.
- Placebo-controlled double-blind randomised study to assess the effectiveness and safety of dupilumab in corticosteroid-dependent patients with severe asthma. November 2015 -. PI: Luis Lores.
- Placebo-controlled double-blind randomised study with parallel groups to assess the effectiveness and safety of dupilumab in patients with persistent asthma. July 2015 -. PI: Luis Lores.
- Placebo-controlled double-blind randomised study with parallel groups to assess the benefits of acclidinium bromide in the improvement of COPD symptoms, including cough, in its administration to COPD patients. June 2015 -. PI: Luis Lores.
- Assessment of the change in clinical control versus the change in the level of severity in COPD patients. Observational study. June 2015 -. PI: Luis Lores.
- Observational, cross-sectional, multi-centre descriptive study of the clinical profile of COPD patients treated with double bronchodilation. DOBRO Study. December 2014 -. PI: Xavier Casas.
- Dose-determination, randomised, double-blind, placebo-controlled study to evaluate dupilumab in patients with moderate-to-severe uncontrolled asthma. January 2014 - November 2015. PI: Luis Lores.
- Open extension study to evaluate the long-term safety and tolerability of dupilumab in asthma patients who took part in the prior clinical trial on dupilumab in asthma. November 2014 -. PI: Luis Lores.
- Prospective, multi-centre, randomised, open study with a duration of 12 weeks to evaluate the efficacy and safety of glycopyrronium (50 microgrammes once daily) or of the combination of fixed doses of indacaterol and glycopyrronium bromide (110/50 microgrammes once daily) on the symptoms and the state of health of patients with moderate chronic obstructive pulmonary disease (COPD) who switch from any standard treatment regime for COPD. September 2014 -. PI: Luis Lores.
- Titan study. National study on quality of oral anticoagulation in non-valvular atrial fibrillation. June 2014 -. PI: César Romero.
- Comparative, randomised, double-blind, double-simulation study with parallel groups on fluticasone propionate / formoterol fumarate (Flutiform®) 250/10 µg (2 inhalations twice daily) and on Flutiform® 125/5 µg (2 inhalations twice daily) vs. formoterol fumarate dihydrate (Atimos®) 12 µg (1 inhalation twice daily) on patients with chronic obstructive pulmonary disease (COPD). November 2013 -. PI: Luis Lores.
- Randomised, double-blind, double-simulation, active product-controlled evaluation study on the efficacy, safety and tolerability of aclidinium bromide / formoterol fumarate, administered twice daily, in comparison to salmeterol / fluticasone propionate, administered twice daily, in the 24-week treatment of symptomatic patients with chronic obstructive pulmonary disease (COPD). August 2013 - January 2015. PI: Luis Lores.
- ESOPPO study. Evaluation of a programme of remote support for patients with COPD and frequent exacerbations on quality of life and the evolution of the disorder. July 2013 - November 2015. PI: Luis Lores.
- Randomised, double-blind, placebo-controlled, multi-centre study on ciprofloxacin in a dose of 32.5 mg dry inhalation powder for inhalation twice daily with intermittent administration, during 28 days with another 28 days of rest, or during 14 days with another 14 days of rest, in comparison to placebo, on evaluation of the time until the first pulmonary exacerbation and the frequency of exacerbations in patients with bronchiectasis not due to cystic fibrosis. March 2013 -. PI: Luis Lores.
- Evaluation of the clinical effects of inhibition of cholesteryl ester transfer protein (CEPT) with evacetrapib in patients with high risk of vascular events - ACCELERATE study. January 2013 - February 2015. PI: Pablo Marchena.

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Emerging groups and groups under training

General Medicine
Foetal/Paediatric Diseases
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Social Sphere

- Multi-centre, randomised, active-control comparative study of the efficacy and safety of betrixaban in extended treatment vs. Enoxaparin® as usual treatment for prevention of venous thromboembolism in patients with medically acute disorder. August 2012 - January 2015. PI: Pablo Marchena.
- Study of prognostic factors and prevalence of post-thrombotic syndrome (PTS) in Spain in patients with deep vein thrombosis (DVT). August 2012 - January 2015. PI: Pablo Marchena.
- Cross-sectional and longitudinal international evaluation of asthma control (LIAISON). August 2012 -. PI: Luis Lores.
- Study of the safety and efficacy of an inhaled combination of inhaled fluticasone propionate/salmeterol vs. inhaled fluticasone propionate in the treatment of adolescents and adults with asthma. February 2012 - September 2015. PI: Luis Lores.
- Open, prospective, randomised, phase IV clinical trial to evaluate the utility of measuring nitric oxide in exhaled air in the therapeutic handling of adult patients with light asthma. January 2012 -. PI: Luis Lores.
- Opportunities for intravenous to oral sequencing and early discharge in gram-positive infections requiring glycopeptide or lipopeptide treatment. SEQUENCE study. February 2012 - November 2015. PI: Vicenç Díaz de Brito.
- Study of clinical results to compare the effect of inhaled fluticasone furoate/vilanterol powder, 100/25 mg, versus placebo, on the survival of patients with moderate chronic obstructive pulmonary disease (COPD) and with background or high risk of cardiovascular disorder. July 2011 - August 2015. PI: Luis Lores.

Publications

- Lores L, Sanz de Burgoa V, and Chaves-Puertas J. Assessment of inspiratory flow in bronchial asthma by using a portable meter. Allergy Asthma Proc 2015. 36: 487-492. FI: 3,061(Q2).

FOETAL/PAEDIATRIC DISEASES AND ENVIRONMENTPaediatric Intensive Care Unit
research projects group

We seek to base our research projects on the crossover concept of the critical patient. The most interesting research lines to date have been in the field of respiratory and infectious pathology.

- Treatment of acute respiratory failure by means of non-invasive ventilation (NIV). The use of this technique in various aetiological conditions. Predictive factors of success and failure.
- Analysis of nosocomial infection and application of corrective measures.

- Infection markers in the critical patient. Distinction of inflammatory versus infectious pathology.
- Analysis of stress markers in post-operative patients of craniostenosis and scoliosis.
- Analysis of stress in paediatrics resident physicians during their rotation in intensive care.
- Bioethical problems in intensive care.

Research team

Coordinator Francisco José Cambra
 Researchers Carme Alejandre, Georgina Armero, Mónica Balaguer, Patricia Corniero, Eli Esteban, Aida Felipe, Iolanda Jordán, Lluïsa Hernández, Nuria Millán, Martí Pon, Susana Segura, Luciana Rodriguez, David Vila

Influence of the milieu on the well-being of children and adolescents

Group focused on research in the following spheres: Study of the epidemiologic and clinical factors involved in childhood accidents. Differential diagnosis of child abuse. Early detection and secondary prevention of social-healthcare problems in adolescence: drugs,

sexuality and violence. Impact of external agents (radiation, pollution, etc.) on child health. Improvement of paediatric patient care in the physician's consultation room: presence of parents, analgesia, differentiated care by age (children / adolescents...).

Research team

Coordinator Carles Luaces Cubells
 Researchers Gemma Claret Teruel, Ana Isabel Curcoy Barcenilla, Marta Simó Nebot, Lidia Martínez Sánchez, Victoria Trenchs Sainz de la Maza, Eva Gargallo Burriel, Andrea Aldemira Liz, Sergi Navarro Vilarrubí

Foetal Environment and obstetric complications

We consider it necessary to make a deeper study of the condition of the foetus precisely to be able to evaluate it at any point in the course of gestation. We have methods allowing us to determine the foetus's well-being but when these methods indicate that it may be

in a risk situation, we lack precise diagnostic tests to quantify the foetal condition as would be required to make a precise diagnosis and to suitably adapt the obstetric procedure to be followed.

Research team

Coordinator Maria Dolores Gómez Roig
 Researchers Laura Almeida, Isidora Andujar, Josep Maria Boguñá, Sergi Cabré, Carolina Esteve, Silvia Ferrero, Edda Marimón, Edurne Mazarico, Jaume Miñano, Elisabeth Palacios, Miriam Perez, Joan Sabriá, Maria José Tojo

Projects

- Assessment of prenatal exposure to abuse substances and environmental toxic substances in foetuses with intrauterine growth restriction and its influence on placental pathology. Hospital Sant Joan de Déu - Esplugues HSJD. October 2015 - September 2018. PI: Maria Dolores Gómez Roig.
- Combined Maternal-Foetal and Neonatal Medicine Group, Hospital Clínic de Barcelona and Hospital Sant Joan de Déu. Agaur - Agència de Gestió d'Ajuts Universitaris i de Recerca. SGR 2014. 2014SGR928. January 2014 - December 2016. PI: Maria Dolores Gómez-Roig.
- Maternal-Child Health and Development Network (SAMID). Instituto de Salud Carlos III. Enero 2013 - December 2016. PI: Maria Dolores Gómez-Roig.
- Evaluation of prenatal exposure to antidepressants and anxiolytics by their determination in alternative biological matrices. Instituto de Salud Carlos III. January 2012 - December 2015. PI: Maria Dolores Gómez-Roig.
- Low molecular weight heparin (LMWH) for prevention of complications derived from placental insufficiency in at-risk patients without thrombophilia: randomised multi-centre study. Ministerio de Sanidad y Política Social. January 2011 - December 2015. PI: Maria Dolores Gómez-Roig.

Clinical trials

- Open trial registering subjects aged 6 to 18 years with pain requiring treatment with extended-release opioid, to evaluate the safety and efficacy of tapentadol ER versus morphine ER, followed by an open extension. November 2014 - . PI: S Navarro Vilarrubi.
- Low molecular weight heparin (LMWH) for prevention of complications resulting from placental insufficiency in risk patients without thrombophilia: randomized multicenter study. January 2011 - . PI: Maria Dolores Gómez Roig.

Publications

- Angel Solà J, Sagué Bravo S, Parra Cotanda C, Trenchs Sainz de la Maza V, Luaces Cubells C. Has the presence of parents during invasive procedures in the emergency department increased in the last few years?. *An Pediatr (Barc)* 2015. 82: 6-11. FI: 0,833(Q4).
- Benito Fernández J, Luaces Cubells C, Gelabert Colomé G, Anso Borda I. Actualización del sistema de codificación diagnóstica de la Sociedad Española de Urgencias de Pediatría. *An Pediatr (Barc)* 2015. 82: 1-7. FI: 0,833(Q4).
- Borrás-Novell C, García Rey E, Perez Baena LF, Jordan I, Catella Cahiz D, Cambra FJ. Therapeutic plasma exchange in acute disseminated encephalomyelitis in children. *J Clin Apher* 2015. 30: 335-339. FI: 1,791(Q3).
- Carrasco-Colom J, Jordan I, Alsina L, García-García JJ, Cambra FJ, Martín-Mateos MA, Juan M, Muñoz-Almagro C. Association of Polymorphisms in IRAK1, IRAK4 and MyD88, and Severe Invasive Pneumococcal Disease. *Pediatr Infect Dis J* 2015. 34: 1008-1013. FI: 2,723(Q1).
- Gómez-Roig MD, Mazarico E, Valladares E, Guirado L, Fernández-Arias M, Vela A. Aortic Intima-Media Thickness and Aortic Diameter in Small for Gestational Age and Growth Restricted Fetuses. *PLoS One* 2015. FI: 3,234(Q1).
- Gómez-Roig MD, Mazarico E, Sabria J, Parra J, Oton L, Vela A. Use of Placental Growth Factor and Uterine Artery Doppler Pulsatility Index in Pregnancies Involving Intrauterine Fetal Growth Restriction or Preeclampsia to Predict Perinatal Outcomes. *Gynecol Obstet Invest* 2015. 80: 99-105. FI: 1,696(Q3).
- Hernández S, Trenchs Sainz de la Maza V, Alarcón Gamarra M, Camacho Díaz JA, Gene A, Luaces Cubells C. Etiología y curso clínico de la infección del tracto urinario en los lactantes menores de 3 meses. *Enferm Infecc Microbiol Clin* 2015. 33: 516-520. FI: 2,172(Q3).
- Hernández S, Trenchs Sainz de la Maza V, Esquivel Ojeda JN, Gene A, Luaces Cubells C. Factores predictores de contaminación ante un hemocultivo con crecimiento bacteriano en Urgencias. *An Pediatr (Barc)* 2015. 82: 426-432. FI: 0,833(Q4).
- Hernández S, Trenchs V, Batlle A, Gene A, Luaces Cubells C. Occult bacteraemia is uncommon in febrile infants who appear well, and close clinical follow-up is more appropriate than blood tests. *Acta Paediatr* 2015. 104: 76-81. FI: 1,674(Q2).
- Martínez Monseny A, Martínez Sánchez L, Margarit Soler A, Trenchs Sainz de la Maza V, Luaces Cubells C. Poisonous plants: An ongoing problem. *An Pediatr (Barc)* 2015. 82: 347-353. FI: 0,833(Q4).
- Mazarico E, Gómez-Roig MD, Guirado L, Lorente N, Gonzalez-Bosquet E. Relationship between smoking, HPV infection, and risk of cervical cancer. *Eur. J. Gynaecol. Oncol.* 2015. 36: 677-680. FI: 0,611(Q4).
- Pérez-Cruz M, Cruz-Lemini M, Fernández MT, Parra JA, Bartrons J, Gómez-Roig MD, Crispi F, Gratacós E. Fetal cardiac function in late-onset intrauterine growth restriction vs small-for-gestational age, as defined by estimated fetal weight, cerebroplacental ratio and uterine artery Doppler. *Ultrasound Obstet Gynecol* 2015. 46: 465-471. FI: 3,853(Q1).
- Ruiz de Gauna B, Rodríguez D, Olartecoechea B, Aubá M, Jurado M, Gómez-Roig MD, Alcázar JL. Diagnostic performance of IOTA simple rules for adnexal masses classification: a comparison between two centers with different ovarian cancer prevalence. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 2015. 191: 10-14. FI: 1,695(Q3).
- Vilà de Muga M, Serrano Llop A, Rifé Escudero E, Jabalera Contreras M, Luaces Cubells C. Impacto de un modelo estandarizado para la declaración y análisis de incidentes en la mejora de un servicio de Urgencias pediátrico. *An Pediatr (Barc)* 2015. 83: 248-256. FI: 0,833(Q4).

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Emerging groups and groups under training

General Medicine
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Social Sphere



Supervised theses

- Improved quality of care for intoxicated paediatric patients by means of quality indicators. Doctoral Candidate: Lidia Martínez Sánchez. Director: Santiago Nogué and Carles Luaces. November 2015.
- Magnesium sulphate in continuous versus discontinuous regime in the framework of watchful waiting in severe pre-eclampsia: randomised clinical trial. Ministerio de Sanidad y Política Social. January 2012 - December 2015. PI: Joan Sabrià.
- Development of a prospective quality control method for quantitative sonographic markers included in the screening of aneuploidies. Doctoral Candidate: Joan Sabrià. Director: Dolores Gómez-Roig. July 2015.

Networks

- Maternal-Child Health and Development Network (SAMiD). Carlos III Health Institute.

SOCIAL SPHERE

Research group on nursing, education and society

The Research Group on Nursing, Education and Society (GIEES) is engaged in four different spheres of research (social action, healthcare methodology, educational innovation, and identity traits). Each of these spheres is covered by a group of professors who carry out their research activity on one same focus of interest: the analysis of social inequalities and the situation of vulnerability; the evaluation of nursing care plans; the development and analysis of

innovative teaching methodologies; and the identity traits of our profession.

Research lines:

- Social action.
- Identity traits.
- Educational innovation.
- Healthcare methodology.

Research team

Coordinator Juan Roldán and Núria Roca
 Researchers Marta Callarisa Roca, Anna Cano Parellada, Mariona Farres Tarafa, Rosa Gaya Cortadellas, Amèlia Guilera Roche, Marina Heredia Torras, Bàrbara Hurtado Pardos, Esther Insa Calderon, Laura Martínez Rodríguez, Dolors Miguel Ruiz, Maria José Morera Pomarede, Carlos Nebot Bergua, Àngels Pedrola Segarra, Anna Ramió Jofré, Núria Roca Caparà, Juan Fco Roldán Merino, Júlia Roura Masmitjà, Olga Rodrigo Pedrosa, Dolores Royo Aran, Laura Serradesanferm González, Carme Vega Monteagudo

Projects

- Adaptation to the Spanish language and reliability and validity study of the Creighton Competency Evaluation Instrument (C-CEI). Col·legi Oficial d'Infermeria de Barcelona. January 2015 - December 2017. PI: Mariona Farrés Tarafa.
- Mental illness and social stigma in Santo Domingo (Piura Department, Peru). An anthropological vision. June 2015 - December 2016. PI: Núria Roca Caparà.
- The Teaching Action Plan in undergraduate nursing studies. Campus Docent Sant Joan de Déu - Fundació Privada. February 2013 - January 2015. PI: Núria Roca.
- Training of the collective of women of Maghrebi origin in Sant Vicenç dels Horts. Campus Docent Sant Joan de Déu - Fundació Privada. November 2013 - November 2017. PI: Laura Martínez.
- Hospitality as a value. Meanings and construction in the students of Campus Docent Sant Joan de Déu - Fundació Privada (EUI agreement). Campus Docent Sant Joan de Déu - Fundació Privada. December 2012 - December 2016. PI: Laura Martínez, Amèlia Guilera.
- Study of the attitudes and behaviours attached to the institutional values of the Hospitaller Order of Saint John of God, Aragon-San

Rafael province. Campus Docent Sant Joan de Déu - Fundació Privada; OHSJD-Provincial Curia. May 2012 - May 2017. PI: Anna Ramió, Amèlia Guilera and Laura Martínez.

- Mobility of students and its impact on schooling in the metropolitan region of Barcelona: types, processes and trends. Ministerio de Economía y Competitividad. January 2013 - December 2017. PI: Silvia Carrasco. Investigator: Núria Roca.
- Improving the therapeutic relation in nursing care through evidence. A research study-participative action in acute psychiatry units. COIB. December 2014 - December 2016. PI: Antonio Rafael Moreno. Investigator: Juan Roldán-Merino.
- Medicated life. Healthcare policies, antidepressant consumption, and vital worlds of Catalan youth. Ministerio de Economía y Competitividad. 2013-2015. PI: Àngel Martínez. Investigator: Carme Vega.
- Evaluation of critical thought in hospitalisation nursing professionals, according to the Alfaro-LeFevre 4-circle model. COIB. September 2014- December 2016. PI: Esperanza Zurigel. Investigator: Juan Roldán-Merino.
- Adaptation of the Spanish language and study of reliability and validity of the Scoring Scale for Nursing Skills in Crighton Simulation (C-SEI). COIB. September 2014 - December 2016. PI: Mariona Farrés.
- International Researchers Group on Mental Health Nursing Care. Campus Docent-Fundació Privada. 2013 - 2018. PI: Juan Roldan-Merino.
- Physiological immaturity of the newborn: Multi-phase study by the mixed method. COIB. January 2014 - December 2016. PI: M. Eulalia Juve. Investigator: Bàrbara Hurtado.
- Influence of nursing interventions on adherence to treatment with antituberculosis drugs in the paediatric population. COIB. January 2014 - December 2016. PI: Eva M Guix. Investigator: Bàrbara Hurtado.
- Carers 2.0: effectiveness of a support programme for non-professional carers of chronic patients. Universitat Rovira i Virgili. January 2013 - December 2015. PI: Mar Lleixà. Investigator: Juan Roldán Merino.

Publications

- Falcó-Pegueroles A, Lluch-Canut T, Roldan-Merino J, Goberna-Tricas J, Guardia-Olmos J. Ethical conflict in critical care nursing: Correlation between exposure and types. *Nurs Ethics* 2015. 22: 594-607. FI: 1,247(Q2).
- Juvé-Udina ME, Fabrellas-Padrés N, Delgado-Hito P, Hurtado B, Martí-Cavallé M, Gironès-Nogué M, Garcia-Berman RM, Alonso-Fernandez S. Newborn physiological immaturity: a concept analysis. *Adv Neonatal Care* 2015. 15: 86-93. FI: 1,122(Q2).
- Zuriguel Pérez E, Teresa Lluch Canut M, Falcó Pegueroles A, Puig Llobet M, Moreno Arroyo C, Roldan-Merino J. Critical thinking in nursing: Scoping review of the literature. *Int J Nurs Pract* 2015. 21: 820-830. FI: 0,599(Q4).

Supervised theses

- Teaching innovation in the nursing curriculum. The integrated case: a case study towards European convergence. Doctoral Candidate: M.Jose Morera. Director: José Luis Medina. March 2015.
- The teaching contract as a facilitator in the case of methodologies: integrated case and tutorial action plan in the Bachelors Degree in Nursing of the Sant Joan de Déu University School of Nursing. Doctoral Candidate: Amèlia Guilera. Director: Anna Forés. December 2015.
- Implementation of ICTs in the education of vocational training students: the case of the Sant Joan de Déu Educational Centre. Doctoral Candidate: Júlia Roura. Director: Anna Forés. June 2015.



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Activities and Scientific seminars

Activities

- Jornada Sant Joan de Déu 2015. March 4.
- 1st Conference opportunities and future of pediatric clinical research in Spain: Overcoming Challenges. July 2.
- 9th Course on Economic Evaluation and Social-Healthcare Policy. October 5 - 10.
- 3st International debate SomaPsy. October 9.
- 4th Conference Care Ethics Committee. November 4.

Scientific seminars

- Applications of the massive sequencing of the Ion Torrent PGM in the clinical setting. Dr. Bea Cabo tan Dra. Núria Queralt. January 27.
- Neuroblastoma whole genome methylation analysis. Dr. Soledad Gómez. February 10.
- Validation of the single daily dose of isoniazid at 10mg/kg of weight in infants under 3 months of age. Dr. Maria Goretti López Ramos. February 24.
- Research lines in paediatric rheumatology. Dr. Jordi Antón. March 10.
- Kids BCN Project. Updating of the Clinical Research Unit. Ms. Joana Claverol. March 24.
- Study of the primary and secondary defects of the IL-12/ IFN-gamma pathway susceptible to infections by intracellular pathogens. Dr. Laia Alsina. April 7.
- Analysis of exome vs gene panel in Rett syndrome. Dr. Judith Armstrong. April 21.
- Studies of the human microbiome and its impact on health. Dr. Alejandro Mira. May 19.
- Managers bibliographic references: what are they? And what good are they? Introduction to Mendeley. Ms. Ana Maria Merino. May 28.
- Language learning and brain reorganization in perinatal stroke: evidences using structural and functional MRI imaging. Dr. Antoni Rodríguez-Fornells. June 2.
- Utility of thiamine isoforms in CSF as a diagnostic method for thiamine transporter-2 (SLC19A3) deficiency. Mr. Juan Dario Ortigoza Escobar. June 16.
- European grants. Ms. Leonor Norton. June 18.
- Role of inflammation in type-2 diabetes. Prof. Jason K Kim. June 29.
- Omics technologies for the clinical Sciences. Dr. Ivo Gut. September 8.
- *Kingella kingae*: an emerging paediatric pathogen. Dr. Pablo Yagupsky. October 20.
- Chimeric Antigen Receptors in T-cells (CARTs): a reality that is not a chimera in the treatment of cancer. Dr. Manel Juan. November 3.
- European funding opportunities in health research for the period 2016-2017. Ms. Leonor Norton. November 17.
- Oncolytic virotherapy: potential and limitations. Dr. Ramón Alemany. December 1.
- Research programme on paediatric arrhythmias. Dr. Georgia Sarquella Brugada. December 15.