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ANIVERSARIO

IMIBIC

2008 - 2018

SCIENTIFIC REPORT 2017

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Director's Foreword

1. Director's Foreword

One more year of activity has passed at the Maimonides Institute of Biomedical Research of Córdoba, the IMIBIC, and thus, the annual report gets ready to summarize the accomplishments achieved by all the scientific and research teams, and the invaluable support personnel of the Institute, during 2017.

However, this is not one more report, it is not a regular one, for it is the 10th Report that we compile to provide the records of our activity at IMIBIC. Throughout these pages, you will recognize the efforts made by the people who made it possible to arrive here. Not everyone that was involved in the original project is still active at the Institute, however they are all with us, showing the right path to continue advancing.

This 10th report also (re)presents an overview of what we have become through the years, thanks to the efforts of the people that works here and the institutions that support us. Because the IMIBIC is, above all and beyond anything else, a joint collaborative project, a common endeavor shared by many people and nurtured by our key founding institutions, to which we are greatly thankful: Universidad de Córdoba, Hospital Universitario Reina Sofía, Consejería de Salud, and Consejería de Conocimiento, Innovación y Universidad; thanks for helping us to make what we are, to climb to this summit, and for your

continued compromise and support in the coming future.

Turning "only" 10 years old means, in fact, youth; and yes, the IMIBIC is a young project, as young are their most relevant protagonists, not just by age, but most of all by their mentality: "No prejudices, nothing is impossible if we all walk together". That is the spirit of the IMIBIC: of the researchers, basic and clinicians alike, the resident doctors, the nurses, PhD students, the technicians, the administrative personnel and the managers of the Institute. That is how it is now and how it should continue being: theirs is the present, and the future also belongs to them. This is, in essence, the fundamental pillar of IMIBIC: to walk together and stay young regardless how many years you celebrate.

But, one decade also provides enough grounds to make some history and to reflect on the pathway covered: the achievements and the failures, the challenges waiting ahead and the wishes for the future. The strategic lines that we designed for the IMBIC in 2008 were progressively fulfilled. The Institute obtained the national accreditation from the Instituto de Salud Carlos III in 2011, which was subsequently renewed in 2016, and has been growing and progressively achieving higher levels of production and quality, providing new employments

to and forging tighter bonds with our social environment; meanwhile, we have become a valuable, appreciated resource for our institutions of reference.

The figures and the data contained in this report clearly evidence this growth. Over the last years, our Institute has reached higher levels of scientific production of increasing quality (424 publications in 2017, with over 1800 IF) and has consistently attracted more than 9.5 million euros for its general budget, through research grants, clinical trials and competitive funding for human resources. We have also consolidated a series of annual activities to provide opportunities for researchers in training, such as the 8th Young Investigators Meeting, to promote translation, with the V IMIBIC-Roche Innovation Prize, and to retain talent (e.g. STOP Fuga de Cerebros Fellowship); as well as to recognize, through the VII Maimonides Commemorative Lecture and Research Awards, the best research arising from the Institute, and a researcher that uniquely contributed to the development of the IMIBIC.

In addition, with the precious help of our Training and Communications Units, we have organized or collaborated with a number of seminars, workshops, and meetings throughout 2017, and have also continued consolidating innovative activi-

ties like the Public-Private Procurement, and offering new, advanced services through our invaluable Core Technology Units. Thus, although there are still many goals to pursue, the people that worked hard and did research at the Institute, those who helped research teams to improve their success rates, and the institutions that made a great effort to make it possible, can be proud of what has been achieved, and should be hopeful for the future of the IMIBIC.

Indeed, the master lines for our tomorrow are already designed and start being deployed. We will apply our research to make Precision Personalized Medicine a reality, wherein Cell Biology, Molecular Biology, Clinical Medicine, Bioinformatics, Technology, Big Data, and Artificial Intelligence converge towards the patient: something that is nowadays becoming more and more plausible. Part of our success will rely on the adequate incorporation of Innovation as an advance tool to enable translating the discoveries into real and useful applications. Translational Biomedical Research, which unites and leads our teams, which made us what we are and will bring us to the future, needs innovation in order to transform discoveries into patents, and those into medical applications. THIS is the real meaning of an institute of biomedical research: to

transform and translate, to transfer and apply the advances of knowledge into improvements of the health of the society.

And all of these can be best exemplified by high quality Clinical Research, the research and trials that are every day growing and improving in our environment, thanks to the impulse, the collaboration, and the joint efforts of our professionals and institutions, and the support of our Clinical Research Unit. This is, indisputably, the best means, current and future, whereby the knowledge and the results from research can reach the patients, provide treatments, enable the prevention of diseases, and hence, impact and improve the health of the citizens.

In order to achieve these strategic goals in the coming future, it is first essential to keep maintaining the utmost exigency and quality in our daily practice; to rely on the best possible formative resources for the training of the most talented young researchers and professionals, those coming through the University of Córdoba and the Reina Sofia University Hospital, and also, importantly, from abroad, for it is critical to recruit and maintain the best researchers to achieve the best results,

no matter if they come from within or outside our borders. And it is also essential to increase the role of female researchers in our environment, to appreciate and take into account their talent, and to promote and support their leadership, because the growth of us all relies on their success.

To develop and fulfill our joint plans, it is necessary to attain and maintain a sufficient level of funding, which should never be called expenditure, because it is not: it is the best investment that our society can make for its own future, our common future, that of the young people that embodies the Institute, the University, the Hospital, and populates Córdoba, young people who only awaits our trust and support to give back to the society what this generation, that certainly is the best prepared ever in our history, has ready for us: a better future for us all.

Justo P. Castaño
Scientific Director

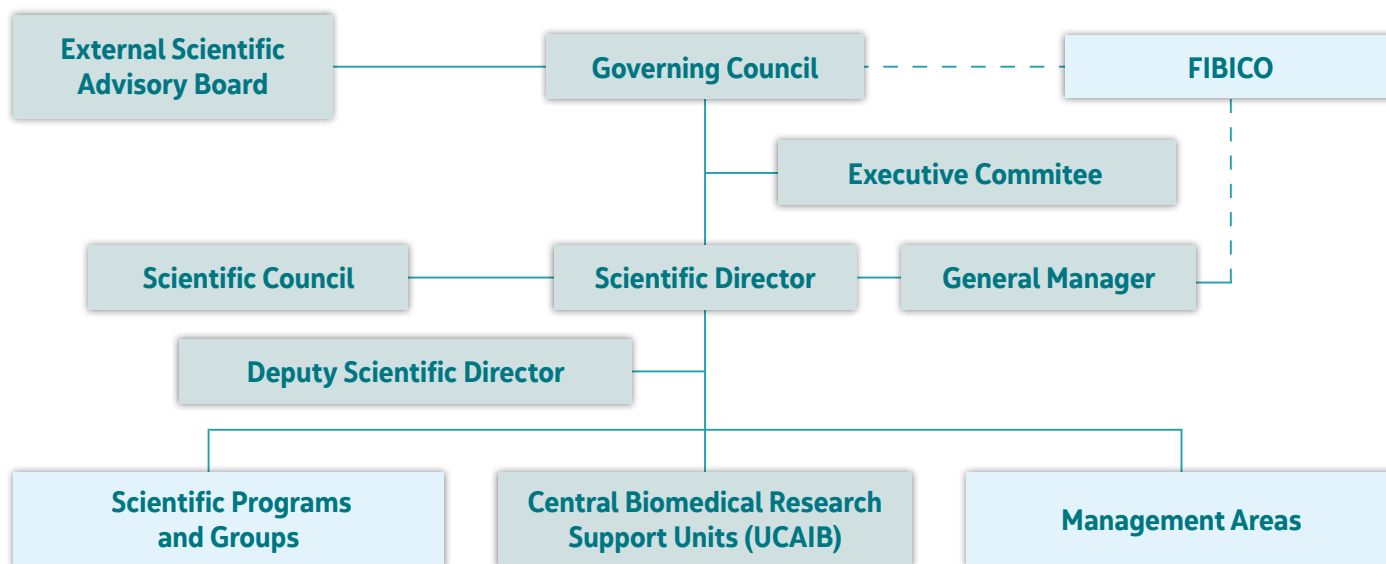
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Organization Chart, Human and Economic Resources

2. Human, Technological and Economic Resources. Facilities

2.1 Organization Chart

IMIBIC's governing and representative bodies are detailed below:



A. Collegiate Bodies

The collegiate bodies composing IMIBIC are the Governing Council, the Executive Committee, the Scientific Council and the External Scientific Board. Each body has its competencies and is composed of several specialists.

Governing Council

The Governing Council is the uppermost governing body of IMIBIC. The Governing Council is composed of the following members:

Two representatives from the Regional Ministry of Equity, Health and Social Policies of the Andalusian Regional Government
M^o Isabel Baena Parejo. General Director of Research and Management of Knowledge of the Health Council
Valle Garcia Sánchez. Managing Director of the Reina Sofia University Hospital and President of FIBICO

Two representatives from the Regional Ministry of Economy, Innovation, Science and Employment

Manuel García León. General Director for Research, Technology and Business

Manuel Carmona Jiménez. Provincial Delegate of Economy, Innovation, Science and Employment of Córdoba

Two representatives from the University of Córdoba

Antonio Cubero Atienza. Vice rector of Institutional Coordination and Infrastructures

Luisa M. Rancaño Martín. Managing Director.

IMIBIC's Scientific Director

Justo P. Castaño Fuentes

One representative from the Progress and Health Foundation (FPS)

Ana Madera Molano. Managing Director.

IMIBIC's General Manager

José Miguel Guzmán de Damas

Executive Committee

To facilitate agile decision making, the Governing Council has adopted, on July 27 2015, an agreement to create an Executive Committee. The Executive Committee is composed of one member from each of the institutions that constitute the Governing Board, as set forth in the collaboration agreement between the Regional Ministry of Health, the Ministry of Economy and Knowledge and the University of Córdoba. The Scientific Direction, General Manager and the Governing Council will participate with voice but without vote.

Scientific Council

The Scientific Council is an advisory body to the Scientific Director. It is composed of the Scientific Director, the Deputy Scientific Director of IMIBIC, the Principal Investigators (PI), the Emerging Researchers (ER), the Associated Researchers (AR), a representative of the Reina Sofia University Hospital Board of Directors (RSUH), the IMIBIC's General Manager and representatives of the technical and management staff. It was established on July 9, 2009.

External Scientific Advisory Board

The External Scientific Advisory Board is a body appointed by the Governing Council, whose mission is to assist the Scientific Director in the performance of his duties. It is an advisory body to the Scientific Direction but its decisions are not legally binding. It was established on July 9, 2009 under the name of External Advisory Board, and it was ratified by the Governing Council on December 21, 2009

B. Individual Bodies

The Management Team is responsible for ensuring the correct performance, in order to increase the quality and impact of IMIBIC's research activity.

Scientific Director

Justo P. Castaño Fuentes. Full Professor of Cell Biology of University of Cordoba. He was appointed scientific director of IMIBIC by the Governing Council at a meeting held on April 08, 2015.

Deputy Scientific Director of Basic Research

Manuel Tena Sempere. Full Professor of Physiology at the Faculty of Medicine of the University of Córdoba. He was re-appointed deputy scientific director of Basic Research of IMIBIC by the Governing Council at a meeting held on April 08, 2015.

Deputy Scientific Director of Clinical Research

José López Miranda. Full professor of the University of Cordoba and Head of the Internal Medicine Unit at Reina Sofia University Hospital. He was appointed depute scientific director of clinical research of IMIBIC by the Governing Council at a meeting held on April 08, 2015.

General Manager

José Miguel Guzmán de Damas. BSc in Pharmacy, BSc in Business Administration, MSc in Health Economics and Health Care Management, MBA. He was appointed General Manager of IMIBIC by the Governing Council at a meeting held on December 21, 2010.

2.2 Scientific Structure

The research activities of IMIBIC are organised into five scientific programmes, which integrate various different research groups. The scientific programs target prevalent and highly relevant health problems, identifying areas in which the researchers of the institute can join their efforts by transversal collaborative projects and are inspired and aim to give response to the main health challenges faced by the European society today, in line with the priorities set by the European Union's Horizon 2020 program. The structure defines a framework that guides researchers towards the improvement of health of patients and the community through excellent translational and clinical research and innovation. It encourages interaction and cooperation among the different groups, as well as aims for attraction of talent and continuous improvement of career development opportunities of young researchers. Our Scientific Programs are a reflection of the strength of our research teams and show the unique specialization of IMIBIC. The programs are as follows:

1. Active ageing and Frailty

This program is oriented towards understanding the molecular pathogenic basis of the aging process, its relation to quality of life and the search for new strategies for patient care assistance. It includes the following lines of research:

- Immunology and senescence
- Attention and care of the chronically ill
- Frailty and quality of life in the elderly

2. Nutrition and endocrine and metabolic diseases

This program is oriented towards studying diseases of the metabolism and the endocrine system, with particular interest in the role of nutrition in the prevention and management of these processes at different stages of life. It also focuses on the study of reproductive health and neuroendocrine tumors. It includes the following lines of research:

- Metabolic syndrome
- Reproductive Health
- Pediatric and perinatal diseases
- Neuroendocrine Tumors

3. Infectious and immunological diseases and organ transplants

This program focuses on the study of diseases by different infectious agents, with a special emphasis on the infections in immunocompromised patients. It includes the following lines of research:

- HIV + Hepatitis C Virus
- Transplants
- Multi-drug resistance

4. Cancer (Oncology and Oncohematology)

This program focuses on the study of neoplastic diseases, including both solid tumors and hematologic neoplasms. It includes the following lines of research:

- Lung Cancer
- Breast Cancer
- Hepatocellular carcinoma
- Leukemia and Lymphomas
- Digestive Tumors
- Other tumors

5. Chronic and Inflammatory Diseases

This program focuses on the study of a number of chronic diseases of modern society, with special emphasis on those of an inflammatory nature. This program includes both basic research and clinical studies, with the ultimate aim of promoting a better understanding of the basis of chronic/inflammatory diseases and the improvement of their therapies. It includes the following lines of research:

- Cardiovascular diseases
- Diseases of the locomotor system and connective tissue
- Neurological diseases

- Mental health
- Kidney and urologic diseases
- Liver and digestive diseases
- Chronic inflammation and signaling

2.3. Research Groups

GC – Consolidated Group

GE – Emerging Group

GA – Associated Group

CODE	GROUP and PROGRAMS	PRINCIPAL INVESTIGATOR(s)
GC1	Immunology and allergy PROGRAMS 1, 3, 5	Dr. Rafael Solana Lara (PI)
GC2	Oxidative and nitrosative stress in acute and chronic liver disease PROGRAMS 3, 4, 5	Dr. Manuel De La Mata García (PI) Dr. José Antonio Bárcena Ruiz (CO-PI)
GC3	Infectious diseases PROGRAMS 1, 3, 5	Dr. Julián De La Torre Cisneros (PI) Dr. Antonio Rivero Román (CO-PI)
GC4	Inflammation and cancer PROGRAMS 2, 3, 4, 5	Dr. Eduardo Muñoz Blanco (PI) Dr. Marco A. Calzado (ER)
GC5	Systemic and chronic inflammatory autoimmune diseases of the locomotor system and connective tissue PROGRAMS 2, 5	Dr. Rosario López Pedrera (PI) Dr. Eduardo Collantes Estévez (CO-PI) Dr. Nuria Barbarroja Puerto (ER)
GC6	New therapies in cancer PROGRAM 4	Dr. Enrique Aranda Aguilar (PI) Dr. Antonio Rodríguez Ariza (CO-PI) Dr. Juan de la Haba Rodríguez (ER)
GC7	Nephrology. Cell damage in chronic inflammation PROGRAMS 1, 5	Dr. Pedro Aljama García (PI)
GC8	Hormones and cancer PROGRAMS 2, 4	Dr. Justo P. Castaño Fuentes (PI) Dr. Francisco Gracia Navarro (CO-PI) Dr. Raúl M. Luque Huertas (CO-PI) Dr. Manuel David Gahete Ortiz (ER)

GC9	Nutrigenomics. Metabolic syndrome PROGRAMS 1, 2, 4, 5	Dr. José López Miranda (PI) Dr. Francisco Pérez Jiménez (CO-PI) Dr. Yolanda Almadén Peña (CO-PI) Dr. Javier Delgado Lista (CO-PI) Dr. Pablo Pérez Martínez (CO-PI) Dr. Antonio Camargo García (ER) Dr. Antonio García Ríos (ER)
GC10	Hormonal regulation of energy balance, puberty and reproduction PROGRAMS 2, 4	Dr. Manuel Tena Sempere (PI)
GC11	Metabolism and Adipocyte Differentiation. Metabolic Syndrome PROGRAM 2	Dr. María del Mar Malagón Poyato (PI) Dr. Francisco Gracia Navarro (CO-PI)
GC12	Clinical and epidemiological research in primary care PROGRAMS 4, 5	Dr. Luis Ángel Pérula de Torres (PI)
GC13	Calcium metabolism. Vascular calcification PROGRAMS 2, 5	Dr. Mariano Rodríguez Portillo (PI) Dr. Juan Rafael Muñoz Castañeda (ER)
GC14	Cell therapy PROGRAM 5	Dr. I. Concepción Herrera Arroyo (PI)
GC15	Invasive cardiology and cell therapy PROGRAM 5	Dr. Manuel Pan Álvarez-Ossorio (PI)
GC16	Cellular biology in Hematology. Hypercoagulability PROGRAM 4	Dr. Joaquín Sánchez García (PI) Dr. Francisco Velasco Gimena (CO- IR)
GC17	Pathophysiology of the endocrine system of vitamin D. Biotechnology and aging PROGRAMS 1, 2	Dr. José Manuel Quesada Gómez (PI)
GC18	Translational research in surgery of solid organ transplantation PROGRAMS 4, 5	Dr. Javier Briceño Delgado (PI)
GC19	Artificial Vision Applications (A.V.A.) PROGRAM 5	Dr. Rafael Medina Carnicer (PI)
GC20	Genetics and behavioural diseases PROGRAM 5	Dr. Manuel Ruiz Rubio (PI) Dr. Juan A. Moriana (CO-PI)
GC21	Metabolomics and identification of bioactive compounds PROGRAMS 2, 4, 5	Dr. Feliciano Priego Capote (PI)
GC22	Epigenetics PROGRAM 4	Dr. Teresa Roldán Arjona (PI)
GC23	Metabolism in childhood PROGRAMS 2, 4	Dr. Mercedes Gil Campos (PI)

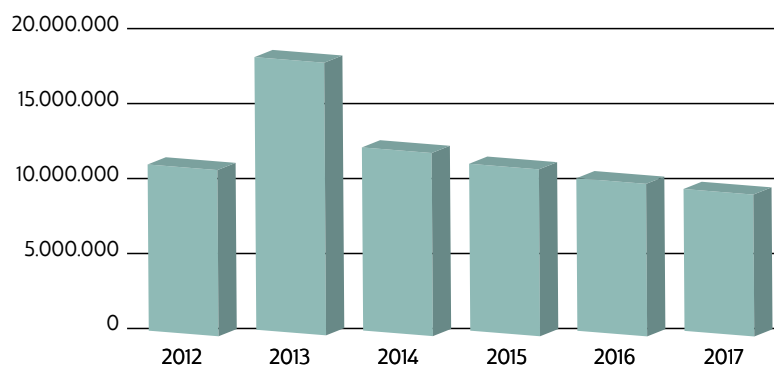
GC24	Clinical and molecular microbiology PROGRAMS 1, 3, 5	Dr. Luis Martínez Martínez (PI)
GC25	Knowledge Discovery and Intelligent Systems in Biomedicine PROGRAMS 1, 2, 3	Dr. Sebastián Ventura Soto (PI)
GE1	Oxidative stress and nutrition PROGRAMS 1, 2, 5	Dr. Isaac Túnez Fiñana (PI)
GE3	Inflammatory immune-mediated cutaneous diseases PROGRAM 5	Dr. Juan A. Ruano Ruiz (PI)
GE4	Applied psychology PROGRAM 1	Dr. Bárbara Luque Salas (PI)
GE5	Urology and Sexual Medicine PROGRAM 5	Dr. María José Requena Tapia (PI)
GA1	Lung transplantation. Thoracic malignancies PROGRAM 4	Dr. Ángel Salvatierra Velázquez (PI) Dr. Paula Moreno Casado (ER)
GA2	Comprehensive Nursing Care. Multidisciplinary Perspective PROGRAMS 1, 5	Dr. María Aurora Rodríguez Borrego (PI)
GA3	Pneumology PROGRAMS 2, 4, 5	Dr. Bernabé Jurado Gámez (PI)
GA4	Endocrinology and nutrition. Insulin resistance, diabetes and metabolism PROGRAM 2	Dr. M ^o Ángeles Gálvez Moreno (PI)
GA5	Study of growth. Endocrinology and child nutrition PROGRAM 2	Dr. Ramón Cañete Estrada (PI)
GA6	Clinical analysis PROGRAM 2	Dr. Fernando Rodríguez Cantalejo (PI)
GA8	Radiology PROGRAMS 2, 4, 5	Dr. Daniel López Ruiz (PI)
GA9	Cardiovascular Pathology PROGRAMS 2, 4,	Dr. Ignacio Muñoz Carvajal (PI)
GA10	Nuclear Medicine PROGRAMS 2, 4	Dr. Juan A. Vallejo Casas (PI)
GA11	Learning and Artificial Neural Networks-AYRNA PROGRAMS 2, 3, 4, 5	Dr. César Hervás Martínez (PI)

2.4. Economic Resources

The year 2017 has been a year of consolidation for the economic structure of IMIBIC. After the period between 2013 and 2015 in which the budget of the Institute was strongly marked by obtaining extraordinary funding for the development of 3 Pre-commercial Public Procurement projects, for a total of 9 million euros, the funding raised for the 2017 has managed to reach similar levels. It is also noteworthy to mention that the funding from private sources has increased.

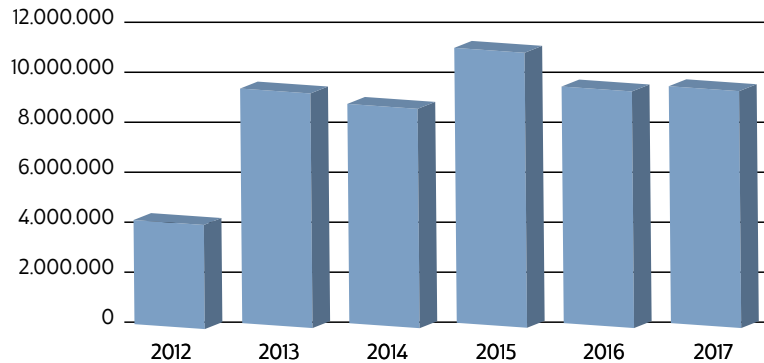
The evolution of the funding raised since 2012:

	2012	2013	2014	2015	2016	2017
Total Funds Raised	11.277.608,23	18.499.562,55	12.424.933,05	11.325.478,50	10.351.059,17	9.628.230,27



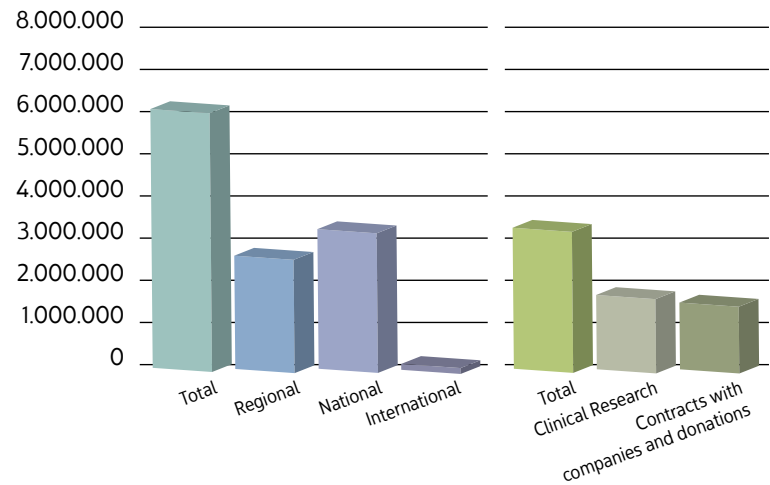
Considering that the abovementioned figures include also the funding raised for the acquisition of infrastructures (i.e. scientific equipment), we consider presenting the same figures without the budget item for infrastructures. This allows to evaluate the growth and capacity to attract specific financing for the development of R & D projects. The total funds raised, excluding the funds for infrastructures, has been as follows:

	2012	2013	2014	2015	2016	2017
Total Funds Raised Without Infrastructure	4.231.754,11	9.535.436,81	8.915.342,79	11.175.450,20	9.616.514,40	9.628.230,27



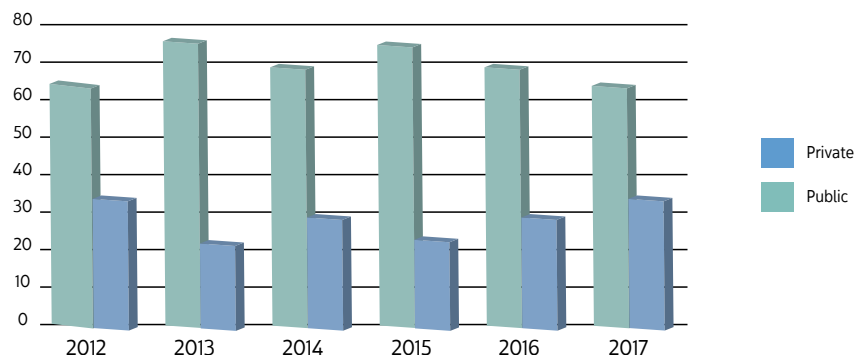
The division of the funds is as follows:

PUBLIC	6.231.726,71
Regional	2.728.309,01
National	3.361.978,61
International	141.439,09
PRIVATE	3.396.503,56
Clinical Research	1.789.050,00
Contracts with companies and donations	1.607.453,56



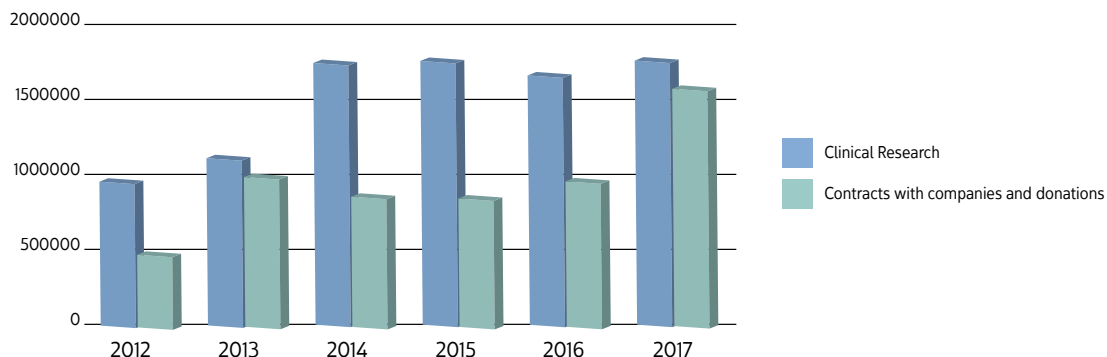
Similar to previous years, the balance between private and public funding shows that public funding remains higher than private funding. However, an increase in private funding can be observed in the last years:

FUNDING SOURCES	2012	2013	2014	2015	2016	2017
PUBLIC	65%	77%	70%	76%	70%	65%
PRIVATE	35%	23%	30%	24%	30%	35%



Regarding private funding from industry for the development of clinical studies, it is evident from the figures presented in the following table and the results reflecting the development of the institution's Plan for Clinical Research that there has been practically no growth in the amount of raised funds over the last years. IMIBIC is taking appropriate measures to reactivate the attraction of funding from industry for the coming years:

PRIVATE FUNDS	2012	2013	2014	2015	2016	2017
Clinical Research	975.149,79	1.132.818,84	1.772.682,05	1.786.513,67	1.689.229,30	1.789.050,00
Contracts with companies and donations	491.816,75	1.014.231,85	882.070,62	870.238,09	985.203,45	1.607.453,56



3

Goals achieved
in 2017


3. Goals achieved in 2017

Objectives and indicators for 2017		Results
<p>1. Promote and consolidate institutional integration in relation to human resources (Specific Actions 5, 6 and 7 of the Integration Plan) and promote and consolidate access to the different services that IMIBIC institutions provide to their professionals (Action 9).</p>	<p>Successful realization of the planned activities</p>	<p>-Action 5: Promote compensatory mechanisms for teaching activities (teaching support for non-university researchers). The Direction and Management has met with the dean of the Faculty of Medicine and Nursing, Faculty of Veterinary Medicine, and Faculty of Sciences of UCO with the aim of presenting new lines of research for the final projects (TFG) of the different degrees tutored by IMIBIC researchers, thus promoting their teaching profiles.</p> <p>-Action 6: Enable measures to establish and design a model to link university professors to the hospital and their relationships with the clinical management units. The Direction and Management has suggested that UCO professors would have the option of being considered researchers within the clinical management units of HURS they are working with.</p> <p>-Action 7: Favour the relations of non-university researchers with the university. The Direction and Management has proposed to the institutions to consider those researchers with Miguel Servet or other international competitive HR contracts (Marie Skłodowska Curie fellowships, ERC Grants, ...) to be recognised with the same contractual benefits as the holders of Ramón y Cajal grants, i.e be offered a contract as a professor at the university.</p> <p>Action 9: Make it possible for IMIBIC researchers hired by FIBICO to access university services under the same conditions as the UCO personnel. The Direction and Management has established an agreement with UCO to establish collaboration agreements with the UCO-Languages and UCO-Sports organisations.</p>
<p>2. Develop strategies to increase the quality and number of scientific publications and leadership of IMIBIC researchers.</p>	<p>≥ 27% of articles published in first decile journals</p>	<p>73 articles in first decile (17% of total nr of articles)</p>
<p>3. Promote and improve clinical research at IMIBIC, increasing the number, quality and efficiency of independent clinical research projects.</p>	<p>≥ 10 trials carried out as promoter</p>	<p>11 trials carried out as promoter</p>

Objectives and indicators for 2017		Results
4. Maximize and improve IMIBIC's self-sustainability. Optimize the management of own resources by increasing the funds from European and public competitive calls, as well as via fostering collaborations with the business fabric.	Structure income \geq 2.2 million euros. Private/public revenues \geq 46%	<ul style="list-style-type: none"> - The estimated budget of core funding for 2017 was 2.2 million euro. The final total revenue to finance the institute's core structure was 2.1 million euro. However, the expenses were adjusted to the revenues and the result does not present economic deficit. - 46% of the total budgeted funds correspond to private funds: the result of this indicator is 44%, which is very close to expected, and presents an increase in comparison with the previous years.
5. Develop a strategy for incorporating new clinical and academic groups, as well as for promoting the existing groups.	2 new groups (of which at least one emerging group) incorporated to IMIBIC. 1 group promoted to Emerging or Consolidated group category.	1 new associated group: "Visual Quality". 1 new emerging group: "Preventive Medicine". 1 group promoted to consolidated group category: "Knowledge Discovery and Intelligence Systems"
6. Increase the attraction of research talent and promote their professional development.	Nr of researcher contracts funded by competitive calls $>$ 8% of 2016 value No. of new Emerging Researchers $>$ 3	Nr of contracts funded by competitive calls $>$ 15% of 2016 value (57 vs. 66) Nr. of new Emerging Researchers = 5 Dr. Manuel Gahete Dr. Paula Moreno Dr. Antonio García Dr. Juan Muñoz Castañeda Dr. Nuria Barbarroja
7. Foster, specify and consolidate international alliances and collaborations.	Apply funding for more than 24 international projects	31 international projects applied for funding
8. Promote and increase the protection of intellectual property generated and the transfer of technology to the business fabric.	$>$ 20% of the patents exploited	22% of the patents exploited
9. Ensure the quality of the service provided by the Research Support Units and institute's management units, and promote cross-sector innovation through them.	User satisfaction \geq 85%	<p>Although satisfactory, the result didn't reach the target, which may have been overestimated. The evaluation of the possibility of re-designing the procedure to collect the data that forms part of this study has been transferred to the Quality Commission.</p> <p>User satisfaction 77,20 %</p>
10. Develop and implement an action plan to promote the research activities of medical residents.	70% of the plan implemented	75% of the plan implemented
11. Develop and implement an action plan to promote research in primary care and nursing.	70% of the plan implemented	IMIBIC has participated in the activities planned within the Primary Research Promotion Plan for the region of Andalusia.



4



External Scientific Advisory Board

4. External Scientific Advisory Board

The composition of the External Scientific Advisory Board was modified in 2014. The members of the board are:

Dr. Lina Badimon Maestro. Director of the Cardiovascular Research Centre (CSIC-ICCC) (Barcelona)

Dr. Carlos Diéguez González. Director of the Centre for Research in Molecular Medicine and Chronic Diseases (CIMUS) (Santiago de Compostela)

Dr. José María Ordovás. Senior Scientist and Director for the Nutrition and Genomics Laboratory and Chair of the Functional Genomics Core of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University (USA). Scientific Director of IMDEA Food (Madrid)



Dr. Francisco Sánchez Madrid. Professor of Immunology at the Universidad Autónoma de Madrid and Scientific Director of La Princesa Research Institute (Madrid)

Dr. Carlos López-Otín. Professor of Biochemistry and Molecular Biology at the University of Oviedo (Oviedo)

The annual ordinary meeting took place on November 22, 2017. The members expressed their opinions on matters such as the management of the Institute, incorporation of new research groups, the implementation of strategic initiatives, the scientific structure, and budget for 2017.

5

Participation in Networks

5. Participation in Networks

IMIBIC researchers are involved in a wide range of strategic initiatives coordinated by the National Institute of Health Carlos III (ISCIII) and they participate in its National Research Networks program, through the Networks for Cooperative Research in Health (RETICs in Spanish) and the Biomedical Research Networking Centers (CIBERs in Spanish). In addition, IMIBIC is member of the new platforms that support research in health sciences and technologies.

Among the 42 groups integrated in the IMIBIC, 22 participate in partnership programs related to different ISCIII strategic initiatives. 11 groups are involved in 8 different RETICs. Additionally, 11 groups are involved in 5 CIBERs and there are 33 groups involved in the Andalusian Plan for Research, Development & Innovation (PAIDI Program).

CIBER Program

Our researchers lead the following CIBER nodes:

CIBER	Principal Investigator (PI) /Collaborators
CIBER on Obesity and Nutrition (CIBERobn)	José López Miranda (PI)
	Manuel Tena-Sempere (PI)
	Mercedes Gil Campos (PI)
	M ^o Mar Malagón Poyato
	Justo P. Castaño Fuentes
CIBER on Liver and Digestive Diseases (CIBERehd)	Manuel de la Mata García (PI)
CIBER on Rare Diseases (CIBERER)	Eduardo López Laso
	Rafael Camino León
CIBER on Fragility and Healthy Aging (CIBERFES)	Jose Manuel Quesada Gómez (PI)
	Feliciano Priego Capote
	Manuel Rich Ruiz
CIBER on Cancer (CIBERONC)	Enrique Aranda Aguilar (PI)

Plataforms

IMIBIC has become member of the new platforms that support research in health sciences and technologies of the National Institute of Health Carlos III:

- Medical Technology Innovation Platform (ITEMAS)
- Biomolecular and Bioinformatics Resources Platform
- Spanish Clinical Research Network –SCReN
- Biobanks Platform

RETICS Program

List of ISCIII thematic network centers that the IMIBIC is involved in:

Name of the Network	Principal Investigator (PI)/Collaborators
Spanish AIDS research network (RIS)	Antonio Rivero Román (PI)
Spanish Renal Research Network (REDinREN)	Pedro Aljama García (PI)
	Mariano Rodríguez Portillo
Spanish Network for Research in Infectious Diseases (REIPI)	Julián de la Torre Cisneros (PI)
	Rafael Solana Lara
	Luis Martínez Martínez
The Spanish National Biobank Network	Manuel Medina Pérez
Primary Care Prevention and Health Promotion Network (RedIAPP)	Luis A. Pérula de Torres
Spanish Network for asthma, adverse and allergic reactions (ARADYAL)	Carmen Moreno Aguilar (PI)
The Research Network for Inflammation and Rheumatic Diseases (RIER)	Eduardo Collantes Estévez (PI)
The Spanish Network of Multiple Sclerosis (REEM)	Eduardo Agüera Morales (PI)
	Isaac Túnez Fiñana
Healthcare Research Unit (Investén-ISCIII)	Manuel Rich Ruiz
Prevention, Early detection, Treatment and Rehabilitation of Ocular Pathologies	José M ^o Gallardo Galera (PI)

The Andalusian Plan for Research, Development and Innovation (PAIDI)

Many IMIBIC researchers belong to or lead groups formed under the Andalusian Plan for Research, Development and Innovation (PAIDI, in Spanish).

BIO-139	Principal investigator	Justo P. Castaño Fuentes
BIO-139	Collaborator	María Del Mar Malagón Poyato
BIO-216	Principal investigator	José Antonio Bárcena Ruiz

BIO-272	Principal investigator	Manuel Ruiz Rubio
BIO-301	Principal investigator	Rafael Rodríguez Ariza
BIO-310	Principal investigator	Manuel Tena Sempere
BIO-304	Collaborator	Ángel Salvatierra Velázquez
CTS-208	Collaborator.	Rafael Solana Lara
CTS-179	Principal investigator	Escolástico Aguilera Tejero
CTS-212	Principal investigator	Francisco Pérez Jiménez
CTS-273	Principal investigator	Manuel de la Mata García
CTS-234	Principal investigator	Enrique Aranda Aguilar
CTS-260	Principal investigator	Pedro Aljama García
CTS-273	Collaborator	Francisco Javier Briceño Delgado
CTS-329	Principal investigator	Ramón Cañete
CTS-413	Principal investigator	José Manuel Quesada Gómez
CTS-452	Principal investigator	Luis A. Pérula de Torres
CTS-525	Principal investigator	José López Miranda
CTS-639	Principal investigator	María Mercedes Gil Campos
CTS-620	Principal investigator	Francisco Velasco Gimena
CTS-624	Principal investigator	Isaac Túnez Fiñana
CTS-647	Principal investigator	Julián Carlos de la Torre Cisneros
CTS-651	Principal investigator	Juan Antonio Paniagua González
CTS-666	Principal investigator	Aurora Rodríguez Borrego
CTS-985	Principal investigator	José Peña Amaro
CTS-992	Principal investigator	Bernabé Jurado Gámez
CTS-1004	Principal investigator	Eduardo Collantes Estevez
FQM-227	Principal investigator	María Dolores Luque de Castro
HUM-414	Principal investigator	Carmen Tabernero Urbietá
HUM-924	Principal investigator	Juan Antonio Moriana
TIC-122	Principal investigator	Sebastián Ventura Soto
TIC-148	Principal investigator	César Hervás Martínez
TIC-161	Principal investigator	Rafael Medina Carnicer

6

Training Activities

6. Training Activities

6.1. Introduction

The Institute conceives training as a fundamental institutional tool to fulfil and improve its scientific goals. Thus, a multifaceted program is designed on an annual basis to foster and provide high-quality scientific training to our researchers, which is adapted to the different stages of their scientific career. It includes the organization of an annual program of seminars by known national and international leaders in trending scientific topics, and courses that cover concepts related to our current lines of research as well as practical applications on the latest technologies. Along with these activities, the Institute maintains two key training activities: the annual Young Investigators Meeting, aimed at fostering the interaction and exchange of knowledge among our youngest researchers, and the “Maimonides Commemorative Lecture” which includes lectures by leading experts in Biomedicine, and is intended to recognize and award our top scientists. Finally, the IMIBIC is responsible of a PhD Program in Biomedicine and also participates in two additional PhD programs of the University of Cordoba, that, in all, are aimed to train highly qualified researchers, promote teaching and favour professional qualification in the field of biomedical sciences.

The Training Program Director: Prof. M^o del Mar Malagón, PhD.

6.2. Training Programmes

6.2.1 PhD in Biomedicine

IMIBIC leads a unique PhD Program in Biomedicine. This program, coordinated by Prof. Dr. María M. Malagón, aims to train qualified professionals and to promote the development of professional skills in the field of biomedical sciences.

Website: <http://www.uco.es/idep/doctorado/programas/biomedicina>

6.2.2. Master's Degrees

The Master's Degree Program associated to the IMIBIC encompasses three degrees, one of them led by a member of the IMIBIC, as follows

- Translational Biomedical Research

Academic Director: Prof. Raúl M Luque Huertas, PhD. (IMIBIC)

Website: <http://www.uco.es/estudios/idep/masteres/investigacion-biomedica-traslacional>

- Human Nutrition

Academic Director: Prof. Rafael Moreno Rojas, PhD.

Website: <http://www.uco.es/estudios/idep/masteres/nutricion-metabolismo>

- Biotechnology

Academic Director: Prof. Nieves Abril Díaz, PhD.

Website: <https://www.uco.es/estudios/idep/masteres/biotecnologia>

6.3. Training Activities

6.3.1. Courses and Workshops

Specific courses, seminars and other training activities in different research areas were held during 2017 at the IMIBIC.

Title	Duration	Organizer
Data Analysis & Visualization Club	3h	IMIBIC - Dr. Juan Ruano Ruiz
Técnicas avanzadas de genómica y aplicaciones: Aplicaciones de NGS (Next Generation Sequencing)	4h	IMIBIC & WERFEN
Comercialización y Relación con las Empresas	1,5h	IMIBIC & ITEMAS
Cómo preparar un CV en las plataformas Investiga+ y FECYT	1,5h	IMIBIC
Cómo realizar presentaciones orales en biomedicina	9h	IMIBIC & FUNDACIÓN ESTEVE
Creación y gestión de bases de datos en investigación clínica	2h	IMIBIC
Curso Avanzado de Lectura Crítica de Metodología y Estadística en Investigación Biomédica	2,5h	IMIBIC
CVN para convocatorias nacionales: Como cumplimentarlo correctamente	2h	IMIBIC
Diseñar la semilla empresarial: primera fase del proyecto emprendedor	1,5h	IMIBIC & ITEMAS ISCIII
El know-how, su protección y transferencia a debate	1h	IMIBIC & ITEMAS ISCIII
El Plan de Empresa: una herramienta esencial para una empresa de base tecnológica	1,5h	IMIBIC
El proceso de transferencia tecnológica en biomedicina	1,5h	IMIBIC
Enfermería basada en la evidencia	8h	IMIBIC - GA02: Comprehensive Nursing Care. Multidisciplinary Perspective
Estrategia financiera para las spin-off	1,5h	IMIBIC - ITEMAS ISCIII
Gestión de Servicios de Nefrología Módulo II	2 days	IMIBIC & Escuela Andaluza de Salud Pública
I CAMPUS DE FORMACIÓN EN BIOMEDICINA. La interfase entre la industria y el médico clínico: ¿Se necesita un modelo especial?	17h	IMIBIC - HURS - Internal Medicine
II Curso teórico-práctico del tratamiento del queratocono	8h	IMIBIC - HURS
Lectura Crítica de Metodología y Estadística en Investigación Biomédica	5h	IMIBIC
Modelos de negocio de éxito	1,5h	IMIBIC & ITEMAS ISCIII
Recuperación de la información en la biblioteca virtual-sspa. Gestores bibliográficos	4h	BVSSPA & HURS & IMIBIC

Publicar con impacto. Como analizamos la producción científica	4h	BVSSPA & HURS & IMIBIC
Comunicación social en salud: el Community Manager y la reputación online	4h	BVSSPA & HURS & IMIBIC
New CytoFLEX LX series Roadshow	6,5h	IMIBIC & Beckman Coulter
Gestión clínica en los servicios de urgencias de atención primaria y hospitales	112h	HURS
Preparación de propuestas de proyectos europeos Horizonte 2020	1h	IMIBIC & FPS
Presentación del grupo de investigación ingeniería Biomédica US-CIBER-BBN	1h	IMIBIC
Principales instrumentos públicos para financiar proyectos de I+D+i	1h	IMIBIC
Systematic reviews & meta-analyses course	56h	IMIBIC & Cochrane Skin
Cómo poner en marcha un estudio clínico	1h	IMIBIC
Técnicas avanzadas de genómica y aplicaciones: Aplicaciones de NGS (Next Generation Sequencing)	2h	WERFEN
High-Content Analysis System workshop	6h	IMIBIC - Unit of Microscopy, Cytomics and Imaging
XI Curso de actualización: Escenarios clínicos de la práctica diaria en diabetes tipo 2	8h	HURS - Dr. Rafael Palomares, Dr. Juan José García
XII Curso de Formación Avanzada en Protección y Experimentación Animal	80h	SAEX UCO

6.3.2. Events and conferences

TITLE	DURATION	ORGANIZER
Abordaje multidisciplinar para pacientes con esclerosis múltiple	4h	IMIBIC - HURS
Bienvenida prácticas FP IMIBIC	1h	IMIBIC
Bienvenida Residentes IMIBIC	1h	IMIBIC - HURS
Feria de Posgrado UCO	2 days	UCO - IDEP
III Jornada de Investigación Traslacional en Enfermedades Raras	11,5h	IMIBIC - Centro de Referencia Andaluz de Enfermedades Raras
Investigación en Alzheimer	5h	IMIBIC & Alzheimer Córdoba
IV Encuentro de Enfermería de Medicina Interna	4h	HURS
Jornada Hematología	7h	CELGENE
Manejo de insectos himenópteros en alergia	12h	ALK

PREMIOS IMIBIC ROCHE	4h	ROCHE
VII Lección Maimónides	4h	IMIBIC
VIII Jornada de Jóvenes Investigadores IMIBIC	2 days	IMIBIC
XVII jornadas científicas de medicina familiar y comunitaria de Córdoba	2h	UDMFyC & Dr. Luis Ángel Pérula de Torres
XX reunión de actualización en tratamiento oncológico: tumores digestivos	2 days	IMIBIC
XXXIII congreso de la sociedad andaluza de medicina interna	6,5h	IMIBIC – HURS – Internal Medicine

6.3.4 Other activities

TYPE OF ACTIVITY	TITLE	DURATION	ORGANIZER
INFO SESSION	Carrera Investigadora	2,5h	IMIBIC & FPS
INFO SESSION	Convocatoria de Ayudas de la Consejería de Salud en 2017 para la Financiación de la Investigación, Desarrollo e Innovación (I+D+i) Biomédica y en Ciencias de la Salud en Andalucía	1h	IMIBIC & FPS
INFO SESSION	Novedades de las convocatorias del ISCIII 2017	1h	IMIBIC
INFO SESSION	Sesión informativa Work Programme SC1 2018-2020: Experto de OPE-IS-CIII y Encuentro	3h	IMIBIC & FPS
LECTURE	Actualización en Leucemia Linfática Crónica	4h	JANSSEN
CLINICAL SESSION	Sorafenib: "10 años junto al Tratamiento del Hepatocarcinoma"	3h	BAYER
CLINICAL SESSION	Darzalex: primer anticuerpo monoclonal anti CD38	1,5h	HEMATOLOGY JANSSEN

6.3.5 IMIBIC Research Seminars

Regular seminars and research events offer the opportunity to meet recognized national and international speakers covering a diverse range of topics in biomedicine. IMIBIC research seminars promote networking and contribute to strengthen the knowledge of the research community of the Institute. The Institute launches a yearly cycle of seminars aimed at promoting interactions, sharing ideas, and strengthening the bonds among IMIBIC scientists and recognised scientist from other research institutions. In 2017, a total of 21 external seminars were presented.

In addition, young researchers (preferentially post-doctoral researcher) of our Institute have the opportunity to present their ongoing studies in a fortnight-scheduled cycle of intramural seminars, which was launched for the first time in 2015. In 2017, a total of 9 intramural seminars were held.

JANUARY		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
2	-	Date: 12/01/2017 Speaker: Elena López-Guadamillas Organisation: Centro Nacional de Investigaciones Oncológicas (CNIO) Title: Papel de PI3K en obesidad y síndrome metabólico: Estudios mecanísticos y traslacionales
3	Date: 17/01/2017 Speaker: Juana Serrano Group: GC16 Title: Hematopoyesis e inflamación	Date: 19/01/2017 Speaker: Mónica García Alloza Organisation: Área de Fisiología, Facultad de Medicina, Universidad de Cádiz Title: Análisis de las interacciones entre la obesidad y las enfermedades neurodegenerativas: Modelos preclínicos e implicaciones traslacionales
4	Date: 26/01/2017 Speaker: Carmen García Martínez Group: Escuela Politécnica Superior de Córdoba, Profesora Titular de Física Aplicada Title: Los plasmas en la Medicina	-
5	Date: 31/01/2017 Speaker: Carmen Navarrete Group: GC04 Title: Nuevos derivados cannabinoides en neuroprotección y neuroinflamación. Eficacia en Esclerosis Múltiple	-
FEBRUARY		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
6	-	Date: 9/02/2017 Speaker: Alejandro Rodríguez González Organisation: Universidad Politécnica de Madrid Title: Redes complejas de enfermedades humanas: análisis y creación a gran escala
7	Date: 14/02/2017 Speaker: Alicia Villa OSaba Group: GC08 Title: Avances en la (pato)fisiología de somatostatina y cortistatina en cáncer de mama y obesidad: ¿dos simples análogos?	-
8	Date: 21/02/2017 Speaker: José Miguel Bretones Group: GA02 Title: Cuidados enfermeros integrales. Perspectiva multidisciplinar	Date: 23/02/2017 Speaker: Guillermo Velasco Diez Organisation: Universidad Complutense de Madrid Title: Towards the utilization of cannabinoids as anticancer agents... and other stories inspired by cannabis

MARCH		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
9	-	Date: 02/03/2017 Speaker: María Domínguez Organisation: Instituto de Neurociencias, UMH-CSIC Title: The neurobiology of 'puberty' and reproduction: a view from Drosophila
10	Date: 07/03/2017 Speaker: Rocío Guzmán Group: GC11 Title: Identificación de nuevos marcadores de disfunción del tejido adiposo en obesidad y resistencia a insulina	Date: 09/03/2017 Speaker: Teresa Giráldez Organisation: Institute of Biomedical Technologies (ITB) & University of La Laguna Title: Ion channels in health and disease
11	-	Date: 16/03/2017 Speaker: Savino Sciascia Organisation: Universidad de Torino, Italia Title: New perspectives in Antiphospholipid Syndrome
12	-	Date: 23/03/2017 Speaker: Jose Ramón Banegas Banegas Organisation: Universidad Autónoma de Madrid, Facultad de Medicina, Departamento de Medicina Preventiva y Salud Pública Title: Investigación clínica y epidemiológica en prevención cardiovascular. Algunos datos y retos
APRIL		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
14	Date: 04/04/2017 Speaker: Valeria Barresi Group: GE01 Title: Molecular profile of brain tumours	Date: 06/04/2017 Speaker: Juan C. Cigudosa Organisation: Asociación Española de Genética Humana. Centro Nacional de Investigaciones Oncológicas (CNIO) y Director Científico de NIMGenetics Title: Medicina Personalizada de Precisión
16	Date: 18/04/2017 Speaker: Nuria Barbarroja Group: GC05 Title: Papel patogénico de los neutrófilos en las enfermedades autoinmunes	-
17	-	Date: 27/04/2017 Speaker: Ernestina Menasalvas Organisation: Universidad Politécnica de Madrid Title: Electronic health record analysis to support evidence based medicine

MAY		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
18	-	Date: 05/05/2017 Speaker: Javier Casado García Organisation: Unidad de Terapia del Centro de Cirugía de Mínima Invasión, Title: Aplicabilidad de Células Madre Mesenquimales en el tratamiento de enfermedades de base inflamatoria
19	-	Date: 08/05/2017 Speaker: Nicolas Heureux Organisation: DIAsource Immunoassays Title: Should we measure free or total 25OH Vitamin D?
	-	Date: 09/05/2017 Speaker: Eduard Batlle Organisation: Colorectal Cancer Laboratory, Institute for Research in Biomedicine (IRB), Barcelona Title: Papel del microambiente tumoral en la progresión del cáncer colorrectal
20	Date: 16/05/2017 Speaker: Delphine Franssen Group: GC10 Title: Alteration of the neuroendocrine control of puberty after postnatal exposure to Endocrine Disrupting Chemicals	Date: 18/05/2017 Speaker: Oriol de Barrios Barri Organisation: Institut d'investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) Title: ZEB1 promueve la progresión tumoral mediante la inhibición de la senescencia celular
21	-	Date: 22/05/2017 Speaker: Paulino Tallón de Lara Organisation: Institute of Experimental Immunology, University of Zurich Title: Dual formation MD-PhD for physician scientists. Building bridges between lab and clinic
JUNE		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
22	-	Date: 01/06/2017 Speaker: Jesús María Hernández Rivas Organisation: Hospital Univ. Salamanca. Instituto Investigación del Cáncer de Salamanca Title: Edición génica CRISPR en Hemopatías
24	-	Date: 15/06/2017 Speaker: Dr Eduardo Eyrás Organisation: Universitat Pompeu Fabra Title: Splicing y cáncer

NOVEMBER		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
44	-	Date: 02/11/2017 Speaker: María Laura García Organisation: Instituto Ramón y Cajal de Investigación Sanitaria (IRYCIS) Title: MiRNAs como nuevos biomarcadores de nefropatías útiles en la práctica clínica
47	-	Date: 23/11/2017 Speaker: Óscar Fornas Organisation: Universitat Pompeu Fabra Title: Identificación y aislamiento de exosomas mediante citometría de flujo
48	-	Date: 29/11/2017 Speaker: Roberto Manfredi Organisation: University of Ferrara, Italy. Title: Chronobiology, gender and health
DECEMBER		
WEEK	INTRAMURAL SEMINARS	EXTERNAL SEMINARS
50	-	Date: 14/12/2017 Speaker: Miguel Valcárcel Organisation: Analytical Chemistry, University of Cordoba Title: Nanoteragnosis: combinación de terapias y diagnósticos con base nanotecnológica

6.4 Institutional Events

6.4.1 8th IMIBIC Young Investigator Meeting

The IMIBIC Young Investigator Meetings is intended to provide the ideal environment to strengthen the skills and knowledge of young scientists, fostering translational research by facilitating the interface between experimental basic science and clinical medicine to improve health and the quality of life. By sharing the results obtained by young researchers at the IMIBIC and related centers, including other groups of the University of Cordoba, we intend to encourage inter-disciplinary research and, especially, quality training.

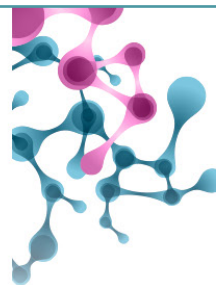
The objectives of the Meetings are:

- To provide a platform to discuss the latest knowledge and methods in translational medical research.
- To promote interactions and the exchange of ideas between pre- and post-doctoral scientists and strengthen the bonds among research groups.
- To facilitate interdisciplinary actions and communication in order to bring together basic and clinical research.
- To foster and provide high-quality scientific training to young researchers.
- To consolidate the annual IMIBIC Meetings as a youthful and fresh reference forum for the research community and, in particular, for our young researchers.

The 8th Meeting took place at the IMIBIC Building on 30–31 May 2017. The Meeting program included different sessions encompassing the IMIBIC Scientific Programs, as follows:

8th IMIBIC YOUNG INVESTIGATORS MEETING

IMIBIC Building • Conference Room • Córdoba, 30-31 May, 2017



Programme

Day 1 (30th MAY)

08:30 – 09:00 Registration and Poster display

09:00 – 09:30 Opening ceremony

09:30 – 11:00 **SESSION I. Nutrition, Endocrine and metabolic diseases**

Ia 09:30 – 9:45 Atrial fibrillation, genetic and biomarkers in the Atherosclerosis Risk in Communities Study.
Antonio Pablo Arenas de Larriva

Ib 09:45 – 10:00 Adipokines and their receptors are widely expressed in mouse prostate and are distinctly regulated therein by the metabolic environment.
André Sarmento Cabral

Ic 10:00 – 10:15 Perturbed central ceramide signaling as novel mechanism for obesity-induced precocious puberty: Evidence from preclinical studies.
Violeta Heras Domínguez

Id 10:15 – 10:30 Unbalanced proteostasis in preadipocytes in obesity-related metabolic disease.
Julia Sánchez Ceinos

Ie 10:30 – 10:45 Chronic consumption of a Mediterranean diet improves endothelial dysfunction in patients with diabetes mellitus.
José David Torres Peña

If 10:45 – 11:00 Involvement of a novel AMPK-Kisspeptin pathway in the metabolic control of puberty.
Alexia Barroso Romero

11:00 – 11:30 Coffee Break

11:30 – 12:15 **Poster Showcase. SESSION I Nutrition, Endocrine and metabolic diseases & SESSION I Active ageing and fragility. Infectious and Immunological diseases. Organ transplantation**

12:15 – 13:45 **SESSION II. Active ageing and fragility. Infectious and Immunological diseases. Organ transplantation**

Ila 12:15 – 12:30 A prospective study to evaluate the impact of early everolimus on the recurrence of hepatocellular carcinoma after liver transplantation.
Beatriz Gros Alcalde

17:15 – 17:45 Posters

17:45 – 19:15 **SESSION IV. Cancer (Oncology and Oncohematology)**

Iva 17:45– 18:00 Components of the splicing machinery are drastically dysregulated in neuroendocrine tumors and associated with malignancy and aggressiveness.
Sergio Pedraza Arévalo

Ivb 18:00 – 18:15 Development of a CRISPR-based system to reactivate epigenetically silenced genes.
Iván Devesa Guerra

Ivc 18:15 – 18:30 Use of MALDI imaging technology to predict the response to antiangiogenic therapy in colorectal cancer.
Francisco Manuel Conde Pérez

Ivd 18:30 – 18:45 Diagnostic accuracy of MRI-Transrectal Ultrasound Fusion prostate Biopsy in men with previous prostate biopsies: The FUPROS16 project.
Enrique Gómez Gómez

Ive 18:45 – 19:00 Metabolomics analysis of human sweat by gas chromatography–time of flight/mass spectrometry.
María del Mar Delgado Povedano

IVf 19:00 – 19:15 Alteration of nitric oxide production targets cancer stem cells in breast cancer and augments the efficacy of anti-hormonal therapy.
Laura M. López Sánchez

Day 2 (31th MAY)

08:30 – 09:00 Registration and Poster display

09:00 – 10:30 **SESSION V. Nutrition, Endocrine and metabolic diseases**

Va 09:00 – 09:15 Identification of candidate serum biomarkers of pediatric Growth Hormone deficiency using SWATH-MS next-generation proteomics and feature selection algorithms.
Ignacio Ortea García

Vb 09:15 – 09:30 Gender interacts with metabolic abnormalities to influence carotid atherosclerosis in elderly patients.
M^a Magdalena Pérez Cardelo

- Ila 12:15 – 12:30 A prospective study to evaluate the impact of early everolimus on the recurrence of hepatocellular carcinoma after liver transplantation.
Beatriz Gros Alcalde
- Ilb 12:30 – 12:45 Quality of Life of Informal Caregivers of People with Alzheimer's Disease, Conductual Intervention.
Patricia Luque Carrillo
- Ilc 12:45 – 13:00 External validation of a risk score for carbapenm-resistant Klebsiella pneumoniae bloodstream infection in a prospective cohort of rectal carriers.
Ángela Cano Yuste
- Ild 13:00 – 13:15 Vitamin E from food sources can prevent cellular aging: CORDIOPREV study.
Andreea Corina Baba
- Ile 13:15 – 13:30 Effect of hypoxic preconditioning on rat Adipose Derived Mesenchymal Stem Cells (ASCs) functionality. Study in a diabetic rat model.
Ana María López Díaz
- Ilf 13:30 – 13:45 Diagnosis of acute hepatitis E genotype 3 infection by viral isolation from saliva.
Pedro López López
-
- 13:45 – 14:15 In Memory of Enrique Aguilar Benítez de Lugo**
-
- 14:15 – 15:45 Lunch**
-
- 15:45 – 17:15 SESSION III. Chronic and Inflammatory diseases**
- Illa 15:45 – 16:00 Assessment of short-term effectiveness of five local treatment modalities in patients with symptomatic knee osteoarthritis.
M^a Lourdes Ladehesa Pineda
- Illb 16:00 – 16:15 Regulation of Renal Klotho and FGFR1 Expression.
Ma Victoria Pendón Ruiz de Mier
- Illc 16:15- 16:30 Diagnostic potential of NETosis-derived products for disease activity, atherosclerosis and therapeutic effectiveness in Rheumatoid Arthritis patients.
Patricia Ruiz Limón
- Illd 16:30 – 16:45 Lithium recovers altered mechanosensory and locomotory behaviors in neuroligin- and neurexin-deficient mutants of *Caenorhabditis elegans*.
Ángel Rodríguez Ramos
- Ille 16:45 -17:00 Defective glucose and lipid metabolism in rheumatoid arthritis is determined by chronic inflammation in metabolic tissues.
Iván Arias de la Rosa
- Illf 17:00 – 17:15 Consumption of alcoholic beverages in nursing students at the University of Cordoba.
Pedro Manuel Rodríguez Muñoz

- Vc 09:30 – 09:45 Mechanisms and consequences of obesity-induced hypogonadism: Role of a novel hypothalamic miR-137/Kisspeptin pathway.
María Soledad Avendaño Herrador
- Vd 09:45 – 10:00 Evaluation of the metabolic and inflammatory status in prepuberal children with a history of Extra-uterine Growth Restriction or Prematurity.
M^a Dolores Ordoñez Díaz
- Ve 10:00 – 10:15 Significance of circulating miRNAs as predictive biomarkers in pre-diabetes and new diagnosed type 2 diabetes mellitus.
Rosa Jiménez Lucena
- Vf 10:15 – 10:30 Plasma profile of cytokines and adhesion molecules in children with autism spectrum disorder.
Cristina Pérez García

10:30 – 11:00 Coffee Break

11:00 – 11:45 Poster Showcase. SESSION II Chronic and Inflammatory diseases & SESSION II Cancer (Oncology and Oncohematology)

11:45 – 13:00 SESSION VI. Cancer (Oncology and Oncohematology)

- Vla 11:45 – 12:00 The Splicing Machinery is Profoundly Deregulated in Prostate Cancer: Pathological and Clinical Implications.
Juan Manuel Jiménez Vacas
- Vlb 12:00 – 12:15 Targeted DNA demethylation in human cells by fusion of a plant 5-methylcytosine DNA glycosylase to a sequence-specific DNA binding domain.
Jara Teresa Parrilla Doblas
- Vlc 12:15 – 12:30 Regulation of Notch1 expression and activity by DYRK2: New Insights of Carcinogenesis Signaling Pathways.
Rosario Morrugares Carmona
- Vld 12:30 – 12:45 Neutrophil-to-Lymphocyte Ratio as prognostic factor in SBRT for Lung Cancer.
Fabiola Romero Ruperto
- Vle 12:45 – 13:00 Plasmatic Levels of miRNAs as Reliable Diagnostic Tool for Prostate Cancer Patients.
Vicente Herrero Aguayo

13:00 – 14:00 Plenary Lecture. Dr. Roger Gomis, IRB Barcelona

14:00 – 14:30 Awards and Closing ceremony

6.4.2 6th Maimonides Commemorative Lecture and IMIBIC awards 2017

The aim of this initiative is to recognize the biomedical research carried out by IMIBIC staff and to emphasize the importance of the results obtained at the Institute. In 2017 the “Enrique Aguilar Benítez de Lugo” Prize was awarded to the most relevant scientific publication in collaboration with international groups, together with an Award for the best master’s degree thesis, and two Awards for the most relevant translational research results. A special prize was also awarded to the most valuable news that had been published in press regarding IMIBIC activities.

In each edition, an outstanding biomedical scientist is invited to give the “Maimónides Lecture”, a conference focusing on the latest knowledge on basic, applied, and/or translational biomedical science of excellence. In 2017, the guest was Dr. José López Barneo. Dr. López Barneo is the scientific director of the Institute of Biomedicine of Seville (IBIS), University of Seville/Spanish Research Council/University Hospital Virgen del Rocío, Seville, Spain, and principal investigator of the group “Cellular Neurobiology and Biophysics” at the IBIS. He is doctor of Medicine and Surgery, Full Professor of Physiology of the University of Seville, and Coordinator of Research at University Hospital Virgen del Rocío. He has been awarded several prizes, among others the National Research Award “King Jaime I” in Science and Technology, National Research Award “King Juan Carlos I” in Science and Technology, or the Research award Medal of the Andalusian Government. The research work of Dr. Lopez-Barneo has been published in more than a hundred publications in highly ranked international journals. Dr. Lopez-Barneo is one of the most cited physiologists in Spain. He was awarded a 2014 ERC Advanced Grant.

In addition to the aforementioned prizes, a special prize was awarded to the Reina Sofía University Hospital in Córdoba, for its contribution to the advancement of biomedical and health research, commemorating the 40th anniversary of its creation.

VII LECCIÓN CONMEMORATIVA MAIMÓNIDES Y PREMIOS IMIBIC 2017



22 de noviembre
Salón de Actos IMIBIC



PROGRAMA

16:15h Acto de apertura

16:30h Entrega de premios anuales y presentación de premiados

- Premio al mejor trabajo de Máster defendido en 2015/2016.
Juan Manuel Jiménez Vacas - GC08.
"La variante de splicing sst5TMD4 incrementa la malignidad del cáncer de próstata alterando rutas de señal clave, oncogenes y supresores tumorales"
- Premios a la traslacionalidad de los resultados de investigación.
 - Categoría 1. Mejor iniciativa que suponga una nueva aportación a la cartera de servicios del entorno sanitario resultado de la labor investigadora o bien la participación en una guía de práctica clínica con criterios de calidad internacional (AGREE).
Pablo Pérez Martínez- GC09.
"Lifestyle recommendations for the prevention and management of metabolic syndrome: an international panel recommendation"

- **Categoría 2. Premio al registro, patente o “spin off” que se considere con más potencialidad para mejorar problemas de salud.**

Manuel David Gahete Ortiz - GC08.

“Método diagnóstico no invasivo del cáncer”

- **Premio al trabajo periodístico de mayor valor para el IMIBIC.**

Ángela Alba Mora - El Día de Córdoba.

“Enfermedades raras. El valor de la investigación”

- **Premio a la Publicación Científica más relevante en colaboración con grupos internacionales.**

Rubén Ciria Bru - GC18.

“Comparative Short-term Benefits of Laparoscopic Liver Resection: 9000 Cases and Climbing”

- **Premio “Enrique Aguilar Benítez de Lugo” a la publicación más relevante.**

Ignacio Ortea García –Unidad de Proteómica.

“Discovery of potential protein biomarkers of lung adenocarcinoma in bronchoalveolar lavage fluid by SWATH MS data-independent acquisition and targeted data extraction”

Raúl Luque Huertas – GC08.

“Ghrelin O-acyltransferase (GOAT) enzyme is overexpressed in prostate cancer, and its levels are associated with patient’s metabolic status: Potential value as a non-invasive biomarker”

17:50h Lección Conmemorativa Maimónides

Prof. Dr. José López Barneo (IBiS)

18:50h Acto de clausura

19:00h Copa de vino andaluz



6.5. Results of the Training Activities

6.5.1 Doctoral Theses

The Institute holds the PhD Program on Biomedicine, which helps prepare young scientists in biomedical and clinical research. Experienced mentors in the IMIBIC supervise the research training in health and health-related areas of a considerable number of pre-doctoral students. A list is provided below of the 30 Doctoral Theses supervised by researchers from the Institute that were presented in 2017.

Author	Title	Director(s)	
Trávez García, Andrés Ricardo	Caracterización de nuevos marcadores reguladores del funcionamiento del tejido adiposo	M ^o del Mar Malagón	Rafael Vázquez Martínez
Alcalá Díaz, Juan Francisco *	Metabolismo energético postprandial y su relación con el síndrome metabólico en pacientes con enfermedad coronaria	Jose López Miranda	Javier Delgado Lista
Hormaechea Agulla, Danie l*	Functional role and therapeutic potential of the somatostatin and ghrelin systems and their splicing variants in prostate cancer	Raúl M. Luque Huertas	Justo P. Castaño Fuentes
Pérez Sánchez, Carlos *	Mecanismos de aterosclerosis y enfermedad cardiovascular en enfermedades autoinmunes sistémicas: integración de análisis inmunológicos, moleculares y epigenéticos	Rosario López Pedrera	Nuria Barbarroja Puerto
Guirao Arrabal, Emilio	Incidencia y factores de riesgo de tuberculosis en el trasplante de pulmón: importancia de la profilaxis	Julián de la Torre Cisneros	Verónica Muñoz Romero
Morales Estévez, Cristina	Genes KIR y sus ligandos como predictores de respuesta a anticuerpos monoclonales anti-EGFR en tumores sólidos"	Juan de la Haba Rodríguez	Enrique Aranda Aguilar
Fernández Peralbo, María Auxiliadora	Aportaciones de la metabolómica al análisis clínico orientado y global mediante cromatografía y espectrometría de masas	Feliciano Priego Capote	M ^o Dolores Luque de Castro
Del Río Mercado, Carmen	Desarrollo y caracterización de nuevos derivados de cannabinoides no psicotrópicos para el tratamiento de enfermedades inflamatorias	Eduardo Muñoz Blanco	Irene Cantarero Carmona
Medina Fernández, Francisco Javier	efecto neuroprotector de la aplicación transcraneal de campos electromagnéticos en un modelo experimental de encefalomielitis autoinmune	Isaac Túnez Fiñana	René Drucker Colín
García Martínez, Lucrecia	Impacto de un programa de validación de antimicrobianos de uso restringido en la resistencia microbiana: estudio de intervención antes-después	Julián de la Torre Cisneros	

Author	Title	Director(s)	
Calvo Gutiérrez, Jerusalem	Análisis de la expresión clínico-radiográfica del daño estructural de origen inflamatorio en pacientes con espondiloartritis	Rosario López Pedrera	Juan Luis Garrido Castro
Ortega Castro, María Rafaela	Efecto del tocilizumab sobre el perfil aterotrombótico en pacientes con artritis reumatoide: análisis de la función endotelial y la inflamación	Nuria Barbarroja Puerto	Rosario López Pedrera
Lucía Fernández del Río*	Regulación de la biosíntesis del coenzima Q a través de intervenciones nutricionales y farmacológicas	Jose Manuel Villalba Montoro	M ^o Isabel Burón Romero
Morais Sarmiento Borges Cabral, André *	Factores moleculares, celulares y endocrino-metabólicos implicados en la interacción patológica entre la obesidad y el cáncer de próstata: Papel terapéutico de la metformina	Raúl M. Luque Huertas	
León del Pino, María Carmen	Prevalencia del "mismatch" prótesis-paciente tras implante percutáneo de prótesis aórtica, e impacto pronóstico a medio plazo	Manuel Pan Álvarez Osorio	Dolores Mesa Rubio
Puentes Torres, Rafael Carlos	Aceptabilidad y factibilidad del cribado oportunista de VIH en Atención Primaria	Cristina Aguado Taberné	Luis Ángel Pérula de Torres
Agüera Morales, Eduardo	Respuesta in vivo de las células satélites a extractos musculares. Diferencias entre músculos lentos y rápidos	José Peña Amaro	Evelio Luque Carabot
Vega Oomen, Olivia	Descripción y comparación del perfil de expresión del sistema lin28/let-7 y microrna asociados en tejido placentario sano y tejido placentario procedente de embarazo ectópico	Antonio Pellicer Martínez	Francisco Domínguez Hernández
Molina Calle, María	Análisis orientado y global en metabolómica vegetal mediante espectrometría de masas acoplada a técnicas cromatográficas	M ^o Dolores Luque de Castro	Feliciano Priego Capote
Lara Chica, María Isabel *	Identification of new kinase substrates involved in the DNA damage response pathway and its implication in carcinogenesis	Marco Antonio Calzado Canale	Eduardo Muñoz Blanco
González Rubio, Sandra	Regulación de nos3 durante la muerte hepatocelular inducida por ácidos biliares	Manuel de la Mata García	Gustavo Ferrín Sánchez
García González, Víctor	Mecanismos de acción antitumoral del metabolito fúngico galiellactona y sus derivados semisintéticos	Eduardo Muñoz Blanco	Marco Antonio Calzado Canale
Ayllón Terán, María Dolores	Validación de las redes neuronales artificiales como metodología para la asignación donante-receptor en el trasplante hepático	Francisco Javier Briceño Delgado	César Hervás Martínez
Linares Luna, Clara Isabel	Regulación de la supervivencia celular por sobreexpresión de NOS3 en la línea de hepatoma HepG2	Manuel de la Mata García	Gustavo Ferrín Sánchez

Author	Title	Director(s)	
Casado Adam, Ángela	Importancia de la temperatura de la quimioterapia intra-peritoneal intraoperatoria con paclitaxel en el tratamiento quirúrgico radical de la carcinomatosis peritoneal de origen ovárico. hipertermia versus normotermia	Sebastián Rufián Peña	Álvaro Arjona Sánchez
Canales de Andrade, Nancy Beatriz	RCP ROCK. Ana herramienta para recordar cómo salvar vidas. ensayo comunitario sobre la creación de una canción que permite recordar las maniobras de rcp en el tiempo	Roger Ruiz Moral	Luis Ángel Pérula de Torres
Vida Pérez, Luis	Prevalencia y factores de riesgo de síndrome metabólico en el post-trasplante hepático	Jose Luis Montero Álvarez	
Raya Hidalgo, Patricia	aportación del servicio de protección radiológica a la seguridad y salud del personal expuesto a radiaciones ionizantes en la universidad de córdoba	Manuel Vaquero Abellán	
Santiesteban Sánchez de Puerta, Marta	Intervencionismo cardiaco en pacientes con cirugía de derivación cavopulmonar	Manuel Pan Álvarez Osorio	Miguel Ángel Romero Moreno
Campos Hernández, Juan Pablo	Fragmentación de ADN en espermatozoides de varones infértiles con varicocele. Nivel al que se produce la fragmentación del adn. implicaciones clínicas y terapéuticas	Antonio López Beltrán	María Josefa Requena Tapia
Cano Castiñeira, Roque Jesús	Prevalencia de litiasis renal en la población andaluza. factores asociados	Luis Ángel Pérula de Torres	
Cárdenas Aranzana, Manuel Jesús	Efectividad y eficiencia de la terapia biológica en artritis reumatoide en la práctica clínica real	Eduardo Collantes Estevez	Miguel Ángel Casado Gómez
Yáñez Rodríguez, Virginia	Habilidades de afrontamiento en los padres y madres de niños y niñas con trastornos del espectro autista: hacia una visión integradora	Bárbara Luque Salas	Vicente Sánchez Vázquez

* Theses with International Mention

6.5.2 Research Stays

IMIBIC is committed to foster training of our PhD students in national and international centers of reference in biomedical research in order to allow the opportunity to experience research in a foreign environment, facilitate the integration of graduates into the scientific community and create networks.

14 researchers from the IMIBIC completed a research stay in a national or international center in 2017. 3 of them were financed by public competitive grants, 2 by private competitive grants, and 9 by the institutions own research visit grants. The total duration of all the stays sums up to 52 months.

Likewise, external visitors are invited to carry out their research in our Institute. Altogether 17 visiting scientists stayed at IMIBIC during 2017, with the total duration of their visits summing up to 50 months.



7



Biomedical
Research
Support Units



7. Biomedical Research Support Units

The UCAIB (Central Biomedical Research Support Units) are a fundamental part of IMIBIC, as they provide support and innovative scientific solutions to the development of the research projects of the IMIBIC research groups. Part of the activity carried out by these units is included among the objectives of the Infrastructure Plan.

Central Biomedical Research Support Units are (incl. personnel):

- Methodology and Biostatistics Unit (1 senior technician)
- Microscopy, Cytomics, and Scientific Imaging Unit (2 senior technicians)
- Proteomics Unit (2 senior technicians and 2 technical support staff members)
- Animal Experimentation Unit (1 veterinarian and 2 technical support staff members)
- Bioinformatics and Technological Innovation Unit (3 senior technicians)
- Isotope Unit (1 technician)
- Genomics Unit (1 technician and 1 technical support staff member)
- Biobank Unit (2 technical support staff member)
- Clinical Research Unit (1 Pharmacologist, 3 senior technicians, 2 nurses and 1 nurse assistant)

7.1. Isotope Unit

7.1.1. Personnel

The Isotope Unit is composed of:

Supervisor:

Dr. Eduardo Muñoz Blanco
fi1muble@uco.es

Operator:

Antonia Sánchez Arroyo
antonia.sanchez@imibic.org

7.1.2. Equipment and Facilities

The unit has two laboratories dedicated to working with radioactive isotopes both and . One is located on the -2 floor and the other on the third floor.

The unit has been authorized by the Nuclear Safety Council since December of 2014 to work with the following isotopes:

Isotopes	Maximum Activity (Mbg)
Carbon (C-14)	370
Tritium (H-3)	370
Phosphorous (P-32)	370
Phosphorous (P-33)	370
Sulfur (S-35)	370
Chrome (Cr-51)	370
Iodine (I-125)	370

The Radiological Protection Service of the University of Córdoba is responsible for the supervision of this Unit and its operative procedures. The Service is also responsible for checking that the laboratories are free from contamination and is in charge of waste management and removal.

7.1.3. Equipment

- Gamma Counters 3 units:
 - Brand: Wizard
 - Model: 2470-0100 Beta counter
- UN Beta Counter (1 unit)
 - Brand: Tricard
 - Model: 2810 TR
- Microbeta Counter (1 unit)
 - Brand: Microbeta2
 - Model: 2450-0020
- Harvester Cell
- A sample preparer
 - Brand: Janus
- Two refrigerated ultracentrifuges with capacity for 200 samples.
- Three exclusive gas cabinets for working with radioactive isotopes, two of which are used with a lead guillotine and the third with a methacrylate guillotine.
- Two radiation detectors
 - Brand: Lamse
 - Model: RM 10013-RDM

7.1.4. Services

- Training in the handling of β and γ counters.

- Labeling of proteins with I-125.
- Identification of protein levels in serum, plasma and other biofluidos using the RIA technique.
- In situ hybridization (ISH) with P-33 labelled probes.
- Radioactive techniques for analysis of cell death and proliferation.
- Consultation regarding the different isotopic techniques that are employed in the laboratory.
- Optimization of protocols.

The necessary infrastructure to house within the Animal Experimentation Unit a PET-RM and MicroTAC Preclinical Imaging Systems has been designed in collaboration with the Radiological Protection Service of the University of Córdoba and the Radio diagnostic and Nuclear Medicine Unit of the hospital. This work has been carried out in order to define the optimal equipment and workflows prior to the bidding process of said equipment.

7.2. Animal Experimentation Unit

The animal experimentation unit is associated to the Animal Experimentation Service (SAEX) of the University of Córdoba. The unit provides integral support to its users, at consultation and experimental levels, with the objective of carrying out research for the Institute and other associated organizations through the use of animal subjects, mainly rodents (mice and rats) and pigs.

7.2.1. Personnel

The Animal Experimentation Unit is composed of:

Director of SAEX
Ana M^o Molina López

Anabel Pozo Salas
sae@imibic.org

Estefanía Escudero Jabonero
estefania.escudero@imibic.org

Rafael Pineda Reyes (till September 2017)
rafael.pineda@imibic.org

7.2.2. Equipment and Facilities

The unit comprises:

- 7 rooms for housing rodents.
- 1 healing / metabolism room: This room has a respirometry system and two racks for metabolic cages.
- 5 multi-purpose rooms: These rooms have optogenetics and quantitative analysis equipment as well as a bodily composition MRI, among other equipment.
- Operating Room: Suitable for surgery in both rodents and larger animals, consisting of: 3 3D laparoscopy towers, 7 TV video monitors, 3 anesthesia machines for large animals, 6 surgery tables, 2 rodent anesthesia system with 4 seats, 1 rodent

anesthesia system with 2 seats, 6 gas towers, 1 surgical microscope for large animals, 1 high-end ultrasound, 3 magnifiers, 1 microscope and 1 C-arm.

- Quarantine Zone: 4 ventilated racks for rats / mice, 1 replacement cabinet and 1 triple gate SAS.

In 2017, coordinated by the Animal Experimentation Service of the University of Córdoba, the animal experimentation unit of IMIBIC obtained the favourable resolution to open its facilities.

7.3. Microscopy, Cytomics, and Scientific Imaging Unit

The Microscopy, Cytomics and Scientific Imaging Unit comprises two technological areas which are of great importance in the field of biomedical research, because they are a powerful tool for studies at cellular level.

- Flow cytometry aimed at multicolor flow cytometry analysis (up to 18 colors), and cell sorting.
- Advanced Optical Microscopy aimed at fluorescence and confocal microscopy of fixed and living cellular samples, and image analysis.

The unit offers access to specialized equipment of flow cytometry, cell sorting and confocal microscopy, and a wide range of techniques, actively providing IMIBIC researchers and external users with technical expertise, as well as methodological and scientific advice to develop efficient and reliable assays and to obtain high-quality results.

7.3.1. Personnel

The unit is composed of:

Esther Peralbo Santaella, PhD
microscopia.citometria@imibic.org

Gema García Jurado, PhD
gema.garcia@imibic.org

7.3.2. Equipment and Facilities

Flow Cytometry and Sorting Laboratory

Equipped with:

- BD LSR Fortessa SORP analyzer: 4 lasers and 20 detectors (18 fluorescence parameters + FSC/SSC).
- BD FACSCalibur analyzer: 1 laser and 5 detectors (3 fluorescence parameters + FSC/SSC).
- BC Cytomics FC500 MCL analyzer: 2 lasers and 7 detectors (5 fluorescence parameters + FSC/SSC).
- BD FACSAria III Cell Sorter: 3 lasers and 13 detectors (11 fluorescence parameters + FSC/SSC).

Advanced Optical Microscopy Laboratory

Equipped with:

- Zeiss LSM 710 spectral confocal laser scanning microscope, with inverted motorized stand. 7 laser lines: 405, 458, 488, 514, 543, 594 and 633 nm. Scanning module with 3 spectral R/FL detection channels (PMTs) and 1 transmitted-light channel (PMT). Integrated large incubation chamber.
- Zeiss LSM 5 Exciter confocal laser scanning microscope, with inverted motorized stand. 6 laser lines: 405, 458, 488, 514, 543 and 633 nm. Scanning module with 2 R/FL detection channels (PMTs). Stage top incubator.
- Zeiss Axio Vert.A1 inverted fluorescence microscope.

7.3.3. Services

- Self-use (Operator-unassisted) of flow cytometry analyzers and microscopy equipment (only for internal users properly trained in using the equipment).
- Operator-assisted use of the instruments.
- Technical support for instrument setup and troubleshooting.
- Cell sorting: only provided as a staff-assisted service.
- Advice on experimental design, sample preparation methods, analysis and interpretation of flow cytometry data and microscopy images.

7.3.4. Highlights

In 2017, a new Confocal Microscopy Technician was hired for the Microscopy, Cytomics and Scientific Imaging Unit. Moreover, the unit provided services to 13 IMIBIC research groups.

Publications co-authored by the unit in 2017:

Martínez-Moreno JM, Herencia C, de Oca AM, Díaz-Tocados JM, Vergara N, Gómez-Luna MJ, López-Argüello SD, Camargo A, Peralbo-Santaella E, Rodríguez-Ortiz ME, Canalejo A, Rodríguez M, Muñoz-Castañeda JR, Almadén Y. High phosphate induces a pro-inflammatory response by vascular smooth muscle cells and modulation by vitamin D derivatives. *Clin Sci (Lond)*. 2017 Jun 28; 131(13):1449-1463.

7.4. Proteomics Unit

The Proteomics Unit provides researchers with state-of-the-art technologies in the field. Currently, the Proteomics Unit is a specialized platform in quantitative proteomics and MALDI Imaging (or Molecular Imaging).

The Proteomics Unit offers its analytical services for IMIBIC staff and University of Córdoba and to other universities, hospitals and private companies.

The Unit has two main state-of-the-art components: (i) a high performance liquid chromatography-mass spectrometry platform that provides researchers with access to high-throughput proteomics analyses, ranging from protein identification and characterization to label-free quantitative proteomics; and (ii) a mass spectrometry-based molecular imaging platform (MALDI-Imaging) that provides spatial information of metabolites, lipids and proteins directly from tissues and biopsies.

The Proteomics Unit provides individualized, fit-for-purpose support including project planning, sample preparation, mass spectrometry analysis and data analysis.

7.4.1. Personnel

The Unit is composed of two specialized technicians:

Ignacio Ortea, PhD

ignacio.ortea@imibic.org

Eduardo Chicano, PhD

eduardo.chicano@imibic.org

and two assistant technicians:

Rocío Pérez

Natalia Fernández (till December 2017)

7.4.2. Equipment and Facilities

- Q-TOF mass spectrometer, Triple TOF 5600+ (Sciex)
- Triple quadrupole mass spectrometer, XevoTQS (Waters)
- MALDI-TOF/TOF Mass spectrometer, 5800 (Sciex)
- nanoHPLC: Eksigent LC400 (Sciex)
- nanoUPLC: nanoAcquity M-Class (Waters)
- Sprayer: Sunchrom Suncollect (Sunchrom, Friedrichdorf, Germany)
- Laser Scanner: Typhoon Trio (GEHealthcare, Uppsala, Sweden)
- Main programs (and programming languages) used for data analysis: Protein Pilot, Comet and X!Tandem for protein identification; Peak View, Marker View and Skyline for protein quantification; Tissue View, MSiReader, Cardinal for Maldi Imaging MS. R, Python and Matlab for general analysis purposes.
- Basic laboratory equipment for sample preparation

7.4.3. Services

- Identification and characterization of proteins by MALDI-TOF/TOF
- Identification and characterization of proteins by LC-MS/MS
- Quantitative Proteomics:
 - SWATH
 - SRM (Selected Reaction Monitoring)
 - pseudoSRM
- MALDI Imaging mass spectrometry
- Project supervision and collaboration
- Training in software used for data analysis

7.4.4. Highlights

During 2017, the Proteomics Unit increased its volume of work related to fee-based services to the scientific community. The Proteomics Unit registered a patent, published two scientific articles, presented three studies at congresses, and joined an international inter-laboratory proficiency study.

Articles published:

- Vialas V, et al. A multicentric study to evaluate the use of relative retention times in targeted proteomics. *J Proteomics* 2017, 152:138-149.
- Fernandez A, et al. Non-canonical aberrant DNA hypermethylation in glioma. *bioRxiv* 193789; doi: <https://doi.org/10.1101/193789>.

Patent registered:

- Cañete R, Ortea I, Caballero J, Cañete MD. Biomarkers for the early detection of growth hormone deficiency in children. Procedure and kit. Patent Application P201730251. Andalusian Health System – University of Cordoba. February 2017.

Awards received by Proteomics Unit staff:

- Grant from the Spanish Proteomics Society for covering expenses related to an international short research stay.
- “Enrique Benitez de Lugo” 2017 Prize to the most outstanding publication.

7.5. Bioinformatics and Technological Innovation Unit

The mission of the Bioinformatics and technological innovation Unit is to provide engineering and computing resources to satisfy both the bioinformatics analysis requirements and the different technological needs that result from research and clinical practice, with an emphasis on the promotion and implementation of state-of-the-art technologies.

In the field of bioinformatics, the main objective is to develop and design and execute pipelines for the analysis of genomic and proteomic data. A top priority is the implementation of reporting guidelines pertinent to each particular case (MIAME, MIAPE, etc.) and the use of standardized formats (MAGE-ML, MAGE-TAB, mzML, mzIdentM, etc.) is a top priority whose aim is to burnish robust reporting and facilitate the publication of findings.

7.5.1. Personnel

The Bioinformatics and technological innovation Unit is composed of:

Head of Unit

Sebastián Ventura Soto, PhD
sventura@uco.es

Technicians

Jesús Fernández Chaichio
jesus.fernandez@imibic.org

José Luis Fernández Rueda
joseluis.fernandez@imibic.org
Helena Molina Abril, PhD (till October 2017)

7.5.2. Equipment and Facilities

- Computing resources: BullX R428-E3 node. 4x Intel Xeon E5-4610v2 8c, 32 cores. 256 GB RAM
- 3D Printer: BCN3D+ Fused Deposition Material Printer.
- Development resources: Apple Mac Mini for iOS app development.

7.5.3. Services

The unit's services can be divided in two main categories:

- Bioinformatic services
 - Biocomputing tools to support groups conducting relevant research projects
 - Direct analysis of relevant research projects and technical data needed for support
 - Bioinformatics covers varying fields and diverse applications such as:
 - Analysis of nucleic acids (DNA / RNA)
 - Analysis of peptide sequences, structures, functions, metabolic pathways and interactions with genes
 - Generation of knowledge relative to the study of new drugs
- Engineering services
 - Software development
 - Design and implementation of algorithms
 - Construction of databases and Electronic Data Capture instruments
 - 3D modeling and printing
 - Engineering & consulting

7.5.4. Highlights

The Bioinformatics and Technological Innovation Units has continued its activity of promoting the use of computer technologies among the different research groups. As part of these activities, the Unit has started a cycle of seminars, which began with one centered on the use of Electronic Data Capture instruments and databases in clinical research. This cycle will be continued on the following years with more advanced topics. As a result, the Unit has increased its activity and the number of both collaborations and funded projects in which it participates.

7.6. Genomics Unit

The mission of the IMIBIC Genomics Unit is to make very high level equipment available and provide scientific and technical advice for the development of various analytical techniques to researchers both at the institute and at other public and private institutions. Said equipment and technical knowledge is dedicated to the comprehensive study of DNA and RNA (genotyping / expression /

regulation), which in turn will produce high-quality results for the development of excellent biomedical research. To this end, the unit has cutting-edge, high throughput performance platforms in the field of genomics. It is also important to note the high level of interaction with the other UCAIBs, which are located in the same building, such as Bioinformatics, Proteomics and Cytometry.

7.6.1. Personnel

The unit is composed of a senior specialized technician, who coordinates the unit, and a laboratory technician.

Álvaro Jiménez Arranz

(senior specialized technician)

genomica@imibic.org / alvaro.jimenez@imibic.org

Pilar Rubín González de Canales

(laboratory technician)

7.6.2. Equipment and Facilities

Currently, the resources that the Genomics Unit has at its disposal are:

a) Illumina MiSeq

MiSeq is an Illumina platform sequencing technology based on SBS (sequencing by synthesis), which is currently the most widely adopted NGS (next-generation sequencing) technology in the world on account of its speed, accuracy and quality. This sequencer can generate up to 15 Gb/run and can perform 2x300bp paired-end reads, leading to greater accuracy, especially in problem areas such as with homopolymers. The MiSeq system allows for DNA-Seq, RNA-Seq, Methyl-Seq and ChIP-Seq, with a wide range of applications.

b) nCounter DX / NanoString technology

The NanoString nCounter system uses a novel technique of molecular barcodes linked to specific probes that can detect and count hundreds of targets in a single reaction without amplification, thus letting users study a large number of mRNAs, miRNAs and DNAs simultaneously with sensitivity and “gold standard” reproducibility. Its applications include gene expression analysis, gene fusion, copy-number variation (CNV) and simultaneous analysis of mRNAs and RNA regulators such as miRNAs and lncRNAs.

The nCounter DX is CE and IVD certified for conducting analyses that ensure care quality and, along with these applications, make the nCounter a tool with high potential for clinical use. Currently there is a CE-marked test for in vitro diagnostics (CE-IVD) on the market, which was approved by the FDA for breast cancer (Prosigna-PAM50), based on the molecular analysis of the gene expression of 50 genes. This lets it classify the tumor into one of four intrinsic subtypes, related to disease prognosis and choice of treatment. In addition, the launch of another validated kit for in-vitro diagnostics (CE-IVD / FDA) is currently underway, based on 20 differential gene expression patterns, aimed at determining DLBCL subtypes (diffuse large B-cell lymphoma), and related disease treatment.

c) Digital PCR (dPCR): QX200 Droplet Digital PCR System

The digital PCR offers a more precise and sensitive alternative to conventional qPCR for absolute quantification and detection of rare alleles without need of standards or endogenous controls due to droplet partitioning.

d) Quantitative PCR (qPCR):

The unit currently has 3 platforms aimed at genotyping PCR and gene expression studies:

- Light Cycler 480 (96-well platform)
- Light Cycler 96 (96-well platform)
- 7900 HT Fast (384-well platform)

With regard to IMIBIC research staff, the unit offers the possibility of using the qPCR platforms under a “self-service” scheme (without technical operator).

e) Others

The unit has additional appliances designed for quantification, quality analysis and determining the size of nucleic acid fragments:

- Nanodrop ND1000 (Spectrophotometer)
- DeNovix DS-11 (Spectrophotometer)
- Quantus (Fluorometer)
- 2200 TapeStation (Microelectrophoresis)

Additionally, IMIBIC has a computation cluster (bullx computing node R418-E3), for mandatory use in next-generation sequencing (NGS) protocols.

7.6.3. Services

- Technical support and scientific and methodological advice on the choice and optimization of genomic techniques
- Design support for NGS or NCounter targeted panels
- Technical and scientific support in the use of qPCR platforms and probe design
- Nucleic acid quality controls (spectrophotometry, fluorometry and microelectrophoresis)
- Analysis of targeted gene expression panels (up to 800 genes) using NCounter System
- PAM50-signature Analysis (Prosigna™) for breast cancer prognosis
- Screening of up to 800 miRNA in tissue, peripheral blood cells and serum/plasma by NanoString Technologies (NCounter System)
- Gene expression and genotyping studies using real-time PCR
- Absolute quantification by Droplet Digital PCR System (viral load analysis...)
- Liquid biopsy: Rare mutation detection in cfDNA by ddPCR
- NGS library preparation
- Sequencing NGS (next generation sequencing) by Illumina Miseq
- Training and support in the use of data analysis software related to the unit's technology
- Project supervision and partnerships

7.6.4. Highlights

In 2017, the Genomics Unit significantly increased the number of projects and users, improved the protocols and services by following GLP principles (good laboratory practices) to ensure the quality, reproducibility and reliability of results, initiated a set of new services and was integrated into a multidisciplinary team with several clinical departments at the Reina Sofía University Hospital.

This has led to the implementation of the PAM50–signature (Prosigna™) for breast cancer prognosis and has laid the foundations for the development of future analyses that facilitate the translation of research results into clinical practice. The certification for developing the PAM50 analysis that was obtained in 2016 and the implementation of the signature have positioned the unit as a PAM50 analysis reference center. Furthermore, the unit has been part of the Nanostring’s Translational Research Collaboration program for testing the molecular signature LST (Lymphoma Subtyping Test), aimed at determining DLBCL subtypes (diffuse large B-cell lymphoma).

7.7. Clinical Research Unit

The IMIBIC Clinical Research Unit promotes clinical research at IMIBIC and at the Reina Sofia University Hospital and also aims to establish collaborations with other research centers. Currently, IMIBIC is part of the Spanish Clinical Research Network (SCReN). The Unit focuses on the development of clinical trials including design, feasibility, regulatory affairs, launch, management, monitoring, pharmacovigilance, data management, statistics and delivery of clinical assistance. All operations are GCP compliant. The IMIBIC Clinical Research Unit consists of two facilities: the Provincial Hospital Clinical Research Unit and the General Hospital Clinical Research Unit. Both are adapted to perform clinical trials of phases I–IV in patients.

7.7.1. Personnel

Head of Unit

Jose López Miranda, MD
jlopezmir@uco.es

Clinical Pharmacologist

María Esther Pacheco Rodríguez, MD
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Project Managers/CRA

Antonio Miguel Luque Pineda
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Carmen María Clavijo Ramírez (till September 2017)
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Nurse Coordinator

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Araceli Chicano Gálvez

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Nursing Assistants

Rubén Sánchez Nieves

7.7.2. Equipment and Facilities

- 10 doctor's consultation rooms and a storehouse
- 2 hospital wards each containing: crash trolley with semi-automatic defibrillator and emergency medication, intravenous fluids, an insulin pump, heating trolleys, oxygen outlets in all positions and audiovisual system
- 14 armchairs and rooms with 3 single beds, all with ongoing monitoring
- Pediatric area
- 12-lead ECGs
- Measuring boards and scales
- Blood pressure meter in each office
- Customized Bathrooms
- Individual lockers for patients
- 2 Living rooms for patients
- 2 Waiting rooms for patients and family
- 1 multi-purpose room
- 2 Laboratories for sample processing and centrifuges
- Freezers (-80°C and -20°C)
- 2 storehouse for materials
- High Definition Ultrasound Scanner
- 2 Study coordinators' offices
- 2 CRAs' offices
- 2 Archives

7.7.3. Services

- Methodological support
- Launch and Regulatory affairs
- Study development

- Monitoring
- Pharmacovigilance
- Delivery of clinical assistance

7.7.4. Highlights

During 2017, the Unit provided assistance and support in the start-up, coordination, data management or monitoring of 24 independent clinical research projects in the following Units, among others: Cardiology, Hematology, Internal Medicine, Pediatrics, General Surgery, Nephrology, Rheumatology, and Infectious Diseases. Concerning research activity, 768 patients were treated at the facilities of the Clinical Research Unit. 132 clinical research projects have been carried out. The main areas that have developed their activity in the unit are Oncology, Internal Medicine, Nephrology, Infectious Diseases, Dermatology, Urology, Rheumatology, Cardiology, Pediatrics, Psychiatry, Endocrinology, Ophthalmology, Digestive System, Allergy and Immunology.

As a member of the Spanish Clinical Research Network (SCReN), the Unit has coordinated as sponsor one international multicenter clinical trial and has actively participated in 4 other clinical trials interacting with different groups within Spain. The Unit also collaborates with several working groups within the network.

To promote clinical research, the Unit has organized working meetings with health professionals in different areas: Urology, Pediatrics, Immunology, General Surgery, Palliative Care, Cardiac Surgery, Diagnostic Radiology, etc. The research lines of the main pharmaceutical companies and the capacity of participation of these units have been evaluated. Meetings have been organized with the medical departments of the pharmaceutical companies.

In 2017 the Unit helped the Pediatrics service to join the Spanish Pediatric Clinical Trials Network (RECLIP).

7.8. Biobank Unit

The Biobank Unit is one of the research support platforms whose mission is to act as a liaison between doctors, researchers and patients who donate biological samples for the purpose of biomedical research to uphold the current legal constraints and appropriate ethical safeguards.

The IMIBIC Biobank is part of the Biobanks of the Andalusian Public Health System (SSPA), an initiative of the Department of Equality, Health and Social Policy of the Regional Government. It is part of the Thematic Network of Hospital Biobanks pertaining to the National Institute of Health Carlos III (ISCIII), and the subprogram of the Thematic Networks of Cooperative Research in Health (RETICS).

7.8.1. Personnel

Scientific Manager

Dr. Manuel Medina Pérez

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Coordinator

Carmen Pérez Calle(till December 2017)

Technician

Javier Herruzo
javier.herruzo@imibic.org

7.8.2. Equipment and Facilities

The Unit has its own laboratory resources for sample transformations (Safety booths, PCR Booths, Microtomes, Chryostate, Flotation Bath, Centrifuge, Histobath, Automatized Processor for Paraffin Inclusion, Paraffin Dispenser, etc.) as well as other machinery such as:

- Tissue Safe: fully automated preparation of tissue samples in a vacuum.
- Tissue Arrayer: assembles different tissue samples in a single multiple matrix for subsequent histological analysis.
- Quiacube: Automatic, compact system for analysis of DNA, RNA, plasmids and proteins from varying samples.

For sample storage, there are currently two freezers: one for temperatures of -20 degrees Celsius, seven for -80 degrees Celsius, as well as paraffin storage rooms for room temperature.

7.8.3. Services

The service portfolio is divided into four main areas:

1. Custody for storing samples at different temperatures.
2. Processes for transforming multiple types of biological samples in accordance with the procedures and technical criteria commonly used by researchers in their projects.
3. Provision of human samples and data on human health and disease research, selected according to clinical and diagnostic criteria specified by researchers.
4. Technical, scientific and ethical consulting regarding the collection, storage, and management of human samples in biomedical research.

7.8.4. Highlights

In 2017, the Biobank Unit has given essential support to 22 research projects. This activity generated a total of 16 232 samples / bio resources.

7.9. Methodology and Biostatistics Unit

The Unit offers methodological consulting and statistical support for IMIBIC's researchers and for healthcare professionals in the Public Health System in the Province of Córdoba.

The Unit's main objectives are to:

1. Offer methodological consulting in the beginning or development of the studies of research in the phases prior to the presentation of proposals/reports to the relevant financial entities and in general throughout the projects' life cycles.
2. Provide necessary statistical support to researchers for the creation of databases, and use of statistical techniques and tools of epidemiological clinical research, through advisory or execution of statistical analysis.
3. Provide the highest possible quality in design, execution, interpretation and communication of results.

7.9.1. Personnel

Maria del Carmen Muñoz Villanueva, MD, PhD. (till June 2017)

During the rest of the year, from July to December, the biostatistics and methodological support was offered by the Bioinformatics and Technological Innovation Unit. In 2018, one senior technician will join the Unit.

7.9.2. Equipment and Facilities

The main statistical programs used for data analysis are:

- PASW Statistics 18 (Copyright 2009 by SPSS Inc.)
- IBM SPSS 19 (Copyright 2010 by SPSS Inc.)
- Epidat 4.1
- GranMo versión 7 (abril 2012)
- G-stat 2.0 (Copyright 2008 by GSK, SA.)
- Sinergy 3.0 (Copyright 2008 by GSK, SA.)

7.9.3. Services

Through personalized consultations (face to face meetings, telematic or virtual) we cover the different moments of the research process. Specifically, the aid that they request may be:

- Research design
- Data collection instruments
- Database organization
- Technical statistics options
- Data analysis
- Results interpretation
- Written report of results
- Attention to methodological demands of copy editors

Specifically, the consulting at the methodological level may include:

- Review of the different sections of the scientific methodology proposed in the research protocol: presentation of hypotheses, formulation of objectives, choice of epidemiological design, operational definition of variables, etc.
- Guidance for literature search techniques
- Advice on the presentation of results for scientific dissemination
- Validation of publication requirements depending on the type of study and quality criteria of scientific publications
- Analysis of the grounds for refusal: review of articles and rejected projects

Consultation and execution of statistical analysis may include:

- Drafting of statistical analysis methodology or strategy.
- Sampling and sample size calculation.
- Design of research databases.

- Exploratory and descriptive analysis of the data.
- Inferential analysis (univariate and multivariate).
- Evaluation of diagnostic tests: sensitivity, specificity, predictive values and ratios of likelihoods. ROC curves.
- Validation of questionnaires and other measuring instruments.
- Other statistical techniques (Bayesian analysis, meta-analysis, etc.).

8

Scientific Production



HIGHLIGHTS

Publications

13

Impact Factor

49,371

Average Impact Factor

3,797

Team Leader

Principal Investigator (PI)

Rafael Solana Lara

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Spanish Network for Research into Infectious Pathologies (REIPI) (Collaborator)

Spanish Network for asthma, adverse and allergic reactions (ARADyAL) (PI: Carmen Moreno Aguilar) PAIDI CTS 208 Molecular immunology

Researchers

Alonso Diaz, Corona
 Barasona Villarejo, M^o José
 González Fernández, Rafael
 Jurado Roger, Aurora
 Moreno Aguilar, Carmen
 Saiz Sánchez, Vanessa
 Serrano Delgado, María del Pilar

Post-Doctoral Researchers

Campos Fernández, Carmen
 Castro Orgaz, Laura
 Manzanares Martin, Bárbara
 Pera Rojas, Alejandra
 Ruiz León, Berta
 Hassouneh, Fakhri

Pre-Doctoral Researchers (PhD and MSc Students)

Cañones Barceló, Estrella
 García Gallego, Azahara
 López Sejas, Nelson
 Navas Romo, Ana María
 Molina Alcaide, Juan Eduardo
 Yarce Bustamante, Oscar Alberio

Other members of the Group (Nursing, Technical and Administrative Staff)

Fisichella, Marco
 Guerra González, Mercedes
 Velarde Martínez, M^o Luisa

Scientific Activity

Our group studies the process of senescence of the immune system in different models: chronological aging, cancer, inflammatory diseases, viral infection and other situations of chronic activation of the immune system. In particular, we analyse the receptors involved in the regulation of cytotoxicity in T (CTL) and NK cells and their ligands in these models, and the role of CMV.

Keywords

Immunosenescence, aging, melanoma, NK cells, NKT cells, NK receptors, CMV, cytotoxic T lymphocytes (CTL).

Scientific Production

Publications

Main Publications

Pera A, Bradley I, Davies KA, Kern F. Cytomegalovirus as a Driver of Excess Cardiovascular Mortality in Rheumatoid Arthritis A Red Herring or a Smoking Gun? *CIRCULATION RESEARCH*. 2017;120(2):274-277. IF: 13,965
Q: 1 D: 1

Martinez-Losada C, Martin C, Gonzalez R, Manzanares B, Garcia-Torres E, Herrera C. Patients lacking a Kir-ligand of HLA group C1 or C2 have a Better Outcome after Umbilical cord Blood Transplantation. *FRONTIERS IN IMMUNOLOGY*. 2017.8.art.810. IF: 6,429
Q: 1

Hassouneh F, Lopez-Sejas N, Campos C, Sanchez-Correa B, Tarazona R, Solana R, Pera A. Differential effect of cytomegalovirus infection with age on the expression of CD57, CD300a, and CD161 on T-cell subpopulations. *FRONTIERS IN IMMUNOLOGY*. 2017.8.art.-649. IF: 6,429
Q: 1

Molina J, Navas A, Aguera ML, Rodelo-Haad C, Alonso C, Rodriguez-Benot A, Aljama P, Solana R. Impact of Preformed Donor-Specific Anti-Human Leukocyte Antigen Antibody C1q-Binding Ability on Kidney Allograft Outcome. *FRONTIERS IN IMMUNOLOGY*. 2017.8. art.1310. IF: 6,429
Q: 1

Tarazona R, Sanchez-Correa B, Casas-Aviles I, Campos C, Pera A, Morgado S, Lopez-Sejas, N, Hassouneh, F, Bergua, JM, Arcos, MJ, Banas, H, Casado, JG, Duran, E, Labella, F, Solana, R. Immunosenescence: limitations of natural killer cell-based cancer immunotherapy. *CANCER IMMUNOLOGY IMMUNOTHERAPY*. 2017.66(2):233-245. IF: 4,711
Q: 1

Pera A, Vasudev A, Tan C, Kared H, Solana R, Larbi A. CMV induces expansion of highly polyfunctional CD4(+) T cell subset coexpressing CD57 and CD154. *JOURNAL OF LEUKOCYTE BIOLOGY*. 2017.101(2):555-566. IF: 4,018
Q: 2

Frias M, Rodriguez-Cano D, Cuenca-Lopez F, Macias J, Gordon A, Manzanares-Martin B, Pineda JA, Camacho A, Torre-Cisneros J, Pena J, Rivero-Juarez A, Rivero A. HLA-B18 as a risk factor of short-term progression to severe liver fibrosis in HIV/HCV co-infected patients with absent or minimal fibrosis: implications for timing of therapy. *PHARMACOGENOMICS JOURNAL*. 2017.17(6):551-555. IF: 3,815
Q: 1

Frias M, Rodriguez-Cano D, Cuenca-Lopez F, Macias J, Gordon A, Manzanares-Martin B, Pineda JA, Camacho A, Torre-Cisneros J, Pena J, Rivero-Juarez A, Rivero A. HLA-B18 as risk factor of liver fibrosis progression in HIV/HCV treatment-experienced patients. *PHARMACOGENOMICS JOURNAL*. 2017.17(6):479-480. IF: 3,815
Q: 1

Rivero-Juarez A, Gonzalez R, Frias M, Manzanares-Martin B, Rodriguez-Cano D, Perez-Camacho I, Gordon A, Cuenca F, Camacho A, Pineda JA, Pena J, Rivero A. KIR2DS2 as predictor of thrombocytopenia secondary to pegylated interferon-al-

pha therapy. *PHARMACOGENOMICS JOURNAL*. 2017.17(4):360-365. IF: 3,815
Q: 1

Cantisan S, Paez-Vega A, Santos F, Rodriguez-Benot A, Aguado R, Rivero A, Montejo M, Torre-Cisneros J, Solana R, Spanish Network for Research in Infectious Diseases (REIPI). Impact of age and cytomegalovirus on CD8(+) T-cell compartment remodeling after solid organ transplantation: A one-year follow-up study. *EXPERIMENTAL GERONTOLOGY*. 2017.95(1):98-106. IF: 3,34
Q: 1

Hassouneh F, Lopez-Sejas N, Campos C, Sanchez-Correa B, Tarazona R, Pera A, Solana R. Effect of Cytomegalovirus (CMV) and Ageing on T-Bet and Eomes Expression on T-Cell Subsets. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2017.18(7)art.1391. IF: 3,226
Q: 2

Puente LG, Flores EI, Benitez JM, Medina RM, Rodriguez IS, Melero PA, Aranzana MJC, Fernandez RG, Martin BM, Garcia-Sanchez V. Evolution after switching to biosimilar infliximab in inflammatory bowel disease patients in clinical remission. *GASTROENTEROLOGIA Y HEPATOLOGIA*. 2017.40(9):595-604. IF: 0,917
Q: 4

Other publications

Schiener M, Eberlein B, Moreno-Aguilar C, Pietsch G, Serrano P, McIntyre M, Schwarze L, Russkamp D, Biedermann T, Spillner E, Darsow U, Ollert M, Schmidt-Weber CB, Blank S. Application of recombinant antigen 5 allergens from seven allergy-relevant Hymenoptera species in diagnostics. *ALLERGY*. 2017.72(1):98-108. IF: 7,631
Q: 1 D: 1

Bradley I, Pera A, Morrow G, Davies KA, Kern F. Expansions of Cytotoxic CD4(+)CD28(-) T Cells Drive Excess Cardiovascular Mortality in Rheumatoid Arthritis and Other Chronic Inflammatory Conditions and Are Triggered by CMV Infection *FRONTIERS IN*

IMMUNOLOGY. 2017.8.art.1-10195.
IF: 6,429
Q: 1

Sanchez-Correa B, Bergua JM, Pera A, Campos C, Arcos MJ, Banas H, Duran E, Solana R, Tarazona R. In Vitro culture with interleukin-15 leads to expression of activating receptors and recovery of natural Killer cell Function in acute Myeloid Leukemia Patients. FRONTIERS IN IMMUNOLOGY. 2017.8():-931. IF: 6,429
Q: 1

Goldeck D, Theeten H, Hassouneh F, Oettinger L, Wistuba-Hamprecht K, Cools N, Tsitsilonis OE, Pawelec G. Frequencies of peripheral immune cells in older adults following seasonal influenza vaccination with an adjuvanted vaccine. VACCINE. 2017.35(34):4330-4338. IF: 3,235
Q: 2

Cebrino J, de la Cruz SP, Barasona MJ, Alcazar P, Moreno C, Dominguez-Vilches E, Galan C. Airborne pollen in Cordoba City (Spain) and its implications for pollen allergy. AEROBIOLOGIA. 2017.33(2):281-291. IF: 2,212
Q: 2

Arias TA, Gomis VS, Mera TS, Castro AV, Gutierrez JMV, Llamazares AA, Amerigo DA, Gonzalez FJC, Noche CD, Fernandez DG, Amat LM, Arcediano AM, Irene MMS, Ancillo AM, Crespo YP, Leon BR, Morillas LS, Hymenoptera Allergy Committee of the SEAIC. Key Issues in Hymenoptera Venom Allergy: An Update. JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY. 2017.27(1):19-31. IF: 3,094
Q: 3

Research Funding

National

Solana R. Relevance of immunosenescence in the design of new NK cell-based immunotherapy protocols in melanoma and acute myeloid leukaemia models. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01615

Moreno C. Spanish Network for asthma, adverse reactions and allergic (ARADYAL). Funding agency: National Institute of Health Carlos III (ISCIII). Reference: RD16/0006/0018

Moreno C - Jurado A. Insect sting anaphylaxis. Search for biomarkers of early response to hymenoptera venom immunotherapy Funding agency: National Institute of Health Carlos III Health (ISCIII). Reference: PI15/02170

Moreno C. Anaphylaxis by insect bites. Search for biomarkers of early response to immunotherapy with Hymenoptera venom. Funding agency: Andalusian Society of Allergology and Clinical Immunology. Reference: Alergosur16

Moreno C. Anaphylaxis by insect bites. Search for biomarkers of early response to immunotherapy with Hymenoptera venom. Funding agency: Andalusian Society of Allergology and Clinical Immunology. Reference: SEAIC_15

Regional

Ruiz León, M. Role of Microbioma by lipid transfer proteins in allergic disease. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0119-2016

Serrano Delgado, P. Identificación de biomarcadores en pacientes alérgicos a veneno de abeja o a polen de olivo de fenotipo grave y reacción sistémica con inmunoterapia. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PC-0278-2017

International

Moreno C. FAST - Towards safe and effective immunotherapy of persistent life-threatening food allergies. Funding Agency: European Commission FP7. Reference: FP7-HEALTH-2007-A-2015

Contracts with Companies

Solana Lara R. Agreement with Spanish Cancer Association. Funding Agency: Spanish Cancer Association. Reference: CCB.0137

Moreno C. Agreement with Novartis. Funding Agency: Novartis Farmaceutica S.A. Reference: PSS.0117

Moreno C. Agreement with Alk-Abello. Funding Agency: Alk-Abello S.A. Reference: PSS.0138

Jurado A. Agreement with Thermo. Funding Agency: Thermo Fisher Diagnostics S.L.U. Reference: PSS.0201

Clinical Trials

0086/15. A multinational phase IIb study to investigate the efficacy and safety of subcutaneous immunotherapy with a modified fish-parvalbumin given in single rising and maintenance doses to subjects allergic to fish.
PI: Dr Moreno Aguilar, Carmen

0258/15. A multicentre international, randomized, double-blind, and placebo-controlled to demonstrate the clinical efficacy and safety of subcutaneous immunotherapy using gpASIT + TM in patients with allergic rhinoconjunctivitis induced grass pollen.
PI: Dr Moreno Aguilar, Carmen

3343. Valuation Of The Effectiveness And Toxicity Of The Use Of Intravenous Gammaglobulin In The Treatment Of Infections In Patients With Hipogammaglobulinemia Igg Post-Transplant Of Solid Organ.
PI: Dr Alonso Diaz, Corona

3031. Insect sting anaphylaxis. Search for biomarkers of early response to hymenoptera venom immunotherapy.
PI: Dr Moreno Aguilar, Carmen

2739. Effect of antihypertensive medication in the severity of anaphylaxis and side effects during venom immunotherapy Hymenoptera insects. EA-DOAS.
PI: Dr Moreno Aguilar, Carmen

3070. Analysis Of The Sensitization Profile By Skin Test, Determination Of Ige To Complete Extract And Molecular Diagnosis In Patients With Allergic Disease Respiratory For Sensitization To Pollen.
PI: Dr Moreno Aguilar, Carmen

GC2

Oxidative and nitrosative stress in acute and chronic liver disease



HIGHLIGHTS

Publications

31

Impact Factor

129,331

Average Impact Factor

4,171

Principal Investigator (PI)

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CIBER on Liver and Digestive Diseases (CIBERhd)

PAIDI CTS-273 in Study of acute affections of the digestive system.

Co-Principal Investigator (Co-PI)

Jose Antonio Bárcena Ruiz

PAIDI BIO-216 on Molecular mechanisms of antioxidant and proteomic defense.

Researchers

Aguilar Melero, Patricia

Barrera Baena, Pilar

Costán Rodero, Guadalupe

Ferrín Sánchez, Gustavo

Fraga Rivas, Enrique

García Sánchez, M^a Valle

Iglesias Flores, Eva

Martínez Galisteo, Emilia

Montero Álvarez, José Luis

Padilla Peña, Alicia

Peinado Peinado, José

Poyato González, Antonio

Rodríguez Perálvarez, Manuel Luis

Post-Doctoral Researchers

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Linares Luna, Clara Isabel

Requejo Aguilar, Raquel

Vida Pérez, Luis

Pre-Doctoral Researchers (PhD and MSc Students)

Benítez Cantero, José Manuel

Fernández González, Rocío

Guerrero Misas, Marta

López Grueso, María José

Medina Medina, Rosario

Other members of the Group (Nursing, Technical and Administrative Staff)

Díaz Sillero, Encarnación

Gómez Núñez, M^a Isabel

Salgueiro Rodríguez, Isabel

Scientific Activity

Our research group is a consolidated multidisciplinary team composed of 6 basic researchers and 8 clinicians. The group is involved in the scientific education of its members, which is reflected in the 4 post-doctoral and 4 pre-doctoral researchers, who are developing their scientific career in the group. Besides, we have the valuable support of 3 dedicated nurses trained in research tasks.

Our main research area is the molecular basis of liver and digestive diseases, with special dedication to patients with end-stage liver disease who develop hepatocellular carcinoma or undergo liver transplantation, and patients with inflammatory bowel diseases.

In the long term, we expect to apply the results of our research projects to develop a more personalized medicine, increasing the efficacy of the treatments and their safety. In particular, we are continuously working in improving immunosuppression regimens for liver transplant patients and in implementing liquid biopsy as a prognostic tool to select patients with hepatocellular carcinoma to undergo liver transplantation. In inflammatory bowel diseases, we expect to apply the identified biomarkers of response to anti-TNF to select the best treatment for each patient. The group aims to promote and to protect the health through the basic, clinical and translational research in liver and digestive diseases. In addition, our group is deeply engaged in providing access to the novel therapies to our

patients, as part of our participation in 45 trials in hepatology and inflammatory bowel diseases in the last 10 years.

In 2017, our group led 4 publications and collaborated in 19 scientific articles.

Regarding immunosuppression strategies, in the past few years we have shown that early minimization of tacrolimus in liver transplant patients with hepatocellular carcinoma is able to decrease tumor recurrence rates, while prolonging graft survival (Journal of Hepatology, 2013). We have also demonstrated that everolimus, an mTOR inhibitor, may be safely introduced early after liver transplantation (Clinical Transplantation, 2015). However, the addition of everolimus to tacrolimus minimization does not provide an extra benefit regarding prevention of recurrence of hepatocellular carcinoma, nor concerning graft survival (article in press). Early in 2018 we have worked with the Cochrane Collaboration to perform a network meta-analysis to make a ranking of the most effective and safest immunosuppression protocols (Cochrane Syst Rev Database, 2017). The results have reinforced the assumption that tacrolimus based immunosuppression is the gold standard after liver transplantation, even though its optimal combination with other immunosuppressants remains unknown. Further research initiatives are needed in order to accomplish a true personalized immunosuppression (Transplant International, 2016).

Research Lines

- Hepatocellular carcinoma and liver transplantation: personalized immunosuppression and liquid biopsy
- Functional validation of SNP rs6105269 in Crohn's disease
- Biomarkers of response to anti-TNF drug in inflammatory bowel disease
- Systemic therapy for advanced hepatocellular carcinoma
- Evaluation of alternative therapeutic compounds for the treatment of cholestasis

Keywords

Liver transplant, hepatocellular carcinoma, Crohn's disease, ulcerative colitis, cholestasis, liquid biopsy, proteomic, anti-TNF.

Scientific Production

Publications

Main Publications

Requejo-Aguilar R, Alastrue-Agudo A, Cases-Villar M, et al. Combined polymer-curcumin conjugate and ependymal progenitor/stem cell treatment enhances spinal cord injury functional recovery. *Biomaterials*. 2017;113:18-30.

IF: 8,402

Q: 1 D: 1

Rodriguez-Peralvarez M, Guerrero-Misas M, Thorburn D, Davidson BR, Tsochatzis E, Gurusamy KS. Maintenance immunosuppression for adults undergoing liver transplantation: a network meta-analysis. *COCHRANE DATABASE OF SYSTEMATIC REVIEWS*. 2017.(3):-CD011639.

IF: 6,124

Q: 1 D: 1

Perez P, Rodriguez-Peralvarez M, Guerrero L, Gonzalez V, Sanchez R, Centeno M, Poyato A, Briceno

J, Sanchez-Frias M, Montero JL, De la Mata M. Incidental hepatocellular carcinoma after liver transplantation: Prevalence, histopathological features and prognostic impact. *PLOS ONE*. 2017;12(4):e0175010. IF: 2,806 Q: 1

Rodriguez-Peralvarez M, De Luca L, Crespo G, Rubin A, Marin S, Benlloch S, Colmenero J, Berenguer M, Navasa M, Tsochatzis E, De la Mata M. An objective definition for clinical suspicion of T-cell-mediated rejection after liver transplantation. *CLINICAL TRANSPLANTATION*. 2017;31(7):e13005. IF: 1,865 Q: 2

Puente LG, Flores EI, Benitez JM, Medina RM, Rodriguez IS, Meler PA, Aranzana MJC, Fernandez RG, Martin BM, Garcia-Sanchez V. Evolution after switching to biosimilar infliximab in inflammatory bowel disease patients in clinical remission. *GASTROENTEROLOGIA Y HEPATOLOGIA*. 2017;40(9):595-604. IF: 0,917 Q: 4

Other Publications

Carrillo CF, Lens S, Llop E, Pascasio JM, Crespo J, Arenas J, Fernandez I, Baliellas C, Carrion JA, de la Mata M, Buti M, Castells L, Albillos A, Romero M, Turnes J, Pons C, Moreno-Planas JM, Moreno-Palomares JJ, Fernandez-Rodriguez C, Garcia-Samaniego J, Prieto M, Bermejo MF, Salmeron J, Badia E, Salcedo M, Herrero JI, Granados R, Ble M, Marino Z, Calleja JL. Treatment of Hepatitis C Virus Infection in Patients With Cirrhosis and Predictive Value of Model for End-Stage Liver Disease: Analysis of Data From the Hepa-C Registry. *HEPATOLOGY*. 2017;65(6):1810-1822. IF: 13,246 Q: 1 D: 1

Pascasio JM, Vinaixa C, Ferrer MT, Colmenero J, Rubin A, Castells L, Manzano ML, Lorente S, Testillano M, Xiol X, Molina E, Gonzalez-Dieguez L, Oton E, Pascual S, Santos B, Herrero JI, Salcedo M, Montero JL, Sanchez-Antolin G, Narvaez I, Noguera F, Giraldez A, Prieto M, Forn X, Londono MC. Clinical outcomes of patients undergoing antiviral therapy while awaiting liver transplantation. *JOURNAL OF*

HEPATOLOGY. 2017;67(6):1168-1176. IF: 12,486 Q: 1 D: 1

Casanova MJ, Chaparro M, Garcia-Sanchez V, Nantes O, Leo E, Rojas-Feria M, Jauregui-Amezaga A, Garcia-Lopez S, Huguet JM, Arguelles-Arias F, Aicart M, Marin-Jimenez I, Gomez-Garcia M, Munoz F, Esteve M, Bujanda L, Cortes X, Tosca J, Pineda JR, Manosa M, Liao J, Guardiola J, Perez-Martinez I, Munoz C, Gonzalez-Lama Y, Hinojosa J, Vazquez JM, Martinez-Montiel MP, Rodriguez GE, Pajarres R, Garcia-Sepulcre MF, Hernandez-Martinez A, Perez-Calle JL, Beltran B, Busquets D, Ramos L, Bermejo F, Barrio J, Barreiro-de Acosta M, Roncedo O, Calvet X, Hervias D, Gomollon F, et al. Evolution After Anti-TNF Discontinuation in Patients With Inflammatory Bowel Disease: A Multicenter Long-Term Follow-Up Study. *AMERICAN JOURNAL OF GASTROENTEROLOGY*. 2017;112(1):120-131. IF: 9,566 Q: 1 D: 1

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Q: 4

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IF: n/a

Research Funding

Regional

Aguilar Melero, P. Proteomic biomarkers for prediction of response to Anti-Tnf drugs in patients with Crohn disease. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0199-2013

Padilla Peña, A. Antitumor activity of nitric oxide: regulation of sorafenib by way of mTOR inhibitors of Wnt / β -catenine. Funding Agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CTS-6264

Bárcena Ruiz, JA. Molecular systems for defense against oxidative stress and proteomics. Funding Agency Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: BIO-216

National

De la Mata García, M. The role of the immune system activation to eliminate circulating tumour cells and to prevent hepatocellular carcinoma recurrence after liv-

er transplantation. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/01469

García Sánchez V. Proteomic markers of response to infliximab biosimilars in patients with ulcerative colitis. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/01352

Bárcena Ruiz, JA/Padilla Peña, C.A. Role of peroxiredoxins in the homeostasis celular as Antioxidants and Signalling. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO) Reference: BFU2016-80006-P

Contracts with Companies

De la Mata García, M. Collaboration Agreement between Ciberehd and institution. Funding agency: Centro de Investigación Biomédica en Red en el Área Temática de Enfermedades Hepáticas y Digestivas (CIBER on Liver and Digestive Diseases (CIBERehd)). Reference: MCI.CIBERehd

García Sánchez, MV. Sample collection service for the Innacto project. Funding agency: Fundació Institut de Recerca Hospital Universitari Vall D'hebron. Reference: PSS.0021

De La Mata García, M. Agreement with Omniprex (From research to clinical practice). Funding agency: Omniprex SL. Reference: PSS.0055

García Sánchez, MV. Sponsored research agreement. Funding agency: Merck Sharp & Dohme SA. Reference: PSS.0063

García Sánchez, MV. Prognosis of patients with ulcerative colitis in sustained remission after thiopurines withdrawal. Merck Sharp & Dohme SA. Reference: PSS.0091

Rodríguez Perálvarez, ML. Support agreement for collaborators at the Digestive Tract Unit. Funding agency: Tumor Andalusian society of transplants of organs and tissues. Reference: PSS.0095

De La Mata García, M. aHction Project. Funding agency: OMNIPREX SL. Reference PSS.0106

De la Mata García, M. aHction Project. Funding agency: Abbvie Spain S.L.U. Reference: PSS.0144

De la Mata García, M. Support agreement for collaborators at the Digestive Tract Unit. Funding agency: Astellas Pharma, S.A. Reference: CCB.0124

De la Mata García, M. Support agreement for collaborators at the Digestive Tract Unit. Funding agency: Merck Sharp & Dohme de España SA .Reference: CCB.0130

De la Mata García, M. Support agreement for collaborators at the Digestive Tract Unit. Funding agency: Mutual Médica de Cataluña y Baleares. Reference: CCB.0132

Clinical Trials

0249/14. An open, multicenter study to assess long-term effects of ABT-450/ritonavir/ABT-267 (ABT-450/r/ABT-267) and ABT-333 with or without ribavirin (RBV) in adults with chronic infection with genotype 1 (TOPAZ-1) of Hepatitis C virus (HCV). PI: Dr Fraga Rivas, Enrique

0349/14.A Phase 1b Study to Assess the Safety and Anti-tumour Activity of Dexanabiol Monotherapy and Dexanabiol in Combination with Chemotherapy in Patients with Advanced Tumours. PI: Dr Montero Alvarez, Jose Luis

0257/15.A Study of Safety, Tolerability, and Clinical Activity of MEDI4736 and Tremelimumab Administered as Monotherapy and in Combination to Subjects with Unresectable Hepatocellular Carcinoma. PI: Dr Fraga Rivas, Enrique

0219/15. A Phase II/III, randomized, double-blind and placebo-controlled study, to evaluate the efficacy and safety the treatment of induction and maintenance GS-5745 in which patients with active mild to moderate ulcerative colitis. PI: Dr García Sánchez, Valle

0259/15. Open, multicenter, randomized study to evaluate the efficacy and safety of ABT-493 / ABT-530 in adults with chronic infection with hepatitis C genotype 1 (ENDURANCE-1) study. PI: Dr Montero Álvarez, José Luis

0311/15.A phase 3b, randomized, controlled, multicenter study with oral ferric maltol (Feracru) or intravenous iron (FCM), for the treatment of iron

deficiency anemia in subjects with inflammatory bowel disease.

PI: Dr García Sánchez, Valle

2952. Phase 2, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of ENZALUTAMIDE in patients with advanced hepatocellular carcinoma.

PI: Dr Montero Álvarez, José Luis

3002. A Phase 3, randomized, double-blind, placebo-controlled, multicenter study to investigate the efficacy and safety of mongersen (GED-0301) for the treatment of subjects with active Crohn's disease.

PI: Dr García Sánchez, Valle

3024. A Phase 3, long-term active treatment extension study of mongersen (GED-0301) in subjects with Crohn's disease

PI: Dr García Sánchez, Valle

3127. Open and a single group study to evaluate the safety and efficacy ABT-493/ABT-530 in adults who have been recipients of a liver or kidney transplant, with chronic infection Hepatitis C (VHC) genotipo 1-6 (MAGELLAN-2).

PI: Dr Montero Álvarez, José Luis

3182. Suspension of treatment ANTI-TNF in patients inflammatory bowel disease: Multicenter trial, prospective and randomized.

PI: Dr Benítez Cantero, José Manuel

3184. A phase II, multicentre and open study to evaluate the efficacy and safety of combination with fixed-dosis of sofosbuvir/velpatasvir in patients with chronic HCV infection who received a liver transplant.

PI: Dr Montero Álvarez, José Luis

3414. Study of Treat to Target Versus Routine Care Maintenance Strategies in Crohn's Disease Patients Treated With Ustekinumab.

PI: Dr Barrera Baena, Pilar

3482. A Phase 3, Randomized, Double-blind, Controlled Study of Cabozantinib (XL184) vs Placebo in Subjects With Hepatocellular Carcinoma Who Have Received Prior Sorafenib.

PI: Dr Benítez Cantero, José Manuel

3527. An Open-label, Randomized, Parallel-Group, Phase I Study to Evaluate Pharmacokinetics, Efficacy and Safety between Subcutaneous CT-P13 and Intravenous CT-P13 in Patients with Active Crohn's Disease Active Ulcerative Colitis.

PI: Dr Benítez Cantero, José Manuel

3561. A Single Arm, Open-label Study to Evaluate the Efficacy and Safety of Glecaprevir (GLE)/Pibrentasvir (PIB) in Treatment Naïve Adults With Chronic Hepatitis C Virus (HCV) Genotype 1, 2, 4, 5 or 6 Infection and Compensated Cirrhosis.

PI: Dr Montero Álvarez, José Luis

3589. A Phase 3 Multicenter, Open-Label Extension (OLE) Study to Evaluate the Long-Term Safety and Efficacy of ABT-494 in Subjects With Ulcerative Colitis (UC).

PI: Dr Benítez Cantero, José Manuel

2315. A long-term non-interventionist registration study to assess the safety and efficacy of HUMIRA (adalimumab) in patients with moderately active or very active ulcerative colitis (LEGACY).

PI: Dr García Sánchez, Valle

2567. Assessing adherence to triple therapy for Hepatitis C.

PI: Dr Fraga Rivas, Enrique

2616. Observational, multicenter, prospective study to assess renal function in patients with liver transplants treated with tacrolimus.

PI: Dr Rodríguez Perálvarez, Manuel Luis

3006. Cancer and seriously infections across Europe: I-CARE.

PI: Dr Benítez Cantero, José Manuel

3044. Effectiveness and safety/tolerability of Viekirax y Exviera in diagnosed patients HCV, co-infected or not with VIH-1, GT1 o 4, and chronic kidney disease in stage IIIb to V, including those in dialysis, usual clinical practice in Spain. Vie-kinD Study.

PI: Dr Montero Álvarez, José Luis

3132. Epidemiologic study in incidence in inflammatory bowel disease in adult spanish population.

PI: Dr García Sánchez, Valle

3194. Exploratory observational study, describing the profiles of patients with Hepatitis C with 18 age

old or treated without interferon in accordance with the ribavirin addiction in Spain. ConRiba-15 Study.

PI: Dr Montero Álvarez, José Luis

3278. Evidence on the effectiveness of Paritaprevir/r/Ombitasvir ± Dasabuvir (RÉGIMEN ABBVIE) ± Ribavirina in pacientes with chronic hepatitis C. Retrospective observational study.

PI: Dr Poyato González, Antonio

3279. Evolution of patients with inflammatory bowel disease in remission after the exchange to infliximab biosimilar.

PI: Dr García Sánchez, Valle

3354. Prospective and multicentric study on the epidemiology and omic characteristics of inflammatory bowel disease of recent diagnosis in Spain.

PI: Dr Benítez Cantero, José Manuel

3391. Effectiveness of Envarsus in the prevention of rejection of liver transplantation: Prospective observational post-authorization study in conditions of usual clinical practice

PI: Dr Montero Álvarez, José Luis

3531. A post-authorization safety of golimumab in UC using spanish ENEIDA registry.

PI: Dr García Sánchez, Valle

3646. Analysis of the effectiveness and safety of the switch from original infliximab to biosimilar in patients with inflammatory bowel disease

PI: Dr Benítez Cantero, José Manuel

3657. Effect of self-management with flexible doses in patients with ulcerative colitis treated with 5-aminosalicylic acid (5-ASA): Controlled observational study (ASAFLEX-Study).

PI: Dr Iglesias Flores, Eva

3659. Management of patients with unresectable hepatocellular carcinoma (HCCI) after radiological confirmation of the disease to the first line of systemic treatment.

PI: Dr Montero Álvarez, José Luis



HIGHLIGHTS

PUBLICATIONS

41

IMPACT FACTOR

170,245

AVERAGE IMPACT FACTOR

4,152

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Machuca Sánchez, Isabel

Marmesat Rodas, Bárbara

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Rodríguez Cano, Diego

Valle Arroyo, Jorge

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Cabada Añón, M^o Teresa

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Scientific Activity

The Infectious Diseases Group (GC-03) is a consolidated and interdisciplinary group that includes biologists, immunologists, research nurses and infectious diseases specialists. The group is focused on the study of several infectious pathologies, from two different approaches:

1. Clinical-epidemiological studies (which include clinical trials). In these studies, our objective is to study risk factors, clinical features and the efficacy/safety of new treatments, thus aiming to improve the prognosis of infectious diseases.
2. Pathogenesis studies aimed to set the basis for the development of specific clinical strategies. The most relevant are our studies on immunopathology (in collaboration with the Immunology and Microbiology groups).

All our studies start with the identification of a clinical problem that we try to solve using an experimental approach. Our aim is that our experimental results have an impact on healthcare solutions and improve disease prognosis (translational research).

Research Lines

- Infection in transplant patients: cytomegalovirus and other micro-organisms.
- Optimizing the management multidrug-resistant bacterial infections.
- Immunopathology, pathogenesis and

treatment of HIV infection.

- Pathogenesis and treatment of HIV / HCV co-infection.

Keywords

Cytomegalovirus, multidrug-resistant microorganisms, immunopathology, transplantation, specific immune response, HIV, HCV, antiretroviral therapy.

Scientific Production

Publications

Main publications

Rivero-Juarez A, Frias M, Lopez-Lopez P, Rialde MD, Brieva T, Machuca I, Camacho A, Martinez-Peinado A, Gomez-Villamandos JC, Rivero A. Hepatitis E Virus (HEV) Infection in Anti-HEV Immunoglobulin G-Carrying Patients After Successful Hepatitis C Virus Treatment: Reactivation or Reinfection?. *CLINICAL INFECTIOUS DISEASES*. 2017;64(7):964-966.

IF: 8,216

Q: 1 D: 1

Caston JJ, De la Torre A, Ruiz-Camps I, Sorli ML, Torres V, Torre-Cisneros J. Salvage Therapy with Ceftolozane/Tazobactam for Multidrug-Resistant *Pseudomonas aeruginosa* Infections. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017;61(3):e02136-16.

IF: 4,302

Q: 1

Machuca I, Gutierrez-Gutierrez B, Gracia-Ahufinger I, Espinar FR, Cano A, Guzman-Puche J, Perez-Nadales E, Natera C, Rodriguez M, Leon R, Caston JJ, Rodriguez-Lopez F, Rodriguez-Bano J, Torre-Cisneros J. Mortality Associated with Bacteremia Due to Colistin-Resistant *Klebsiella pneumoniae* with High-Level Meropenem Resistance: Importance of Combination Therapy without Colistin and Carbapenems. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017;61(8):e00406-17.

IF: 4,302

Q: 1

Rivero-Juarez A, Gonzalez R, Frias M, Manzanares-Martin B, Rodriguez-Cano D, Perez-Camacho I, Gordon A, Cuenca F, Camacho A, Pineda JA, Pena J, Rivero A. KIR2DS2 as predictor of thrombocytopenia secondary to pegylated interferon-alpha therapy. *PHARMACOGENOMICS JOURNAL*. 2017;17(4):360-365.

IF: 3,815

Q: 1

Frias M, Rodriguez-Cano D, Cuenca-Lopez F, Macias J, Gordon A, Manzanares-Martin B, Pineda JA, Camacho A, Torre-Cisneros J, Pena J, Rivero-Juarez A, Rivero A. HLA-B*18 as a risk factor of short-term progression to severe liver fibrosis in HIV/HCV co-infected patients with absent or minimal fibrosis: implications for timing of therapy. *PHARMACOGENOMICS JOURNAL*. 2017;17(6):551-555.

IF: 3,815

Q: 1

Frias M, Rodriguez-Cano D, Cuenca-Lopez F, Macias J, Gordon A, Manzanares-Martin B, Pineda JA, Camacho A, Torre-Cisneros J, Pena J, Rivero-Juarez A, Rivero A. HLA-B*18 as risk factor of liver fibrosis progression in HIV/HCV treatment-experienced patients. *PHARMACOGENOMICS JOURNAL*. 2017;17(6):479-480.

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Q: 1

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Research Funding

National

Gracia Ahufinger, I. Study of epigenetic modifications induced by cytomegalovirus as risk and prognostic markers. Funding agency: National Institute

of Health Carlos III (ISCIII). Reference: PI14/O1225

De la Torre Cisneros, J. Clinical trial to stop valganciclovir prophylaxis in CMV-seropositive renal transplant patients who maintain CD8+ CMV-specific cellular immunity after receiving thymoglobulin. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI15/O0402

Rivero Román, A. Andalusia prospective follow-up cohort of chronically HCV infected patients co-infected with HIV. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/O1017

Cantisán Bohorquez, S. Impact of the lack of CMV-specific CD8+ T cell response in CMV-seropositive donors on CMV reactivation after hematopoietic stem cells transplant in CMV-seropositive recipients. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/O1419

Rivero Juarez, A. Impact of the acute Hepatitis e Virus Infection in HIV Infected Patients Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/O1297

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De la Torre Cisneros, J. Spanish Network for Research on Infectious Diseases (REIPI). Funding agency: National Institute of Health Carlos III (ISCIII). Reference: RD16/O016/O008

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Regional

Camacho Espejo, A. Assessing persistence of hepatitis C virus in HIV co-infected patients achieving a sustained viral response. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0187-2013

Rivero Juarez, A. Study Group for Viral Hepatitis. Funding agency: Regional Ministry of Equality,

Health and Social Policies (CISPS). Reference: RH-0024-2013

De la Torre Cisneros, J. Study of the kinetics of CD8 + T immunity against CMV in renal transplant patients treated with thymoglobuline. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0294-2014

International

De la Torre Cisneros, J. Combatting Bacterial Resistance in Europe (COMBACTE-NET). IMI - call 6, 2012, Topic 1: Innovative Trial Design & Clinical Drug Development. Reference: Grant Agreement n. 115523.

De la Torre Cisneros, J. Combatting Bacterial Resistance in Europe - Carbapenem Resistance (COMBACTE-CARE). Funding Agency: IMI - call 9, 2013, Topic 5: Clinical development of antibacterial agents for Gram-negative antibiotic resistant pathogens. Reference: Grant Agreement n. 115620.

Rivero Juaréz, A (node). Partners of people on ART: a New Evaluation of the Risks Stage 2 (PARTNER 2). Programme Grants for Applied Research funding scheme (RP-PG-0608-10142). National Institute for Health Research (NIHR), UK.

Contract with Companies

Rivero Juarez, A. Agreement with FPS. Funding agency: FPS Reference: PSS.0181

Rivero Juarez, A. Janssen Agreement. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS.0184

Rivero Juarez, A. Agreement. Funding agency: FPS. Reference: PSS.0217

Rivero Román, A. Programme combined HIV/AIDS. Funding agency: Bristol-Myers Squibb, S.A.U. Reference: CCB.0049

De la Torre Cisneros, JC. Agreement with Roche Pharma (Publications). Funding Agency: Roche Pharma, S.A. Reference: CCB.0076

Rivero Román, A. Agreement with Abbvie. Funding Agency: Abbvie Spain S.L.U. Reference: CCB.0093

Rivero Román, A. Agreement with JANSSEN. Funding agency: JANSSEN-CILAG, S.A. Reference: CCB.0113_01

De la Torre Cisneros, JC. Agreement. Funding Agency: FPS. Reference: CCB.0114

Rivero Román, A. Agreement with JANSSEN. Funding agency: Janssen-Cilag, S.A. Reference: CCB.0115

Rivero Román, A. Agreement with JANSSEN. Funding agency: Janssen-Cilag, S.A. Reference: CCB.0123

Rivero Román, A. Agreement with GILEAD. Funding agency: Gilead Sciences, S.L. Reference: CCB.0121

Rivero Román, A. Agreement with GILEAD. Funding agency: Gilead Sciences, S.L. Reference: CCB.0120

De la Torre Cisneros, JC. Agreement with Astellas. Funding agency: Astellas Pharma, S.A. Reference: CCB.0135

Rivero Román, A. Agreement with Astellas. Funding agency: Bristol-Myers Squibb, S.A.U. Reference: CCB.0140

Rivero Román, A. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: CCB.0141

Rivero Román, A. Agreement with Merck. Funding agency: Merck Sharp & Dohme De España SA. Reference: CCB.0148

Rivero Juárez, A. Agreement with GILEAD. Funding agency: Gilead Sciences, S.L. Reference: CCB.0152

Clinical Trials

0072/12. Estudio abierto para evaluar la seguridad, la actividad antiviral y la farmacocinética del tratamiento con antivirales de acción directa (AAD) en combinación con peginterferón α -2a y ribavirina (pegIFN/RBV) en sujetos con infección crónica por el virus de la hepatitis C (VHC) que han presentado fracaso virológico en un estudio previo de Abbvie o Abbott sobre el tratamiento combinado con AAD. PI: Dr Rivero Román, Antonio

0152/13. Follow-up study to assess the resistance and durability of response to treatment with Abb-

Vie direct-acting antivirals in patients who participated in phase II/III studies for the treatment of chronic HCV infection.

PI: Dr Rivero Román, Antonio

0272/14. Phase 3, randomized, active-controlled, open-label treatment to evaluate the change in treatment regimen in a single tablet taken once daily darunavir / cobicistat / emtricitabine / alafenamida tenofovir (D / C / F / TAF) front the continuation of the current regime consists of an inhibitor boosted protease (PPI) in combination with emtricitabine / tenofovir disoproxil fumarate (FTC / TDF) in patients infected with HIV type 1 (HIV-1) with virologic suppression subjects. PI: Dr Rivero Román, Antonio

0124/15. Switch to MK-1439A in HIV-1-Infected Subjects Virologically Suppressed on a Regimen of a Ritonavir-boosted Protease Inhibitor and Two Nucleoside Reverse Transcriptase Inhibitors (NRTIs).

PI: Dr Rivero Román, Antonio

0114/15. Phase 3 trial, randomized, active-controlled, double-blind treatment to evaluate the safety and efficacy of the combined regimen of darunavir / cobicistat / emtricitabine / alafenamida tenofovir (D / C / F / TAF) administered once daily against the consistent treatment in the combination of darunavir / cobicistat co-administered with combination emtricitabine / tenofovir disoproxil fumarate in antiretroviral treatment naive subjects infected with human immunodeficiency virus type 1. PI: Dr Rivero Román, Antonio

0298/15. Clinical trial of suspension of prophylaxis with valganciclovir in CMV-seropositive kidney transplant recipients that maintain cellular immunity CMV-specific CD8 + after receiving thymoglobuline.

PI: Dr De la Torre Cisneros, Julián Carlos

0062/15. Immune Response, and Safety Study of Clostridium difficile Toxoid Vaccine in Subjects at Risk for C. difficile Infection.

PI: Dr De la Torre Cisneros, Julián Carlos

0369/15. A Phase 3, Randomized, Double-Blind Study to Evaluate the Safety and Efficacy of Switching From a Regimen of Dolutegravir and ABC/3TC, or a Fixed Dose Combination (FDC) of ABC/DT-

G/3TC to a FDC of GS-9883/F/TAF in HIV-1 Infected Subjects Who Are Virologically Suppressed.
PI: Dr Rivero Román, Antonio

3192. A Phase III, randomised, double-blind, multicentre, parallelgroup, non-inferiority study evaluating the efficacy, safety, and tolerability of dolutegravir plus lamivudine compared to dolutegravir plus tenofovir/emtricitabine in HIV-1-infected treatment-naïve adults
PI: Dr Rivero Román, Antonio

3186. A Phase 2, Multicenter, Randomized, Open-Label Study to Evaluate the Efficacy and Safety of Sofosbuvir/Velpatasvir Fixed Dose Combination (FDC) and Sofosbuvir/Velpatasvir FDC and Ribavirin in Subjects With Chronic Genotype 3 HCV Infection and Cirrhosis.
PI: Dr Rivero Román, Antonio

3124. A Phase 3, Randomized, Double-Blind Study to Evaluate the Safety and Efficacy of GS-9883/Emtricitabine/Tenofovir Alafenamide Versus Abacavir/Dolutegravir/Lamivudine in HIV-1 Infected, Antiretroviral Treatment-Naïve Adults.
PI: Dr Rivero Román, Antonio

3125. A Phase 3, Randomized, Double-Blind Study to Evaluate the Safety and Efficacy of GS-9883/Emtricitabine/Tenofovir Alafenamide Versus Dolutegravir + Emtricitabine/Tenofovir Alafenamide in HIV-1 Infected, Antiretroviral Treatment-Naïve Adults.
PI: Dr Rivero Román, Antonio

3248. A Phase III, Randomized, Multicenter, Parallel-group, Non-inferiority, Open-label Study Evaluating the Efficacy, Safety, and Tolerability of Switching to Long-acting Cabotegravir Plus Long-acting Rilpivirine From Current INI- NNRTI-, or PI-based Antiretroviral Regimen in HIV-1-infected Adults Who Are Virologically Suppressed.
PI: Dr/a Rivero Román, Antonio

3406. A Multicenter, Randomized, Open-Label Clinical Study Of S-649266 Or Best Available Therapy For The Treatment Of Severe Infections Caused By Carbapenem-Resistant Gram-Negative Pathogens.
PI: Dr De la Torre Cisneros, Julián Carlos

3581. Imipenem/Relebactam/Cilastatin Versus Piperacillin/Tazobactam for Treatment of Participants With Bacterial Pneumonia (MK-7655A-014).
PI: Dr Caston Osorio, Juan José

3585. A Multicenter, double-blind, randomized, comparative study of the safety, tolerability, efficacy, and pharmacokinetics of CF-301 vs. Placebo in addition to standard-of-care antibacterial therapy for the treatment of adult patients with staphylococcus aureus bloodstream infections (Bacteremia) including right sided endocarditis.
PI: Dr Natera Kindelan, Clara

3632. A Phase IIIb, randomized, multicenter, parallel-group, non-inferiority, open-label study evaluating the efficacy, safety, and tolerability of long-acting cabotegravir plus long-acting rilpivirine administered every 8 weeks or every 4 weeks in hiv-1-infected adults who are virologically suppressed.
PI: Dr/a Rivero Román, Antonio

0032/08/EPA. An international, multicenter, observational, prospective study on the safety of Maraviroc in combination with an optimized background therapy in previously treated HIV-1 patients.
PI: Dr Rivero Román, Antonio

2907. Impact of specific antimicrobials and MIC values on the outcome of bloodstream infections due to ESBL- or carbapenemase-producing Enterobacteriaceae in Solid Organ Transplantation: an observational multinational study.
PI: Dr De la Torre Cisneros, Julián Carlos

2649. Effectiveness and safety of treatment against hepatitis C virus based on direct acting antivirals in actual use conditions: Cohort GEHEP
PI: Dr Rivero Román, Antonio

2848. Evaluation of mortality associated with different clinical management strategies of Klebsiella pneumoniae bacteremia resistant to carbapenems and colistin. KAPECOR study.
PI: Dr Machuca Sánchez, Isabel María

2933. Study of the kinetics of T Cd8 positive immunity against CMV in renal transplant patients treated with thymoglobuline.
PI: Dr De la Torre Cisneros, Julián Carlos

3044/2. Efficacy and safety/tolerability of Viekirax and Exviera in patients with diagnosed HCV, whether or not displaying coinfection with HIV-1, GT1 or GT4, and Stage IIIB-V chronic kidney disease, including patients undergoing dialysis, in routine clinical practice in Spain. Vie-kinD Study.
PI: Dr Rivero Román, Antonio

3131. Rescue therapy using ceftolozane-tazobactam in infection caused by multidrug-resistant Pseudomonas aeruginosa.
PI: Dr De la Torre Cisneros, Julián Carlos.

3162. Spanish bacteremia cohort 2016: epidemiology, clinical management and prognostic factors at diagnosis. PRO-BAC 2016 Study.
PI: Dr Natera Kindelan, Clara

2853. Epidemiología y eficacia de tratamiento con fosfomicina en la infección del tracto urinario causada por Klebsiella pneumoniae resistente a carbapenemas y colistina. Estudio KAPECOR-ITU.
PI: Dr Rodríguez Gómez, Jorge

3009. Prospective observational study to assess the risk factors, clinical management outcomes of hospitalized patients with serious infections caused by carbapenem-resistant Enterobacteriaceae and acinetobacter baumannii.
PI: Dr De la Torre Cisneros, Julián Carlos

3350. Assessment of the Incidence of Clostridium difficile Infections in hospitalised Patients on Antibiotic Treatment.
PI: Dr De la Torre Cisneros, Julián Carlos

3412. Current european practice patterns of skin infection management: evaluate the incidence of skin infection, the percentage of acute bacterial skin and skin structure infections (ABSSSI) among them, and their clinical and therapeutic management.
PI: Dr De la Torre Cisneros, Julián Carlos

GC4

Inflammation and cancer



HIGHLIGHTS

PUBLICATIONS

8

IMPACT FACTOR

31,368

AVERAGE IMPACT FACTOR

3,921

Principal Investigator (PI)

Eduardo Muñoz Blanco

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*PAIDI BIO-304 Immunopharmacology and
Molecular Virology*

Emerging Researcher (ER):

Marco Antonio Calzado Canale

Post-Doctoral Researchers

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Navarrete Rueda, Carmen

Pre-Doctoral Researchers and MSc Students

Carranza Valencia, Juan

Del Río Mercado, Carmen

Garrido Rodríguez-Córdoba, Martín

Jiménez Jiménez, Carla

Lara Chica, M^o Isabel

Millán Ortega, Estrella

Morrugares, Rosario

Palomares Cañero, Belén

Other members of the Group (Nursing, Technical, and Administrative Staff)

Collado Rojas, Juan Antonio

Mellado, Ana

Molina Moran, Rosario

Scientific Activity

Our group Inflammation and Cancer is a consolidated group (GC-04) of the IMIBIC and participates in the research program Chronic Inflammatory Diseases that is described in the Institute strategic plan. Overall the research undertaken by the group is very collaborative with other national and international research groups and with SMEs. The main research lines are:

1. Study of the mechanism of action of cannabinoids (endocannabinoids, phytocannabinoids and synthetic cannabinoids) (IP. Eduardo Muñoz). In this line of research we are very focused on studying the mechanism of action of some phytocannabinoids and endocannabinoids in order to explore its therapeutic potential in inflammatory and neurodegenerative diseases. We aim to identify the hyoximimetic mechanism of action of endocannabinoids type N-acyl dopamines and explore pharmacological strategies to increase the levels of these endocannabinoids in the CNS. Also we are investigating the pharmacological potential of new semi-synthetic compounds derived from phytocannabinoids Cannabidiol and Cannabigerol by studying novel mechanisms of actions and its efficacy in different in vivo models of neuroinflammation and fibrosis.
2. Molecular identification of signaling pathways that regulate certain processes involved in inflammation and cancer (IP. Marco A. Calzado). This line of re-

search is aimed to identify the role of the ubiquitin ligase SIAH2 in response to hypoxia and other endogenous mediators. One of the main objectives is to identify new molecular targets for the development of novel potential therapies. Moreover, we are studying the metabolomic profile in human lung cancer and in murine models of prostate cancer. We also have a particular interest in the study of new chemical entities able to inhibit molecular targets of pharmacological interest in cancer.

Research Lines

- Study of the mechanism of action of cannabinoids
- Molecular identification of signaling pathways that regulate certain processes involved in inflammation and cancer

Keywords

Inflammation, cancer, tissue regeneration, cannabinoids, SIAH2, pharmacology and nutraceuticals.

Scientific Production

Publications

Main Publications

Nadal X, del Rio C, Casano S, Palomares B, Ferreiro-Vera C, Navarrete C, Sanchez-Carnerero C, Cantarero I, Bellido ML, Meyer S, Morello G, Appendino G, Munoz E. Tetrahydrocannabinolic acid is a potent PPAR gamma agonist with neuroprotective activity. *BRITISH JOURNAL OF PHARMACOLOGY*. 2017.174(23):4263-4276.
IF: 5,491
Q: 1 D: 1

Other Publications

Saliba SW, Marcotegui AR, Fortwangler E, Ditrich J, Perazzo JC, Munoz E, de Oliveira ACP, Fiebich BL. AM404, paracetamol metabolite, prevents prostaglandin synthesis in activated microglia by inhibiting COX activity. *JOURNAL OF NEUROINFLAMMATION*. 2017. 14(1):246.

IF: 5,102

Q: 1

Nizet S, Muñoz E, Fiebich BL, Abuja PM, Kashofer K, Zatloukal K, Tangermann S, Kenner L, Tschegg C, Nagl D, Scheichl L, Meisslitzer-Ruppitsch C, Freissmuth M, Berger T. Clinoptilolite in Dextran Sulphate Sodium-Induced Murine Colitis: Efficacy and Safety of a Microparticulate Preparation. *INFLAMMATORY BOWEL DISEASES*. 2017. 24(1):54-66.

IF: 4,525

Q: 1

Gomez-Canas M, Morales P, Garcia-Toscano L, Navarrete C, Munoz E, Jagerovic N, Fernandez-Ruiz J, Garcia-Arencibia M, Pazos MR. Corrigendum to "Biological characterization of PM226, a chromenoisoxazole, as a selective CB2 receptor agonist with neuroprotective profile" [Pharmacol. Res. 110 (August 2016) (2016) 205-215]. *PHARMACOLOGICAL RESEARCH*. 2017.120:302.

IF: 4,48

Q: 1

Del Prete D, Tagliatalata-Scafati O, Minassi A, Sirignano C, Cruz C, Bellido ML, Munoz E, Appendino G. Electrophilic Triterpenoid Enones: A Comparative Thiol-Trapping and Bioactivity Study. *JOURNAL OF NATURAL PRODUCTS*. 2017.80(8):2276-2283.

IF: 3,281

Q: 1

Egas V, Millan E, Collado JA, Ramirez-Apan T, Mendez-Cuesta CA, Munoz E, Delgado G. Effect of natural and semi-synthetic cadinanes from *Heterotheca inuloides* on NF-kappa B, Nrf2 and STAT3 signaling pathways and evaluation of their in vitro cytotoxicity in human cancer cell lines. *BIOORGANIC & MEDICINAL CHEMISTRY*. 2017.25(12):3135-3147.

IF: 2,93

Q: 2

Olmedo DA, Lopez-Perez JL, del Olmo E, Bedoya LM, Sancho R, Alcami J, Munoz E, San Feliciano A,

Gupta MP. Neoflavonoids as Inhibitors of HIV-1 Replication by Targeting the Tat and NF-B Pathways. *MOLECULES*. 2017.22(2):-E321.
IF: 2,861
Q: 2

Formisano C, Sanna C, Ballero M, Chianese G, Sirignano C, Rigano D, Millan E, Munoz E, Tagliamonte Scafati O. Anti-inflammatory sesquiterpene lactones from *Onopordum illyricum* L. (Asteraceae), an Italian medicinal plant. *FITOTERAPIA*. 2017.116:61-65.
IF: 2,698
Q: 2

Research Funding

Regional

Calzado Canale, MA. Analysis of the metabolic footprint of lung cancer. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0246-2013

National

Muñoz Blanco, E. Pre-clinical development of new cannabinoid derivatives for the treatment of sclerodermia and ALS. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2014-1877-1

Muñoz Blanco, E. Hypoxia Mimetic activity of new derivatives of cannabidiol. Therapeutic implications. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2014-53763-P

Lopez Miranda JM (Calzado Canale, M, Co-PI). Early predictor and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine. Agency: National Institute of Health Carlos III (ISCIII) Reference: PIE14/00005

Muñoz Blanco, E. Preclinical development of VCE-003.2 for the treatment of Huntington's Disease (CANNADERIV). Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2015-3364-1

Calzado Canale, MA. Identification of new functions and substrates of protein kinase Dyrk2 and their implications for carcinogenesis. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2016-75228-R.

Malagón MM (Calzado Canale, M, Co-PI). Integration of platforms for the identification of therapeutic targets and the development of new products for the prevention and/or treatment of radiodermatitis. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-4589-1

Muñoz Blanco, E. Study of the mechanism of action of vce-004.8, a cannabidiol quinone derivative. Therapeutic implications in multiple sclerosis. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2017-87701-R B.

Contracts with Companies

Muñoz Blanco, E. Biomolecules design through multivariate analysis process for obtaining active compounds (INTERCONNECTA). Funding agency: Vivacell Biotechnology Spain SL.

Muñoz Blanco, E. Natural Ingredients. Funding agency: SimCosmetic Biotech S.L. Reference: 12015022



HIGHLIGHTS

Publications

16

Impact Factor

57,248

Average Impact Factor

3,578

Principal Investigator (PI)

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 Nicolás Monardes Contract

Co-Principal Investigator (Co-PI)

Eduardo Collantes Estévez
Professor at University of Cordoba. Head of the Clinical Management Unit of Rheumatology Research network in inflammation and rheumatic diseases (RIER)
PAIDI CTS-1004: Chronic inflammatory diseases of musculoskeletal system and connective tissue

Emerging Researcher

Barbarroja Puerto, Nuria

Researchers

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 Escudero Contreras, Alejandro
 Font Ugalde, Pilar
 Gómez Gracia, Inmaculada
 López Montilla, María Dolores
 Pérez Guijo, Verónica

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 Ortega Castro, Rafaela
 PerezSanchez, Carlos
 Ruiz Limon, Patricia
 Lopez Medina, Clementina
 Arias de la Rosa, Iván

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 Mallenco Anguita, Marisa
 Ruiz Ponce, Miriam
 Ramos Salado, Francisco José
 Pérez Sánchez, Laura

Other members of the Group (Nursing, Technical, Student, and Administrative Staff)

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 Carmona Moriel, Cristina Elena
 Jurado Ruiz, Luis
 Romero Gutiérrez, María Dolores
 Ruiz Vílchez, Desiree
 Segura Ruiz, Rocío

Scientific Activity

Our team is integrated in the Scientific Program on Chronic and Inflammatory Diseases, oriented to the study of the most relevant chronic processes of the modern society, with special emphasis on those of an inflammatory and auto-immune nature.

This area mainly covers the study of chronic inflammatory and systemic autoimmune diseases, cardiovascular diseases, neurological diseases, renal and urological diseases, liver and digestive diseases.

Our research team -GC-5 'Systemic Autoimmune Diseases and Chronic Arthropathies', employs synergistically clinical-therapeutic approaches and cellular and molecular approaches, and has as main objectives:

1. Analyze molecular and cellular mechanisms of atherothrombosis development in systemic autoimmune diseases (EAS), and to identify new biomarkers and regulatory mechanisms promoted by new therapeutic approaches.
2. Analyze the role of the chronic systemic inflammation in the glucose and lipid metabolism in rheumatoid and psoriatic arthritis.
3. Study of the effects of conventional therapies (DMARDs), new agents (Apremilast) and other biologic drugs (anti-TNF α) on the metabolic syndrome associated with chronic inflammatory diseases.
4. Record, describe, and analyze clinical, epidemiological, demographic, genetic,

radiographic, pathophysiological and of therapeutic response in patients with spondyloarthritis (AS) in Spain.

5. Design, develop and validate a new system of measurement of mobility (most important expression of structural damage) of AS patients.

Research Lines

- Atherothrombosis in Systemic autoimmune diseases
- Biomarkers for Systemic Autoimmune Diseases
- Mechanisms involved in the development of insulin resistance and metabolic syndrome in rheumatoid and psoriatic arthritis
- Inflammation and Chronic Arthropathies
- Biomechanical analysis of joint motility

Keywords

Autoimmune diseases, spondyloarthropathies, inflammation, atherothrombosis, biomarkers, metabolic syndrome, treatment, atherosclerosis.

Scientific Production

Publications

Main Publications

Perez-Sanchez C, Aguirre MA, Ruiz-Limon P, Abalos-Aguilera MC, Jimenez-Gomez Y, Arias-de la Rosa I, Rodriguez-Ariza A, Fernandez-del Rio L, Gonzalez-Reyes JA, Segui P, Collantes-Estevez E, Barbarroja N, Velasco F, Sciascia S, Cecchi I, Cuadrado MJ, Villalba JM, Lopez-Pedrerac. Ubiquinol Effects on Antiphospholipid Syndrome Prothrombotic Profile A Randomized, Placebo-Controlled Trial. *ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR*

BIOLOGY. 2017;37(10):1923-1932.

IF: 6,607

Q: 1 D: 1

Perez-Sanchez C, Ruiz-Limon P, Aguirre MA, Jimenez-Gomez Y, Arias-de la Rosa I, Abalos-Aguilera MC, Rodriguez-Ariza A, Castro-Villegas MC, Ortega-Castro R, Segui R, Martinez C, Gonzalez-Conejero R, Rodriguez-Lopez S, Gonzalez-Reyes JA, Villalba JM, Collantes-Estevez E, Escudero A, Barbarroja N, Lopez-Pedrerac. Diagnostic potential of NETosis-derived products for disease activity, atherosclerosis and therapeutic effectiveness in Rheumatoid Arthritis patients. *JOURNAL OF AUTOIMMUNITY*. 2017;82:31-40.

IF: 7,641

Q: 1

Ruiz Limón, P. Ortega R, Arias de la Rosa I, Abalos-Aguilera MDC, Perez-Sanchez C, Jimenez-Gomez Y, Peralbo-Santaella E, Font P, Ruiz-Vilches D, Ferrin G, Collantes-Estevez E, Escudero-Contreras A, López-Pedrerac*, Barbarroja N*. Tocilizumab improves the proatherothrombotic profile of rheumatoid arthritis patients modulating endothelial dysfunction, NETosis, and inflammation. *TRASLACIONAL RESERACH: the journal of laboratory and clinical medicine*. 2017. 183;87-103.

IF: 4,65

Q: 1

López-Medina C, Jiménez-Gómez Y, Moltó A, Schiotis RE, Marzo-Ortega H, van Gaalen FA, Ozgocmen S, Dougados M, Calvo-Gutiérrez J, Castro-Villegas MC, Collantes-Estévez E, Font-Ugalde P; ASAS-COMOSPA taskforce. Cardiovascular risk factors in patients with spondyloarthritis from Northern European and Mediterranean countries: An ancillary study of the ASAS-COMOSPA project. *Joint Bone Spine*. 2017. S1297-319X (17)30139-2.

IF: 3,329

Q: 2

Radin M, Cecchi I, Perez-Sanchez C. Antiphospholipid antibodies negativization: time for testing for non-criteria aPL? *LUPUS*. 2017;26(13):1457-1458.

IF: 2,454

Q: 3

Cardenas MJ, de la Fuente S, Castro-Villegas MC, Romero-Gomez M, Ruiz-Vilchez D, Calvo-Gutiérrez J, Escudero-Contreras A, del Prado JR,

Collantes-Estevez E, Font P. Optimization of biological therapy in rheumatoid arthritis patients: outcomes from the CREATE registry after 2 years of follow-up. *RHEUMATOLOGY INTERNATIONAL*. 2017.37(10):1701-1708.
IF: 1,824
Q: 3

Lopez-Pedreira C, Aguirre-Zamorano MA, Perez-Sanchez C. Mechanisms of atherosclerosis and cardiovascular disease in antiphospholipid syndrome and systemic lupus erythematosus. New therapeutic approaches. *MEDICINA CLINICA*. 2017.149(4):160-169.
IF: 1,125
Q: 3

Other Publications

Sciascia S, Coloma-Bazan E, Radin M, Bertolaccini ML, Lopez-Pedreira C, Espinosa G, Meroni PL, Cervera R, Cuadrado MJ. Can we withdraw anticoagulation in patients with antiphospholipid syndrome after seroconversion? *AUTOIMMUNITY REVIEWS*. 2017.16(11):1109-1114.
IF: 8,961
Q: 1 D: 1

Arroyo AB, Salloum-Asfar S, Perez-Sanchez C, Teruel-Montoya R, Navarro S, Garcia-Barbera N, Luengo-Gil G, Roldan V, Hansen JB, Lopez-Pedreira C, Vicente V, Gonzalez-Conejero R, Martinez C. Regulation of TFPI alpha expression by miR-27a/b-3p in human endothelial cells under normal conditions and in response to androgens. *SCIENTIFIC REPORTS*. 2017.7():-43500.
IF: 4,259
Q: 1

Aterido A, Julia A, Carreira P, Blanco R, Lopez-Longo JJ, Venegas JJP, Olive A, Andreu JL, Aguirre-Zamorano MA, Vela P, Nolla JM, Marengo-de la Fuente JL, Zea A, Pego JM, Freire M, Diez E, Lopez-Lasanta M, Lopez-Corbeto M, Palau N, Tortosa R, Gelpi JL, Absher D, Myers RM, Fernandez-Nebro A, Marsal S. Genome-wide pathway analysis identifies VEGF pathway association with oral ulceration in systemic lupus erythematosus. *ARTHRITIS RESEARCH & THERAPY*. 2017.19(1):-138.
IF: 4,121
Q: 2

Gomez-Gomez E, Carrasco-Valiente J, Blanca-Pedregosa A, Barco-Sanchez B, Fernandez-Rueda JL, Molina-Abril H, Valero-Rosa J, Font-Ugalde P, Requena-Tapia MJ. European Randomized Study of Screening for Prostate Cancer Risk Calculator: External Validation, Variability, and Clinical Significance. *UROLOGY*. 2017.102():85-91.
IF: 2,309
Q: 2

Fernandez-Carballido C, Navarro-Compan V, Castillo-Gallego C, Castro-Villegas MC, Collantes-Estevez E, de Miguel E. Esperanza StudyGrp. Disease Activity As a Major Determinant of Quality of Life and Physical Function in Patients With Early Axial Spondyloarthritis. *ARTHRITIS CARE & RESEARCH*. 2017.69(1):150-155.
IF: 3,319
Q: 3

Fernandez ASI, Roura XJ, Ruiz AA, Rosas J, Luezas JM, Estevez EC, Hernandez MAA, Benitez VC, Fisac C. Clinical utility of the ASDAS index in comparison with BASDAI in patients with ankylosing spondylitis (Axis Study). *RHEUMATOLOGY INTERNATIONAL*. 2017.37(11):1817-1823.
IF: 1,824
Q: 3

Torre-Alonso JC, Carmona L, Moreno M, Galindez E, Babio J, Zarco P, Linares L, Collantes-Estevez E, Barrial MF, Hermosa JC, Coto P, Suarez C, Almodovar R, Luelmo J, Castaneda S, Gratacos J. Identification and management of comorbidity in psoriatic arthritis: evidence- and expert-based recommendations from a multidisciplinary panel from Spain. *RHEUMATOLOGY INTERNATIONAL*. 2017.37(8):1239-1248.
IF: 1,824
Q: 3

Marras C, Monteagudo I, Salvador G, de Toro FJ, Escudero A, Alegre-Sancho JJ, Raya E, Ortiz A, Carmona L, Mestre Y, Cea-Calvo L, Calvo-Alen J. Identification of patients at risk of non-adherence to oral antirheumatic drugs in rheumatoid arthritis using the Compliance Questionnaire in Rheumatology: an ARCO sub-study. *RHEUMATOLOGY INTERNATIONAL*. 2017.37(7):1195-1202.
IF: 1,824
Q: 3

Bonilla PN, Gomez RG, Jimenez DR, Fabra MLV, Villanueva MDM, Catalan RG, Ugalde FF, Fernandez MSP, Alonso JLL, Galera JMG. Enhanced depth OCT imaging of the lamina cribrosa for 24 hours. *INTERNATIONAL JOURNAL OF OPHTHALMOLOGY*. 2017.10(2):306-309.
IF: 1,177
Q: 4

Research Funding

Regional

López Pedrera, R. Cellular and Molecular Mechanisms. Funding Agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CTS-7940

Jiménez Gómez, Y. Nuevos Mecanismos de Regulación Génica Post-Transcripcional Involucrados en la Patogenia de la Espondilitis Anquilosante (Ea): Micrnas y Splicing Alternativo. Nuevas Aproximaciones Terapéuticas. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0139-2017

Aguirre Zamorano, M^a A. Identificación y Caracterización de Nuevos Biomarcadores Como Predictores de Respuesta A Terapias Biologicas en la Artritis Reumatoide. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0285-2017

National

López Pedrera, R. Study of the mechanisms of atherothrombosis in systemic autoimmune diseases by integration of immunological, molecular and epigenetic analysis. New therapies. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/O1333

Barbarroja Puerto, N. Role of inflamed joints in the development of global insulin resistance and atherosclerosis associated with Rheumatoid Arthritis. Funding agency: Institute Carlos III Health (ISCIII). Reference: CP15/O0158. Associated to Miguel Serret Contract.

Collantes Estevez, E. Spanish Network for Research in inflammation and rheumatic disease (RIER).

Funding agency: Institute Carlos III Health (ISCIII). Reference: RD16/O012/O015

Barbarroja Puerto, N. Study of the epigenetic mechanisms involved in the development of insulin resistance and obesity associated with rheumatoid arthritis and psoriatic arthritis Funding agency: Institute Carlos III Health (ISCIII). Reference: P117/O1316
Expected starting date: 2018

International

Collantes Estevez, E. PRECISEADS - Molecular reclassification to find clinically useful biomarker for systemic autoimmune diseases. Funding agency: European Commission Reference: IMI/O002

Collantes Estevez, E. Can Inertial Movement Sensors (IMUs) provide a valid and reliable way of measuring Spinal Mobility in Axial Spondyloarthritis (axSpa): a Clinimetric Evaluation. Funding Agency: Foundation for Research in Rheumatology. Reference: FOREUM-2015-001

López-Pedrerá, Rosario; Aguirre-Zamorano M^o Ángeles. APSaAction International Clinical Data Base and Repository. Funding Agency: APS Action. Reference: AA01

Contracts with Companies

Collantes Estevez, E. Agreement between MSD and the UGC of Rheumatology. Funding agency: Merck Sharp & Dohme de España SA. Reference: CCB.0042

Escudero Contreras, A. A study of the development and control mechanisms of atherothrombosis in systemic autoimmune diseases. New therapeutic approaches. Funding agency: Fundacion Española de Reumatología (Spanish Rheumatology Foundation). Reference: CCB.0045

Collantes Estevez, E. Sponsored Research Agreement. Funding agency: Pfizer S.L.U. Reference: CCB.0050

Collantes Estevez, E. Sponsored Research Agreement UCOTRACK. Funding agency: Merck Sharp & Dohme De España Sa. Reference: CCB.0107

Barbarroja Puerto, N. Sponsored Research Agreement ROCHE. Funding agency: Roche Farma, S.A. Reference: CCB.0122

Lopez Pedrerá, R. Agreement Canaan. Funding agency: Canaan Reserch & Investment, S.L. Reference: CCB.0142

Collantes Estevez, E. Agreement Sanofi. Funding agency: Sanofi-Aventis, S.A. Reference: PSS.0212

Clinical Trials

0125/12. A multicenter, randomized, placebo-controlled, double-blind, parallel-group phase III study to assess the efficacy and safety of Apremilast (CC-10004) in the treatment of active ankylosing spondylitis.

PI: Dr Collantes Estevez, Eduardo

0320/12.A randomized, double-blind, placebo-controlled, 52-week duration study to assess adverse events of special interest in adults with systemic antibody positive lupus erythematosus receiving belimumab.

PI: Dr Aguirre Zamorano, M^o Ángeles

0034/13.A Multicenter, Randomized, Double-Blind, Active and Placebo-Controlled 24-Week Study Followed by Long Term Evaluation of Efficacy and Safety of Ixekizumab (LY2439821) in Biologic Disease-Modifying Antirheumatic Drug-Naive Patients With Active Psoriatic Arthritis.

0106/13.A multicenter, randomized, double-blind study to compare the effectiveness and safety of continuous treatment with adalimumab vs. discontinuation of treatment with adalimumab as maintenance therapy in patients with axial spondyloarthritis.

PI: Dr Collantes Estevez, Eduardo

0248/13.A multicenter, randomized, double-blind, placebo-controlled phase III study to demonstrate the efficacy of Secukinumab after 16 weeks of treatment and assess its long-term safety, tolerability and efficacy in a period of three years in patients with active ankylosing spondylitis.

PI: Dr Collantes Estevez, Eduardo

0205/14.A phase 3 randomized, double-blind study assessing the efficacy and safety of PF-

06410293 and adalimumab in combination with methotrexate in subjects with moderately to severely active rheumatoid arthritis who have had an inadequate response to methotrexate
PI: Dr Escudero Contreras, Alejandro

0318/14. GO-VIBRANT A Multicenter, Randomized, Double-blind, Placebo-controlled Trial of Golimumab, an Anti-TNF alpha Monoclonal Antibody, Administered Intravenously, in Subjects with Active Psoriatic Arthritis

PI: Dr López Montilla, M^o Dolores

0040/15.Phase III, multicenter, randomized, double-blind, placebo-controlled secukinumab (150mg) po subcutaneously with or without a loading dose subcutaneously with or without a loading dose subcutaneously to evaluate the efficacy, safety and tolerability for up to 2 years in patients with active ankylosing spondylitis.

PI: Dr Collantes Estevez, Eduardo

0064/15. A Phase II Multicenter, Open-Label Extension Study Assessing the Long Term Efficacy and Safety of Subcutaneous ALX-0061 in Subjects with Moderate to Severe Rheumatoid Arthritis who Have Completed One of the Preceding Phase iib Studies with ALX-0061

PI: Dr Escudero Contreras, Alejandro

0107/15.A Phase III, randomized, double-blind, placebo controlled multi-center study of subcutaneous secukinumab (150 mg and 300 mg) in prefilled syringe to demonstrate efficacy (including inhibition of structural damage), safety, and tolerability up to 2 years in subjects with active psoriatic arthritis (FUTURE 5).

PI: Dr Lopez Montilla, M^o Dolores

0146/15. A Phase 3, Multicenter, Randomized, Double-blind, Placebo-controlled Study Evaluating the Efficacy and Safety of Ustekinumab in the Treatment of Anti-TNF (alpha) Refractory Subjects With Active Radiographic Axial Spondyloarthritis.

PI: Dr Collantes Estevez, Eduardo

0253/15. Phase III study randomized, double-blind, parallel group to demonstrate equivalent efficacy and compare the safety and immunogenicity of GP2015 and Enbrel (authorized in the EU) in patients with active rheumatoid arthritis.

PI: Dr Escudero Contreras, Alejandro

0293/15. A Multicenter Double-Blind, Randomized Controlled Study of Etanercept and Methotrexate in Combination or as Monotherapy in Subjects With Psoriatic Arthritis

PI: Dr Lopez Montilla, M^o Dolores

0271/15. A Comparative Study to Assess the Efficacy, Safety and Immunogenicity of YLB113 and Enbrel for the Treatment of Rheumatoid Arthritis.

PI: Dr Escudero Contreras, Alejandro

0306/15. A Randomized, Double-blind, Placebo-controlled, Proof-of-concept Study to Evaluate the Efficacy of UCB5857 Over 12 Weeks in Subjects With Primary Sjogren's Syndrome.

PI: Dr Escudero Contreras, Alejandro

2950. A Phase 3 Randomized, Double-blind, Placebo-controlled, multicenter study of the analgesic efficacy and safety of the subcutaneous administration of tanezumab in subjects with osteoarthritis of the hip or knee.

PI: Dr Caracuel Ruiz, Miguel Ángel

2959. A Phase 3, Multicenter, Long-term Observational Study Of Subjects From Tanezumab Studies Who Undergo A Total Knee, Hip Or Shoulder Replacement.

PI: Dr Caracuel Ruiz, Miguel Ángel

2894. A Multicenter, Open-label (Part A) Followed by a Randomized, Double-blind, Parallel-group, Placebo Controlled Study (Part B) to Evaluate Maintenance of Remission in Subjects With Active Axial Spondyloarthritis (axSpA) Receiving Either CertolizumabPegol 200 mg Q2W or 200 mg Q4W as Compared to Placebo.

PI: Dr Collantes Estevez, Eduardo

3235. MAXIMISE (Managing AXIal Manifestations in Psoriatic Arthritis With Secukinumab), a Randomized, Double-blind, Placebo-controlled, Multicenter, 52 Week Study to Assess the Efficacy and Safety of Secukinumab 150 mg or 300 mg s.c. in participants with active psoriatic arthritis and axial skeleton involvement who have inadequate response to non steroidal Anti-inflammatory Drugs (NSAIDs).

PI: Dr López Montilla, M^o Dolores

3026. A Multicenter, Randomized, Double-Blind, Placebo- Controlled 16-week study followed by

long-term evaluation of efficacy and safety of Ixekizumab (LY2439821) in TNFi-experienced patients with radiographic axial spondyloarthritis.

PI: Dr Collantes Estevez, Eduardo

3239. A Phase 4 Open-label Randomized Controlled Study COmparing the Effectiveness of AdalimumabiNTROduction and Methotrexate Dose escaLation in Subjects With Psoriatic Arthritis (CONTROL).

PI: Dr López Montilla, M^o Dolores

3244. A Study to Assess the Effects of CertolizumabPegol on the Reduction of Anterior Uveitis (AU) Flares in Axial Spondyloarthritis Subjects With a Documented History of AU.

PI: Dr Collantes Estevez, Eduardo

3331. A Phase 3, Randomized, Active-Controlled, Double Blind Study Comparing Upadacitinib to Abatacept in Subjects With Moderately to Severely Active Rheumatoid Arthritis With Inadequate Response or Intolerance to Biologic DMARDs (bDMARDs) on Stable Conventional Synthetic Disease Modifying Anti-Rheumatic Drugs (csDMARDs).

PI: Dr Escudero Contreras, Alejandro

3337. A Phase 3, Randomized, Double-Blind Study Comparing ABT-494 to placebo and to adalimumab in subjects with moderately to severely active rheumatoid arthritis who are on a stable background of methotrexate (MTX) and who have an inadequate response to MTX (MTX-IR).

PI: Dr Escudero Contreras, Alejandro

3342. A Multicenter study to evaluate the efficacy and safety of different doses of bimekizumab in subjects with active ankylosing spondylitis.

PI: Dr Collantes Estevez, Eduardo

3345. A Randomized, Double-blind, active control, multicenter study to evaluate the efficacy at week 52 of secukinumab monotherapy compared with adalimumab monotherapy in patients with active psoriatic arthritis.

PI: Dr López Montilla, M^o Dolores

3480. A randomized, double-blind, placebo-controlled, 24-week study followed by long-term treatment to evaluate the efficacy and safety of baricitinib in patients with active psoriatic arthritis.

PI: Dr López Montilla, M^o Dolores

3522. A Phase I/III Study to Evaluate Efficacy, PK and Safety Between CT-P13 SC and CT-P13 IV in Patients With Active RA.

PI: Dr Escudero Contreras, Alejandro

3525. Phase IV, randomized, double-blind, placebo-controlled, and parallel-group trial to evaluate the efficacy and safety of golimumab (MK-8259 [SCH 900259]) after withdrawal of treatment, compared to its continuation.

PI: Dr Collantes Estevez, Eduardo

3550.A Randomized, Double-blind, Placebo-controlled Multicenter study of secukinumab to evaluate the safety, tolerability and efficacy up to 2 years in patients with active non-radiographic axial spondyloarthritis.

PI: Dr Castro Villegas, María del Carmen

3552. A Phase 3, Multicenter, Randomized, Double-blind, Placebo-controlled study evaluating the efficacy and safety of guselkumab administered subcutaneously in subjects with active psoriatic arthritis.

PI: Dr López Montilla, M^o Dolores

3556. A Randomized, Double-Blind, Placebo-Controlled, Multi-Center Phase II Study to Evaluate The Safety and Efficacy of RO7123520 as adjunct treatment in patients with moderately to severely active rheumatoid arthritis and an inadequate response to TNF-alpha Inhibitors.

PI: Dr Escudero Contreras, Alejandro

3631.A Phase 3, Randomized, Double-Blind, Study Comparing Upadacitinib (ABT-494) to placebo in subjects with active psoriatic arthritis who have a history of inadequate response to at least one biologic disease modifying anti-rheumatic drug (bDMARD).

PI: Dr López Montilla, M^o Dolores

1789. Assessing cardiovascular risk and its determinants in patients with rheumatoid arthritis, ankylosing spondylitis and psoriatic arthritis.

PI: Dr Collantes Estevez, Eduardo

2273. Spanish registry of patients with axial ankylosing spondylitis treated with anti-TNF.

PI: Dr Collantes Estevez, Eduardo

2457. Multi-Country Registry of clinical characteristics, including radiographic progression, and

burden of disease over 5 years in real-life setting)
PROOF.
PI: [Dr CollantesEstevez, Eduardo](#)

2686. ASCORE study about long-term experience with abatacept.c. in habitual clinical practice.
PI: [Dr Escudero Contreras, Alejandro](#)

2703. Spanish Registry of psoriatic arthritis.
PI: [Dr López Montilla, M^o Dolores](#)

2736. A non-interventional study to assess the effectiveness of CertolizumabPegol In patients with axial Spondyloa.
PI: [Dr Collantes Estevez, Eduardo](#)

2817. Clinical applicability of a standardised dose-reduction protocol in patients with diagnosed rheumatoid arthritis (RA) displaying persistent clinical remission with anti-TNF therapy.
PI: [Dr Font Ugalde, Pilar](#)

2880. Spanish Registry of adverse events in biological and biosimilar therapies in rheumatic illnesses. Phase III.
PI: [Dr Collantes Estevez, Eduardo](#)

3160. Observational study of the reproducibility of UCOTRACK, an automated system for measuring mobility in patients with axial spondyloarthritis.
PI: [Dr CollantesEstevez, Eduardo](#)

3161. An Observational, Prospective Cohort Study to Evaluate Safety and Efficacy of RemsimaTM in Patients with Rheumatoid Arthritis.
PI: [Dr Escudero Contreras, Alejandro](#)

3582. Cross-sectional observational study to evaluate adherence to treatment in patients with rheumatoid arthritis in Spain.
PI: [Dr Escudero Contreras, Alejandro](#)

3662. Early treatment with biological therapy in axial spondyloarthritis: 5-year effectiveness.
PI: [Dr Castro Villegas, María Del Carmen](#)



HIGHLIGHTS

Publications

28

Impact Factor

148,172

Average Impact Factor

5,291

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CIBER on Cancer (CIBER-ONC)

PAIDI CTS-234: Immunological Aspects of Interest in Clinical Medicine. Cancer

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Scientific Activity

The research group New Therapies in Cancer is multidisciplinary, with a team structure that reflects transversal capacities and skills (oncologists, biologists, pathologists, biotechnologists, etc.), and allows integrated approaches to the achievement of the proposed goals. Our aim is to conduct multifaceted research of the tumorigenic process at basic, translational, and clinical level. We participate in a National Research Network program, through the Biomedical Research Networking Center in Cancer (CIBER cancer in Spanish), and also in other cooperative groups of clinical cancer research, thus providing an excellent framework for collaboration and interaction with other cancer research groups. We developed several lines of study mainly aimed to address new clinical challenges in the implementation of novel targeted therapies in oncology. We conduct research in several areas of both clinical and experimental research. The first area is related to the identification of clinical or molecular factors useful in predicting clinical evolution, response or toxicity in cancer treatment. In this area we have reported the development of predictive biomarkers of response to antiangiogenic therapy. We actively participate in the development of new therapeutic strategies using drugs aimed at specific targets. To achieve this, we are currently studying the association between antitumoral immune response and response to antiangiogenic therapy

in cancer, to define predictive markers of response to antiangiogenic drugs. The development of these markers will optimize the use of new therapies in cancer patients. Another research area aims to unravel the mechanisms by which nitric oxide (NO) is involved in the onset and progression of cancer, and identify new therapeutic strategies for the treatment of this disease. Using the latest proteomic approaches to identify posttranslational nitrosative modifications, notably the S-nitrosylation of proteins, we analyze the importance of maintaining the homeostasis of nitrosothiols and the formation of S-nitrosoproteins. Results in our laboratory data support the hypothesis that the metabolism of NO plays an important role in the onset and progression of cancer, confirming a close relationship between NO and stem/mesenchymal characteristics in tumors. Finally, our group is actively performing clinical validation studies to assess whether the determination of RAS mutational status using liquid biopsy tools may optimize the rational use of anti-EGFR therapies in colorectal cancer. Likewise, our group is applying liquid biopsy tools in other gastrointestinal tumors such as pancreatic cancers. Also, more translational studies are being undertaken in our laboratory to explore other plasma components, such as miRNAs and exosomes.

Research Lines

- Identification of clinical or molecular factors useful in predicting clinical evo-

lution, response or toxicity in cancer treatment

- Role of nitric oxide in the pathogenesis and progression of cancer: new therapeutic opportunities
- Development and clinical validation of liquid biopsy tools for the optimization and rational use of therapies in cancer

Keywords

Colorectal cancer, breast cancer, nitric oxide, proteomics, biomarkers, prognosis, prediction of response, liquid biopsy, targeted therapy, precision oncology.

Scientific Production

Publications

Main Publications

Irigoyen A, Gallego J, Ponce CG, Vera R, Iranzo V, Ales I, Arevalo S, Pisa A, Martin M, Salud A, Falco E, Saenz A, Mozo JLM, Pulido G, Galaan JM, Pazo-Cid R, Rivera F, Garcia TG, Serra O, Parra EMF, Hurtado A, Reina MJG, Gomez LJJ, Esther MOW, Benavides M, Aranda E, Spanish Cooperative Grp Treatment. Gemcitabine-erlotinib versus gemcitabine-erlotinib-capecitabine in the first-line treatment of patients with metastatic pancreatic cancer: Efficacy and safety results of a phase IIb randomised study from the Spanish TTD Collaborative Group. EUROPEAN JOURNAL OF CANCER. 2017;73-82.

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IF: 5,168

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IF: n/a

Other Publications

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IF: 9,619
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IF: 7,641
Q: 1 D: 1

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IF: 5,168
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IF: 5,168
Q: 1

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IF: 4,971
Q: 1

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IF: 2,353
Q: 3

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Q: 3

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IF: n/a

Research Funding

Regional

López Sánchez, M. Protein Study for the identification of new biomarkers in breast cancer stem cells Cancer. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0268-2014

Aranda Aguilar, E. Genetic variations associated with hypertension and thrombosis as predictors of response to antiangiogenic therapy in patients with colon cancer. Funding agency: Asociación española contra el cancer. Reference: AECC14/002

Aranda Aguilar, E. Microangiogenesis. Funding Agency: CIBER-BBN. Reference: Ciberbbn-lmib-ic14-1

Guil Luna, S. Antitumor effect of immunotherapy by blocking pd-1 combined with antiangiogenic therapy in humanized murine models of colorectal cancer. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0150-2017

National

Aranda Aguilar, E. Genetic variations associated with hypertension and thrombosis as predictors of response to antiangiogenic therapy in patients with colon cancer. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI13/00951

Aranda Aguilar, E. Design and production of biomimetic microfluidic devices for the development of predictors in anti-angiogenic therapy for cancer. Funding agency: FUNDACION SALUD 2000. Reference: FS2000-SEOM-14-01

Aranda Aguilar, E. Using polymorphisms of the angiotensin-converting enzyme to predict response to anti-angiogenic therapy for cancer. Funding agency: Fundación para la innovación y la prospectiva para la salud en España. Reference: FIPSE2014_001

Rodríguez Ariza, A. Proteomic identification of biomarkers defining molecular subtypes of colorectal cancer and their possible use as prognostic or therapy-response factors. Funding agency: FUNDACIÓN SALUD 2000. Reference: 15-MS-002

Rodríguez Ariza, A. Development of anti-cancer stem cell (CSC) drugs by screening synthetic libraries using inhibitors of GPCR kinase and the NFAT-calcineurin interaction. Funding agency: Ministry of Economy, Innovation, Science and Employment (MINECO). Reference: RTC-2015-3386-1_2

De la Haba JR. Epigenetic profile in cancer patients with increased blood pressure secondary to anti-VEGF treatment. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/00516

Aranda Aguilar, E. The association among anti-tumor immunity, the renin-angiotensin system and

response to antiangiogenic therapy in colorectal cancer. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01271

Aranda Aguilar, E. CIBER-OBN. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: CB16/12/00349

Rodríguez Ariza, A. Relationships between nitric oxide and molecular subtypes in colorectal cancer: identification of new therapeutic strategies. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01508

Contracts with Companies

Aranda Aguilar, E. Contract for determination of gene activity NRAS. Funding agency: MERCK, S.L. Reference: PSS.0050

Aranda Aguilar, E. Contract for determination of biomarker rAS. Funding agency: TTD Group. Reference: PSS.0054

Aranda Aguilar, E. Oncobeam Contract Centre of excellence. Funding agency: Sysmex España S.L. Reference: PSS.0108

Aranda Aguilar, E. Tactics Agreement. Funding agency: Tactics Medicina Y Desarrollo, S.L. Reference: PSS.0140

Aranda Aguilar, E. TTD Agreement. Funding agency: TTD Group. Reference: PSS.0147

Aranda Aguilar, E. Boehringer Agreement. Funding agency: Boehringer Ingelheim International GmbH. Reference: PSS.0153

Gómez España, M.A. Agreement TTD. Funding agency: TTD Group. Reference: PSS.0180

Aranda Aguilar, E. Agreement Tactics Funding agency: Tactics Medicina Y Desarrollo, S.L. Reference: PSS.0211

De la Haba Rodríguez, JR. Analytical assays for the evaluation of AGTR1 expression in tumors as a possible predictor of response to angiogenic therapy in connection with the clinical development of bevacizumab. Funding agency: Roche Farma, S.A. Reference: CCB.0028

Aranda Aguilar, E. Rovi Agreement. Funding agency: Laboratorios Farmaceuticos Rovi, SA. Reference: CCB.0094

Aranda Aguilar, E. FS2000 Agreement. Funding agency: Fundación Salud 2000. Reference: CCB.0119

Aranda Aguilar, E. Agreement Canvax. Funding agency: CANVAX BIOTECH S.L. Reference: CCB.0159

Clinical Trials

0090/07. An open, multicenter, randomized, phase III study of lapatinib, trastuzumab sequentially administered or administered in combination as adjuvant treatment in a patient with HER2/ERBB2-positive breast cancer. PI: Dr De la Haba Rodríguez, Juan Rafael

0253/08. An Open Label Randomized, Multi-Centre Exploratory Phase II Study to Evaluate the Efficacy and Safety of the Combination of Panitumumab With FOLFOX 4 Chemotherapy or Panitumumab With FOLFIRI Chemotherapy in Subjects With Wild-Type KRAS Colorectal Cancer and Liver-only Metastases. PI: Dr Aranda Aguilar, Enrique

0082/10. An open, randomized, phase II study to assess the effectiveness and safety of paclitaxel administered weekly as a single agent and two different administration regimes of SAR240550 (BSI- 201), a PARP-1 inhibitor, in combination with paclitaxel administered weekly as neoadjuvant therapy in patients with stage II-IIIa triple-negative breast cancer. PI: Dr De la Haba Rodríguez, Juan Rafael

0198/11. A multicenter, randomized, double-blind, placebo-controlled study to compare chemotherapy plus trastuzumab and placebo versus chemotherapy plus trastuzumab and pertuzumab as adjuvant treatment in HER-2 positive primary breast cancer patients. PI: Dr De la Haba Rodríguez, Juan Rafael

0231/11. An open, multicenter, randomized, parallel-group phase II clinical study to assess the effectiveness and safety of pertuzumab administered in combination with trastuzumab and an aromatase inhibitor for first-line treatment. PI: Dr De la Haba Rodríguez, Juan Rafael

0240/11. An Open-Label, Multicenter, Phase 1b/2 Study of E7080 Alone, and in Combination With Everolimus in Subjects With Unresectable Advanced or Metastatic Renal Cell Carcinoma Following One Prior VEGF-Targeted Treatment.

PI: Dr Mendez Vidal, Maria Jose

0071/12. A randomized, phase II clinical trial to explore the impact of BRAF and PI3K state on the effectiveness of FOLFIRI + Bevacizumab or Cetuximab as first-line cancer treatment of patients with metastatic colorectal cancer with native KRAS and less than three circulating tumor cells.

PI: Dr Aranda Aguilar, Enrique

0229/12. A multicenter, single-arm study of trastuzumab emtansine (TDM1) in patients with metastatic or locally advanced, HER2-positive breast cancer patients previously treated with an anti-HER2 agent-based treatment plus chemotherapy.

PI: Dr De la Haba Rodríguez, Juan Rafael

0312/12. A multicenter, randomized, double-blind, placebo-controlled, phase III trial to assess the efficacy and safety of pertuzumab in combination with to assess the efficacy of trastuzumab and chemotherapy in patients with HER2-positive gastric and gastroesophageal junction cancer.

PI: Dr Aranda Aguilar, Enrique

0347/12. An open, randomized, multicenter, phase II trial to assess the toxicity and efficacy of pre-surgical chemotherapy with or without Bevacizumab in patients with advanced ovarian cancer.

PI: Dr Rubio Pérez, María Jesús

0020/13. ARCHER 1050. A randomized, open, phase III study of the efficacy and safety of Dacomitinib (PF-00299804) vs. Gefitinib in first-line treatment of locally advanced or metastatic non-small cell lung cancer in patients with activating mutation(s) of the epidermal growth factor (EGF) receptor.

PI: Dr Barneto Aranda, Isidoro

65/13. Neoadjuvant Chemotherapy With Nab-paclitaxel in Women With HER2-negative High-risk Breast Cancer ETNA (Evaluating Treatment With Neoadjuvant Abraxane)

PI: Dr De la Haba Rodríguez, Juan Rafael

0132/13. A multicenter, randomized, double-blind, placebo-controlled, phase III study of maintenance therapy with Olaparib alone in patients with

BRCA-positive ovarian cancer or with platinum-sensitive relapsed ovarian cancer with complete response, or patients with EGFR activating mutations.

PI: Dr Rubio Pérez, María Jesús

0136/13. A multicenter, randomized, double-blind, placebo-controlled, phase III study of maintenance therapy with Olaparib alone in patients with FIGO stage IIIb-IV ovarian cancer with complete or partial response after platinum-based first-line chemotherapy.

PI: Dr Rubio Pérez, María Jesús

0215/13. Phase III Palbociclib (PD-0332991) study in combination with Exemestane versus chemotherapy (capecitabine) in patients with Advanced Breast Cancer (ABC) with positive hormone receptors (HR) and negative HER2 inhibitor resistance to Aromatase inhibitors.

PI: Dr De la Haba Rodríguez, Juan Rafael

0246/13. Abiraterone acetate maintenance in combination with docetaxel after disease progression to abiraterone acetate in metastatic castration resistant prostate cancer. Randomized phase II study.

PI: Dr Méndez Vidal, María José

0281/13. Safety study retreatment radium-223 dichloride in castration-resistant prostate cancer patients with bone metastases who received an initial regimen of six doses of radium-223 dichloride 50 kBq / kg every four weeks.

PI: Dr Méndez Vidal, María José

0312/13. A Phase II Randomized Clinical Trial Evaluating Neoadjuvant Therapy Regimens With Weekly Paclitaxel Plus Neratinib or Trastuzumab or Neratinib and Trastuzumab Followed by Doxorubicin and Cyclophosphamide With Postoperative Trastuzumab in Women With Locally Advanced HER2-Positive Breast Cancer.

PI: Dr De la Haba Rodríguez, Juan Rafael

0323/13. A Study of MEK162 vs. Physician's Choice Chemotherapy in Patients With Low-grade Serous Ovarian, Fallopian Tube or Peritoneal Cancer.

PI: Dr Rubio Pérez, María Jesús

0333/13. A Randomized Phase III, Factorial Design, of Cabazitaxel and Pelvic Radiotherapy in Patients With Localized Prostate Cancer and High-risk Features of Relapse.

PI: Dr Méndez Vidal, María José

0037/14. Phase III, international, randomized trial of more pegylated doxorubicin liposomal trabectedin (DLP) compared to carboplatin plus DLP in patients with ovarian cancer who have experienced progression in the last 6-12 months following treatment.

PI: Dr Rubio Pérez, María Jesús

0050/14. An open-label, phase II trial of Orteronel (TAK-700) for metastatic or advanced non-resectable granulosa cell ovarian tumors. GreKo study II.

PI: Dr Rubio Pérez, María Jesús

0059/14. A phase III study to assess the efficacy of palbociclib (PD-0332991), a cyclin-dependent kinase 4/6 inhibitor in patients with primary HR positive breast cancer and normal HER2 at high risk of relapse following chemotherapy.

PI: Dr De la Haba Rodríguez, Juan Rafael

0094/14. A randomised, double-blind, placebo-controlled, multicentre phase II study to compare the efficacy, safety and tolerability of olaparib versus placebo when given in addition to abiraterone treatment in patients with metastatic castrate-resistant prostate cancer who have received prior chemotherapy containing docetaxel.

PI: Dr Méndez Vidal, María José

0105/14. A multinational, multicenter, phase II study to assess the efficacy of pertuzumab plus trastuzumab and neoadjuvant chemotherapy based on anthracyclines in patients with locally advanced, inflammatory or early positive her2 breast cancer.

PI: Dr De la Haba Rodríguez, Juan Rafael

0107/14. A multicenter, randomized, double-blind phase II study to assess the efficacy and safety of RO5520985 plus FOLFOX vs. bevacizumab plus FOLFOX in patients with naive metastatic colorectal cancer.

PI: Dr Aranda Aguilar, Enrique

0124/14. A multicenter, randomized, placebo-controlled, parallel-group phase III study to assess the efficacy and safety of olaparib as neoadjuvant treatment in patients with high-risk HER2 negative breast cancer.

PI: Dr De la Haba Rodríguez, Juan Rafael

0151/14. Assessing an immunomodulatory maintenance therapy in patients with metastatic colorec-

tal cancer with tumor shrinkage during induction therapy. A phase III trial.

PI: [Dr Aranda Aguilar, Enrique](#)

0177/14. A multicenter, open-label, single-arm, extension study in patients with solid tumors receiving treatment with bevacizumab in any of the studies sponsored by F. Hoffmann– La Roche and/ or Genentech.

PI: [Dr Rubio Pérez, María Jesús](#)

0191/14. A randomized, open-label, phase III study to assess the effectiveness of including denosumab in standard first-line chemotherapy for advanced small cell lung cancer.

PI: [Dr Barneto Aranda, Isidoro](#)

0194/14. A multinational randomised, double-blind, placebo-controlled, phase III efficacy and safety study of ODM-201 in men with high-risk non-metastatic castration-resistant prostate cancer.

PI: [Dr Méndez Vidal, María José](#)

0267/14. Phase II multicenter study that analyzes the predictive value of response to ENZALUTAMIDE fusion gene TMPRSS2 -ETS in patients with metastatic CRPC previously treated with chemotherapy.

PI: [Dr Méndez Vidal, María José](#)

0270/14. Phase II randomized double-blind study comparing treatment every 3 weeks with carboplatin (AUC 5) + 175 mg / m² of paclitaxel, with or without concomitant nintedanib and maintenance in advanced or recurrent cervical carcinoma.

PI: [Dr Rubio Pérez, María Jesús](#)

0309/14. A Randomized, multicenter, open label study of MM-302 plus Trastuzumab vs. chemotherapy of physician's choice plus trastuzumab in anthracycline naïve patients with locally advanced/ metastatic HER2-Positive breast cancer.

PI: [Dr De La Haba Rodríguez, Juan Rafael](#)

0311/14. Phase III study, open, multicenter, randomized trial to investigate the efficacy and safety of mpd13280a (anti-pd-l1) compared to chemotherapy in patients with locally advanced or metastatic urothelial bladder cancer after fault based regime platinum chemotherapy.

PI: [Dr Méndez Vidal, María José](#)

0341/14. Phase III trial to compare the safety and efficacy of lapatinib plus trastuzumab plus an aro-

matase inhibitor (AI) versus trastuzumab plus an AI and against lapatinib plus an AI as first or second line therapy in postmenopausal patients with cancer metastatic breast cancer (MBC) HER2 positive and hormone receptor-positive who have received prior treatment with trastuzumab and endocrine therapy

PI: [Dr De La Haba Rodríguez, Juan Rafael](#)

0358/14. A multicenter phase II clinical trial of lurbinectedin (pm01183) in selected advanced solid tumors.

PI: [Dr Rubio Pérez, María Jesús](#)

0005/15. Multicenter, open single-arm safety study of herceptin s.c. in combination with docetaxel PERJETA and in the treatment of patients with advanced HER2 positive (metastatic or locally recurrent) breast cancer.

PI: [Dr De La Haba Rodríguez, Juan Rafael](#)

0019/15. Phase III, randomized, open MPDL3280A (anti PD-L1) in combination with BEVAZUMAB compared to sunitinib in patients with advanced untreated renal cell carcinoma.

PI: [Dr Méndez Vidal, María José](#)

0020/15. Phase III open randomized clinical trial of pembrolizumab (MK-3475) versus paclitaxel in patients with gastric adenocarcinoma or advanced gastroesophageal which have submitted progression after first-line treatment with platinum and fluoropyrimidine.

PI: [Dr Aranda Aguilar, Enrique](#)

0026/15. Phase II study randomized, multicenter, open to evaluate the efficacy and safety of palbociclib in combination with fulvestrant or letrozole in patients with HER2 negative metastatic breast cancer, ER + (PARSIFAL 1).

PI: [Dr De La Haba Rodríguez, Juan Rafael](#)

0045/15. A Randomized, Double-blind, Placebo-Controlled, Phase 2 Study to Assess the Efficacy and Safety of Farletuzumab (MORAb 003) in Combination with Carboplatin plus Paclitaxel or Carboplatin plus Pegylated Liposomal Doxorubicin (PLD) in Subjects with Low CA125 Platinum-Sensitive Ovarian Cancer.

PI: [Dr Rubio Pérez, María Jesús](#)

0055/15. A phase III, open-label, randomized study of mpd13280a (anti-pd1 antibody) in combination

with carboplatin - paclitaxel with or without bevacizumab compared with carboplatin -paclitaxel -bevacizumab in chemotherapy naïve patients with stage IV nonsquamous non-small cell lung cancer.

PI: [Dr Barneto Aranda, Isidoro](#)

0060/15. A phase III, open-label, multicenter, randomized study evaluating the efficacy and safety of mpd13280a (anti-pd-l1 antibody) in combination with carboplatin - paclitaxel or mpd13280a in combination with carboplatin- nab paclitaxel versus carboplatin - nab-paclitaxel in chemotherapy naïve patients with stage IV squamous non-small cell lung cancer.

PI: [Dr Barneto Aranda, Isidoro](#)

0066/15. Multicenter open-label study, randomized controlled phase III to assess the efficacy and safety of olaparib monotherapy versus chemotherapy with single agent lesson by her doctor in the treatment of ovarian cancer relapsed platinum-sensitive in patients carrying germline mutations BRCA1 /2.

PI: [Dr Rubio Pérez, María Jesús](#)

0144/15. A Randomized, Active-Controlled, Partially Blinded, Biomarker Select, Phase III Clinical Trial of Pembrolizumab as Monotherapy and in Combination with Cisplatin+5-Fluorouracil versus Placebo+Cisplatin+5- Fluorouracil as First-Line Treatment in Subjects with Advanced Gastric or Gastroesophageal Junction (GEJ) Adenocarcinoma.

PI: [Dr Aranda Aguilar, Enrique](#)

0176/15. Phase II, multicenter, randomized, double-blind, parallel group study to compare the efficacy and tolerability of fulvestrant (FaslodexTM) 500 mg with placebo and Fulvestrant (FaslodexTM) 500 mg in combination with PD-0332991 (Palbociclib) as first-line treatment for postmenopausal patients with metastatic breast cancer and hormone receptor positive. FLIPPER study.

PI: [Dr De La Haba Rodríguez, Juan Rafael](#)

0192/15. Phase III study, open, randomized trial to investigate the efficacy and safety of Atelizumab (anti-PD-L1 antibody) compared to treatment with optimal support after adjuvant cisplatin-based chemotherapy in selected PD-L1 with completely resected lung cancer patients in small cell stage IB-IIIa.

PI: [Dr Barneto Aranda, Isidoro](#)

0195/15. Phase III randomized trial with the monoclonal anti-PD-1 pembrolizumab (MK-3475) antibody compared to placebo in patients with NSCLC in early stages after resection and completion of adjuvant treatment reference (PEARLS).

PI: Dr Barneto Aranda, Isidoro

0233/15. Randomised phase II study comparing, as first-line chemotherapy, single-agent oral vinorelbine administered with two different schedules in patients with advanced breast cancer. Tempo-Breast 1.

PI: Dr De La Haba Rodríguez, Juan Rafael

0256/15. Randomized, double-blind, phase III trial olaparib vs. Placebo patients with advanced figo stage IIIB-IV high grade serous or endometrioid ovarian, fallopian tube, or peritoneal cancer treated standard first-line treatment.

PI: Dr Rubio Pérez, María Jesús

0261/15. A phase III Trial of postoperative chemotherapy or no further treatment for patients with node-negative stage I-II intermediate or high risk endometrial cancer.

PI: Dr Rubio Pérez, María Jesús

0264/15. A Phase 2a Randomized, Open-label Study to Assess the Safety, Tolerability, and Efficacy of BAX69 in Combination With 5-FU/Leucovorin or Panitumumab Versus Standard of Care in Subjects With Metastatic Colorectal Cancer.

PI: Dr Aranda Aguilar, Enrique

0265/15. Safety and efficacy of LONQUEX@a (lipegfilgrastim) versus pegfilgrastim (Neulasta®, Amgen Inc.) and placebo in patients with non-microcytic lung cancer receiving first-line chemotherapy.

PI: Dr Barneto Aranda, Isidoro

0295/15. Multicenter randomized clinical trial on maintenance of treatment based on biomarkers for first line metastatic colorectal cancer (modul).

PI: Dr Aranda Aguilar, Enrique

0371/15. Phase II study with preoperative MPD-L3280A in operable transitional cell carcinoma of the bladder (ABACUS).

PI: Dr Méndez Vidal, María José

0015/16. An Open-label, Randomised, Non-comparative Phase 2 Study Evaluating S 95005 (TAS-102) Plus Bevacizumab and Capecitabine Plus

Bevacizumab in Patients With Previously Untreated Metastatic COLOrectal Cancer Who Are Non-eligible for Intensive Therapy.

PI: Dr Aranda Aguilar, Enrique

0018/16. A Phase III, Multicenter, Randomized, Placebo-Controlled Study of Atezolizumab (Anti-PD-L1 Antibody) in Combination With Nab-Paclitaxel Compared With Placebo With Nab-Paclitaxel for Patients With Previously Untreated Metastatic Triple-Negative Breast Cancer

PI: Dr De La Haba Rodríguez, Juan Rafael

2893. EUTROC-PiSARRO. p53 Suppressor Activation in Recurrent High Grade Serous Ovarian Cancer, a Phase Ib/II Study of Systemic Carboplatin/Pegylated Liposomal Doxorubicin Combination Chemotherapy With or Without APR-246.

PI: Dr Rubio Pérez, María Jesús

2898. A Phase III Double-Blinded, Placebo Controlled Study of Xilonix for Improving Survival in Metastatic Colorectal Cancer (Trial).

PI: Dr Aranda Aguilar, Enrique

3001. A Phase 3, Randomized, Controlled, Multi-Center, Open-Label Study to Compare Tivozanib Hydrochloride to Sorafenib in Subjects With Refractory Advanced Renal Cell Carcinoma.

PI: Dr Méndez Vidal, María José

3122. A Randomized Phase 2 Study Comparing Different Dose Approaches of Induction Treatment (First Cycle) of Regorafenib in Metastatic Colorectal Cancer (mCRC) Patients.

PI: Dr Aranda Aguilar, Enrique

3123. A Randomized, Multicenter, Double Blind, Phase III Study of Adjuvant Nivolumab or Placebo in Subjects With Resected Esophageal, or Gastroesophageal Junction Cancer.

PI: Dr Aranda Aguilar, Enrique

3183. A Phase 3, Multicenter, Randomized, Open-label Study Of Avelumab (msb0010718c) Alone Or In Combination With Pegylated Liposomal Doxorubicin Versus Pegylated Liposomal Doxorubicin Alone In Patients With Platinum-resistant/Refractory Ovarian Cancer.

PI: Dr Rubio Pérez, María Jesús

3189. A Study to Evaluate the Efficacy and Safety of Trastuzumab Emtansine in Combination With

Atezolizumab or Atezolizumab-Placebo in Participants With Human Epidermal Growth Factor-2 (HER2) Positive Locally Advanced or Metastatic Breast Cancer Who Have Received Prior Trastuzumab and Taxane Based Therapy (KATE2).

PI: Dr De La Haba Rodríguez, Juan Rafael

3191. A Phase 3, Randomized, double-blind, placebo-controlled, multicenter study of niraparib maintenance treatment in patients with advanced ovarian cancer following Response on Front-Line Platinum-Based Chemotherapy.

PI: Dr Rubio Pérez, María Jesús

3217. Phase III Randomized Clinical Trial of Lurbinectin (PMO1183)/Doxorubicin (DOX) Versus Cyclophosphamide (CTX), Doxorubicin (DOX) and Vincristine (VCR) (CAV) or Topotecan as Treatment in Patients With Small-Cell Lung Cancer (SCLC) Who Failed One Prior Platinum-containing Line (ATLANTIS Trial).

PI: Dr Barneto Aranda, Isidoro

3220. A Phase II Trial to Assess FOLFIRI+Aflibercept Efficacy in Patients With Oxaliplatin-pretreated Metastatic Colorectal Cancer With or Without ACE Polymorphisms.

PI: Dr Gómez España, María Auxiliadora

3238. Multicenter, Double-Blind, Randomized, Parallel-Group Study to Assess the Efficacy and Safety of MYL-14020 Compared with Avastin, in the First-line Treatment of Patients with Stage IV Non-Squamous Non-Small Cell Lung Cancer.

PI: Dr Barneto Aranda, Isidoro

3240. A randomised, Parallel, Double Blinded Study to Compare the Efficacy and Safety of FKB238 to Avastin in 1st line treatment for patients with Advanced/Recurrent Non-Squamous non-small cell lung cancer in combination of paclitaxel and carboplatin.

PI: Dr Barneto Aranda, Isidoro

3246. A Phase 2 Efficacy and Safety Study of Niraparib in Men With Metastatic Castration-Resistant Prostate Cancer and DNA-Repair Anomalies.

PI: Dr Méndez Vidal, María José

3267. A Study to Investigate Efficacy and Safety of Cobimetinib Plus Atezolizumab and Atezolizumab Monotherapy Versus Regorafenib in Participants With Metastatic Colorectal Adenocarcinoma.

PI: Dr Aranda Aguilar, Enrique

3271. Phase II clinical trial of radio activity 223 in patients with castration-resistant metastatic prostate cancer (mCRSc) with asymptomatic progression during treatment with abiraterone acetate or enzalutamide.

PI: Dr Méndez Vidal, María José

3325. A Study of Atezolizumab in Locally Advanced or Metastatic Urothelial or Non-Urothelial Carcinoma of the Urinary Tract.

PI: Dr Méndez Vidal, María José

3333. A Phase III, Multicenter, Randomized, Placebo-Controlled, Double-Blind Study of Atezolizumab (Anti-PD-L1 Antibody) as Adjuvant Therapy in Patients With Renal Cell Carcinoma at High Risk of Developing Metastasis Following Nephrectomy.

PI: Dr Méndez Vidal, María José

3338. Phase II, single-arm, open-label multicenter study that assesses feasibility, safety and efficacy of combined neoadjuvant chemotherapy and immunotherapy with Nivolumab 360 mg IV Q3W + Paclitaxel 200mg/m² + Carboplatin AUC 6 IV Q3W in resectable stage IIIA N2-NSCLC adult patients followed by adjuvant treatment for 1 year with Nivolumab 240 mg IV Q2W for 4 months and Nivolumab 480mg Q4W for 8 months.

PI: Dr Barneto Aranda, Isidoro

3339. A Randomized, Double-blind, Placebo Controlled Phase III Study of ODM-201 Versus Placebo in Addition to Standard Androgen Deprivation Therapy and Docetaxel in Patients With Metastatic Hormone Sensitive Prostate Cancer.

PI: Dr Méndez Vidal, María José

3347. A Multicenter, Open-label, Randomized, Phase 3 Trial to Compare the Efficacy and Safety of Lenvatinib in Combination With Everolimus or Pembrolizumab Versus Sunitinib Alone in First-Line Treatment of Subjects With Advanced Renal Cell Carcinoma.

PI: Dr Méndez Vidal, María José

3348. Randomized, Double-Blind, Phase 3 Study Evaluating Tas-102 Plus Best Supportive Care (Bsc) Versus Placebo Plus Bsc In Patients With Metastatic Gastric Cancer Refractory To Standard Treatments.

PI: Dr Cano Osuna, María Teresa

3383. A Multicenter Phase II Trial to Evaluate the Efficacy and Safety of Pembrolizumab and Gem-

citabine in Patients With HER2-negative Advanced Breast Cancer (ABC) PANGEA-Breast.

PI: Dr De La Haba Rodríguez, Juan Rafael

3415. A Phase 3, Open-Label, Multicenter Study of ALXN1210 in Children and Adolescents With Atypical Hemolytic Uremic Syndrome (aHUS).

PI: Dr Cano Osuna, María Teresa

3416. A Phase II Clinical Trial to Analyse Olaparib Response in Patients With BRCA1 and/or 2 Promoter Methylation Diagnosed of Advanced Breast Cancer (COMETA-Breast Study).

PI: Dr De La Haba Rodríguez, Juan Rafael

3417. A Phase III, Multicenter, Randomized, Placebo-Controlled Study of Atezolizumab (Anti-PD-L1 Antibody) as Monotherapy and in Combination With Platinum-Based Chemotherapy in Patients With Untreated Locally Advanced or Metastatic Urothelial Carcinoma.

PI: Dr Méndez Vidal, María José

3418. Study of Encorafenib + Cetuximab Plus or Minus Binimetinib vs. Irinotecan/Cetuximab or Infusional 5-Fluorouracil (5-FU)/Folinic Acid (FA)/Irinotecan (FOLFIRI)/Cetuximab With a Safety Lead-in of Encorafenib + Binimetinib + Cetuximab in Patients With BRAF V600E-mutant Metastatic Colorectal Cancer.

PI: Dr Ortiz Morales, María Jose

3419. Phase II Study to Evaluate Efficacy and Safety of Sunitinib Therapy in Patients With Metastatic Renal Clear Cell Carcinoma Who Have Progressed to First-line Immunotherapy Treatment (INMUNOSUN Study).

PI: Dr Méndez Vidal, María José

3439. Estudio de fase III, aleatorizado y doble ciego para evaluar pembrolizumab más quimioterapia frente a un placebo más quimioterapia como tratamiento neoadyuvante y pembrolizumab frente a un placebo como tratamiento adyuvante para el cáncer de mama triple.

PI: Dr De La Haba Rodríguez, Juan Rafael

3441. COMPLEEMENT-1: An Open-label, Multicenter, Phase IIIb Study to Assess the Safety and Efficacy of Ribociclib (LEE011) in Combination With Letrozole for the Treatment of Men and Pre/Postmenopausal Women With Hormone Receptor-positive (HR+) HER2-negative (HER2-) Advanced Breast Cancer

(aBC) With no Prior Hormonal Therapy for Advanced Disease.

PI: Dr De La Haba Rodríguez, Juan Rafael

3443. A Multicentre, International, Non-controlled Phase II Trial to Identify the Molecular Mechanisms of Resistance and Sensitivity to Palbociclib Re-challenge Upon Progression to a Palbociclib Combination in ER-positive Metastatic Breast Cancer Patients (BioPER).

PI: Dr De La Haba Rodríguez, Juan Rafael

3448. Phase Ib/II Study to Evaluate the Efficacy and Tolerability of PMO1183 in Combination With Olaparib in Patients With Advanced Solid Tumors.

PI: Dr Rubio Pérez, María Jesús

3474. A Phase III, Randomized, Double-Blind, Placebo-Controlled, Multicenter Trial Testing Ipatasertib Plus Abiraterone Plus Prednisone/Prednisolone, Relative to Placebo Plus Abiraterone Plus Prednisone/Prednisolone in Adult Male Patients With Asymptomatic or Mildly Symptomatic, Previously Untreated, Metastatic Castrate-Resistant Prostate Cancer.

PI: Dr Méndez Vidal, María José

3476. Phase 3 Study of ADXS11-001 Administered Following Chemoradiation as Adjuvant Treatment for High Risk Locally Advanced Cervical Cancer: AIM2CERV.

PI: Dr Rubio Pérez, María Jesús

3479. Trastuzumab y pertuzumab sin quimioterapia en cancer de mama HER+: estrategia adaptada en funcion de la respuesta evaluada por FDG-PET. Estudio PHERGain.

PI: Dr De La Haba Rodríguez, Juan Rafael

3483. PALbociclib CoLLaborative Adjuvant Study: A Randomized Phase III Trial of Palbociclib With Standard Adjuvant Endocrine Therapy Versus Standard Adjuvant Endocrine Therapy Alone for Hormone Receptor Positive (HR+) / Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Early Breast Cancer.

PI: Dr De La Haba Rodríguez, Juan Rafael

3524. Phase I/II Study of Nab-paclitaxel and Gemcitabine Followed by AG-mFOLFOX in Patients With Metastatic Pancreatic Adenocarcinoma.

PI: Dr Cano Osuna, María Teresa

3526. A Randomized, Double-blind, Placebo-controlled, Phase II Trial of Palbociclib in Combination With Letrozole Versus Placebo in Combination With Letrozole for Patients With Estrogen Receptor Positive Advanced or Recurrent Endometrial Cancer.
PI: Dr Rubio Pérez, María Jesús
3528. Randomised, Multicentre, Phase II Pilot Study to Assess the Efficacy and Safety of Treatment With FOLFIRI-aflibercept Compared to Initial Treatment With FOLFIRI-aflibercept (for 6 Cycles) Followed by Maintenance With 5FU-aflibercept, in an Elderly Population With Metastatic Colorectal Cancer (mCRC) After Failure of an Oxaliplatin-based Regimen.
PI: Dr Gómez España, María Auxiliadora
3529. A Randomized, Open-Label, Phase 3 Study of Abemaciclib Combined With Standard Adjuvant Endocrine Therapy Versus Standard Adjuvant Endocrine Therapy Alone in Patients With High Risk, Node Positive, Early Stage, Hormone Receptor Positive, Human Epidermal Receptor 2 Negative, Breast Cancer.
PI: Dr De La Haba Rodríguez, Juan Rafael
3554. A Phase III, Open Label, Randomized Study of Atezolizumab (Anti-PD-L1 Antibody) Compared With a Platinum Agent (Cisplatin or Carboplatin) in Combination With Either Pemetrexed or Gemcitabine for PD-L1-Selected, Chemotherapy-Naive Patients With Stage IV Non-Squamous Or Squamous Non-Small Cell Lung Cancer.
PI: Dr Barneto Aranda, Isidoro
3559. A Phase IIIb, Randomised, Double-blind, Placebo-controlled, Multicentre Study of Olaparib Maintenance Retreatment in Patients With Epithelial Ovarian Cancer Previously Treated With a PARPi and Responding to Repeat Platinum Chemotherapy.
PI: Dr Rubio Pérez, María Jesús
3560. A Two-part, Open-label, Randomized, Phase 2/3 Study of Dinutuximab and Irinotecan Versus Irinotecan for Second Line Treatment of Subjects With Relapsed or Refractory Small Cell Lung Cancer.
PI: Dr Barneto Aranda, Isidoro
3562. A Randomized Double-blind Phase 3 Study Of Avelumab In Combination With Standard Of Care Chemoradiotherapy (Cisplatin Plus Definitive Radiation Therapy) Versus Standard Of Care Chemoradiotherapy In The Front-line Treatment Of Patients With Locally Advanced Squamous Cell Carcinoma Of The Head And Neck.
PI: Dr Porras Quintela , Ignacio
3586. A Randomized, Double-blind, Phase 2 Trial to Assess Safety and Efficacy of Lenvatinib at Two Different Starting Doses (18 mg vs. 14 mg QD) in Combination With Everolimus (5 mg QD) in Renal Cell Carcinoma Following One Prior VEGF-Targeted Treatment.
PI: Dr Méndez Vidal, María José
3590. A Phase III/IV, Single Arm, Multicenter Study of Atezolizumab (Tecentriq) to Investigate Long-term Safety and Efficacy in Previously-treated Patients With Locally Advanced or Metastatic Non-small Cell Lung Cancer (TAIL).
PI: Dr Barneto Aranda, Isidoro
3609. Phase 1/2 Study Exploring the Safety, Tolerability, and Efficacy of INCAGN01876 Combined With Immune Therapies in Advanced or Metastatic Malignancies
.PI: Dr Moreno Vega, Alberto Luis
3624. FORWARD I: A Randomized, Open Label Phase 3 Study to Evaluate the Safety and Efficacy of Mirvetuximab Soravtansine (IMGN853) Versus Investigator's Choice of Chemotherapy in Women With Folate Receptor Alpha Positive Advanced Epithelial Ovarian Cancer, Primary Peritoneal Cancer or Fallopian Tube Cancer.
PI: Dr Rubio Pérez, María Jesús
3654. A phase II, Multicentric, Open, Controlled and Randomized, to assess the efficacy of the intra arterial infusion of mononuclear cells of autologous bone marrow in patients with ischemic stroke.
PI: Dr Méndez Vidal, María José
3720. Phase II clinical trial of enzalutamide in advanced unresectable or metastatic ovarian granulosa cancer. GreKo III STUDY.
PI: Dr Rubio Pérez, María Jesús
3068. Phase II study to evaluate the efficacy of sunitinib retreatment in patients with advanced or metastatic well-differentiated (G1/2) pancreatic neuroendocrine tumors (pNET) who have already failed prior sunitinib therapy.
PI: Dr Serrano Blanch, Raquel
2059. A study to assess arterial hypertension as a predictor of effectiveness of bevacizumab (BV) associated with chemotherapy in metastatic colorectal cancer and metastatic breast cancer.
PI: Dr Aranda Aguilar, Enrique
2178. A post-authorization, observational, prospective study to assess progression patterns of advanced EGFR-positive non-small cell lung cancer treated with erlotinib.
PI: Dr Barneto Aranda, Isidoro
2274. Circulating markers in patients with advanced or metastatic renal carcinoma on first-line treatment.
PI: Dr Méndez Vidal, María José
2701. Evaluation of prognostic factors and treatment regimes for metastatic gastric adenocarcinoma in clinical practice.
PI: Dr Serrano Blanch, Raquel
2235. An observational, prospective study to identify the management of patients with castration-resistant metastatic prostate cancer on second-line treatment after docetaxel in regular clinical practice.
PI: Dr Méndez Vidal, María José
2524. Translational, observational and prospective study to determine factors predicting the anti-angiogenic efficacy of bempiparin in patients with advanced cancer.
PI: Dr Sánchez Mauriño, Pedro
2683. Multicenter prospective study of prognostic factors in prostate cancer resistant to castration treated with abiraterone.
PI: Dr Méndez Vidal, María José
2684. Multicenter prospective study of prognostic factors in castration resistant treated with docetaxel or cabazitaxel prostate cancer.
PI: Dr Méndez Vidal, María José
2902. Prospective Development of predictive and prognostic tools for optimization Frontline therapy with Bevacizumab in Patients with Metastatic Breast Cancer HER-2 negative and aggressive illness criteria observational study.
PI: Dr De la Haba Rodríguez, Juan Rafael

2906. Clinical profile and therapeutic management of patients with pancreas cancer, Registry of Hospital Medical Oncology services in Spain.

PI: Dr Aranda Aguilar, Enrique

2928. European non-interventional, multicenter, prospective study to describe the efficacy of trabectedin + pegylated liposomal doxorubicin (PLD) in the treatment of patients with recurrent ovarian cancer (ROC) according to data sheet despite prior use of an anti-angiogenic drug.

PI: Dr Rubio Pérez, María Jesús

2930. The T790M mutation detection technology by BEAMing in patients with NSCLC and EGFR mutated in stage IV. LUNGBEAM study.

PI: Dr Barneto Aranda, Isidoro

2984. Monitoring by liquid biopsy of patients with metastatic colorectal cancer. comparison of next generation platforms for genotyping of circulating tumor DNA.

PI: Dr Aranda Aguilar, Enrique

3074. Clinical evaluation of OncoBEAM using an extended panel of 34 RAS mutations. comparison of RAS mutation detection in circulating tumor DNA and sample tissue in patients with metastatic colorectal cancer.

PI: Dr Aranda Aguilar, Enrique

3221. Multi-centre observational prospective study on fatigue- and hand-foot syndrome-related quality of life in patients with metastatic renal cell carcinoma receiving a tyrosine kinase inhibitor as first-line treatment.

PI: Dr Méndez Vidal, María José

3223. Prospective registry study in patients with unresectable locally advanced or metastatic breast cancer (MBC). RegistEM Study

PI: Dr De la Haba Rodríguez, Juan Rafael

3295. Validation of the International Metastatic Renal-Cell Carcinoma Database Consortium (IMDC) prognostic model for second-line directed therapy (ITC/mTOR inhibitors) following first-line treatment with pazopanib (SPAZO-2)

PI: Dr Méndez Vidal, María José

3252. Retrospective observational study on the treatment of metastatic colorectal cancer (mCRC) in Spain.

PI: Dr Aranda Aguilar, Enrique



HIGHLIGHTS

Publications

12

Impact Factor

52,02

Average Impact Factor

4,335

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Spanish Renal Research Network (REDinREN)

PAIDI CTS-260: Abnormal Cell Activation:

Apoptosis

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Tejero Circuéndez, Iván

Scientific Activity

Our Nephrology Cell Damage in Chronic Inflammation research group is a consolidated group of IMIBIC, bringing together both basic and clinical researchers in various scientific disciplines, including medicine, biology and nursing staff.

Our research group is focused on different aspects of uremia, hemodialysis, chronic inflammation and endothelial dysfunction. Our primary area of research is chronic kidney disease (CKD). We study CD14+CD16+ and endothelial cell interaction mediated induction of vascular calcification in patients with chronic kidney disease. We investigate the effect of the endothelial cell and production of microparticles as mediators of this process. We have also performed experimental models of cell culture to study microparticles, CD14 +CD16+ and endothelial cells by flow cytometry and proteomics (mass spectrometry) to analyze the role of these biological biomarkers on microinflammation and the mechanisms involved in vascular calcification on chronic kidney disease.

The main aim of our research is to study the mechanisms of cell damage and repair conditioning in the response to stress caused by chronic inflammation. The working model focuses on immunocompetent cells and vascular wall cells. In addition, we analyze the mechanisms regulating the stress response in circulating progenitor cells in peripheral blood.

Results derived from our research may

lead to determine the benefits of different dialysis or pharmacological treatments (chelators, calcimimetic, and vitamin D) on morbidity and mortality of CKD4 CKD5 and CKD5D patients. Support tools at diagnosis and possible therapeutic targets will be identified.

In the last three year, our group has published manuscripts that are contributing to the understanding of Cell Damage in Chronic Inflammation and endothelial dysfunction on chronic kidney disease. We are also evaluated new biological biomarkers and the effect of different uremic toxins on the pathogenesis and development of vascular calcification and cardiovascular risk.

Our group is collaborating with the Spanish Renal Research Network (REDinREN). Other collaborations include research projects with companies of pharmaceutical/dialysis industry (Fresenius Medical Care and Medtronic).

Research lines

- Nephrology. Cell Damage in Chronic Inflammation
- Relevance of protein content within the renal scaffold for kidney bioengineering and regeneration

Keywords

Cell activation, chronic renal failure, microinflammation, cell therapy, hemodialysis, renal transplantation, inflammation, cellular stress, genomic damage, endothelium.

Scientific Production

Publications

Main Publications

Carmona A, Guerrero F, Buendia P, Obrero T, Aljama P, Carracedo J. Microvesicles Derived from Indoxyl Sulfate Treated Endothelial Cells Induce Endothelial Progenitor Cells Dysfunction. *FRONTIERS IN PHYSIOLOGY*. 2017.8():-666.

IF: 4,134

Q: 1

Carmona A, Aguera ML, Luna-Ruiz C, Buendia P, Calleros L, Garcia-Jerez A, Rodriguez-Puyol M, Arias M, Arias-Guillen M, de Arriba G, Ballarin J, Bernis C, Fernandez E, Garcia-Rebollo S, Mancha J, del Peso G, Perez E, Poch E, Portoles JM, Rodriguez-Puyol D, Sanchez-Villanueva R, Sarro F, Torres A, Martin-Malo A, Aljama P, Ramirez R, Carracedo J. Markers of endothelial damage in patients with chronic kidney disease on hemodialysis. *AMERICAN JOURNAL OF PHYSIOLOGY-RENAL PHYSIOLOGY*. 2017.312(4):F673-F681.

IF: 3,611

Q: 1

Esquivias-Motta E, Martin-Malo A, Buendia P, Alvarez-Lara MA, Soriano S, Crespo R, Carracedo J, Ramirez R, Aljama P. Hemodiafiltration With Endogenous Reinfusion Improved Microinflammation and Endothelial Damage Compared With Online-Hemodiafiltration: A Hypothesis Generating Study. *ARTIFICIAL ORGANS*. 2017.41(1):88-98.

IF: 2,403

Q: 2

Other Publications

Tortajada A, Gutierrez E, de Jorge EG, Anter J, Segarra A, Espinosa M, Blasco M, Roman E, Marco H, Quintana LF, Gutierrez J, Pinto S, Lopez-Trascasa M, Praga M, de Cordoba SR. Elevated factor H-related protein 1 and factor H pathogenic variants decrease complement regulation in IgA nephropathy. *KIDNEY INTERNATIONAL*. 2017.92(4):953-963.

IF: 8,395

Q: 1 D: 1

Diaz-Tocados JM, Peralta-Ramirez A, Rodriguez-Ortiz ME, Raya AI, Lopez I, Pineda C, Herencia C, de Oca AM, Vergara N, Steppan S, de Mier MVPR, Buendia P, Carmona A, Carracedo J, Alcalá-Díaz JF, Frazao J, Martínez-Moreno JM, Canalejo A, Felsenfeld A, Rodriguez M, Aguilera-Tejero E, Almaden Y, Muñoz-Castaneda JR. Dietary magnesium supplementation prevents and reverses vascular and soft tissue calcifications in uremic rats. *KIDNEY INTERNATIONAL*. 2017.92(5):1084-1099.

IF: 8,395
Q: 1 D: 1

Molina J, Navas A, Aguera ML, Rodelo-Haad C, Alonso C, Rodriguez-Benot A, Aljama P, Solana R. Impact of Preformed Donor-Specific Anti-Human Leukocyte Antigen Antibody C1q-Binding Ability on Kidney Allograft Outcome. *FRONTIERS IN IMMUNOLOGY*. 2017.8():-1310.

IF: 6,429
Q: 1

Alique M, Ruiz-Torres MP, Bodega G, Noci MV, Troyano N, Bohorquez L, Luna C, Luque R, Carmona A, Carracedo J, Ramirez R. Microvesicles from the plasma of elderly subjects and from senescent endothelial cells promote vascular calcification. *AGING-US*. 2017.9(3):778-789.

IF: 4,867
Q: 2

Cavero T, Rabasco C, Lopez A, Roman E, Avila A, Sevillano A, Huerta A, Rojas-Rivera J, Fuentes C, Blasco M, Jarque A, Garcia A, Mendizabal S, Gavella E, Macia M, Quintana LF, Romera AM, Borrego J, Arjona E, Espinosa M, Portoles J, Gracia-Iguacel C, Gonzalez-Parra E, Aljama P, Morales E, Cao M, de Cordoba SR, Praga M. Eculizumab in secondary atypical haemolytic uraemic syndrome. *NEPHROLOGY DIALYSIS TRANSPLANTATION*. 2017.32(3):466-474.

IF: 4,47
Q: 1

Valencia-Nunez DM, Kreutler W, Moya-Gonzalez J, Alados-Arboledas P, Muñoz-Carvajal I, Carmona A, Ramirez-Chamond R, Carracedo-Anon J. Endothelial vascular markers in coronary surgery. *HEART AND VESSELS*. 2017.32(11):1390-1399.

IF: 3,434
Q: 2

Cantisan S, Paez-Vega A, Santos F, Rodriguez-Benot A, Aguado R, Rivero A, Montejo M, Torre-Cisneros J, Solana R, Spanish Network Res Infect Dis. Impact of age and cytomegalovirus on CD8(+) T-cell compartment remodeling after solid organ transplantation: A one-year follow-up study. *EXPERIMENTAL GERONTOLOGY*. 2017.95():98-106.

IF: 3,34
Q: 1

Maduell F, Varas J, Ramos R, Martín-Malo A, Perez-Garcia R, Berdud I, Moreso F, Canaud B, Stuard S, Gaulty A, Aljama P, Merello JI. Hemodiafiltration Reduces All-Cause and Cardiovascular Mortality in Incident Hemodialysis Patients: A Propensity-Matched Cohort Study. *AMERICAN JOURNAL OF NEPHROLOGY*. 2017.46(4):288-297.

IF: 2,542
Q: 2

Luno J, Varas J, Ramos R, Merello I, Aljama P, Martín Malo A, Pascual J, Praga M, ORD Grp. The Combination of Beta Blockers and Renin-Angiotensin System Blockers Improves Survival in Incident Hemodialysis Patients: A Propensity-Matched Study. *KIDNEY INTERNATIONAL REPORTS*. 2017.2(4):665-675.

IF: n/a

Research Funding

Regional

Martín Malo, A. Artificial Intelligence: a new alternative to analyze the associations among the concentrations of calcium, phosphorous and PTH in hemodialysis patients as well as predicting cardiovascular risk. Funding agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0311-2014

Soriano Cabrera, S. Role of Fgf3 in the progression of vascular damage associated to uremia: Basics and Clinics Studies. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0136-2016

National

Santamaria Olmo, R. Modulation of endothelial damage and repair mediators through the inhibition of xanthine oxidase in patients with chronic kidney

disease. A cross-over, double-blind, placebo-controlled study. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI12/O1866

Aljama García, P. CD14+CD16+ and endothelial cell interaction mediated induction of vascular calcification in patients with chronic kidney disease. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/O1785

Aljama García, P. Kidney Research Network REDINREN. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: RD16/O009/O034

Martín Malo, A. Mecanismos moleculares implicados en los procesos de adhesión y migración celular: Efecto del tratamiento de enfermedad renal crónica sobre la disfunción endotelial. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI17/O1785
Expected starting date: 2018

Contracts with Companies

Aljama García, P. Agreement FRESENIUS. Funding agency: FRESENIUS MEDICAL CARE ESPAÑA, S.A. Reference: CCB.0125

Aljama García, P. Agreement SANOFI. Funding agency: SANOFI-AVENTIS, S.A. Reference: CCB.0134

Aljama García, P. Agreement FMC. Funding agency: F.M.C. SERVICIOS ANDALUCIA, S.A. Reference: CCB.0147

Aljama García, P. Agreement ALEXION. Funding agency: ALEXION PHARMA SPAIN SL. Reference: PSS.0202

Clinical Trials

0096/13. A randomized, cross-over, double-blind, placebo-controlled study. Modulation of endothelial damage and repair mediators through the inhibition of xanthine oxidase in patients with chronic kidney disease.
PI: Dr Santamaría Olmo, Rafael

0190/13. An international, multicenter, randomized, double-blind, parallel-group, placebo-con-

trolled study of the effect of atrasentan on kidney outcomes in subjects with diabetes type 2 and nephropathy. SONAR trial of diabetic nephropathy.
PI: Dr Santamaría Olmo, Rafael

0239/13. Randomized open and controlled phase III study with active treatment to assess the efficacy and safety of FG-4592 in the treatment of anemia in patients with chronic renal insufficiency untreated by dialysis.

PI: Dr Sagrario Soriano, Sagrario

0263/13. An observer-blind study to assess the immunogenicity and safety of GSK Biologicals' subunit GSK1437173A vaccine against Herpes Zoster (HZ/su) in kidney transplantation recipients aged >18.

PI: Dr Agüera Morales, M^o Luisa

0048/14. A randomized, multicenter, controlled, open-label study to assess the efficacy of sequential treatment with Tacrolimus-Rituximab vs. steroids plus Cyclophosphamide in patients with primary membranous nephropathy.

PI: Dr Espinosa Hernández, Mario

0145/14. A randomized, double-blind, placebo-controlled, phase II study to assess the efficacy and safety of the ASP0113 vaccine in CMV-seronegative donors.

PI: Dr Navarro Cabello, María Dolores

0024/15. Multicentered open randomized study of two parallel groups to assess the efficacy and safety of Envarsus compared to tacrolimus used in accordance with current clinical practice as initial maintenance in-patient treatment.

PI: Dr Rodríguez Benot, Alberto Manuel

3274. A multicenter, single-arm study of the effects of atrasentan on spermatogenesis and testicular function.

PI: Dr Santamaría Olmo, Rafael

3334. Phase III, randomized, double-blind, placebo-controlled, parallel group, multicenter, event-driven study to evaluate the efficacy and safety of finerenone, associated with standard treatment, in the reduction of morbidity and mortality.

PI: Dr Santamaría Olmo, Rafael

3335-1. Phase III, randomized, double-blind, placebo-controlled, parallel group, multicenter, event-driven study to assess the efficacy and safety of finerenone, associated with standard treatment, in the progression of kidney disease.

PI: Dr Santamaría Olmo, Rafael

1762. National Registry of Humoral Rejection. An epidemiological, multicenter, observational, prospective study to assess the clinical, serological and histological characteristics and five-year evolution of humoral rejection after renal transplantation in Spain.

PI: Dr Agüera Morales, M^o Luisa

2079/2. A multinational, multicenter, observational, non-interventional study of patients with atypical hemolytic uremic syndrome (SHUA register).

PI: Dr Espinosa Hernández, Mario

2932. Scrutiny of FABRY disease in patients Segmental Focal Glomerulosclerosis.

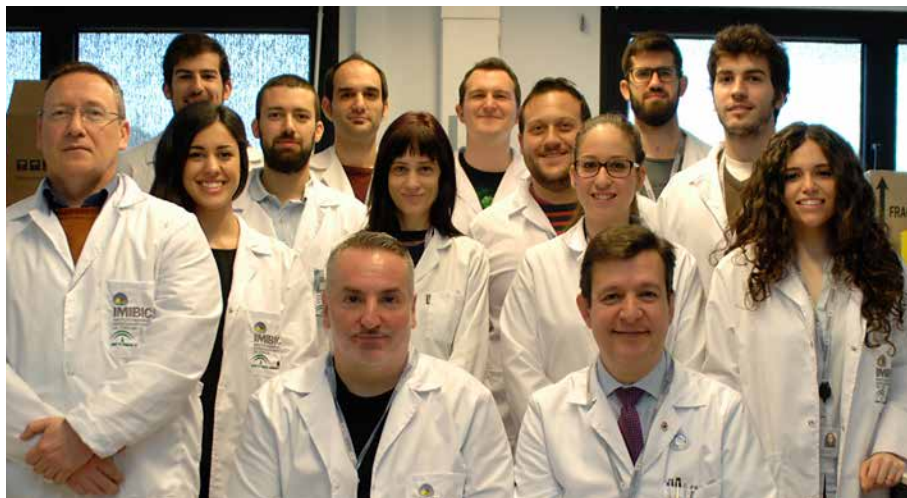
PI: Dr Espinosa Hernández, Mario

2612. A Long-term follow-up study involving adults who received kidney and liver allografts and had previously taken part in a trial with Tacrolimus (Advagraft). A multicenter, non-interventional, post-authorization study.

PI: Dr Rodríguez Benot, Alberto Manuel

3566. Study of the burden of disease in patients with Fabry disease. ESTUDIO CAR E-FABRY.

PI: Dr Santamaría Olmo, Rafael



HIGHLIGHTS

PUBLICATIONS

12

IMPACT FACTOR

56,605

AVERAGE IMPACT FACTOR

4,717

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PAIDI BIO-139 Scientific Group

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Montero Hidalgo, Antonio Jesús

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Rivero Cortés, Esther

 Sánchez Medianero, M^o Teresa

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 López López, Fernando

Scientific Activity

The “Hormones and Cancer” research group is a consolidated group of the IMIBIC comprised by basic, translational, and clinical researchers. We investigate the cellular and molecular principles underlying the natural processes of neuroendocrine-metabolic regulation and their dysfunctions in tumor diseases and cancer. The group pays special attention to the role played by some neuropeptide/receptor systems, and their molecular regulation by signaling pathways, miRNAs, alternative splicing, etc. at the onco-endo-metabolic interface. Starting from the study of pituitary cells producing growth hormone (GH), our group has developed a Research Area focused on the analysis of extracellular signals (somatostatin, cortistatin, GHRH, ghrelin, Kisspeptins, etc.), receptors (sst1-5, GHRH-R, GHS-R, Kiss1r), splicing variants (sst5TMD4, In1-ghrelin, GHSR-1b) and signalling pathways involved in the regulation of this cell type, as well as other endocrine cell types (eg. corticotropes, gonadotropes, pancreatic beta cells) and the global role of these molecules in metabolic homeostasis and the development of tumour pathologies.

To achieve this, we use a wide range of techniques, including primary cultures of normal and tumor cells, cell lines, genetically modified animals, hormone secretion measurements, second messengers and gene expression, dynamics association/dissociation studies and membrane protein trafficking using FRET, confocal

microscopy in living cells, etc.

Our studies have led to the discovery and characterization of new receptors, splicing variants, functions and mechanisms of action for different neuroendocrine-metabolic signals and drugs involved in the control of hormone secretion, tumorigenesis, or cell survival and death in various normal and pathological conditions such as metabolic dysregulations (diabetes, obesity) and cancer (pituitary and neuroendocrine tumors, or breast, prostate, pancreatic and hepatic cancers, among others), with the ultimate aim of contributing to the future design of innovative therapeutic strategies.

Research Lines

- Involvement of alternative splicing regulation in neuroendocrine tumors and pancreatic cancer: identification of novel biomarkers
- Identification of key players in the pathological interaction between metabolic dysfunctions (obesity, diabetes) and prostate cancer
- Role of novel endocrine-related factors in brain and pituitary tumors
- Implication of novel molecular and endocrine-metabolic factors in the pathological association between obesity and liver diseases

Keywords

Cellular and Molecular Endocrinology and Endocrine Oncology; Hypothalamus; Pituitary; Somatostatin, cortistatin,

ghrelin, GHRH, kisspeptins and their receptors; Expression and secretion of hormones (GH, PRL, IGF-I, insulin) and intracellular signalling pathways; Regulation of the somatotrophic axes; Obesity and Diabetes; Pituitary tumours; Neuroendocrine tumors; Prostate cancer; Breast cancer.

Scientific Production

Publications

Main Publication

Capdevila J, Casanovas O, Salazar R, Castellano D, Segura A, Fuster P, Aller J, Garcia-Carbonero R, Jimenez-Fonseca P, Grande E, Castaño JP. Translational research in neuroendocrine tumors: pitfalls and opportunities. *ONCOGENE*. 2017. 36(14):1899-1907. IF: 7,519 Q:1 D:1

Hormaechea-Agulla D, Gahete MD, Jimenez-Vacas JM, Gomez-Gomez E, Ibanez-Costa A, L-Lopez F, Rivero-Cortes E, Sarmento-Cabral A, Valero-Rosa J, Carrasco-Valiente J, Sanchez-Sanchez R, Ortega-Salas R, Moreno MM, Tsomaia N, Swanson SM, Culler MD, Requena MJ, Castaño JP, Luque RM. The oncogenic role of the In1-ghrelin splicing variant in prostate cancer aggressiveness. *MOLECULAR CANCER*. 2017. 16(1):146. IF: 6,204 Q:1

Hormaechea-Agulla D, Jimenez-Vacas JM, Gomez-Gomez E, Lopez FL, Carrasco-Valiente J, Valero-Rosa J, Moreno MM, Sanchez-Sanchez R, Ortega-Salas R, Gracia-Navarro F, Culler MD, Ibanez-Costa A, Gahete MD, Requena MJ, Castaño JP, Luque RM. The oncogenic role of the spliced somatostatin receptor sst5TMD4 variant in prostate cancer. *FASEB JOURNAL*. 2017. 31(11): 4682-4696. IF: 5,498 Q:1 D:1

Luque RM, Lopez-Sanchez LM, Villa-Osaba A, Luque IM, Santos-Romero AL, Yubero-Serrano EM, Cara-Garcia M, Alvarez-Benito M, Lopez-Miranda

J, Gahete MD, Castaño JP. Breast cancer is associated to impaired glucose/insulin homeostasis in premenopausal obese/overweight patients. *ONCOTARGET*. 2017. 8(46):81462-81474. IF: 5,168 Q: 1

Sarmento-Cabral A, L-Lopez F, Gahete MD, Castaño JP, Luque RM. Metformin reduces prostate tumor growth, in a diet-dependent manner, by modulating multiple signaling Pathways. *MOLECULAR CANCER RESEARCH*. 2017. 15(7):862-874. IF: 4,974 Q: 1

L-Lopez F, Sarmento-Cabral A, Herrero-Aguayo V, Gahete MD, Castaño JP, Luque RM. Obesity and metabolic dysfunction severely influence prostate cell function: role of insulin and IGF1. *JOURNAL OF CELLULAR AND MOLECULAR MEDICINE*. 2017. 21(9):1893-1904. IF: 4,499 Q: 1

Herrera-Martinez AD, Gahete MD, Sanchez-Sanchez R, Salas RO, Serrano-Blanch R, Salvatierra A, Hofland LJ, Luque RM, Galvez-Moreno MA, Castaño JP. The components of somatostatin and ghrelin systems are altered in neuroendocrine lung carcinoids and associated to clinical-histological features. *LUNG CANCER*. 2017. 109:128-136. IF: 4,294 Q: 1

Sarmento-Cabral A, L-Lopez F, Luque RM. Adipokines and their receptors are widely expressed and distinctly regulated by the metabolic environment in the prostate of male mice: Direct role under normal and tumoral conditions. *ENDOCRINOLOGY*. 2017. 158(10):3540-3552. IF: 4,283 Q: 1

Ibanez-Costa A, Lopez-Sanchez LM, Gahete MD, Rivero-Cortes E, Vazquez-Borrego MC, Galvez MA, de la Riva A, Venegas-Moreno E, Jimenez-Reina L, Moreno-Carazo A, Tinahones FJ, Maraver-Selfa S, Japon MA, Garcia-Arnes JA, Soto-Moreno A, Webb SM, Kineman RD, Culler MD, Castaño JP, Luque RM. BIM-23A760 influences key functional endpoints in pituitary adenomas and normal pituitaries: molecular mechanisms underlying the differential response

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Research Funding

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Gahete Ortiz, MD. Pathological implications of aberrant alternative splicing in hepatocellular carcinoma: Identification of predictive, prognostic and therapeutic markers. Funding agency: National Institute

of Health Carlos III (ISCIII). Reference: CP15/00156

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Gahete Ortiz, MD. Implication of novel molecular and endocrine-metabolic factors in the pathological interaction between obesity and hepatocellular carcinoma. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI17/02287 Expected start date: 2018

Regional

Luque Huertas, RM. Therapeutic opportunities of somatostatin, ghrelin and their receptors in pituitary pathologies: identification of novel molecular targets and contribution of the mechanism of alternative splicing. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CTS1406

Gahete Ortiz, M D. Determining the molecular footprint of predictive splicing in the development of prostate cancer and application in the diagnosis and treatment of the disease. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0541-2013

Luque Huertas, RM. Grant Mobility II: Protection of research results of Galileo innovation and technology transfer II Plan from Universidad de Córdoba. Funding agency: Universidad de Córdoba. Reference: II Plan Propio GALILEO

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Contracts with Companies

Luque Huertas, RM. Agreement Universidad. Funding agency: Universidad de Córdoba. Reference: PSS.0178



HIGHLIGHTS

PUBLICATIONS

43

IMPACT FACTOR

228,301

AVERAGE IMPACT FACTOR

5,309

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Scientific Activity

The “Nutrigenomics. Metabolic Syndrome” research group is a consolidated group of IMIBIC, bringing together both basic and clinical researchers in various scientific disciplines, such as medicine, biology, biochemistry, as well as dieticians, nursing, technical and administrative staff. Our research is mainly based on the effect of dietary components on cardiovascular risk through a double approach: the biological actions of the diet on mechanisms and factors related to the development of atherosclerosis (oxidative stress, inflammation, homeostasis or cellular signaling) and Nutrigenetics, through which we investigate how common genetic variants modulate the influence of the diet on different markers such as postprandial metabolism, endothelial function, overweight or glucose metabolism. We are also interested in the use of these strategies in others pathologies such as hypercholesterolemia,

thromboembolic disease, as well as in ageing process. These approaches will allow us to modulate the pathological pathways that underlie the development of various chronic diseases (type 2 diabetes mellitus, metabolic syndrome and cardiovascular diseases).

Over the last years, our group has been carrying out the Cordioprev study (CORonary Diet Intervention with Olive oil and cardiovascular PREvention study (clinical trials number NCT00924937/NCT00924937). This is a secondary prevention, randomized and interventional study where 1002 patients who have suffered an episode of ischemia will follow a voluntary prevention program to avoid new cardiovascular events. The participants will follow two randomized heart-healthy diets: a fat low diet whose composition is recognized as a very useful model by the main agencies and societies of the field, and mediterranean diet with a major calorie input of fat, which also stands as an alternative to reduce the risk of heart disease. The results will validate whether both diets are healthy models based on their ability to reduce and normalize the main risk factors as well as the mechanisms involved in atherosclerosis and the risk of heart disease. Our groups is firmly committed to the Cordioprev study and we aim to demonstrate the beneficial effect of these two diet models on the cardiovascular field, helping to prevent new events for patients who have already had an acute myocardial infarction or an angina pectoris. Up to now, this is the first study in the

world which addresses this purpose as a main goal in patients that have suffered from heart disease.

Over the last few years, our group has been developing predictive models for assessing the risk of disease. Specifically, we are developing innovative models to evaluate biological senescence, coronary heart disease treatment choice and miRNAs plasma levels-based model for type 2 diabetes mellitus development. Moreover, due to the complex nature of gene-environment interactions, another important aim of our research is to establish an appropriate dietary therapy in according to the disease, for “personalized” nutrition.

Our research group is highly motivated toward internationalization. In fact, we are currently taking part in two international consortiums. POWER2DM, whose objective is to develop individual self-control of diabetes; and FAME, for the identification of new disease biomarkers.

The Principal Investigator (PI) of the group, José López Miranda, is also PI of both CIBER Physiopathology of Obesity and Nutrition (CIBERObn) and the PAIDI CTS-525 and CTS 212. Other collaborations include highly competitive research groups both on a national and international level, as well as pharmaceutical companies.

Research Lines

- Interaction genes-environment
- Active aging and frailty
- Nutrition, endocrine and metabolic diseases
- Micronutrients and cardiovascular dis-

ease

Keywords

Atherosclerosis, endothelium, metabolic syndrome, type 2 diabetes mellitus, Mediterranean diet, olive oil, polyphenols, antioxidants, inflammation, oxidative stress, cholesterol, polyphenols, gene expression, proteomics, nutrigenetics, nutrigenomics

Scientific Production

Publications

Main Publications

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Q: 1

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Q: 1

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Q: 2

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IF: 3,131

Q: 2

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Q: 1

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IF: 19,309

Q: 1 D: 1

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Q: 1

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Q: 1

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IF: 5,498

Q: 1 D: 1

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IF: 5,168

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Q: 1

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IF: 4,485
Q: 2

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IF: 4,485
Q: 2

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Q: 2

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Q: 1

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Q: 1

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Q: 2

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Q: 1

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Q: 1

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Q: 2

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Q: 3

Research Funding

Regional

López Miranda, J. Nutrigenomic Analysis of the effect of a Mediterranean diet rich in virgin olive oil on endothelial damage and regenerative capacity and its predictive value in cardiovascular risk. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P11-CVI-7450

García Ríos, A. Influence of clock-genes and diet in the etiopathogeny of the metabolic syndrome: New clinical approach. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0206-2013

Haro Mariscal C. Early diagnostic colorectal cancer tool based in intestine microbiota. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PIN-0156-2016

National

Fuentes Jiménez, F. Evaluation and Characterization of Coronary Atherosclerosis. Funding agency: National Institute of Health Carlos III (ISCIII). Reference:PI12/01461

Delgado Lista, FJ. Glucogene project: developing a clinical tool for the identification, staging and individualized non-pharmacological treatment of coronary patients with high genetic risk of developing alterations in the metabolism of carbohydrates. Funding agency: National Institute of Health Carlos III (ISCIII). Reference:PI13/00023

Pérez Martínez, P. Developing a technological platform to evaluate the ageing level and establish an individualized treatment regime based on the clinical, biological and genetic profile of the patient. Funding agency: National Institute of Health Carlos III (ISCIII). Reference:PI13/00185

García Ríos, A. PREDIMED+DM: Effect of a hypocaloric Mediterranean diet and physical activity promotion on the prevention of type 2 diabetes mellitus in subjects with the Metabolic Syndrome. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/00618

Almaden Peña, Y. Association between mineral metabolism parameters and cardiovascular Disease. Influence of the Mediterranean diet. Funding

agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/00872

López Miranda J. Early predictors and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine (FLEXI-MET). Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PIE14/00005

López Miranda, J. (Co-IP) Understanding obesity (Ob), metabolic syndrome (MetS), type 2 diabetes (T2DM) and fatty liver disease (FL): a multidisciplinary approach. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PIE 14/00031

Camargo A. Microbiota, sex hormones, and cardiovascular disease. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: CP14/00114

Lopez Miranda, J. Effect of a Mediterranean diet rich in virgin olive oil on the risk and incidence of Type 2 Diabetes Mellitus: Cordioprev-diab study. Reference: AGL2015-67896-P

Pérez Jiménez, F. Mediterranean diet associated with probiotics improves the cognitive function in patients with mild cognitive impairment modulating the axis microbiota-gut-brain. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01777

Rangel Zuñiga, O. Identification of novel therapeutic biomarkers in the progression of intima media thickness of carotid arteries through on nutritional epigenetics. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/00733.

International

Delgado Lista, J. POWER2DM - Predictive model-based decision support for diabetes patient empowerment. Funding Agency: European Commission H2020. Reference: PHC28-2015-001

López Miranda, J. FAME - Fatty Acid Metabolism - Interlinking Diet with Cardiometabolic Health. Funding agency: JPI HDHL: BIOMARKERS FOR NUTRITION AND HEALTH - MINECO 2016. Reference: ERA-HDHL BioNH 2016-001

Contracts with Companies

Montero Pérez-Barquero, M. Pzifer agreement. Funding agency: Pfizer, S.L.U. Reference: CCB.0070

Montero Pérez-Barquero, M. Laboratorios Servier Agreement. Funding agency: Laboratorios Servier, S.L. Reference: PSS.0051

López Miranda, J. Services Agreement TNO. Funding agency: Tno Netherlands Organisation. Reference: PSS.0014

Pérez Jiménez, F. Sponsored Agreement with Biomaslinc. Funding agency: Biomaslinc S.L. Reference: PSS.0070

Clinical Trials

O267/11. A global, multicenter, double-blind, randomized, parallel-group, placebo-controlled, one-year study to assess the effectiveness and tolerability of Anacetrapib added to an ongoing statin-based treatment, combined or not with other lipid modifying agents in patients with heterozygous familial hypercholesterolemia. PI: Dr López Miranda, José

O159/11 Open label extension (OLE), controlled, Bmulticenter study to assess the safety and long-term efficacy of AMG 145. PI: Dr López Miranda, José

O166/12. A multicenter, randomized, double-blind, placebo-controlled study to assess the effect of a further reduction of LDL cholesterol in major cardiovascular events when AMG 145 is used in combination with statins in patients with clinically evident heart disease. PI: Dr López Miranda, José

O314/12. EA randomized, double-blind, placebo-controlled, parallel-group trial to assess the effect of SAR236553/REGN727 on the occurrence of cardiovascular events in patients who recently had acute coronary syndrome. PI: Dr Fuentes Jiménez, Francisco

O032/13. A multicenter, open study to assess the safety, tolerability and long-term efficacy of AMG 145 in C-LDL cholesterol in subjects with severe heterozygous familial hypercholesterolemia. PI: Dr Fuentes Jiménez, Francisco

0086/13. An open label extension (OLE), controlled, multicenter study to assess the safety and long-term efficacy of AMG 145.
PI: Dr López Miranda, José

0205/13. An open, extension study of the trials EFC12492, R727-CL-1112, EFC12732 and LTS11717 to assess the safety and long-term efficacy of Alirocumab in patients with heterozygous familial hypercholesterolemia.
PI: Dr Fuentes Jiménez, Francisco

0216/13. A randomized, double-blind, parallel-group, active-control trial to assess the efficacy and safety of LCZ696 versus Valsartan on morbidity and mortality in patients with heart failure NYHA Class II-IV).
PI: Dr Montero Pérez-Barquero, Manuel

0223/13. A multicenter, double-blind, placebo-controlled, parallel-group study to assess the effectiveness and safety of Alirocumab in statin-naive patients with primary heterozygous familial hypercholesterolemia.
PI: Dr Fuentes Jiménez, Francisco

0295/13. A randomized, multicenter, double-blind, double-blind, placebo-controlled, parallel-group study to assess the efficacy, safety and tolerability of PF-04950615 in reducing the number of severe cardiovascular events in high-risk patients.
PI: Dr Pérez Martínez, Pablo

0296/13. A randomized, multicenter, double-blind, double-blind, placebo-controlled, parallel-group study to assess the efficacy, safety and tolerability of PF-04950615 in reducing the number of severe cardiovascular events in high-risk patients.
PI: Dr Pérez Martínez, Pablo

0314/13. A randomized, multicenter, double-blind, placebo-controlled, parallel-group study of the effects of Canagliflozin in renal events in adult subjects with Diabetes Mellitus Type 2.
PI: Dr Fuentes Jiménez, Francisco

0090/15. Randomized, double-blind, multicenter, placebo-controlled, parallel group to describe the efficacy, safety and tolerability of evolocumab administered for 24 weeks, as adjunctive therapy of diet and lipid-lowering therapy in reducing the

coesterolligado to LDL density (LDL-C) in pediatric subjects 10-17 years of age with heterozygous familial hypercholesterolemia (HeFH).
PI: Dr Fuentes Jiménez, Francisco

0049/15. Long-term study, randomized, double-blind, placebo-controlled trial to determine the effect of albiglutide, when added to standard glucose-lowering therapy on cardiovascular events in patients with Type 2 Diabetes Mellitus.
PI: Dr Delgado Lista, Francisco Javier

0197/15. Multinational, Multicenter, Single Group and Open Study to document the safety, tolerability and effect on atherogenic lipoproteins Alirocumab in High-Risk Cardiovascular Patients with Severe Hypercholesterolemia not adequately controlled with Conventional Treatments Lipid.
PI: Dr López Miranda, José

3121. Open-label, Single-Arm, Multicenter Study to Evaluate the Safety, Tolerability and Efficacy of Evolocumab for LDL-C Reduction, as Add-on to Diet and Lipid-lowering Therapy, in Pediatric Subjects From 10 to 17 Years of Age With Heterozygous Familial Hypercholesterolemia (HeFH) or Homozygous Familial Hypercholesterolemia (HoFH).
PI: Dr Fuentes Jiménez, Francisco

3237. An 8-Week Open-Label, Sequential, Repeated Dose-Finding Study to Evaluate the Efficacy and Safety of Alirocumab in Children and Adolescents With Heterozygous Familial Hypercholesterolemia Followed by an Extension Phase.
PI: Dr Fuentes Jiménez, Francisco

3245. Safety and Efficacy of the Combination of Loop Diuretics With Thiazide-type Diuretics in Patients With Decompensated Heart Failure. a Double-blind, Randomized, Placebo-controlled Trial (CLOROTIC Trial).
PI: Dr Montero Pérez-Barquero, Manuel

3346. A phase III, international, multicenter, randomized and openlabel study to evaluate the efficacy on LDLc and blood pressure reduction and safety of Trinomia® versus usual care in patients with high cardiovascular risk without previous cardiovascular event. The VULCANO trial.
PI: Dr Pérez Martínez, Pablo

3651. A placebo-controlled, double-blind, randomized trial to evaluate the effect of 300 mg of

incluirán sodium given as subcutaneous injections in subjects with heterozygous familial hypercholesterolemia.
PI: Dr Fuentes Jiménez, Francisco

2488. Protocol Gaucher Registry.
PI: Dr Fernández De La Puebla Giménez, Rafael Ángel

2847. Global anticoagulant registry in the field observing treatment and outcomes in patients with treated acute venous thromboembolic events in the real world.
PI: Dr López Jiménez, Luciano

2615/2. Long-term general registry on atrial fibrillation. EORP registration
PI: Dr Montero Pérez-Barquero, Manuel

3450. Estudio Observacional, transversal para describir la calidad de vida relacionada con la salud en pacientes con fibrilación auricular no valvular tratados con anticoagulantes, controlados y no controlados. Estudio Requil.
PI: Dr López Jiménez, Luciano

3563. Estudio observacional RETrospectivo sobre el uso de evolocumab en Unidades de Medicina Interna de España (RETOSS-IMU).
PI: Dr López Miranda, José

3565. Estudio observacional multinacional para evaluar la seguridad de Repatha en el embarazo.
PI: Dr Fuentes Jiménez, Francisco

GC10

Hormonal regulation of energy balance, puberty and reproduction



HIGHLIGHTS

Publications

15

Impact Factor

120,32

Average Impact Factor

8,021

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PAIDI BIO310: Energy Balance and Reproductive Function

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Pineda Reyes, Rafael

Roa Rivas, Juan

Romero-Ruiz, Antonio

Sánchez-Garrido Nogueras, Miguel

Vázquez Villar, María Jesús

Pre-Doctoral Researchers (PhD and MSc Students)

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Heras Dominguez, Violeta

Pineda Reyes, Beatriz

Ruiz Cruz, Miguel

Ruiz-Pino, Francisco

Perdices Lopez, Cecilia

Pino Aljama, Ana María

Torres Jiménez, Encarnación

Velasco Aguayo, Inmaculada

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Morales Castilla, Cristina

Onieva Jiménez, Rocío

Rodríguez Sánchez, Ana

Sánchez Tapia, M^o Jesús

Scientific Activity

Our team is a consolidated group at IMIBIC, currently composed of 23 members, including three professors, eight postdoctoral researchers, eight predoctoral fellows and PhD/ Master students and three technicians. We are a basic/translational group, aiming to explore the pathophysiological basis of the complex interactions between key bodily functions, such as those controlling body weight, metabolism, puberty and reproduction. While a substantial component of our research deals with the investigation of physiological and molecular mechanisms and their contribution to disease, in the areas of our interest, we have recently undertaken also a number of more clinically-oriented projects, with the overall goal of translating the basic knowledge stemming from our research activity, in order to define better tools and markers for the diagnosis, stratification and management of highly prevalent metabolic and reproductive disorders, ranging from obesity to altered puberty, polycystic ovary syndrome and infertility. We are funded by competitive projects from regional, national and European agencies, as well as by cooperative agreements with biotech and pharma companies. Our group collaborates with numerous teams within IMIBIC, Spain and internationally, which help us to deploy an ambitious research program covering a wide range of topics and activities within the area of hormonal regulation of energy balance, puberty

and reproduction. As demonstration of active interaction and networking, our group is currently cooperating with other IMIBIC research groups in three different competitive projects, coordinating one of the nodes of the Spanish Network for Research in Obesity and Nutrition (CIBEROBN), and hold long-lasting and productive collaborations with reference groups in Finland and other countries in Europe and the USA.

Research Lines

- New mechanisms for the control of puberty and reproduction: From physiology to mechanisms of disease
- Metabolic regulation of puberty and fertility: Implications for Translational Medicine
- Pathophysiological mechanisms and consequences of obesity-induced hypogonadism
- Identification of novel biomarkers for improved diagnosis and stratification of reproductive diseases

Keywords

Puberty, fertility, obesity, metabolism, energy sensors, kisspeptins, neuropeptides, gonadotropins, gonads, polycystic ovary syndrome, endometriosis, hypogonadism, microRNAs, epigenetics.

Scientific Production

Publications

Main Publications

Tena-Sempere M. Neuroendocrinology in 2016: Neuroendocrine control of metabolism and reproduction. *NATURE REVIEWS ENDOCRINOLOGY*. 2017;13(2):67-68.

IF: 18,318

Q: 1 D: 1

Avendaño S, Vazquez MJ, Tena-Sempere M. Disentangling puberty: novel neuroendocrine pathways and mechanisms for the control of mammalian puberty. *HUMAN REPRODUCTION UPDATE*. 2017;23(6):737-763.

IF: 11,748

Q: 1 D: 1

Lopez M, Tena-Sempere M. Estradiol effects on hypothalamic AMPK and BAT thermogenesis: A gateway for obesity treatment? *PHARMACOLOGY & THERAPEUTICS*. 2017;178:109-122.

IF: 11,127

Q: 1 D: 1

Gaytan F, Morales C, Leon S, Heras V, Barroso A, Avendaño MS, Vazquez MJ, Castellano JM, Roa J, Tena-Sempere M. Development and validation of a method for precise dating of female puberty in laboratory rodents: The puberty ovarian maturation score (Pub-Score). *SCIENTIFIC REPORTS*. 2017;7:46381.

IF: 4,259

Q: 1

Other Publications

Martinez-Sanchez N, Seoane-Collazo P, Contreras C, Varela L, Villarroya J, Rial-Pensado E, Buque X, Aurrekoetxea I, Delgado TC, Vazquez-Martinez R, Gonzalez-Garcia I, Roa J, Whittle AJ, Gomez-Santos B, Velagapudi V, Tung YCL, Morgan DA, Voshol PJ, de Morentin PBM, Lopez-Gonzalez T, Linares-Pose L, Gonzalez F, Chatterjee K, Sobrino T, Medina-Gomez G, Davis RJ, Casals N, Oresic M, Coll AP, Vidal-Puig A, Mittag J, Tena-Sempere M, Malagon MM, Dieguez C, Martinez-Chantar ML, Aspichueta P, Rahmouni K, Nogueiras R, Sabio G, Villarroya F, Lopez M. Hypothalamic AMPK-ER Stress-JNK1 Axis Mediates the Central Actions of Thyroid

Hormones on Energy Balance. CELL METABOLISM. 2017.26(1):212-229.e12.
IF: 18,164
Q: 1 D: 1

Tommiska J, Kansakoski J, Skibsbbye L, Vaaralahti K, Liu XN, Lodge EJ, Tang CY, Yuan L, Fagerholm R, Kanters JK, Lahermo P, Kaunisto M, Keski-Filppula R, Vuoristo S, Pulli K, Ebeling T, Valanne L, Sankila EM, Kivirikko S, Laaperi M, Casoni F, Giacobini P, Phan-Hug F, Buki T, Tena-Sempere M, Pitteloud N, Veijola R, Lipsanen-Nyman M, Kaunisto K, Mollard P, Andoniadou CL, Hirsch JA, Varjosalo M, Jespersen T, Raivio T. Two missense mutations in KCNQ1 cause pituitary hormone deficiency and maternally inherited gingival fibromatosis. NATURE COMMUNICATIONS. 2017.8(1): 1289.
IF: 12,124
Q: 1 D: 1

Xu C, Messina A, Somm E, Miraoui H, Kinnunen T, Acierno J, Niederlander NJ, Bouilly J, Dwyer AA, Sidis Y, Cassatella D, Sykiotis GP, Quinton R, De Geyter C, Dirlwanger M, Schwitzgebel V, Cole TR, Toogood AA, Kirk JMW, Plummer L, Albrecht U, Crowley WF, Mohammadi M, Tena-Sempere M, Prevot V, Pitteloud N. KLB, encoding beta-Klotho, is mutated in patients with congenital hypogonadotropic hypogonadism. EMBO MOLECULAR MEDICINE. 2017.9(10):1379-1397.
IF: 9,249
Q: 1 D: 1

Contreras C, Gonzalez-Garcia I, Seoane-Collazo P, Martinez-Sanchez N, Linares-Pose L, Rial-Pensado E, Ferno J, Tena-Sempere M, Casals N, Dieguez C, Nogueiras R, Lopez M. Reduction of Hypothalamic Endoplasmic Reticulum Stress Activates Browning of White Fat and Ameliorates Obesity. DIABETES. 2017.66(1):87-99.
IF: 8,684
Q: 1 D: 1

Moreno-Navarrete JM, Lopez-Navarro E, Cadenas L, Pinto F, Ortega FJ, Sabater-Masdeu M, Fernandez-Sanchez M, Blasco V, Romero-Ruiz A, Fontan M, Ricart W, Tena-Sempere M, Fernandez-Real JM. Ferroportin mRNA is down-regulated in granulosa and cervical cells from infertile women. FERTILITY AND STERILITY. 2017.107(1):236-242.
IF: 4,737
Q: 1 D: 1

Skrede S, González-García I, Martins L, Berge RK, Nogueiras R, Tena-Sempere M, Mellgren G, Steen VM, López M, Fernø J. Lack of ovarian secretions reverts the anabolic action of olanzapine in female rats. INTERNATIONAL JOURNAL OF NEURO-PSYCHOPHARMACOLOGY. 2017.20(12):1005-1012.
IF: 4,71
Q: 1

Jokela H, Hakkarainen J, Katkanaho L, Pakarinen P, Ruohonen ST, Tena-Sempere M, Zhang FP, Poutanen M. Deleting the mouse Hsd17b1 gene results in a hypomorphic Naglu allele and a phenotype mimicking a lysosomal storage disease. SCIENTIFIC REPORTS. 2017.7(1): 16406.
IF: 4,259
Q: 1

Novelle MG, Vazquez MJ, Peinado JR, Martinello KD, Lopez M, Luckman SM, Tena-Sempere M, Malagon MM, Nogueiras R, Dieguez C. Sequential Exposure to Obesogenic Factors in Female Rats: From Physiological Changes to Lipid Metabolism in Liver and Mesenteric Adipose Tissue. SCIENTIFIC REPORTS. 2017.7:46194.
IF: 4,259
Q: 1

Macchi C, Steffani L, Oleari R, Lettieri A, Valenti L, Dongiovanni P, Romero-Ruiz A, Tena-Sempere M, Cariboni A, Magni P, Ruscica M. Iron overload induces hypogonadism in male mice via extrahypothalamic mechanisms. MOLECULAR AND CELLULAR ENDOCRINOLOGY. 2017.454(C):135-145.
IF: 3,754
Q: 2

Rangel-Zuniga OA, Cruz-Teno C, Haro C, Quintana-Navarro GM, Camara-Martos F, Perez-Martinez P, Garcia-Rios A, Garaulet M, Tena-Sempere M, Lopez-Miranda J, Perez-Jimenez F, Camargo A. Differential menopause-versus aging-induced changes in oxidative stress and circadian rhythm gene markers. MECHANISMS OF AGEING AND DEVELOPMENT. 2017.164:41-48.
IF: 3,087
Q: 3

Ibanez L, Oberfield SE, Witchel SF, Auchus RJ, Chang RJ, Codner E, Dabadghao P, Darendeliler F, Elbarbary NS, Gambineri A, Rudaz CG, Hoeger KM, Lopez-Bermejo A, Ong K, Pena AS, Reinehr T, Santoro N, Tena-Sempere M, Tao R, Yildiz BO, Alkhayyat

H, Deeb A, Joel D, Horikawa R, de Zegher F, Lee PA. An International Consortium Update: Pathophysiology, Diagnosis, and Treatment of Polycystic Ovarian Syndrome in Adolescence. HORMONE RESEARCH IN PAEDIATRICS. 2017.88(6):371-395.
IF: 1,844
Q: 2

Research Funding

Regional

Tena-Sempere, M. MicroRNAs and reproductive health: Mechanistic and Translational studies. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: FQM1943

Vazquez Villar, MJ. Etiopathogenic roles and diagnostic implications of microRNAs in the Polycystic Ovary Syndrome. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0186-2013

Avendaño Herrador, MS. Pathophysiological, prognosis and diagnosis role of circulating MicroRNAs in hypogonadism associated with obesity. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0370-2016

National

Tena Sempere, M. MicroRNAs and Polycystic Ovary Syndrome: Search of novel biomarkers for improvement of diagnosis. Funding agency: FUNDACION SALUD 2000. Reference: 13-MS-005

Tena-Sempere, M. Dissecting the roles of kisspeptin pathways as major determinants of puberty: Novel interactions, regulatory mechanisms and metabolic implications. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2014-57581-P

Castellano Rodríguez, JM (Co-PI: M. Tena-Sempere). Overweight-induced hypogonadism as an inductive factor of metabolic comorbidities associated with overweight: Contribution of epigenetic mechanisms. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF 2014-56995 JIN

Lopez Miranda, J (This project was funded as a collaborative initiative among different research groups; CO-PI: M. Tena-Sempere). Early predictors and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine (FLEXI-MET). Funding agency: National Institute of Health Carlos III (ISCIII). REF: PIE/1400005

Roa Rivas J. Etiopathogenic role and diagnostic/therapeutic implications of MicroRNAs on early puberty in obesity. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: CP15/00047

Roa Rivas J. Puberty and metabolic risk in obese children: Epigenetic alterations and pathophysiological and diagnostic implications. PUBMEP Study. Funding agency: National Institute of Health Carlos III (ISCIII). Reference, PI16/01243

International

Tena-Sempere, M. GnRH deficiency: Elucidation of the neuroendocrine control of human reproduction. Funding Agency: COST ACTION. Reference: oc-2011-1-9031

Tena-Sempere, M. New Frontiers in Reproductive medicine: Exploring novel mechanisms for the control of puberty and fertility, and their interplay with metabolic homeostasis and disease. Funding agency: FiDiPro Program (Finnish Distinguished Professorship Program) 2015-2020, Academy of Finland

Tena-Sempere, M. Reprobesity: Overweight-induced Hypogonadism as major factor for the generation and/or perpetuation of Metabolic Co-morbidities of Obesity: Contribution of Epigenetic Regulatory Mechanisms. Funding agency: European Commission. Reference: MSCA-EF-2014-002

Contracts with Companies

Tena-Sempere, M. Physical, chemical and biological characterization of active compounds (BIONATUR-IS); Funding agency: Bioorganic Research and Services, S.A. Reference: PSS.0044

Tena-Sempere, M. Agreement ORGANON-KISS. Funding agency: ORGANON N.V. Reference: 400030

Tena-Sempere, M. Agreement MRC – Conference Kiss1. Funding agency: MRC Human Reproductive Sciences Unit. Reference: 600312

GC11

Metabolism and Adipocyte Differentiation- Metabolic Syndrome



HIGHLIGHTS

Publications

7

Impact Factor

52,173

Average Impact Factor

7,453

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CIBER Physiopathology of Obesity and Nutrition (CIBERObn)

Co- Principal Investigator (PI)

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Vázquez Martínez, Rafael

Post-Doctoral Researchers

Cayuela Marín, Angelina

Guzmán Ruiz, Rocío

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Baker, Matthew

Díaz Del Moral, Sandra

Fernández Vega, Alejandro

Navarro Ruiz, M^o Del Carmen

López Alcalá, Jaime

Podadera Herreros, Alicia

Tercero Alcázar, Carmen

Sá Gomes, Andreia Cristina

Sánchez Ceinos, Julia

Other members of the Group (Nursing, Technical and Administrative Staff)

Molero Murillo, Laura

Scientific Activity

The research team on “Adipobiology” is a consolidated research group working on the identification and characterization of novel markers of adipose tissue dysfunction in obesity. Our research is aimed at elucidating the cellular and molecular mechanisms underlying the development of obesity-related comorbidities, including insulin resistance and type 2 diabetes. This research has a two-pronged approach: (a) targeted analyses of the regulation of insulin signalling and lipid storage and mobilization in adipocytes at the cellular and molecular levels, using a wide variety of cellular and molecular methodologies on adipocyte cell lines and primary human adipocytes, and (b) untargeted omics studies. We employ in vitro models of insulin resistance to mimic different aspects of obesity and metabolic disease, as well as different approaches for the identification of protein networks relevant to adipose tissue function. Likewise, the relevance of impaired organelle function and inter-organelle contacts in obese adipocytes are also explored. Regarding the second approach, we employ several proteomic techniques to identify novel biomarkers and pathways activated and/or impaired in the two major fat depots, subcutaneous and visceral, and its separate components in lean and obese individuals with different degrees of insulin sensitivity. We have also established the protein fingerprint of the adipose tissue in lipodystrophy and after bariatric

surgery-induced weight loss. Our omic studies also include the evaluation of the impact of obesity and insulin resistance on the activation and modification (phosphorylation, acetylation) of proteins of the adipose tissue. More recently, in collaboration with Dr. Priego (GC-21, IMIBIC) and Chicano (UCAIB, IMIBIC), we have extended our omic studies to the lipidome, including MALDI Imaging, for comparative analyses of the adipose tissue from obese subjects with different degrees of insulin resistance or lipid droplets isolated from adipocytes. Finally, our current research project is aimed at characterizing the impact of extracellular matrix composition and remodelling in obesity-associated adipocyte dysfunction in order to decipher novel molecular mechanisms that could pave the way to devise effective therapies in obesity and metabolic disease. Both 2D and 3D culture systems are employed as platforms for testing drugs, sera, or nanotechnology products with the aim of translating research findings to clinical applications.

Research lines

- Novel players in extracellular matrix remodeling in obesity and obesity-associated diseases
- Identification of biomarkers of obesity risk and reversal by weight loss
- The intracellular interactome in metabolic diseases
- Nanotechnology applications in obesity

Keywords

Adipose tissue, adipocytes, adipogenesis, bariatric surgery, cellular stress, extracellular matrix, fibrosis, cell imaging, insulin signaling, insulin resistance, intracellular traffic, lipid droplets, lipids, microscopy, obesity, proteomics, protein networks.

Scientific Production

Publications

Main Publications

Moreno-Castellanos N, Rodriguez A, Rabanal-Ruiz Y, Fernandez-Vega A, Lopez-Miranda J, Vazquez-Martinez R, Fruhbeck G, Malagon M. The cytoskeletal protein septin 11 is associated with human obesity and is involved in adipocyte lipid storage and metabolism. *DIABETOLOGIA*. 2017;60(2):324-335.
IF: 6,08
Q: 1

Other Publications

Martinez-Sanchez N, Seoane-Collazo P, Contreras C, Varela L, Villarroya J, Rial-Pensado E, Buque X, Aurrekoetxea I, Delgado TC, Vazquez-Martinez R, Gonzalez-Garcia I, Roa J, Whittle AJ, Gomez-Santos B, Velagapudi V, Tung YCL, Morgan DA, Voshol PJ, de Morentin PBM, Lopez-Gonzalez T, Linares-Pose L, Gonzalez F, Chatterjee K, Sobrino T, Medina-Gomez G, Davis RJ, Casals N, Oresic M, Coll AP, Vidal-Puig A, Mittag J, Tena-Sempere M, Malagon MM, Dieguez C, Martinez-Chantar ML, Aspichueta P, Rahmouni K, Nogueiras R, Sabio G, Villarroya F, Lopez M. Hypothalamic AMPK-ER Stress-JNK1 Axis Mediates the Central Actions of Thyroid Hormones on Energy Balance. *CELL METABOLISM*. 2017;26(1):212-229.e12.
IF: 18,164
Q: 1 D: 1

Porteiro B, Fondevila MF, Delgado TC, Iglesias C, Imbernon M, Iruzubieta P, Crespo J, Zabala-Le-

tona A, Ferno J, Gonzalez-Teran B, Matesanz N, Hernandez-Cosido L, Marcos M, Tovar S, Vidal A, Sanchez-Ceinos J, Malagon MM, Pombo C, Zalvide J, Carracedo A, Buque X, Dieguez C, Sabio G, Lopez M, Aspichueta P, Martinez-Chantar ML, Nogueiras R. Hepatic p63 regulates steatosis via IKK beta/ER stress. *NATURE COMMUNICATIONS*. 2017.8():-1511. IF: 12,124
Q: 1 D: 1

Mendez-Gimenez L, Becerril S, Moncada R, Valenti V, Fernandez S, Ramirez B, Catalan V, Gomez-Ambrosi J, Soveral G, Malagon MM, Dieguez C, Rodriguez A, Fruhbeck G. Gastric Plication Improves Glycemia Partly by Restoring the Altered Expression of Aquaglyceroporins in Adipose Tissue and the Liver in Obese Rats. *OBSIDITY SURGERY*. 2017.27(7):1763-1774. IF: 3,947
Q: 1 D: 1

Novelle MG, Vazquez MJ, Peinado JR, Martinello KD, Lopez M, Luckman SM, Tena-Sempere M, Malagon MM, Nogueiras R, Dieguez C. Sequential Exposure to Obesogenic Factors in Female Rats: From Physiological Changes to Lipid Metabolism in Liver and Mesenteric Adipose Tissue. *SCIENTIFIC REPORTS*. 2017.7:-46194. IF: 4,259
Q: 1

Sarmento-Cabral A, Peinado JR, Halliday LC, Malagon MM, Castaño JP, Kineman RD, Luque RM. Adipokines (Leptin, Adiponectin, Resistin) Differentially Regulate All Hormonal Cell Types in Primary Anterior Pituitary Cell Cultures from Two Primate Species. *SCIENTIFIC REPORTS*. 2017.7:43537. IF: 4,259
Q: 1

Lopez-Moreno J, Garcia-Carpintero S, Gomez-Delgado F, Jimenez-Lucena R, Vals-Delgado C, Alcala-Diaz JF, Roncero-Ramos I, Rangel-Zuñiga OA, Yubero-Serrano EM, Malagon MM, Ordoñas JM, Perez-Martinez P, Lopez-Miranda J, Camargo A. Endotoxemia is modulated by quantity and quality of dietary fat in older adults. *Experimental gerontology*. 2017. Nov 10. pii: S0531-5565(17)30652-6 IF: 3,34
Q: 1

Research Funding

Regional

Malagón, MM. Identifying markers for adipose tissue dysfunction in insulin resistance conditions. Funding Agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0200-2013

Guzmán Ruiz, R. Identification of biomarkers predictive of response to bariatric surgery in morbidly obese patients. Advanced proteomics techniques and applications. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0159-2016

National

Malagón, MM. Characterization of novel pathways in the regulation of lipid metabolism in adipocytes. Alterations in obesity. Funding Agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU-2013-44229-R

López Miranda, J. (This project was funded as a collaborative initiative among different research groups). Early predictors and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine (FLEXI-MET). Funding agency: National Institute of health Carlos III (ISCIII). REF: PIE/1400005

Malagón, MM (node Córdoba), Villarroya, F. (PI). Research network on adipose plasticity pathophysiologic impact. Funding Agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2015-70454-REDT

Malagón, MM. Characterization of extracellular and intracellular constituents that define expensed adipose tissue. Funding Agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2016-76711-R

Malagón MM. (Co-PI: Calzado Canale, M.) Integration of platforms for the identification of therapeutic targets and the development of new products for the prevention and/or treatment of radiodermatitis. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-4589-1

Malagón, MM (node Córdoba), Villarroya, F. (PI). Next-generation RNA sequencing and single-cell RNAseq: Novel opportunities for understanding human adipose tissue pathophysiology and obesity. CIBER FISIOPATOLOGIA DE LA OBESIDAD Y NUTRICION (CIBEROBN). Acciones Cooperativas Intramurales CIBEROBN.



HIGHLIGHTS

Publications

9

Impact Factor

22,168

Average Impact Factor

2,463

Principal Investigator (PI)

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PC Health Research Network (Rediapp), ISCIII
PAIDI CTS-452: Family and Community Medicine

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Redondo Sánchez, Juana
Martin Rioboo, Enrique
Roldán Villalobos, Ana
Ruiz Moral, Roger
Ruiz Moruno, Fco. Javier
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Silva Aicauer, Luis Carlos
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Marín González, Beatriz
Romero Rodríguez, Esperanza María
Serrano Merino, Jesús

Other members of the Group (Nursing, Technical and Administrative Staff)

Criado Larumbe, Margarita

Scientific Activity

We are a consolidated group of medical practitioners and researchers, most of us working in the field of Primary Care (PC) and others at the University of Córdoba and hospitals in the province of Córdoba. Our group is multidisciplinary and heterogeneous, and composed mainly of specialists in Family and Community Medicine, but it also includes professionals working in the field of Preventive Medicine and Public Health/Epidemiology, Occupational Medicine, Cardiology, Physiotherapy and Rehabilitation, Ophthalmology, Dental health and Otorhinolaryngology, Nursing and Biology.

We approach clinical and epidemiological research from the point of view of primary care settings. Our long-term objectives are to encourage, promote and develop high quality research with practical applicability in the field of PC. Our studies include a wide range of topics, including health promotion in primary care, health communication and education, and occupational, public and environmental health. Our main interest in specific disease areas focuses on respiratory diseases (Antonio Hidalgo), odontostomatology (Antonio Blanco), ophthalmology (Enrique Villegas), urology (Raquel Arias), renal diseases (Luis Carlos Silva), dermatology (M^o Carmen Arias), rheumatology (Francisco Varas), otorhinolaryngology (Francisco Muñoz) and infectious diseases (Beatriz Marín). We also carry out research in nursing care (Jesús Serrano) and occupational health (Antonio Ranchal).

Some recent contributions, showing the transversal nature of our research in the area of primary care, are highlighted:

- We have studied and demonstrated the efficacy of interventions based on motivational interviewing to increase therapeutic adherence and reduce medication errors in older patients with polypharmacy, as well as to achieve better lipid control in patients with dyslipidemia. In addition, we have validated two scales to measure communication skills in the clinical interview (ICCAT) and the motivational interview (EVEM).
- Another major contribution was presenting epidemiological results of renal lithiasis that were previously non-existent, representative of the Spanish population, where the overall prevalence of the disease in adults is 15%.
- We are also actively involved in clinical studies. A study, aimed at patients older than 65 years with suspected Atrial Fibrillation and carried out in 48 primary care centers in Spain, demonstrated that active search of this disease is 6 times more effective than opportunistic search in asymptomatic subjects, thus contributing to our knowledge in efficient screening practices in primary care.
- The group has also studied the acceptability of opportunistic search for HIV and HIV testing in primary care centers in Spain, demonstrating its high acceptance and cost-effectiveness, contributing to earlier diagnostics.
- In the field of health communication, we have carried out a study to evaluate the

Spanish population's knowledge of and beliefs regarding the European Code Against Cancer (ECAC) recommendations. The conclusions of this study reconfirm the need to conduct awareness raising activities and reinforce dissemination of preventive health recommendations.

We actively collaborate with various other research groups of IMIBIC: Urology and Sexual Medicine (GE-05), Cell therapy (GC-14), and Pneumology (GA-03), and Clinical Virology and Zoonoses (GC-26). Our external and international collaborators include Communication and Health Group (semFYC), PAPPS expert groups (semFYC), International Agency for Research on Cancer (IARC-WHO, Lyon, France), University of Rochester (USA), Francisco de Vitoria University / School of Medicine (Madrid), Irish Center St. John's Community Hospital of Enniscorthy and Co. Wexford (Ireland).

Research Lines

- Health promotion and prevention in Primary Care
- Communication and Health
- Risk factors and cardiovascular diseases
- Health problems in the elderly

Keywords

Primary care, epidemiology, preventive medicine, applied research, family and community medicine, communication and health, community health, public health, environment.

Scientific Production

Publications

Main Publications

Serrano Merino J, Pérula de Torres LA, Muñoz Gómez R, Roldán Villalobos A, Feu Collado MN, Ruiz-Moral R, Jurado-Gámez B, Collaborative Group CVCPAP Study. Impact of CPAP therapy on health-related quality of life in elderly patients with apnoea-hypopnea syndrome: a systematic review of randomised clinical trials. *EUROPEAN RESPIRATORY JOURNAL*. 2017.49(1):1601644. IF: 10,569
Q: 1 D: 1

Aparicio-Martinez P, Perea-Moreno AJ, Martinez-Jimenez MP, Varo ISV, Vaquero-Abellan M. Social networks' unnoticed influence on body image in Spanish university students. *TELEMATICS AND INFORMATICS*. 2017.34(8):1685-1692.
IF: 3,398
Q: 1

Ruiz-Moral R, Pérula de Torres L, Monge D, Leonardo CG, Caballero F. Teaching medical students to express empathy by exploring patient emotions and experiences in standardized medical encounters. *PATIENT EDUCATION AND COUNSELING*. 2017.100(9):1694-1700.
IF: 2,429
Q: 2

González Blanco V, Pérula de Torres LÁ, Martín Rioboó E, Martínez Adell MÁ, Parras Rejano JM, González Lama J, Ruiz Moruno J, Martín Álvarez R, Fernández García JÁ, Ruiz de Castroviejo J, Roldán Villalobos A, Ruiz Moral R, grupo de estudio colaborativo DOFA-AP. Opportunistic screening for atrial fibrillation versus detecting symptomatic patients aged 65 years and older: A cluster-controlled clinical trial. *MEDICINA CLINICA*. 2017.148(1):8-15.
IF: 1,125
Q: 3

Arias Vega R, Pérula de Torres LA, Jiménez García C, Carrasco Valiente J, Requena Tapia MJ, Cano Castiñeira R, Silva Ayçaguer LC. Comorbidity and socio-demographic factors associated with renal lithiasis in persons aged 40 to 65: A cross-sectional study. *MEDICINA CLINICA*. 2017.149(9):383-390.
IF: 1,125
Q: 3

Puentes Torres RC, Aguado Taberné C, Pérula de Torres LÁ, Espejo Espejo J, Castro Fernández C, Fransi Galiana L. Acceptability and feasibility among primary care doctors of the opportunistic search for HIV in Health Care centers in Spain. *ATENCION PRIMARIA*. 2017.49(10):593-602.
IF: 1,042
Q: 3

Carrasco J*, Arias MR*, Pérula LA, Campos JP, Prieto R, Requena MJ. Renal lithiasis, erectile dysfunction and ADAM test: Observational study using telephone survey. *REVISTA INTERNACIONAL DE ANDROLOGÍA*. 2017.15(4):153-159. IF: 0,261
Q: 4

Other Publications

Alvarez-Fernandez C, Vaquero-Abellan M, Ruiz-Gandara A, Romero-Saldana M, Alvarez-Lopez C. Cardiovascular risk factors in the population at risk of poverty and social exclusion. *ATENCION PRIMARIA*. 2017.49(3):140-149.
IF: 1,042
Q: 3

Bonilla PN, Gomez RG, Jimenez DR, Fabra MLV, Villanueva MDM, Catalan RG, Ugalde FF, Fernandez MSP, Alonso JLL, Galera JMG. Enhanced depth OCT imaging of the lamina cribrosa for 24 hours. *INTERNATIONAL JOURNAL OF OPHTHALMOLOGY*. 2017.10(2):306-309.
IF: 1,177
Q: 4

Research Funding

Regional

Pérula de Torres, LA. Effect on the quality of life from treatment with positive pressure devices (PPDs) in patients older than 65 with apnea-hypopnea (SAHS).Funding Agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0281-2014

Pérula de Torres, LA. Effect on the quality of life from treatment with positive pressure devices (PPDs) in patients older than 65 with apnea-hypopnea (SAHS).Funding Agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0025-2015

Carrera Gonzalez, M^oP. Adaptation and validation

of the Spanish version of the pain assessment in advanced dementia scale (Painad) and determination of biomarkers of pain in saliva in older persons with cognitive detection with communication disability. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0357-2017

National

Rich Ruíz, M. Efficacy of the Otago Exercise Program (OEP) delivered as group training versus individually tailored training in community-dwelling adults between 65 and 80 years old. Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01520

Martín Rioboó, E. Knowledge, availability and use of current resources for monitoring and diagnostic arterial hypertension in health care professionals. Funding Agency: Laboratorios Esteve. Beca "Isabel Fernández". Sociedad Andaluza de Medicina Familiar y Comunitaria.

Roldán Villalobos A. Efectividad de una intervención no farmacológica multicomponente para reducir el aislamiento social y la soledad de mayores residentes en su domicilio: estudio ASyS. Beca "Francesc Borrell". Sociedad Española de Medicina Familiar y Comunitaria.

Contracts with Companies

Rich Ruíz, M. Efficacy of the Otago Exercise Program (OEP) delivered as group training versus individually tailored training in community-dwelling adults between 65 and 80 years old. Funding Agency: Universidad De Cordoba. Reference: PSS.0164

Rich Ruíz, M. Agreement UCO. Funding Agency: Universidad De Cordoba. Reference: PSS.0209

Clinical Trials

2883/2. Multicentric observational study to establish the prevalence, clinical profile and therapeutic management of patients with hidradenitis suppurativa in hospital services of Dermatology and health centers in Spain.

PI: Dr Ruiz Moruno, Francisco Javier

2883/3. Profile of patients with COPD treated with a dual bronchodilator * according to the usual clinical practice in the field of Primary Care. Dual EPOC study.

PI: Dr Redondo Sánchez, Juana

3243/4. Profile of patients with COPD treated with a dual bronchodilator * according to the usual clinical practice in the field of Primary Care. Dual EPOC study.

PI: Dr Ruiz Moruno, Francisco Javier

2929. Retrospective and prospective study on the degree of GEMA compliance with 2009 guidelines vs the 2015 guidelines, and its impact on the degree of control of asthma patients in primary care.

PI: Dr Ruiz Moruno, Francisco Javier

3249. Glycemic control in patients with high cardiovascular risk and type 2 diabetes mellitus in primary care and cardiology consultation.

PI: Dr Martín Rioboo, Enrique

3010. Prospective, multi Centre, international registry of male and female patients newly diagnosed with atrial fibrillation and treated with Rivaroxaban.

PI: Dr González Lama, Jesús



HIGHLIGHTS

Publications

12

Impact Factor

53,545

Average Impact Factor

4,462

Principal Investigator (PI)

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*Spanish Renal Research Network (REDinREN)
(Collaborator)*

PAIDI CTS-179 Scientific group

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Canalejo Raya, Antonio (Collaborator)

López Villalba, Ignacio

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Raya Bermúdez, Ana Isabel

Rodríguez Ortiz, M^o Encarnación

Pre-Doctoral Researchers (PhD and MSc Students)

Baltanás López, Rodrigo

Pendón Ruiz de Mier, M^o Victoria

Ríos Varo, Rafael

Tocados Díaz, Juan Miguel

Vergara Segura, Noemí

Other members of the Group (Nursing, Technical and Administrative Staff)

García Valdivia, Sandra

Ruiz Mora, Erena

Andújar Gil, Alicia

Scientific Activity

The “Calcium metabolism. Vascular calcification” research group is a consolidated group of IMIBIC, bringing together both basic and clinical researchers in various scientific disciplines, such as medicine, biology and veterinary medicine, and it includes also nursing, technical and administrative staff.

Our research group is focused on different aspects of calcium metabolism and vascular calcification. Our primary area of research is the study of the pathogenetic mechanisms of secondary hyperparathyroidism associated with renal failure. We study the parathyroid function, both at cellular and molecular level (PTH synthesis and secretion and cell proliferation) of normal and hyperplastic parathyroid glands. More recently we have also embarked on research of in vivo and in vitro mechanisms of vascular calcification. In addition, we are interested in studying biomarkers of renal disease progression as well as the bone alterations promoted during chronic kidney disease.

The main aim of our research group is to go deeper into the mechanisms that promote vascular calcifications and the progression of renal disease and to propose new therapeutic alternatives leading to improved renal health of the patients. Results derived from our research may lead to the proposal and use of new therapeutic targets for preventing and reversing vascular calcification and associated complications.

In the last year, our research group has

published some important manuscripts that are contributing to our understanding about the alterations of mineral metabolism during renal disease. We are identifying new biomarkers of renal disease progression and contributing new mechanisms of vascular calcification and mineral bone disease.

The Principal Investigator of the group Juan Mariano Rodríguez Portillo acts as collaborator in both the Spanish Renal Research Network (REDinREN), the PAIDI CTS-179 Scientific group and World group from Chronic Kidney Disease and Metabolic Bone disorders (CKD-BD). Other collaborations include highly competitive research groups both on national and international level, as well as companies of pharmaceutical industry.

Research Lines

- Mechanisms of vascular calcification and renal disease progression
- Biomarkers of renal progression and vascular calcification
- Bone alterations during chronic kidney disease

Keywords

Calcium, phosphorus, mineral metabolism, parathyroid glands, PTH, calcification, uremia, HPTH², vascular calcification, renal failure, bone mineral disease, VDR, CaR, mesenchymal stem cells, Wnt / beta-catenin.

Scientific Production

Publications

Main Publications

Diaz-Tocados JM, Peralta-Ramirez A, Rodriguez-Ortiz ME, Raya AI, Lopez I, Pineda C, Herencia C, de Oca AM, Vergara N, Steppan S, de Mier MVPR, Buendia P, Carmona A, Carracedo J, Alcalá-Díaz JF, Frazao J, Martínez-Moreno JM, Canalejo A, Felsenfeld A, Rodríguez M, Aguilera-Tejero E, Almaden Y, Muñoz-Castaneda JR. Dietary magnesium supplementation prevents and reverses vascular and soft tissue calcifications in uremic rats. *KIDNEY INTERNATIONAL*. 2017;92(5):1084-1099.

IF: 8,395

Q: 1 D: 1

Munoz-Castaneda JR, Herencia C, de Mier MVPR, Rodriguez-Ortiz ME, Diaz-Tocados JM, Vergara N, Martinez-Moreno JM, Salmeron MD, Richards WG, Felsenfeld A, Kuro-O M, Almaden Y, Rodriguez M. Differential regulation of renal Klotho and FGFR1 in normal and uremic rats. *FASEB JOURNAL*. 2017;31(9):3858-3867.

IF: 5,498

Q: 1 D: 1

Martinez-Moreno JM, Herencia C, de Oca AM, Diaz-Tocados JM, Vergara N, Gomez-Luna MJ, Lopez-Arguello SD, Camargo A, Peralbo-Santaella E, Rodriguez-Ortiz ME, Canalejo A, Rodriguez M, Muñoz-Castaneda JR, Almaden Y. High phosphate induces a pro-inflammatory response by vascular smooth muscle cells and modulation by vitamin D derivatives. *CLINICAL SCIENCE*. 2017;131(13):1449-1463.

IF: 4,936

Q: 1

Portillo MR, Rodríguez-Ortiz ME. Secondary Hyperparathyroidism: Pathogenesis, Diagnosis, Preventive and Therapeutic Strategies. *REVIEWS IN ENDOCRINE & METABOLIC DISORDERS*. 2017;18(1):79-95.

IF: 4,817

Q: 1

Diaz-Tocados JM, Herencia C, Martínez-Moreno JM, de Oca AM, Rodríguez-Ortiz ME, Vergara N, Blanco A, Steppan S, Almaden Y, Rodríguez M, Muñoz-Castaneda JR. Magnesium Chloride promotes Osteogenesis through Notch signaling activation

and expansion of Mesenchymal Stem Cells. SCIENTIFIC REPORTS. 2017.7(1):-7839.
IF: 4,259
Q: 1

Acevedo LM, Raya AI, Rios R, Aguilera-Tejero E*, Rivero JLL*. Obesity-induced discrepancy between contractile and metabolic phenotypes in slow and fast-twitch skeletal muscles of female obese Zucker rats. JOURNAL OF APPLIED PHYSIOLOGY. 2017.123(1):249-259.
IF: 3,351
Q: 1

Acevedo LM, Raya AI, Martinez-Moreno JM, Aguilera-Tejero E*, Rivero JLL*. Mangiferin protects against adverse skeletal muscle changes and enhances muscle oxidative capacity in obese rats. PLOS ONE. 2017.12(3):-e0173028.
IF: 2,806
Q: 1

Lopez I, Pineda C, Raya AI, Rodriguez-Ortiz ME, Diaz-Tocados JM, Rios R, Rodriguez JM, Aguilera-Tejero E, Almaden Y. Leptin directly stimulates parathyroid hormone secretion. ENDOCRINE. 2017.56(3):675-678.
IF: 3,131
Q: 2

Pineda C, Aguilera-Tejero E, Morales MC, Belinchon-Lorenzo S, Gomez-Nieto LC, Garcia P, Martinez-Moreno JM, Rodriguez-Ortiz ME, Lopez I. Treatment of canine leishmaniasis with marbofloxacin in dogs with renal disease. PLOS ONE. 2017.12(10):-e0185981.
IF: 2,806
Q: 1

Rios R, Raya AI, Pineda C, Rodriguez M, Lopez I, Aguilera-Tejero E. Vitamin E protects against extraskelatal calcification in uremic rats fed high fat diets. BMC NEPHROLOGY. 2017.18():-.
IF: 2,289
Q: 2

Other Publications

Argiles A, Rodriguez M, Ortiz A. Is Plasma Proteomics Able to Provide Alternative Paths to Better Understand Hypertension? HYPERTENSION.

2017.70(2):250-252.
IF: 6,857
Q: 1 D: 1

Perez-del Palacio J, Diaz C, Vergara N, Algieri F, Rodriguez-Nogales A, de Pedro N, Rodriguez-Cabezas ME, Genilloud O, Galvez J, Vicente F. Exploring the Role of CYP3A4 Mediated Drug Metabolism in the Pharmacological Modulation of Nitric Oxide Production. FRONTIERS IN PHARMACOLOGY. 2017.8():-202.
IF: 4,4
Q: 1

Research Funding

National

Muñoz Castañeda, JR, Rodriguez Portillon, JM. Influence of urinary phosphorus excretion on the renal injury progression. Mechanisms and clinical studies. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/00638

Aguilar Tejero, E. Influence of dietary calorie content on the phosphorus balance: implications in kidney disease. Funding agency: National Institute of Health Carlos III Health (ISCIII). Reference: PI14/00467

Muñoz Castañeda, JR. New therapy for the treatment of degenerative osteoarthritis based on a modification of adipose-tissue-derived mesenchymal stem cells. Funding agency: National Institute of Health Carlos III Health (ISCIII). Reference: DTS.16/00061

Muñoz Castañeda, JR. Nueva Terapia Para El Tratamiento De La Osteoartritis Degenerativa Basada En Una Modificación De Células Madre Mesenquimales De Tejido Adiposo. Funding agency: Fundación Para La Innovación Y La Prospectiva En Salud En España. Reference: FIPSE2016_001

Rodríguez Portillo, M. Characterization of Mg and sclerotin-induced changes in Wnt and its impact on mineral, bone and vascular disorder with chronic kidney disease. Funding agency: National Institute of Health Carlos III Health (ISCIII). Reference: PI17/01010
Expected start date: 2018

Regional

Muñoz-Castañeda, JR. Hepatocyte differentiation from two pluripotent cell types in bone marrow. Application for cell regeneration in two experimental models of hepatic lesion. Funding Agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: ICE02137.

Muñoz Castañeda, JR. In vivo and in vitro studies of oxidative stress, inflammation and vascular calcification in chronic kidney disease: application of mesenchymal stem cells to the search for new therapeutic targets. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CVI-7925

López Villalba, I. Conexiones entre el metabolismo mineral y el metabolismo energético: efecto de la dieta hipercalorica en el balance del fosforo y la función renal. Funding Agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0272-2014

Rodríguez Ortiz, ME. Characterization of Wnt induced changes by Mg and sclerotine and its repercussion in the mineral, bone and vascular disorders associated with chronic kidney disease. Funding Agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0154-2017

Contracts with Companies

Rodríguez Portillo, JM. Effect of paricalcitol on vascular smooth muscle cells. Funding agency: AbbVie Farmaceutica S.L.U. Reference: PSS.0015

Muñoz Castañeda, JR, Mariano Rodríguez. Preclinical Research Program Agreement for anti-PCSK9 mAb1. Funding agency: JYC Ediciones Medicas. Reference: PSS.0162

Mariano Rodríguez, Muñoz Castañeda, JR. Dazamart' Agreement. Funding agency: Dazamart De Inversiones, SL. Reference: PSS.0208

Muñoz Castañeda, JR, Mariano Rodríguez. Research Services related to SNF472 and cardiovascular diseases. Funding agency: LABORATORIS SANIFIT, S.L. Reference: PI2M.

Clinical Trials

0010/14. A multicenter, single-arm, extension study to assess long-term safety of AMG 416 (Velcalctide) for secondary hyperparathyroidism in patients with chronic renal failure undergoing hemodialysis.

PI: [Dr Rodríguez Portillo, J. Mariano](#)

0039/15. Open phase II clinical trial for assessment of the effectiveness of the decrease of intestinal absorption of phosphorous in the progression of kidney disease in patients with metabolic syndrome

PI: [Dr Rodríguez Portillo, J. Mariano](#)

3294. A Double-blind, Randomised, Placebo-controlled Study to Assess the Effect of SNF472 on Progression of Cardiovascular Calcification on Top of Standard of Care in End-stage-renal-disease (ESRD) Patients on Hemodialysis (HD).

PI: [Dr Rodríguez Portillo, J. Mariano](#)

3353. Non-interventionist study for the safety, effectiveness and adherence of Velphoro in the short and long term in the real life of patients with hyperphosphatemia subjected to hemodialysis or peritoneal dialysis.

PI: [Dr Rodríguez Portillo, J. Mariano](#)



HIGHLIGHTS

Publications

9

Impact Factor

28,982

Average Impact Factor

3,220

Principal Investigator (PI)

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Researchers

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Ortega Salas, Rosa

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 Jiménez Moreno; Rosario

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Paco Meza, Luis Miguel

 Trujillo Aguilar, Cristina

Other members of the Group (Nursing, Technical and Administrative Staff)

Gutiérrez Fernández, Rosario

 Luque Zafra, María

Scientific Activity

The group "Cellular Therapy" is a consolidated group of IMIBIC that focuses its activity on clinical and translational research in advanced therapies, specifically in cell therapy and cell-gene therapy.

Regarding clinical research, in the last ten years we have participated in 10 independent clinical trials of cell therapy from cells derived from bone marrow in cardiovascular pathology (myocardial regeneration and peripheral vascular pathology), neurological diseases (stroke and multiple sclerosis), and transplant-related diseases (GVHD). In this context, the Cell Therapy Group is a central unit of cell production under GMP conditions that coordinates its activity with other IMIBIC groups in the development of new Advanced Therapy Medicinal Products (ATMPs) for various pathologies with a high socio-sanitary impact. Along with clinical research, we devote our research to the basic and translational aspects of new cellular therapies in intermediate or early stages of its development. In this sense, we actively collaborate with GENYO in preclinical models of cell-gene therapy in genetic diseases such as Wiskott-Aldrich, and in anti-leukemic immunotherapy with T-CAR lymphocytes. The group's PI Dr. Herrera is the coordinator of IMIBIC's participation in the ATMP Platform of the European Infrastructure for Translational Medicine – EATRIS.

Research Lines

- Cell therapy based on autologous bone marrow in cardiac diseases and peripheral vascular system
- Cell therapy in neurological diseases (stroke and multiple sclerosis)
- Cell therapy in osteoarticular diseases
- Cell-gene therapy in genetic diseases
- CAR-t cell in hematological neoplasms

Keywords

Stem cells, cell therapy, regenerative medicine, myocardial regeneration, therapeutic angiogenesis, cell-gene therapy, CAR-T cells.

Scientific ProductionS

Publications

Main Publications

Martinez-Losada C, Martin C, Gonzalez R, Manzanares B, Garcia-Torres E, Herrera C. Patients lacking a Kir-ligand of HLA group C1 or C2 have a Better Outcome after Umbilical cord Blood Transplantation. *FRONTIERS IN IMMUNOLOGY*. 2017;8():-810. IF: 6,429 Q: 1

Carmona MD, Canadillas S, Romero M, Blanco A, Noguera S, Herrera C. Intramyocardial bone marrow mononuclear cells versus bone marrow-derived and adipose mesenchymal cells in a rat model of dilated cardiomyopathy. *CYTOTHERAPY*. 2017;19(8):947-961. IF: 3,203 Q: 2

Other Publications

Hormaechea-Agulla D, Gahete MD, Jimenez-Vacas JM, Gomez-Gomez E, Ibanez-Costa A, L-Lopez F, Rivero-Cortes E, Sarmento-Cabral A, Valero-Rosa

J, Carrasco-Valiente J, Sanchez-Sanchez R, Ortega-Salas R, Moreno MM, Tsomaia N, Swanson SM, Culler MD, Requena MJ, Castano JP, Luque RM. The oncogenic role of the In1-ghrelin splicing variant in prostate cancer aggressiveness. *MOLECULAR CANCER*. 2017;16():-146. IF: 6,204 Q: 1

Hormaechea-Agulla D, Jimenez-Vacas JM, Gomez-Gomez E, Lopez FL, Carrasco-Valiente J, Valero-Rosa J, Moreno MM, Sanchez-Sanchez R, Ortega-Salas R, Gracia-Navarro F, Culler MD, Ibanez-Costa A, Gahete MD, Requena MJ, Castano JP, Luque RM. The oncogenic role of the spliced somatostatin receptor sst5TMD4 variant in prostate cancer. *FASEB JOURNAL*. 2017;31(11):4682-4696. IF: 5,498 Q: 1 D: 1

Herrera-Martinez AD, Gahete MD, Sanchez-Sanchez R, Salas RO, Serrano-Blanch R, Salvaderra A, Hoflandi LJ, Luque RM, Galvez-Moreno MA, Castano JP. The components of somatostatin and ghrelin systems are altered in neuroendocrine lung carcinoids and associated to clinical-histological features. *LUNG CANCER*. 2017;109():128-136. IF: 4,294 Q: 1

Perez P, Rodriguez-Peralvarez M, Guerrero L, Gonzalez V, Sanchez R, Centeno M, Poyato A, Briceno J, Sanchez-Frias M, Montero JL, De la Mata M. Incidental hepatocellular carcinoma after liver transplantation: Prevalence, histopathological features and prognostic impact. *PLOS ONE*. 2017;12(4):-e0175010. IF: 2,806 Q: 1

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Mesa-Quesada J, Roldan-Romero E, Lozano-Sanchez JA, Centeno-Haro M, Ortega-Salas RM, Bravo-Rodriguez F. Cervical paraspinous chordoma, a condition we should know. A case report. *NEURO-CIRUGIA*. 2017;28(4):197-201. IF: 0,548 Q: 4

Robin M, Porcher R, Ciceri F, van Lint MT, Santarone S, Ehninger G, Blaise D, Gullbas Z, Muniz SG, Michallet M, Velardi A, Koster L, Maertens J, Sierra J, Selleslag D, Radujkovic A, Diez-Martin JL, Kanz L, Arroyo CH, Niederwieser D, Huang H, McDonald A, de Witte T, Koc Y, Kroger N. Haploidentical transplant in patients with myelodysplastic syndrome. *BLOOD ADVANCES*. 2017;1(22):1876-1883.
IF: n/a

García-Cabezas S, Centeno-Haro M, Espejo-Perez S, Carmona-Asenjo E, Moreno-Vega AL, Ortega-Salas R, Palacios-Eito A. Intimal sarcoma of the pulmonary artery with multiple lung metastases: Long-term survival case. *WORLD JOURNAL OF CLINICAL ONCOLOGY*. 2017;8(4):366-370.
IF: n/a

Research Fundings

Regional

Herrera Arroyo, Inmaculada C. Preclinical development of gene cell therapy based on a new drug comprising allogenic T cells with inducible expression of anti-cd19 chimeric antigen receptor (CAR) for the treatment of refractory B-cell tumors. Funding Agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: SALUD-201600073092-TRA

National

Cañadillas López, S. Effect of hypoxia on the regenerative potential of Adipose Derived Mesenchymal Cells (ASCs). Study in adiabetic nephropathy rat model. Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/00087

Contracts with Companies

Herrera Arroyo, Inmaculada C. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0040

Herrera Arroyo, Inmaculada C. Agreement with Roche (SESIÓN CLÍNICA). Funding agency: Roche Reference: PSS.0066

Herrera Arroyo, Inmaculada C. Agreement Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0075

Herrera Arroyo, Inmaculada C. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0103

Herrera Arroyo, Inmaculada C. Agreement with Bristol-Meyers. Funding agency: Bristol-Myers Squibb, S.A.U. Reference: PSS.0129

Herrera Arroyo, Inmaculada C. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0130

Herrera Arroyo, Inmaculada C. Agreement Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0169

Herrera Arroyo, Inmaculada C. Agreement Bristol. Funding agency: Bristol Hyers Squibb SAU. Reference: PSS.0172

Herrera Arroyo, Inmaculada C. Agreement Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0177

Herrera Arroyo, Inmaculada C. Agreement Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0204

Herrera Arroyo, Inmaculada C. Conference sponsored by Pzifer Funding agency: Pzifer. Reference: CCB.0078

Clinical Trials

Opened phase II controlled and randomized clinical trial to evaluate the efficacy in the intra-arterial infusion with mononuclear autologous bone marrow stem cells in patients with ischemic stroke.
PI: Dr R Valverde, Roberto (Neurology)



HIGHLIGHTS

PUBLICATIONS

39

IMPACT FACTOR

165,629

AVERAGE IMPACT FACTOR

4,246

Principal Investigator (PI)

Manuel Pan Álvarez-Ossorio
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Researchers

Anguita Sánchez, Manuel Pablo
 Arizón del Prado, José M^o
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 Delgado Ortega, Mónica M^o
 López Granados, Amador
 Mazuelos Bellidos, Francisco
 Mesa Rubio, M^o Dolores
 Ojeda Pineda, Soledad
 Pavlovic Djurovic, Djordje
 Romero Moreno, Miguel Ángel
 Segura Saint-Gerons, José M^o
 Suarez de Lezo Herreros de Tejada, Javier
 Ruíz Ortíz, Martín

Post-Doctoral Researchers

López Aguilera, José

Pre-Doctoral Researchers (PhD and MSc Students)

Hidalgo Lesmes, Francisco

Other members of the Group (Nursing, Technical and Administrative Staff)

Cebrián Salgado, Eva

Scientific Activity

Our group has 16 cardiologists, of which 8 are dedicated to interventional cardiology in both adults and children (Congenital Heart Disease, Electrophysiology, Valvular Diseases and Coronary Diseases), 5 dedicated to the study of advanced and specialized heart failures, including cardiac/heart transplants, and 3 dedicated to imaging techniques and functional tests (Echocardiographs, Stress Tests, Holter, etc.).

The main research of our group focuses on interventional cardiology and cell therapy. The strategy and objectives of our research include:

1. Determination of the role of stem cells in ischemic and non-ischemic cardiac pathologies.
2. Development and deepening of our knowledge on percutaneous treatment of complex coronary lesions.
3. Study of transluminal disease of congenital heart disease in childhood and adulthood.
4. Development and deepening of our knowledge on percutaneous implantation of valvular prostheses.

Our group is nationally renowned in the treatment of different cardiovascular pathologies, especially in the field of Congenital Heart Disease, Structural Heart Disease, Coronary Disease and Cell Therapy, demonstrated not only by the excellent clinical results but also by the high number of scientific publications.

Our group works in close collaboration

with the Cell Therapy Unit of the Reina Sofia University Hospital to develop clinical studies including the use of stem cells and related with myocardial regeneration. The majority of the group members carry out a wide range of research activities and contribute to broadening the knowledge in the area by publishing in high impact journals in the field of clinical research.

Research Lines

- Interventions for Coronary Heart Disease: bifurcations and chronic occlusions.
- Interventions for structural and valvular pathologies.
- Percutaneously implanted aorta and pulmonary prostheses.
- Mitral Valve Pathology Treatment: Balloon Valvuloplasty for stenosis and Mitraclip implantation for Heart Failure.
- Interventions for congenital pathologies: Closing of birth defects. Treatment of the Coarctation of Aorta.
- Cell Therapy applications to Cardiology: Myocardial Heart Attack, Chronic Occlusions or Dilated Myocardopathy.
- Heart Failure and Cardiac Transplants.
- Imaging techniques for structural and congenital cardiac interventions.

Keywords

Cardiac interventions, cellular therapy, stents, percutaneous aortic valves, closing birth defects.

Scientific Production

Publications

Main Publications

Pan M, Ojeda S, Villanueva E, Romero M. REPLY: No Wire Fracture Is Great News, But Is Polymer Shearing the Real Danger? *JACC-CARDIOVASCULAR INTERVENTIONS*. 2017.10(2):204-204.

IF: 8,841

Q: 1 D: 1

Estevez-Loureiro R, Freixa X, Arzamendi D, de Prado AP, Campante-Teles R, Melica B, Tarantini G, Musement G, Pan M. Transcatheter mitral valve interventions for mitral regurgitation, with special focus on MitraClip: The position of Spanish, Portuguese and Italian interventional societies. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2017.243():169-173.

IF: 6,189

Q: 1

Ojeda S, Pan M, Gutierrez A, Romero M, Chavarria J, de Lezo JS, Mazuelos F, Pardo L, Hidalgo F, Carrasco F, Segura J, Duran E, Ferreiro C, Sanchez JJ, Rodriguez S, Oneto J, de Lezo JS. Bifurcation lesions involved in the recanalization process of coronary chronic total occlusions: Incidence, treatment and clinical implications. *INTERNATIONAL JOURNAL OF CARDIOLOGY*. 2017.230():432-438.

IF: 6,189

Q: 1

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Q: 1

Pan M, Albiero R, Banning A, Burzotta F, Chatzizisis YS, Chieffo A, Darrcmont O, Ferenc M, Hildick-Smith D, Lassen JF, Lefevre T, Louvard Y, Stankovic G, European Bifurcation Club Comm. In memoriam Alfonso Medina Fernandez-Aceituno, MD, 1946-2017. *UROINTERVENTION*.2017.13(3):269-269.

IF: 5,165

Q: 1

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devices over a 27-year period (1987-2013): reply. *EUROPACE*. 2017.19(4):695-696.
IF: 4,53
Q: 1

Anguita M, Lambert JL, Segovia J. SEC-Excellence Comm Heart Failure Heart Failure Programs / Units. A Multidisciplinary Approach Response. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(5):411-411.
IF: 4,485
Q: 1

Jimenez-Quevedo P, Serrador A, de Prado AP, Nombela-Franco L, Biagioni C, Pan M. Selection of the Best of 2016 in Interventional Cardiology: Expansion of TAVI Indications to Intermediate-risk Patients. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(3):218-219.
IF: 4,485
Q: 1

Pan M, Jimenez-Quevedo P, Serrador A, de Prado AP, Mesa D, Loureiro RE. Selection of the Best of 2016 in MitraClip Therapy for the Treatment of Functional Mitral Regurgitation. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(3):216-218.
IF: 4,485
Q: 1

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IF: 4,485
Q: 2

Chavarría J, de Lezo JS, Ojeda S, Pan M, Segura J, Mazuelos F, Espejo S, Lopez J, Romero M, de Lezo JS. Restenosis After Everolimus-eluting Vascular Scaffolding. Angiographic and Optical Coherence Tomography Characterization. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(7):543-550.
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Q: 2

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IF: 4,485
Q: 2

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IF: 4,485
Q: 2

Frutos AMS, Jimenez-Quevedo P, de Prado AP, Alvarez-Ossorio MP. Spanish Cardiac Catheterization and Coronary Intervention Registry. 26th Official Report of the Spanish Society of Cardiology Working Group on Cardiac Catheterization and Interventional Cardiology (1990-2016). *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(12):1110-1120.
IF: 4,485
Q: 2

Hidalgo FJ, Anguita M. Role of Ivabradine in the Treatment of Heart Failure: Comments on the ESC 2016 Guidelines. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(7):612-613.
IF: 4,485
Q: 2

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IF: 3,639
Q: 2

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IF: 3,203
Q: 2

Pardo Gonzalez L, Ruiz Ortiz M, Delgado M, Mesa D, Villalba R, Rodriguez S, Hidalgo FJ, Alados P, Casares J, Suarez de Lezo J. Pulmonary homograft stenosis in the Ross procedure: Incidence, clinical impact and predictors in long-term follow-up. *ARCHIVES OF CARDIOVASCULAR DISEASES*. 2017.110(4):214-222.

IF: 2,331
Q: 2

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IF: 1,042
Q: 3

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Q: 3

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IF: 0,971
Q: 3

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IF: 0,971
Q: 3

Montero-Perez FJ, Quero-Espinosa FD, Clemente-Millan MJ, Castro-Gimenez JA, de Burgos-Marin J, Romero-Moreno MA. Diagnostic validity of hand gestures in chest pain of coronary origin. *REVISTA CLINICA ESPANOLA*. 2017.217(5):252-259.
IF: 0,971
Q: 3

Other Publications

Amat-Santos IJ, Cortes C, Franco LN, Munoz-Garcia AJ, De Lezo JS, Gutierrez-Ibanes E, Serra V, Larman M, Moreno R, Hernandez JMD, Puri R, Jimenez-Quevedo P, Garcia JMH, Alonso-Briales JH, Garcia B, Lee DH, Rojas P, Sevilla T, Goncalves R, Vera S, Gomez I, Rodes-Cabau J, San Roman JA. Prosthetic Mitral Surgical Valve in Transcatheter Aortic Valve Replacement Recipients A Multicenter

Analysis. JACC-CARDIOVASCULAR INTERVENTIONS. 2017;10(19):1973-1981.
IF: 8,841
Q: 1 D: 1

Azzalini L, Dautov R, Ojeda S, Benincasa S, Bellini B, Giannini F, Chavarria J, Pan M, Carlino M, Colombo A, Rinfret S. Procedural and Long-Term Outcomes of Percutaneous Coronary Intervention for In-Stent Chronic Total Occlusion. JACC-CARDIOVASCULAR INTERVENTIONS. 2017;10(9):892-902.
IF: 8,841
Q: 1 D: 1

Azzalini L, Dautov R, Brilakis ES, Ojeda S, Benincasa S, Bellini B, Karatasakis A, Chavarria J, Rangan BV, Pan M, Carlino M, Colombo A, Rinfret S. Procedural and longer-term outcomes of wire- versus device-based antegrade dissection and re-entry techniques for the percutaneous revascularization of coronary chronic total occlusions. INTERNATIONAL JOURNAL OF CARDIOLOGY. 2017;231():78-83.
IF: 6,189
Q: 1

Azzalini L, Dautov R, Brilakis ES, Ojeda S, Benincasa S, Bellini B, Karatasakis A, Chavarria J, Rangan BV, Pan M, Carlino M, Colombo A, Rinfret S. Impact of crossing strategy on midterm outcomes following percutaneous revascularisation of coronary chronic total occlusions. EUROINTERVENTION. 2017;13(8):978-985.
IF: 5,193
Q: 1

Hernandez JMD, Rumoroso JR, Subinas A, Gonzalo N, Ojeda S, Pan M, Yuste VM, Suarez A, Hernandez F, Teruel L, Moreu J, Cubero JM, Cascon JD, Vinhas H, Lozano I, Moreiras JM, de Prado AP, Goicolea J, Escaned J. Percutaneous intervention in chronic total coronary occlusions caused by in-stent restenosis: procedural results and long-term clinical outcomes in the TORO (Spanish registry of chronic Total occlusion secondary to an occlusive in-stent RestenOsis) multicentre registry. EUROINTERVENTION. 2017;13(2):E219-E226.
IF: 5,193
Q: 1

Fam JM, Ojeda S, Garbo R, Latib A, La Manna A, Vaquerizo B, Boukhris M, Vlachoianis GJ, van Geuns RJ, Ezhumalai B, Kawamoto H, van der Sijde J, Felix C, Pan M, Serdoz R, Boccuzzi GG, De Paolis M,

Sardella G, Mancone M, Tamburino C, Smits PC, Di Mario C, Seth A, Serra A, Colombo A, Serruys P, Gallas AR, Zijlstra F, Van Mieghem NM, Diletti R. Everolimus-eluting bioresorbable vascular scaffolds for treatment of complex chronic total occlusions. EUROINTERVENTION. 2017;13(3):355-363.
IF: 5,165
Q: 1

Loughlin G, Avila P, Martinez-Ferrer JB, Alzueta J, Vinolas X, Brugada J, Arizon JM, Fernandez-Lozano I, Garcia-Campo E, Basterra N, De La Concha JF, Arenal A. Association of cardiac resynchronization therapy with the incidence of appropriate implantable cardiac defibrillator therapies in ischaemic and non-ischaemic cardiomyopathy. EUROPACE. 2017;19(11):1818-1825.
IF: 4,521
Q: 1

Avanzas P, Pascual I, Munoz-Garcia AJ, Segura J, Alonso-Briales JH, de Lezo JS, Pan M, Jimenez-Navarro MF, Lopez-Aguilera J, Hernandez-Garcia JM, Moris C. Long-term Follow-up of Patients With Severe Aortic Stenosis Treated With a Self-expanding Prosthesis. REVISTA ESPANOLA DE CARDIOLOGIA. 2017;70(4):247-253.
IF: 4,485
Q: 1

Arribas FI, SEC Working Group for the 2016 ESC Guidelines for the Management of Atrial Fibrillation: Arribas F, Roldán I, Luis Merino J, Roldán V, Arenal Y, Tamargo J, Ruiz-Granell R, Mont L, Anguita M, Marín F; Reviewers for the 2016 ESC Guidelines for the Management of Atrial Fibrillation; Barrios Alonso V, Barón G, Esquivias, Cosín Sales J, Díaz Infante E, Escobar Cervantes C, Ferreiro Gutiérrez JL, Guerra Ramos JM, Jiménez Candil FJ, Pérez Castellano N, Sambola Ayala A, Tello Montoliu A; SEC Guidelines Committee; San Román A, Alfonso F, Arribas F, Evangelista A, Ferreira I, Jiménez M, Marín F, de Isla LP, Rodríguez Padial L, Sánchez PL, Sionis A, Vázquez R. Comments on the 2016 ESC Guidelines for the Management of Atrial Fibrillation. REVISTA ESPANOLA DE CARDIOLOGIA. 2017;70(1):2-8.
IF: 4,485
Q: 2

Romo AI, Martinez VB, Padial LR, Sanchez MA, Mateas FR, Urbano RH, Sobrino JLB, Perez CF, de Miguel CM, Somoza FJE. The RECALCAR Project.

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Q: 2

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IF: 4,485
Q: 2

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IF: 3,894
Q: 1

Rivera-Caravaca JM, Marin F, Esteve-Pastor MA, Rana-Miguez P, Anguita M, Muniz J, Cequier A, Bertomeu-Martinez V, Valdes M, Vicente V, Lip GYH, Roldan V. Usefulness of the 2MACE Score to Predicts Adverse Cardiovascular Events in Patients With Atrial Fibrillation. AMERICAN JOURNAL OF CARDIOLOGY. 2017;120(12):2176-2181.
IF: 3,398
Q: 2

Azzalini L, Dautov R, Ojeda S, Serra A, Benincasa S, Bellini B, Giannini F, Chavarria J, Gheorghie LL, Pan M, Carlino M, Colombo A, Rinfret S. Long-term Outcomes of Rotational Atherectomy for the Percutaneous Treatment of Chronic Total Occlusions. CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS. 2017;89(5):820-828.
IF: 2,602
Q: 2

Ruiz JMM, Fernandez-Golfín C, Mesa D, Gonzalez-Alujas T, Sitges M, Carrasco-Chinchilla F, Li CH, Grande-Trillo A, Martinez A, Matabuena J, Alonso-Rodriguez D, Aquila I, Zamorano JL. Prevalence of optimal valve morphology for MitraClip in patients with mitral regurgitation. ECHOCARDIOGRAPHY-A

JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES. 2017.34(8):1122-1129.
IF: 1,314
Q: 4

Pose A, Almenar L, Manzano L, Gavira JJ, Granados AL, Delgado J, Aramburu O, Arevalo JC, Mendez M, Comin J, Manito N. Hyponatraemia and congestive heart failure refractory to diuretic treatment. Utility of tolvaptan. REVISTA CLINICA ESPANOLA. 2017.217(7):398-404.
IF: 0,971
Q: 3

Research Funding

National

Pan Álvarez-Ossorio, M. Use of the jailed guidewire technique in the percutaneous treatment of coronary bifurcation stenting: A randomized study of stereoscopic microcoscopy. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI12/00440

CLINICAL TRIALS

3000. Secondary Prevention of Cardiovascular Disease in the Elderly Trial.
PI: Dr Romero Moreno, Miguel Ángel

3126. A Phase III, Double-blind, Randomized Placebo-controlled Study to Evaluate the Effects of Dalcetrapib on Cardiovascular (CV) Risk in a Genetically Defined Population With a Recent Acute Coronary Syndrome (ACS): The Dal-GenE Trial.
PI: Dr Pavlovic Djurovic, Djordje

3327. A Double-blind, Randomized, Placebo-controlled, Multicenter Study to Assess the Efficacy and Safety of Omecamtiv Mecarbil on Mortality and Morbidity in Subjects With Chronic Heart Failure With Reduced Ejection Fraction (GALACTIC-HF).
PI: Dr Arizon Del Prado, José María

3341. An Open-label, 2 x 2 Factorial, randomized controlled, clinical trial to evaluate the safety of apixaban vs Vitamin K antagonist and aspirin placebo in patients with atrial fibrillation and acute coronary syndrome or percutaneous coronary intervention.
PI: Dr Pavlovic Djurovic, Djordje

3388. A Multi-center, prospective, randomized, double-blind study to assess the impact of Sacubitril/Valsartan Vs. Enalapril on daily physical activity using a wrist worn actigraphy device in adult chronic heart failure patients.
PI: Dr Arizon Del Prado, José María

3686. Anti-Thrombotic strategy to lower all cardiovascular and neurologic ischemic and hemorrhagic events after trans-aortic valve implantation for aortic stenosis.
PI: Dr Pan Álvarez-Ossorio, Manuel

2594. Global review of long-term oral antithrombotic therapy in patients with atrial fibrillation (Phase II/III EU/ESA Member States).
PI: Dr López Granados, Amador

2615. Long-term general register of atrial fibrillation. EORP Register.
PI: Dr Anguita Sánchez, Manuel

2816. International registry to assess medical practice with longitudinal observation for treatment of heart failure.
PI: Dr Arizon Del Prado, José María

2931. Epidemiological study to evaluate the management, quality of life and therapeutic adherence of patients with stable coronary disease. "AVANCE II" STUDY.
PI: Dr López Aguilera, José

2961. EBC MAIN: Study conducted by the European Bifurcation Club: randomized comparison of the implementation of one or two stents to treat bifurcation lesions of the common trunk of the left coronary artery.
PI: Dr Pan Álvarez-Ossorio, Manuel

3073. Study to assess the satisfaction and preferences of patients in preventive treatment of cardiovascular events with a cardiovascular polypill.
PI: Dr López Aguilera, José

3413. Registry of familial hypersolemia in acute coronary syndrome.
PI: Dr Anguita Sánchez, Manuel

3449. Prospective Observational Study of Pulmonary Vein Cryoablation in Subjects With Atrial Fibrillation (AF) in Spain.

PI: Dr Segura Saint-Gerons, José M^o

3485. Registry of PATients Treated With bioabsorbable Devices in dAily Clinical Practice: Costs, Effectiveness, QALYs, and Efficiency. REPARA-QALY Registry.
PI: Dr Pan Álvarez-Ossorio, Manuel

3619. Retrospective observational study of the use of evolocumab in Spanish units of cardiology (RETOSS-Cardio).
PI: Dr Hidalgo Lesmes, Francisco José

3639. Multicenter Registry of Secondary Revascularization.
PI: Dr Ojeda Pineda, Soledad

3693. Descriptive observational study of convenience in patients treated with dabigatran for the prevention of stroke in non-valvular atrial fibrillation.
PI: Dr López Aguilera, José

GC16

Cellular biology in Hematology. Hypercoagulability



HIGHLIGHTS

Publications

8

Impact Factor

31,664

Average Impact Factor

3,958

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Co-Principal Investigator (CO-PI): Francisco
Velasco Gimena

PAIDI CTS-620: Hematology XXI

Researchers

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Arqueros Martínez, Víctor
Casaño Sánchez, Javier
Fernández de la Mata, Margarita
García Torres, Estefanía
Martínez Losada, Carmen
Martin Calvo, Carmen
Molina Hurtado, José Ramón
Rodríguez Villa, Antonia
Rojas Contreras, Rafael
Serrano López, Josefina
Tabares Carrasco, Salvador

Post-Doctoral Researchers

Serrano López, Juana

Scientific Activity

We are a consolidated group within IMIBIC. Our research focuses on Hematological Malignancies, allogeneic stem cell transplantation and hypercoagulability, and we are particularly interested in looking for new targets to improve or complement Leukemia treatments. Over the last years, we have accumulated plenty of knowledge in Acute Leukemias, particularly in Acute Myeloid Leukemia (AML) which is one of the most heterogeneous leukemia. Currently, in agreement with the Spanish Hematology Association (FEHH), we are studying several key somatic gene mutations and fusion genes in AML to perform the pattern of clonal evolution. In this sense, we are also generating a new panel of probes to sequence 50 genes in AML in collaboration with CIC in Salamanca. We also routinely analyze the leukemic stem cell (LSC) enrichment in acute leukemia patients and intend to isolate the bona fide LSC by fluorescence-activated cell sorting (FACS) to develop functional assays. Furthermore, we study a type of B malignancy named Diffuse Large B-cell Lymphoma (DLBCL) within Non-Hodgkin Lymphoma. In this study, we are using an innovative technology for molecular classification of DLBCL by analysing a set of 20 genes in Nanostring platform and develop new personalized treatment strategies for the patients.

Another research area of our interest is immunotherapy applied to Leukemia,

in specific, the immunological recovery of allogeneic hematopoietic stem cell transplantation (Allo-HSCT). We have evidences that after Alo-SCT, leukemic specific T-cells are immunosurveillance patients' body. Additionally, in collaboration with the University of Cordoba, we are generating a new protocol based on nanoscience for reprogramming of T-cell against Leukemia. Moreover, Chronic graft-versus-host disease (cGvHD) is a late immune response of donor T and B against tissues recipient after Allo-HSCT and is the major cause of late morbidity and mortality. In attempt to elucidate new biomarkers in cGvHD to stop the progression or improve quality of patients' life, we are analyzing gene expression profiling of T lymphocytes by Affymetrix microarrays to describe new pathways implicated in the pathophysiology of cGvHD.

Our clinical research activities include many clinical trials widely distributed in Acute leukemias, Lymphoma, Chronic Leukemia, Multiple Myeloma, Myelodysplastic and Myeloproliferative syndromes. We actively participate in various regional, national and international hematological networks such as PETHEMA, SEHOP, RESMD, and EBMT, increasing our collaborative network of leukemia researchers and clinicians. Our research has resulted in solid scientific production, contributing to improved clinical protocols and practices.

Research lines

- Cellular mechanisms of leukemogenesis and drug resistance
- Immunological mechanisms of stem cell transplantation
- Gene expression profiles in Non-Hodgkin Lymphoma for personalized treatments
- Cellular and molecular mechanisms of hypercoagulability

Keywords

Acute leukemia, lymphoma, allogenic stem cell transplantation, hypercoagulability.

Scientific Production

Publications

Main Publications

Martinez-Losada C, Martin C, Gonzalez R, Manzanares B, Garcia-Torres E, Herrera C. Patients lacking a Kir-ligand of HLA group C1 or C2 have a Better Outcome after Umbilical cord Blood Transplantation. *FRONTIERS IN IMMUNOLOGY* 2017;8():-810.

IF: 6,429

Q: 1

Paniagua JA, Bahamondes R, Cano-Sanchez A, Velasco F. Unexpected papilledema in a young male with Type 1 diabetes. *CLINICAL CASE REPORTS*. 2017;5(8):1333-1338.

Other Publications

Perez-Sanchez C, Aguirre MA, Ruiz-Limon P, Abalos-Aguilera MC, Jimenez-Gomez Y, Arias-de la Rosa I, Rodriguez-Ariza A, Fernandez-del Rio L, Gonzalez-Reyes JA, Segui P, Collantes-Esteviz E, Barbarroja N, Velasco F, Sciascia S, Cecchi I, Cuadrado MJ, Villalba JM, Lopez-Pedraza C. Ubiquinol Effects on Antiphospholipid Syndrome Prothrombotic Profile A Randomized, Placebo-Controlled Trial.

ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY. 2017.37(10):1923-1932.
IF: 6,607
Q: 1 D: 1

Ribera J, Zamora L, Morgades M, Mallo M, Solanes N, Battlle M, Vives S, Granada I, Junca J, Malinverni R, Genesca E, Guardia R, Mercadal S, Escoda L, Martínez-Lopez J, Tormo M, Esteve J, Pratcorona M, Martínez-Losada C, Sole F, Feliu E, Ribera JM, Spanish PETHEMA Group and the Spanish Society of Hematology. Copy number profiling of adult relapsed B-cell precursor acute lymphoblastic leukemia reveals potential leukemia progression mechanisms. GENES CHROMOSOMES & CANCER. 2017.56(11):810-820.
IF: 6,396
Q: 2

Nomdedeu M, Pereira A, Ramos F, Valcarcel D, Costa D, Arnan M, Calvo X, Pomares H, Luno E, Diaz-Campelo M, Collado R, de Paz R, Falantes JF, Pedro C, Marco J, Oirtzabal I, Sanchez-Garcia J, Tormo M, Cedena MT, Nomdedeu B, Sanz G, Spanish MDS Grp. Excess mortality in the myelodysplastic syndromes. AMERICAN JOURNAL OF HEMATOLOGY. 2017.92(2):149-154.
IF: 5,275
Q: 1

Kwon M, Bautista G, Balsalobre P, Sanchez-Ortega I, Montesinos P, Bermudez A, de Laiglesia A, Herrera P, Martin C, Humala K, Zabalza A, Torres M, Bento L, Corral LL, Heras I, Serrano D, Buno I, Anguita J, Regidor C, Duarte R, Cabrera R, Gayoso J, Diez-Martin JL. Haplo-Cord transplantation compared to haploidentical transplantation with post-transplant cyclophosphamide in patients with AML. BONE MARROW TRANSPLANTATION. 2017.52(8):1138-1143.
IF: 3,874
Q: 2

García-Noblejas A, Cannata-Ortiz J, Conde E, Barca EB, Gutierrez N, Rojas R, Vidal MJ, Ramirez MJ, Jimenez-Ubieto A, Garcia-Ruiz JC, Sancho JM, Lopez A, Rull PR, Novelli S, Albo C, Deben G, Lopez-Guillermo A, Nicolas C, de Villambrosia SG, Mercadal S, Garcia-Sancho AM, Arranz R. Autologous stem cell transplantation (ASCT) in patients with mantle cell lymphoma: a retrospective study of the Spanish lymphoma group (GELTAMO). AN-

NALS OF HEMATOLOGY. 2017.96(8):1323-1330.
IF: 3,083
Q: 2

Sanz J, Kwon M, Bautista G, Sanz MA, Balsalobre P, Pinana JL, Solano C, Duarte R, Ferra C, Lorenzo I, Martin C, Barba P, Pascual MJ, Martino R, Gayoso J, Buno I, Regidor C, de la Iglesia A, Montoro J, Diez-Martin JL, Sanz GF, Cabrera R, on behalf of Grupo Español de Trasplante Hematopoyético (GETH). Single umbilical cord blood with or without CD34(+) cells from a third-party donor in adults with leukemia. BLOOD ADVANCES. 2017.1(15):1047-1055.
IF: n/a

Research Funding

Regional

Serrano Lopez, J. Analysis of gene expression using a nanostring platform and of myd88-l265p mutation in paraffin-embedded samples for the personalized treatment of diffuse large B-cell lymphoma. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PIN-0364-2016

National

Sánchez García, J. Analysis of Phenotype, genotype, and sensitivity to new leukemia stem cell pharmaceutical products in LAM and LAL. Funding Agency: Sociedad Española de Hematología-Hemoterapia. Reference: FEHH15_001

García Torres, E. Effect of immunomodulators (lenadomide and pomalidomide) in lymphoid populations and their impact on the development of the disease. Funding Agency: Asociacion Andaluza de Hematología y Hemoterapia. Reference: AAHH2015_001

Losada Martínez, C. Effect of immunomodulators (lenadomide and pomalidomide) in lymphoid populations and their impact on the development of the disease. Funding Agency: AAHH2016_001

Losada Martínez, C. Jornadas de investigación en hematología en Andalucía. Funding Agency: Asociación Andaluza de Hematología y Hemoterapia. Reference: AAHH2017_001

Contracts with Companies

Sanchez Garcia, J. Agreement Fundacion. Funding agency: FUNDACION PETHEMA. Reference: PSS.0200

Sánchez García, J. Collaboration agreement with Janssen. Identifying markers and new cellular therapeutic targets of Graft-Versus-Host-Disease (GVHD) using T lymphocytes gene expression arrays for T-cell activation. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0039.

Molina Hurtado, J. Collaboration agreement with Pzifer. Funding agency: Pfizer, S.L.U. Reference: PSS.0043

Álvarez Rivas, MA. Collaboration agreement with Celgene. Funding agency: Celgene, S.L.U. Reference: PSS.0104

Álvarez Rivas, MA. Collaboration agreement with Celgene. Funding agency: Celgene International SARL. Reference: PSS.0120

Serrano López J. Collaboration agreement with Pfizer. Funding agency: Pfizer, S.L.U. Reference: CCB.0068

Clinical Trials

0279/11. Intergroup trial for children or teens with LNH-B o LLA-B (LLA-L3). Evaluation of the efficacy and safety of Rituximab for high-risk patients. PI: Dr Gómez García, Pedro

0020/12. Ofatumumab as part of the reduced intensity conditioning system (RIC) in patients at high risk of developing non-Hodgkin's lymphoma B receiving allogeneic hematopoietic stem cell transplantation. PI: Dr Martin Calvo, M^a Carmen

0293/12. A randomized, double-blind, placebo-controlled, phase 3 study of the efficacy and safety of oral azacitidine plus the best supportive treatment vs. the best supportive treatment as maintenance therapy in patients with acute myelogenous leukemia i complete remission. PI: Dr Serrano López, Josefina

- 0313/12. CLLM1-Protocol of the German CLL-Study Group (GCLLSG) A phase 3, multicenter, randomized, double-blind, placebo-controlled, parallel-group study of the efficacy and safety of lenalidomide (revlimid®) as maintenance therapy for high-risk patients with chronic lymphocytic leukemia following first-line therapy.
PI: Dr Arquerros Martínez, Víctor
- 0123/13. Phase 3 randomized, double-blind, placebo-controlled study to evaluate the protective efficacy and safety of a therapeutic vaccine, ASP0113, recipients seropositive for cytomegalovirus (CMV) underwent allogeneic cells.
PI: Dr Rojas Contreras, Rafael
- 0148/13. Multicenter phase IIIB study, international, open-label, single treatment group to assess the safety of obinutuzumab as a single agent or in combination with chemotherapy in patients with lymphatic leukemia relapsed / refractory chronic
PI: Dr Molina Hurtado José Ramón
- 0165/13. An open, phase IIb trial to assess the safety of changin intravenous rituximab to subcutaneous rituximab in the course of first-line treatment of CD20+ Follicular and Diffuse Non-Hodgkin's Large B-Cell Lymphoma.
PI: Dr Sánchez García, Joaquín
- 0202/13. A randomized, double-blind, phase 3 study to assess the efficacy and safety of rituximab plus lenalidomide (CC-5013) vs. rituximab plus placebo in subjects with indolent relapsed / resistant lymphoma.
PI: Dr Sánchez García, Joaquín
- 0148/14. Phase III, multicenter, randomized, open-azacytidine (Vidaza®) versus fludarabine and cytarabine (fluga scheme) in elderly patients with acute myeloid leukemia new diagnostic.
PI: Dr Serrano López, Josefina
- 0112/14. A Study of Oral Ixazomib Citrate (MLN9708) Maintenance Therapy in Participants With Multiple Myeloma Following Autologous Stem Cell Transplant.
PI: Dr Alvarez Rivas, Miguel Ángel
- 0298/14. A phase II multicenter study of carfilzomib, lenalidomide and dexamethasone (KRd) plus high-dose therapy with melphalan-200 and autologous stem cell transplantation, followed by consolidation with KRd, and maintenance with lenalidomide and dexamethasone in patients with high risk smoldering multiple myeloma (SMM) under 65 years.
PI: Dr Álvarez Rivas, Miguel Ángel
- 0024/16. Pilot study (Phase II) of combination pomalidomide / dexamethasone associated with low dose of cyclophosphamide in patients with refractory multiple myeloma who have received lenalidomide and bortezomib.
PI: Dr Álvarez Rivas, Miguel Ángel
3190. A Randomized, Double-Blind Study Evaluating the Efficacy, Safety and Immunogenicity of ABP 798 Compared With Rituximab in Subjects With CD20 Positive B-Cell Non-Hodgkin Lymphoma (NHL).
PI: Dr Sánchez García, Joaquín
3218. A Phase 3, Double-Blind, Placebo-controlled Study of Quizartinib (AC220) Administered in Combination With Induction and Consolidation Chemotherapy, and Administered as Maintenance Therapy in Subjects 18 to 75 Years Old With Newly Diagnosed FLT3-ITD (+) Acute Myeloid Leukemia.
PI: Dr Serrano López, Josefina
3269. A Phase 20 Multi-center Study to Evaluate the Safety and Efficacy of Blinatumomab in Subjects With Relapsed/Refractory Aggressive B-Cell Non Hodgkin Lymphoma.
PI: Dr Sánchez García, Joaquín
3340. A Phase 3, Randomized, adaptive study comparing the efficacy and safety of defibrotide vs best supportive care in the prevention of hepatic veno-occlusive disease in adult and pediatric patients undergoing hematopoietic stem cell transplant.
PI: Dr Martín Calvo, María del Carmen
3473. Phase 1b/Phase 3 Multicenter Study Of Avelumab (msb0010718c) in combination regimens that include an immune agonist, epigenetic modulator, Cd20 Antagonist And/or conventional chemotherapy in patients with relapsed or refractory diffuse Large B-cell Lymphoma (DLbcl) Javelin DL-bcl.
PI: Dr Sánchez García, Joaquín
3551. A Phase III Randomized Open-label Multi-center study of ruxolitinib vs. best available therapy in patients with corticosteroid-refractory chronic graft vs host disease after allogeneic stem cell transplantation (REACH3).
PI: Dr Rojas Contreras, Rafael
3557. A Phase 3, Multicenter, Randomized, open-label study of guadecitabine (SGI-110) versus treatment choice in adults with previously treated acute myeloid leukemia.
PI: Dr Serrano López, Josefina
3584. A Phase 3, Multicenter, randomized, double-blind, double-dummy, active-controlled study to assess the efficacy and safety of maribavir compared to valganciclovir for the treatment of cytomegalovirus (CMV) infection in hematopoietic stem cell transplant recipients.
PI: Dr Rojas Contreras, Rafael
2109. An observational, post-authorization study to assess the evolution in regular clinical practice of patients newly diagnosed with myelodysplastic syndrome (MDS) or myelomonocytic leukemia (MML) according to the time of treatment initiation.
PI: Dr Sánchez García, Joaquín
2257. A study to validate an ex vivo individualized test for acute lymphoblastic leukemia.
PI: Dr Serrano López, Josefina
2570. Prospective observational study to identify clinical aspects leading to therapeutic decision making in patients with myelofibrosis.
PI: Dr Molina Hurtado, José Ramón
2634. Ex vivo pharmacology study treatments in hematological malignancies characterization by using automated flow cytometry platform ExviTch.
PI: Dr Sánchez García, Joaquín
2638. PASS Post-Authorization Safety Study (PASS) prospective, non-interventionist, designed as Disease Registry of patients with myelodysplastic syndromes (MDS) low risk (IPSS low and intermediate-1) cin isolated 5q deletion and transfusion dependence
PI: Dr Sánchez García, Joaquín
2641. Non-interventional post-authorization Registration patients with relapsed and refractory multi-

ple myeloma treated with pomalidomide, who have received at least two prior treatments including lenalidomide and bortezomib, and who have experienced a proautologous hematopoietic stem cell transplant (VERSA STUDY)

PI: [Dr Álvarez Rivas, Miguel Ángel](#)

2678. Post-authorization safety study (PASS) ma25101 observational cohort study of the safety of brentuximab vedotin in the treatment of relapsed or refractory cd30 Hodgkins lymphoma and systemic anaplastic large relapsed or refractory cells.

PI: [Dr Molina Hurtado, José Ramón](#)

2699. A Study to the validation of a test ex vivo personalized medicine in Multiple Myeloma.

PI: [Dr Álvarez Rivas, Miguel Ángel](#)

2852. A retrospective study of clinical, phenotypic and genetic factors of peripheral T-cell lymphomas in the Spanish population.

PI: [Dr Sánchez García, Joaquín](#)

3390. Incidence and results associated with the treatment of adenovirus infections in allogeneic hematopoietic cell transplant recipients: Advance.

PI: [Dr Molina Hurtado, José Ramón](#)

3591. Study on direct and indirect clinical complications derived from the detection of cytomegalovirus (CMV) infection in patients with allogeneic hematopoietic progenitor cell transplantation (ALO-TPH) CMV-ALOTPH study.

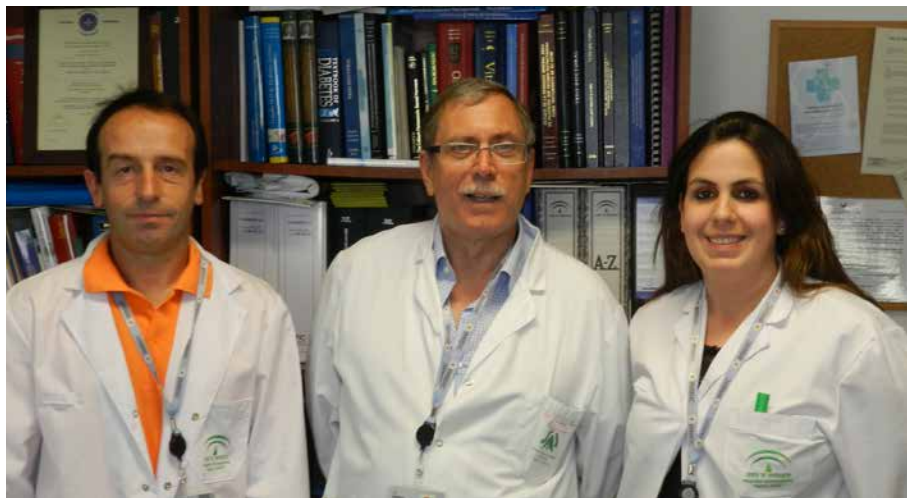
PI: [Dr Rojas Contreras, Rafael](#)

3253/2. Observational Study to assess disease burden, in terms of health-related quality of life and direct healthcare costs, in patients with newly diagnosed multiple myeloma who are not candidates for autologous stem cell transplant (ASCT) in Spain.

PI: [Dr Álvarez Rivas, Miguel Ángel](#)

GC17

Pathophysiology of the endocrine system of vitamin D. Biotechnology and aging



HIGHLIGHTS

Publications

5

Impact Factor

83

Average Impact Factor

16,614

Principal Investigator (PI)

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CIBER on Fragility and Healthy Aging (CIBERFES)

PAIDI CTS-413 Endocrine System of Vitamin D. Biotechnology and Aging

Researchers

Casado Díaz, Antonio

Mata Granados, José María

Santiago Mora, Raquel

Serrano Alférez, Ignacio

Post-Doctoral Researchers

Marín Hinojosa, Carmen

Romero Sánchez, M^o Concepción

Pre-Doctoral Researchers (PhD and MSc Students)

Cuenca Acevedo, Rafael

Rabaneda Garrido, Cristina

Scientific Activity

Our group studies:

1. Osteoporosis: related risk factors, genetics and epidemiology. Endocrine system of vitamin D, other liposoluble vitamins, carotenoids, fatty acids related to osteoporosis and aging.
2. Differentiation of mesenchymal stem cells into osteoblasts, adipocytes or vessels. Study of genes and related factors. Its application in human clinical medicine.
 - a) Evaluation of compounds that may influence the differentiation of mesenchymal stem cells to osteoblasts and adipocytes. By following this line, we intend to evaluate the differentiation capacity of mesenchymal stem cells into adipocytes and osteoblasts in drugs and natural compounds in order to determine what may favour or hinder the formation of new bone. The results obtained in this area may open up new therapeutic strategies to prevent and counter osteoporosis.
 - b) Studies of gene expression of genes related to osteogenesis and adipogenesis.

The aim of this research is to identify human stem cells, which are genes involved in the differentiation into osteoblasts and adipocytes, and associated with osteoporosis. To achieve this, we hope to carry out functional genomics studies to compare gene expression profiles between stem cells originating from both osteoporotic and non-osteoporotic women.

Keywords

Osteoporosis, vitamin D, carotenoids, fatty acids, human mesenchymal stem cells (MSC) of adult adipocytes, osteoblasts, polyphenols, gene expression, proteomics, nutrigenetics, nutrigenomics.

Scientific Production

Publications

Main Publications

Casado-Díaz A, Anter J, Muller S, Winter P, Quesada-Gómez JM, Dorado G. Transcriptomic Analyses of Adipocyte Differentiation From Human Mesenchymal Stromal-Cells (MSC). *JOURNAL OF CELLULAR PHYSIOLOGY*. 2017.232(4):771-784.
IF: 4,08
Q: 2

Casado-Díaz A, Túnuez-Finana I, Mata-Granados JM, Ruiz-Méndez MV, Dorado G, Romero-Sánchez MC, Navarro-Valverde C, Quesada-Gómez JM. Serum from postmenopausal women treated with a by-product of olive-oil extraction process stimulates osteoblastogenesis and inhibits adipogenesis in human mesenchymal stem-cells (MSC). *EXPERIMENTAL GERONTOLOGY*. 2017.90():71-78.
IF: 3,34
Q: 1

Casado-Díaz A, Anter J, Muller S, Winter P, Quesada-Gómez JM, Dorado G. Transcriptomic analyses of the anti-adipogenic effects of oleuropein in human mesenchymal stem cells. *FOOD & FUNCTION*. 2017.8(3):1254-1270.
IF: 3,247
Q: 1

Other Publications

Roca-Ayats N, Balcells S, García-Giralt N, Falco-Mascardo M, Martínez-Gil N, Abril JF, Urreiziti R, Dopazo J, Quesada-Gómez JM, Nogues X, Mellibovsky L, Prieto-Alhambra D, Dunford JE, Javald

MK, Russell RG, Grinberg D, Díez-Pérez A. GGPS1 Mutation and Atypical Femoral Fractures with Bisphosphonates. *NEW ENGLAND JOURNAL OF MEDICINE*. 2017.376(18):1794-1795.
IF: 72,406
Q: 1 D: 1

Varsavsky M, Moreno PR, Fernández AB, Fernández IL, Gómez JMQ, Rubio VA, Martín AG, Berdonces MC, Cortés SN, Muñoz MR, García RR, Gimeno EJ, Torres M en representación del Grupo de Trabajo de Osteoporosis y Metabolismo Mineral de la Sociedad Española de Endocrinología y Nutrición. Recommended vitamin D levels in the general population. *ENDOCRINOLOGIA DIABETES Y NUTRICION*. 2017.64():7-14.

Research Funding

National

Marín Hinojosa, C. Identification of novel therapeutic biomarkers in the progression of intima-media thickness of carotid arteries through on nutritional epigenetics. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/00733

Quesada Gómez, JM. Effect of the PTH (1-34) and vitamin D3 on mobilization of endothelial precursor cells and their role in regenerative medicine applied to the skin ulcers healing in diabetics. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/O1857

Casado Días, A. Effect of the PTH (1-34) and vitamin D3 on mobilization of endothelial precursor cells and their role in regenerative medicine applied to the skin ulcers healing in diabetics. Funding agency: Fundación Española de investigación ósea y del metabolismo mineral. Reference: FEIOMM2016_001

Quesada Gómez, JM. Fragility and Healthy Aging (Ciberfes). Funding agency: National Institute of Health Carlos III (ISCIII). Reference: CB16/10/00501

Contracts with Companies

Quesada Gómez JM. Agreement Quesper. Funding agency: QUESPER R&D, S.L. Reference: PSS.0077

Quesada Gómez JM. Collaboration agreements with Lilly SA (Formation). Funding Agency: LILLY, S.A. Reference: CCB.0079

Clinical Trials

3071. Non-interventional study with Binosto 70 mg effervescent tablets once weekly investigating gastro-intestinal events and medication errors.
PI: Dr Quesada Gómez, José Manuel

GC18

Translational research in surgery of solid organ transplantation



HIGHLIGHTS

Publications

16

Impact Factor

58,706

Average Impact Factor

3,669

Principal Investigator (PI)

Francisco Javier Briceño Delgado

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PAIDI CTS-273 Study of acute infections of the digestive system

Researchers

Ciria Bru, Ruben

Leva Vallejo, Manuel

López Cillero, Pedro

Medina Fernández, Francisco Javier

Muñoz Casares, Francisco Cristobal

Padial Aguado, Ana Cristina

Pozo Laderas, Juan Carlos

Regueiro Lopez, Juan Carlos

Robles Ariza, Juan Carlos

Rufian Peña, Sebastian

Ruiz Rabelo, Juan

Post-Doctoral Researchers

Arjona Sánchez, Álvaro

Pleguezuelo Navarro, María

Pre Doctoral-Researchers (PhD and MSc Students)

Gómez Gómez, Irene

Jiménez Gómez, Jesus

Navarro Rodríguez, Elena

Scientific Activity

Our group studies aspects related to the increase in the donor pool and technical innovations in solid organ transplants. We also aim to establish guidelines to improve the use of expanded criteria donors, and to develop and implement improvements in surgical techniques and technological innovations in the transplant of solid organs.

Keywords

Liver transplant, pancreas transplant, kidney transplant, lung transplant, heart transplant, living donor transplantation, pediatric transplantation, split transplantation, expanded criteria donors.

Scientific Production

Publications

Main Publications

Medina-Fernandez FJ, Diaz-Lopez C, Briceno JA Different Approach to the Use of C-Reactive Protein and Procalcitonin in Postoperative Infectious Complications. *ANNALS OF SURGERY*. 2017.266(6):E98-E99.
IF: 8,98
Q: 1 D:1

Perez-Ortiz M, Gutierrez PA, Ayllon-Teran MD, Heaton N, Ciria R, Briceno J*, Hervas-Martinez C*. Synthetic semi-supervised learning in imbalanced domains: Constructing a model for donor-recipient matching in liver transplantation. *KNOWLEDGE-BASED SYSTEMS*. 2017.123():75-87.
IF: 4,529
Q: 1

Arjona-Sanchez A, Rufian-Pena S. Progress in the management of primary and recurrent ovarian carcinomatosis with peritonectomy procedure and

HIPEC in a high volume centre. *INTERNATIONAL JOURNAL OF HYPERTHERMIA*. 2017.33(5):554-561.
IF: 3,262
Q: 1

Medina-Fernandez FJ, Escribano BM, Aguera E, Aguilar-Luque M, Feijoo M, Luque E, Garcia-Maceira FI, Pascual-Leone A, Drucker-Colin R, Tunez I. Effects of transcranial magnetic stimulation on oxidative stress in experimental autoimmune encephalomyelitis. *FREE RADICAL RESEARCH*. 2017.51(5):460-469.
IF: 3,188
Q: 2

Rello J, Bello I, de Vicente R, Anchuelo AH, Ballesteros MA, Irazo R, Rellan L, Riera J, Robles JC, EMPRET Study Investigators. Risk Factors for Mortality in 272 Patients With Lung Transplant: A Multicenter Analysis of 7 Intensive Care Units. *ARCHIVOS DE BRONCONEUMOLOGIA*. 2017.53(8):421-426.
IF: 2,979
Q: 2

Medina-Fernandez FJ, Luque E, Aguilar-Luque M, Aguera E, Feijoo M, Garcia-Maceira FI, Escribano BM, Pascual-Leone A, Drucker-Colin R, Tunez I. Transcranial magnetic stimulation modifies astrogliosis, cell density and lipopolysaccharide levels in experimental, autoimmune encephalomyelitis. *LIFE SCIENCES*. 2017.169():20-26.
IF: 2,936
Q: 2

Fernandez FJM, Escribano BM, Tunez I. COMMENTARY Transcranial Magnetic Stimulation in Multiple Sclerosis: A Method to Improve Movement. *CNS & NEUROLOGICAL DISORDERS-DRUG TARGETS*. 2017.16(3):218-219.
IF: 2,506
Q: 3

Dorado-Moreno M, Perez-Ortiz M, Gutierrez PA, Ciria R, Briceno J, Hervas-Martinez C. Dynamically weighted evolutionary ordinal neural network for solving an imbalanced liver transplantation problem. *ARTIFICIAL INTELLIGENCE IN MEDICINE*. 2017.77():1-11.
IF: 2,009
Q: 2

Medina-Fernandez FJ, Rodriguez-Ortiz L, Garcilazo-Arismendi DJ, Navarro-Rodriguez E, Tor-

res-Tordera EM, Diaz-Lopez CA, Briceno J. Impact of barium enema on acute diverticulitis recurrence: A retrospective cohort study of 349 patients. *JOURNAL OF DIGESTIVE DISEASES*. 2017.18(7):379-387.
IF: 1,632
Q: 4

Other Publications

Martinez ML, Ferrer R, Torrents E, Gtiillamat-Prats R, Goma G, Suarez D, Alvarez-Rocha L, Laderas JCP, Martin-Loeches I, Levy MM, Artigas A. Edusepsis Study GrpImpact of Source Control in Patients With Severe Sepsis and Septic Shock. *CRITICAL CARE MEDICINE*. 2017.45(1):11-19.
IF: 7,05
Q: 1

Temkin E, Torre-Cisneros J, Beovic B, Benito N, Giannella M, Gilarranz R, Jeremiah C, Loeches B, Machuca I, Jimenez-Martin MJ, Martinez JA, Mora-Rillo M, Navas E, Osthoff M, Pozo JC, Ramos JCR, Rodriguez M, Sanchez-Garcia M, Viale P, Wolff M, Carmeli Y. Ceftazidime-Avibactam as Salvage Therapy for Infections Caused by Carbapenem-Resistant Organisms. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017.61(2):-e01964-16.
IF: 4,302
Q: 1

Suberviola B, Rellan L, Riera J, Irazo R, Campos AG, Robles JC, Vicente R, Minambres E, Santibanez M. Role of biomarkers in early infectious complications after lung transplantation. *PLOS ONE*. 2017.12(7):-e0180202.
IF: 2,806
Q: 1

2015 European Society of Coloproctology collaborating group (Pinkney T, Battersby N, Bhangu A, et al). The Relationship between method of anastomosis and anastomotic failure after right hemicolectomy and ileo-caecal resection: an international snapshot audit. *COLORECTAL DISEASE*. 2017.19(8):O296-O311.
IF: 2,689
Q: 2

Di Stasi LL, Diaz-Piedra C, Ruiz-Rabelo JF, Rieiro H, Carrion JMS, Catena A. Quantifying the cognitive cost of laparo-endoscopic single-site surger-

ies: Gaze-based indices. APPLIED ERGONOMICS. 2017.65():168-174.

IF: 1,866

Q: 2

Escribano BM, Medina-Fernandez FJ, Aguilár-Luque M, Agüera E, Feijoo M, García-Maceira FI, Lillo R, Vieyra-Reyes P, Giraldo AI, Luque E, Drucker-Colin R, Tünez I. Lipopolysaccharide Binding Protein and Oxidative Stress in a Multiple Sclerosis Model. NEUROTHERAPEUTICS. 2017.14(1):199-211.

IF: 5,166

Q: 1

Perez P, Rodríguez-Peralvarez M, Guerrero L, González V, Sánchez R, Centeno M, Poyato A, Briceño J, Sánchez-Frías M, Montero JL, De la Mata M. Incidental hepatocellular carcinoma after liver transplantation: Prevalence, histopathological features and prognostic impact. PLOS ONE. 2017.12(4):-e0175010.

IF: 2,806

Q:1

RESEARCH FUNDING

Regional

Muñoz Casares, FC. Efficacy and safety of early postoperative intraperitoneal chemotherapy with paclitaxel in radical surgical treatment of ovarian peritoneal carcinomatosis. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0327-2013

Briceño Delgado, FJ. External validation of donor-recipient pairing model in liver transplants based on artificial neural networks. Funding Agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0312-2014

National

Ciria Bru, R. Condition mechanisms discarded teatotic liver grafts after cold storage by normo or subnormo thermic machine perfusion. Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/01559

Ciria Bru, R. Rescue paragraph liver transplant grafts discarded normothermic extracorporeal perfusion.

Funding Agency: Fundación Mutua Madrileña Reference: FMM-14-002

Briceño Delgado, FJ. External validation of a donor-recipient matching model in liver transplantation based on artificial neural networks. Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: PI15/01570

Contracts with Companies

Briceño Delgado, FJ. Stand in course on advanced liver surgery. Funding agency: Covidien Spain, S.L. Reference: PSS.0041

Briceño Delgado, FJ. Agreement Covidien. Funding agency: COVIDIEN SPAIN S. L. Reference: PSS.0122

Clinical Trials

0131/15. Multicenter randomized clinical trial to evaluate the efficacy and safety of hyperthermic intraperitoneal chemotherapy (HIPEC) with mitomycin C associated with surgery in the treatment of locally advanced colorectal carcinoma.

PI: Dr Arjona Sánchez, Álvaro



HIGHLIGHTS

Publications

5

Impact Factor

4,377

Average Impact Factor

0,875

Principal Investigator (PI)

Rafael Medina Carnicer

rmedina@uco.es*PAIDI TIC-161 Artificial Vision Applications
(A.V.A.)*

ResearchersMuñoz Salinas, Rafael
Carmona Poyato, Ángel
Fernández García, Nicolás Luis
Madrid Cuevas, Francisco José
Marín Jiménez, Manuel Jesús
Yeguas Bolivar, Enrique
Garrido Castro, Juan Luis

Post-Doctoral Researchers

Cazzato, Dario

**Pre-Doctoral Researchers (PhD and
MSc Students)**Romero Ramírez, Francisco José
Sarmani, Hamid

Scientific Activity

The Research Group “Artificial Vision Applications (A.V.A.)” is a consolidated group at IMIBIC. It is constituted by 7 PhD researchers in the field of Computer Engineering. The research carried out by our group is both basic and applied. Our applied research focuses on developing solutions of Computer Vision with applications to Biomedicine. All members of the group are professors at the University of Córdoba.

Our two main interests are to address new proposals for basic research in Computer Vision, and to apply its research results to health problems involving the use of medical images.

Computer technologies in the field of Computer Vision have many potential and promising applications in health. Good examples of current trends in the field are Medical robotics and the automatic analysis of the mobility of people affected by different diseases, among many others.

In the last 5 years (2013-17) we have published more than 15 articles in JCR journals specifically in the field of Computer Vision and Pattern Recognition. Most of the publications solve basic research questions that allow developing applications to solve clinical problems. Examples of such application are patenting a human mobility analysis system and creation of a spin-off company to commercialize the product, and the development of the 3D Vision system for the surgical robot called BROCA.

We currently carry out two main projects. The first, of basic research, aims to propose new mechanisms of fusion of visual information (color, texture, key-points...) to improve 3D reconstruction processes. The second project has the objective to develop a vision system, of low cost, to ensure that the position of a patient during radiotherapy sessions is exactly the same as the position of the patient during the TAC session that will take place before the treatment and during which the specific area with tumour to be treated is planned. The vision technology we develop will be able to capture in real time and in an interactive manner the exact position of the patient's body during the TAC session, and later guide the positioning of the patient for the radiotherapy session, thus avoiding errors in targeting the radiotherapy and radiating health tissue

Our group maintains collaborations with international research groups, including regular research stays by the group members in the different collaborating centers. Some examples of international institutions with which we collaborate are the University of Orebro (Sweden), the Technical University of Munich (Germany), the University of Malta or the INRIA Research Institute (France). In addition, we maintain regular relations with several national companies developing customized vision systems.

Research lines

- 3D scanning
- Stereo Human Pose Estimation

- Augmented Reality
- Markerless Human Pose Estimation
- Human Interaction Recognition
- Human Gait Recognition
- Image Segmentation, Edge Detection, Shape analysis and Polygonal approximation

Keywords

Computer Vision, Image Segmentation, Pattern Recognition, 3D Reconstruction, Augmented Reality, Human recognition, Human pose estimation.

Scientific Production

Publications

Main Publications

Carmona-Poyato A, Aguilera-Aguilera EJ, Madrid-Cuevas FJ, Marín-Jiménez MJ, Fernández-García NL. New method for obtaining optimal polygonal approximations to solve the min- ϵ problem. *Neural Computing and Applications*. 2017;28(9): 2383-2394.

IF: 2,505
Q: 2

Lopez-Quintero M, Marín-Jimenez MJ, Muñoz-Salinas R, Medina-Carnicer R. Mixing body-parts model for 2D human pose estimation in stereo videos. *IET COMPUTER VISION*. 2017;11(6):426-433.

IF: 0,878
Q: 4

CastroFM, Marín-Jiménez MJ, Mata NG, Muñoz-Salinas R. Fisher Motion descriptor for multi-view gait recognition. *International Journal of Pattern Recognition and Artificial Intelligence*. 2017;31(1):-Article number 1756002.

IF: 0,994
Q: 4

Garrido-Castro JL, Gil-Cabezas J, da Silva-Grigoletto ME, Mialdea-Baena A, González-Navas C. Tri-

dimensional kinematic characterization of female volleyball spike [Caracterización cinemática 3D del gesto técnico del remate en jugadoras de voleibol] (2017) Revista Andaluza de Medicina del Deporte, 10 (2), pp. 69-73.

Li X, González Navas C, Garrido-Castro JL. Reliability and validity of cervical mobility analysis measurement using an inertial sensor in patients with axial spondyloarthritis. *Rehabilitacion*. 2017. 51 (1):17-21.

Research Funding

Regional

Garrido Castro JL. Development and validation of inertial sensors applied to metrology in patients with axial spondyloarthritis. Funding Agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PIN-0079-2016

National

Medina Carnicer R, Muñoz Salinas R. Vision system for tracking and mapping, fusing markers, characteristic points, 3D information and color, and its application to 3-dimensional reconstruction and augmented reality. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2016-75279-P

Muñoz Salinas R, Medina Carnicer R. Volumetric Measuring System. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-5661-1_01

Medina Carnicer R. Sistema de Visión Artificial para posicionamiento de pacientes sometidos a Radioterapia. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: IF116/00033



HIGHLIGHTS

Publications

5

Impact Factor

15,589

Average Impact Factor

3,171

Principal Investigator (PI)

Manuel Ruiz Rubio

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PAIDI BIO-272 Genetics and Behavioral Diseases

Co- Principals Investigators (CO-PI)

Juan Antonio Moriana

PAIDI HUM-924 Evidence-Based Psychology. Evaluation and design of effective psychological interventions.(PBE EDIPE)

Researchers

Alejandro Duran, Encarna

Alós Cívico, Francisco José

Antolí Cabrera, Adoración

Burgos Marín, Rafael

Guijarro Granados, Teresa

Martín Borreguero, Pilar

Moreno, Eliana

Pérez-Dueñas, Carolina

Romero Balsera, María Auxiliadora

 Sánchez Raya, M^o Araceli

Sánchez Vázquez, Vicente

 Soto Hidalgo, José Manuel

Pre-Doctoral Researchers (PhD and MSc Students)

Espejo Duran, Carmen

Rodríguez Ramos, Ángel

Rodríguez Ramos, Ángel

Gálvez Lara, Mario

Venceslá Martínez, José Fernando

Cuadrado Hidalgo, Fátima

Vacas Ruiz, Julia

Jurado González, Francisco

 Arriaga Díaz, Valle

Other members of the Group (Nursing, Technical and Administrative Staff)

Moyano Santiago, Álvaro

 Velasco Rodríguez, Judith

Scientific Activity

The group GC20 is a consolidated research group composed of over twenty researchers on genetics and behavioural diseases both from the clinical applied field and from the academic and basic research. Our research group is interprofessional and it gathers specialist from areas such as genetics, early attention, clinical and health Psychology, Artificial Intelligence and physiotherapy. Due to the multidisciplinary nature of the group, members are divided into several research lines, mainly:

1. Early detection of developmental disorders and other issues of human behaviour, as well as the development of a procedure to teach verbal and cognitive behaviours on children with developmental disabilities.
2. Clinical and health psychology, and the assessment of EST (Empirically Supported Treatments) for anxiety and depression on Primary Care services.
3. Psycho-oncology applied to cancer survivors and their families.
4. Artificial Intelligence applied to the evaluation of developmental disorders from a physiotherapeutic and psychological perspective.
5. Genetics and explanatory models for autism following model organisms based on the nematode *Caenorhabditis elegans*.

Our research has potential impact on several health areas. Research on genetics implies generating more knowledge regarding pathologies such as autism and

its genetic base. Concerning early attention, our studies may improve some of the current assessment methods through the development of IT systems for the analysis of children's development. These advances may be applied in paediatric services and in the context of child clinical Psychology as well as to improve learning procedures. Our team also endeavours to early detection of developmental disorders and neuropsychological alterations in children affected with cerebellar tumours and ataxias (cerebellum pathologies). Our studies on psychological treatments for anxiety and depression may increase actual knowledge of effective treatments, which may lead to reducing the costs associated with the treatment of depression and anxiety. In this context, we have conducted a clinical essay to demonstrate that brief therapy is a better and more efficient strategy in comparison to pharmacological treatment for anxiety and depression. To conclude, in the oncology area our research focuses on improving the psychological health of cancer patients and their families.

Research lines

- Emotional impairments in caregivers and cancer patients
- Development of a procedure to teach verbal and cognitive behaviours on children with developmental disabilities
- Brief therapies for anxiety and depression disorder in primary care. Assessment and design of psychological treatments

- Early attention. Developmental disorders and risk factors. Neuropsychological alterations on rare diseases
- *Caenorhabditis elegans* as an experimental tool for the study of complex neurological diseases

Keywords

Genetics: behaviour genetics, autism spectrum disorder, *C. elegans*
Oncology: oncology, clinical psychology, psycho-oncology
Clinical and mental health: psychological treatment, primary care, depression, anxiety, based-evidence psychology
Early attention and verbal behavior: early attention, developmental disorders, neuropsychological alterations, rare diseases, developmental disability, verbal behaviour, cognitive behaviour.

Scientific Production

Publications

Main Publications

Moriana JA; Galvez-Lara M; Corpas J. Psychological treatments for mental disorders in adults: A review of the evidence of leading international organizations. *CLINICAL PSYCHOLOGY REVIEW*. 2017.54():-. IF: 8,897
Q:1 D: 1

Rodriguez-Ramos A, Gamez-del-Estal MM, Porta-de-la-Riva M, Ceron J, Ruiz-Rubio M. Impaired Dopamine-Dependent Locomotory Behavior of *C-elegans* Neuroligin Mutants Depends on the Catechol-O-Methyltransferase COMT-4. *BEHAVIOR GENETICS*. 2017.47(6):596-608.
IF: 2,385
Q: 1

Benitez-Burraco A, Barcos-Martinez M, Espejo-Portero I, Jimenez-Romero S. Variable Penetration of the 15q11.2 BPI-BP2 Microduplication in a Family with Cognitive and Language Impairment. *MOLECULAR SYNDROMOLOGY*. 2017.8(3):139-147. IF: n/a

Other Publications

Munoz-Navarro R, Cano-Vindel A, Moriana JA, Medrano LA, Ruiz-Rodriguez P, Aguero-Gento L, Rodriguez-Enriquez M, Piza MR, Ramirez-Manent JI. Screening for generalized anxiety disorder in Spanish primary care centers with the GAD-7. *PSYCHIATRY RESEARCH*. 2017.256():312-317. IF: 2,528
Q: 2

Ruiz-Veguilla M, Moreno-Granados J, Salcedo-Marín MD, Barrigon ML, Blanco-Morales MJ, Igunza E, Canabate A, Garcia MD, Guijarro T, Diaz-Atienza F, Ferrin M. Sex-specific cognitive abnormalities in early-onset psychosis. *REVISTA BRASILEIRA DE PSIQUIATRIA*. 2017.39(1):28-35. IF: 2,049
Q: 3

Research Funding

Regional

Sánchez Raya, A. Mobile computing application for early detection, diagnosis and intervention in health care and its integration of clinical management system. Funding Agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PIN-0072-2016

National

Moriana JA. Evidence-based short psychological treatments for common disorders. A randomized trial in the specialized primary care setting. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: PSI2014-56368-R

Contracts with Companies

Ruiz Rubio M. *Caenorhabditis elegans* as models of neurological diseases. Funding agency: Canvax

Biotech S.L. Reference: INTER.0002

Moriana JA. New smartphone app for early detection of autism and the development of therapeutic activities on the part of parents and keepers. Funding agency: Fundación Privada Cajasur

Sánchez-Raya A, Luque B, Moriana JA. Agreement with the CISPS for the creation of the Early Child Care Center (Centro de Atención Infantil Temprana) of the University of Cordoba.

Clinical Trials

0040/14. Effectiveness studies for the treatment of aripiprazole in the control of severe alterations in behavior and irritability in children with autistic spectrum disorders.

PI: Dr Burgos Marín, Rafael.

3661. Evaluation of the change in emotional expression in patients with attention deficit hyperactivity disorder (ADHD) with inadequate response to methylphenidate after change in their therapeutic strategy to lisdexamfetamine dimesylate (LDX).

PI: Dr Burgos Marín, Rafael.



HIGHLIGHTS

Publications

14

Impact Factor

49,775

Average Impact Factor

3,555

Principal Investigator (PI)

Feliciano Priego Capote

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CIBER on Fragility and Healthy Aging (CIBERFES). (Collaborator)

PAIDI FQM-227 Analytical platforms in metabolomics / proteomics and waste management in the agri-food industry Merited Researcher: Luque de Castro, M^a Dolores

Researchers

Delgado Povedano, M^o del Mar

López Bascón, M^o Asunción

Mena Bravo, Antonio

Díaz Lozano, Azahara

Luque Córdoba, Diego

Castillo Peinado, Laura de Los Santos

Post-Doctoral Researchers

Calderón Santiago, Mónica

Ledesma Escobar, Carlos Augusto

Pre-Doctoral Researchers (PhD and MSc Students)

Criado Navarro, Inmaculada

Scientific Activity

Our group is mid-size team formed by 10 people. It is a consolidated group that is dedicated to basic transversal research. Our main scientific activity is focused on the development and application of metabolomics methods for application in clinical and agrofood areas. We are specialized in targeted and untargeted metabolomics analysis by using mass spectrometry. For this purpose, we are well equipped with GC-MS and LC-MS/MS equipment both in high and low resolution acquisition modes to be implemented in metabolomics analysis. In targeted analysis our main objective is to enhance sensitivity and selectivity as well as to obtain a high automation level. In this context, we have contributed to the development of a number of analytical methods with applicability in clinical analysis (vitamin D and metabolites, lipid inflammation markers, phospholipids, etc.) and agrofood characterization (phenolic compounds in olive oil, steviol glycosides, etc.). Concerning untargeted analysis our aim is to combine analytical methods to maximize the number of detected metabolites in a specific sample. We also develop analytical methods for characterization of biological samples with special emphasis on biofluids and tissues. Finally, a pipeline for identification, configuration of biomarkers panels, and further validation is also available to be applied in metabolomics analysis. Due to our transversal focus we collaborate with clinical groups to offer a

complementary view to be implemented in biomedical studies. Additionally, our group is active in the development of research projects with public and private companies which take benefits from the methodological innovation proposed by our group.

Research lines

- Development of analytical methods to improve the detection/identification coverage in metabolomics experiments
- Untargeted metabolomics analysis of biological samples for nutritional and clinical studies
- Targeted metabolomics for quantitative analysis of metabolites in nutritional and clinical studies
- Identification of bioactive compounds in agrofood products

Keywords

Metabolomics, mass spectrometry, targeted analysis, untargeted analysis, sample preparation, clinical analysis, agrofood, bioactive compounds.

Scientific Production

Publications

Main Publications

Ledesma-Escobar C.A, Priego-Capote F, Robles-Olvera VJ, Luque de Castro MD. Changes in the composition of the polar fraction of Persian lime (*Citrus latifolia*) during fruit growth by LC-QTOF MS/MS analysis. *Food Chemistry* 2017.234:262-268.
IF: 4,529
Q: 1 D: 1

Delgado-Povedano MD, Priego-Capote F, de Castro M.D. Selective ultrasound-enhanced enzymatic hydrolysis of oleuropein to its aglycon in olive (*Olea europaea* L.) leaf extracts. *Food Chemistry* 2017.220:282-288.
IF: 4,529
Q: 1 D: 1

Molina-Calle, M, Priego-Capote, F, Luque de Castro, MD. Characterization of Stevia leaves by LC-QTOF MS/MS analysis of polar and non-polar extracts. *Food Chemistry* 2017.219:329-338.
IF: 4,529
Q: 1 D: 1

Peralbo-Molina A, Calderon-Santiago M, Jurado-Gamez B, de Castro MD, Priego-Capote, F. Exhaled breath condensate to discriminate individuals with different smoking habits by GC-TOF/MS. *Scientific Reports* 2017.7:1421.
IF: 4,259
Q: 1

Calderon-Santiago M, Lopez-Bascon MA, Peralbo-Molina A, Priego-Capote F. MetaboQC: A tool for correcting untargeted metabolomics data with mass spectrometry detection using quality controls. *Talanta* 2017.174:29-37.
IF: 4,162
Q: 1

Molina-Calle M, Sánchez de Medina VS, Priego-Capote F, Luque de Castro MD. Establishing compositional differences between fresh and black garlic by a metabolomics approach based on LC-QTOF MS/MS analysis. *Journal of Food Composition and Analysis* 2017.62:155-163.
IF: 2,752
Q: 1

Molina-Calle M, Sánchez de Medina V. Calderón-Santiago M, Priego-Capote F, Luque de Castro MD. Untargeted analysis to monitor metabolic changes of garlic along heat treatment by LC-QTOF MS/MS. *Electrophoresis* 2017.38:2349-2360.
IF: 2,744
Q: 2

Molina-Calle M, Priego-Capote F, Luque de Castro MD. Headspace-GC-MS volatile profile of black garlic vs fresh garlic: Evolution along fermentation and behavior under heating. *LWT - Food Science*

and Technology 2017;80:98-105.
IF: 2,329
Q: 1

Sánchez de Medina V, Miho H, Melliou E, Magiatis P, Priego-Capote F, Luque de Castro MD. Quantitative method for determination of oleocanthal and oleacein in virgin olive oils by liquid chromatography-tandem mass spectrometry. *Talanta* 2017;162:24-31.
IF: 4,162
Q: 1

Castillo-Peinado LS, Luque de Castro MD. An overview on forensic analysis devoted to analytical chemists. *Talanta* 2017;167:181-192.
IF: 4,162
Q: 1

Luque-Córdoba D, Luque de Castro MD. Metabolomics: A potential way to know the role of vitamin D on multiple sclerosis. *Journal of Pharmaceutical and Biomedical Analysis* 2017;136:22-31.
IF: 3,255
Q: 1

Other Publications

Mitsuwan W, Olaya-Abril A, Calderon-Santiago M, Jimenez-Munguia I, Gonzalez-Reyes JA, Priego-Capote F, Voravuthikunchai SP, Rodriguez-Ortega MJ. Integrated proteomic and metabolomic analysis reveals that rhodomyrton reduces the capsule in *Streptococcus pneumoniae*. *Scientific Reports*. 2017;7:2715.
IF: 4,259
Q: 1

Ibanez MI, Cabello P, Luque-Almagro VM, Saez LP, Olaya A, Sánchez de Medina V, Luque de Castro MD, Moreno-Vivian C, Roldan MD. Quantitative proteomic analysis of *Pseudomonas pseudoalcaligenes* CECT5344 in response to industrial cyanide-containing wastewaters using Liquid Chromatography-Mass Spectrometry/Mass Spectrometry (LC-MS/MS). *Plos One*. 2017;12(3):-e0172908.
IF: 2,806
Q: 1

Serrano-Rodríguez JM, Gomez-Diez M, Esgueva M, Castejon-Riber C, Mena-Bravo A, Priego-Capote F,

Ayala N, Caballero JMS, Munoz A. Pharmacokinetic/pharmacodynamic modeling of benazepril and benazeprilat after administration of intravenous and oral doses of benazepril in healthy horses. *Research in Veterinary Science*. 2017;114():117-122.
IF: 1,298
Q: 2

Research Funding

National

López Miranda, J. (Priego Capote F. (CO-PI). This project was funded as a collaborative initiative among different research groups). Early predictors and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine (FLEXI-MET). Funding agency: National Institute of Health Carlos III (ISCIII). REF: PIE/1400005

Priego Capote, F. Strategy development for improving the mass-spectrometric detection in guided metabolomics analysis and global applied to clinical and nutrition. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: CTQ2015-68813-R.

International

Priego Capote, F. Interreg-Med Aristoil Project. Funding agency: European Commission. Reference: MED-1033

Contracts with Companies

Luque de Castro, MD, Priego Capote, F. Extraction of stevia plants: identifying the components of the extract and optimizing the extraction and purification of the compounds of interest. Funding agency: Consortium with Campus de Excelencia Internacional en Agroalimentación (ceiA3) (Agrifood Campus of International Excellence)

Luque de Castro, MD, Priego Capote, F. Analysis of vitamin D and its metabolites in human serum samples. Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: 12015111

Luque de Castro, MD, Priego Capote, F. Postprandial study after eating sausages with modified fat in obese patients and healthy adults and children. Funding Agency: Aceites Del Sur-Coosur S.A. Reference: ITC-20151323

Luque de Castro, MD, Priego Capote, F. Determination of vitamin D and its 25(OH)D 1,25(OH)2D and 24,25(OH)D metabolites (potentially also the C3 epimer) in serum samples provided by the organization. Funding agency: Ospedale San Raffaele S.R.L. Reference: PSS.0112

Luque de Castro, MD, Priego Capote, F. Metabolomics profile of sweat samples by GC-QTOF (in the latter case in positive and negative ionization modes). Identification by public databases and the private database of the Research Group. Funding Agency: Beiersdorf AG. Reference: PSS.0137

GC22 Epigenetics



HIGHLIGHTS

Publications

2

Impact Factor

10,295

Average Impact Factor

5,147

Principal Investigator (PI)

M^o Teresa Roldán Arjona

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PAIDI BIO-301 Epigenetics and repair of DNA, Genetics

Researchers

Rodríguez Ariza, Rafael

Post-Doctoral Researchers

Cordoba Cañero, M^o Dolores

García Ortiz, M^o Victoria

Morales Ruiz, M^o Teresa

Oliveira Rincón, Raphael

Parrilla Doblas, Jara Teresa

Pre-Doctoral Researchers (PhD and MSc Students)

Barbado García-Gil, Casimiro

Devesa Guerra, Iván

García Perejón, Ester

Valderrama Aguilar, Paul Fernando

Scientific Activity

The “Epigenetics” Group is a consolidated group at IMIBIC. It comprises 11 people (6 researchers, 4 pre-docs and 1 technical staff) and performs basic and applied research at the interface between Epigenetics, DNA Repair and human disease. Our primary research area is focused on developing molecular tools for epigenetic editing in human cells. Abnormal gene silencing through deposition of epigenetic marks such as DNA methylation is a hallmark of human diseases such as cancer. We are combining CRISPR technology with enzymes that initiate active DNA demethylation through DNA repair-like mechanisms for targeted reactivation of aberrantly methylated genes in cancer cells. We have shown that overexpression of a heterologous DNA demethylase in human cancer cells partially reverts their aberrant methylome to normal levels, causing reduced tumorigenesis *in vivo*. Additionally, we have recently achieved targeted DNA demethylation in human cells by fusion of a DNA demethylase to an RNA-guided dCAS9 protein. Results derived from our research may provide useful tools to epigenetically reprogram tumor cells *in vitro* and *in vivo*. A second research area of our group is focused in understanding the interconnection between Epigenetics and DNA Repair pathways. Accumulating evidence points towards important but poorly understood mechanistic links between DNA demethylation and Base Excision Repair processes, both in humans and other organisms.

Using as a model organism the plant *Arabidopsis thaliana*, we have shown that DNA repair and demethylating factors cooperate in genome maintenance and epigenome modification processes. We are now making use of the knowledge gained in plants to decipher similar mechanisms operating in human cells. Since pharmacological inhibition of DNA repair and Epigenetic processes in tumor cells is a promising approach in therapy, results in this research area may contribute to design improved cancer treatments.

The long goal of our group is to translate mechanistic findings gained through basic research in humans and other organisms into the implementation of useful diagnostic and therapeutic tools.

Our group collaborates with other IMIBIC’s groups, such as GC06 (New Therapies in Cancer) and GC03 (Infectious Diseases). We have also successful collaborative links with the Biotech Company CANVAX.

Research lines

- Targeted DNA demethylation in human cells by CRISPR-guided plant 5-meC DNA glycosylases
- Deciphering mechanistic links between Base Excision Repair and DNA demethylation

Keywords

Epigenetics, DNA repair, cancer, DNA methylation, DNA demethylation, DNA glycosylases, base excision repair.

Scientific Production

Publications

Main Publications

Cordoba-Cañero D, Cognat V, Ariza RR, Arjona TR, Molinier J. Dual control of ROS1-mediated active DNA demethylation by DNA damage-binding protein 2 (DDB2). *PLANT JOURNAL*. 2017;92(6):1170-1181. IF: 5,901
Q: 1

Parrilla-Doblas JT, Ariza RR, Roldan-Arjona T. Targeted DNA demethylation in human cells by fusion of a plant 5-methylcytosine DNA glycosylase to a sequence-specific DNA binding domain. *EPIGENETICS*. 2017;12(4):296-303. IF: 4,394
Q: 1

Research Funding

Regional

Roldán Arjona, M^o T. Molecular mechanisms of DNA demethylation and implications in epigenome reprogramming. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CVI-7576

National

Roldán Arjona, M^o T. Dynamization Actions Europe Researchs. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: 201460000027968

Roldán Arjona, M^o T. DNA repairs by base excision: from genome maintenance to epigenome issue. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2016-80728-P.

International

Roldán Arjona, M^o T. COST Action (CM1406) Epigenetic Chemical Biology (EPICHEMBO). Funding agency: European Commission. Reference: COST-2014-002

Contracts with Companies

Roldán Arjona, M^o T. Services provided for Canvax.
Funding agency: Canvax Biotech S.L. Reference:
PSS.0032



HIGHLIGHTS

PUBLICATIONS

10

IMPACT FACTOR

29,036

AVERAGE IMPACT FACTOR

2,904

Principal Investigator (PI)

Mercedes Gil Campos

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CIBER on Obesity and Nutrition (CIBERObn)

CIBER on Rare Diseases (CIBERER) (Collaborator: Eduardo López Laso)

RECLIP Spanish Pediatric Clinical Trials Network

PAIDI CTS-639 Scientific Group

Researchers

Antón Gamero, Montserrat

De La Torre Aguilar, M^o José

Flores Rojas, Katherine

Ibarra De La Rosa, Ignacio

López Laso, Eduardo

Mateos González, María Elena

Pérez Navero, Juan Luis

Post-Doctoral Researchers

Llorente Cantarero, Francisco Jesús

Pre-Doctoral Researchers (PhD and MSc Students)

Ordoñez Díaz, María Dolores

Rodríguez Benítez, María-Victoria

Gómez Fernández, Antonio Rafael

Moreno Hidalgo, Carmen Maria

Scientific Activity

The GC23 group is a group of clinical researchers, mostly medical specialists in various areas of Pediatrics, related to nutrition and metabolism. It is a consolidated group of young researchers, PhD, doctors and professors from the University of Córdoba, with assistance activity at the Reina Sofía University Hospital in Cordoba, Spain.

The main research area of development is Nutrition and Metabolism during childhood, although is related with other pediatric specialties such as Oncology, Neuropediatrics, Endocrinology, Inborn Errors of Metabolism or Nephrology. In addition, it stands out for its research on childhood obesity.

Our objectives are based on the development of quality research oriented to the most prevalent pediatric health problems, in order to achieve results that have applicability and influence clinical practice.

Specifically, we intend to identify nutritional, cardiovascular and metabolic risk factors for the prevention of childhood-onset diseases, especially cardiovascular disease and the metabolic syndrome in relation to obesity and malnutrition or underlying diseases. The prevention of these diseases controlling risk factors in childhood can have a high impact on later stages of life in health.

In addition, we participate in alliances with other national and international researchers, who are leaders in nutritional research applied to the clinic, as well

as with companies in the food sector or through clinical trials for new therapies.

Among our relevant results, we highlight the research of the metabolic syndrome in prepubertal children, and risk factors associated with genetic polymorphisms, as well as the use of probiotics and therapies in rare metabolic diseases.

Research Lines:

- Study of metabolic risk factors in metabolic syndrome and pediatric obesity
- Probiotics: Use in prevention or treatment for pediatric diseases
- Metabolic factors related with autism spectrum disease
- Pediatric Oncology

Keywords:

Autism, children, childhood, metabolic syndrome, obesity, oncology, physical activity, pre-probiotics, renal disease.

Scientific Production

Publications

Main Publications

Perez-Navero JL, de la Torre-Aguilar MJ, de la Rosa II, Gil-Campos M, Gomez-Guzman E, Merino-Cejas C, Munoz-Villanueva MC, Llorente-Cantarero FJ. Cardiac Biomarkers of Low Cardiac Output Syndrome in the Postoperative Period After Congenital Heart Disease Surgery in Children. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(4):267-274. IF: 4,485
Q: 1

Moreno-Solis G, de la Torre-Aguilar MJ, Torres-Borrego J, Llorente-Cantarero FJ, Fernandez-Gutierrez F, Gil-Campos M, Tunez-Finana I, Perez-Navero JL.

Oxidative stress and inflammatory plasma biomarkers in respiratory syncytial virus bronchiolitis. *CLINICAL RESPIRATORY JOURNAL*. 2017.11(6):839-846. IF: 2,356
Q: 3

Gil Campos M, Blasco-Alonso J, Sierra Córcoles C, Cuevas Cervera JL, Arrabal Fernández L, Aldámiz Echevarría L, Belanger A. Spanish multicenter study: hyperammonemia not associated with inborn errors of metabolism in children. *Nutr Hosp*. 2017; 34(4):814-819. I
IF: 0,7
Q: 4

Perez-Navero JL, Tejero-Hernandez MA, Gomez-Guzman E, Merino-Cejas C, De La Torre-Aguilar MJ, Llorente-Cantarero FJ. Left ventricle training before late arterial switch to correct congenital transposition of the great arteries with intact ventricular septum. *GAZZETTA MEDICA ITALIANA ARCHIVIO PER LE SCIENZE MEDICHE*.2017.176(6):359-362. IF: n/a

Other Publications

Cabezas OR, Flanagan SE, Stanescu H, García-Martínez E, Caswell R, Lango-Allen H, Antón-Gamero M, et al. Polycystic Kidney Disease with Hyperinsulinemic Hypoglycemia Caused by a Promoter Mutation in Phosphomannomutase 2. *J AM SOC NEPHROL*. 2017;28:2529-2539. IF: 8,966
Q: 1 D: 1

Batlloir M, Molero-Luis M, Arrabal L, Heras JD, Fernandez-Ramos JA, Gutierrez-Solana LG, Ibanez-Mico S, Domingo R, Campistol J, Ormazabal A, Sedel F, Opladen T, Zouvelou B, Pons R, Garcia-Cazorla A, Lopez-Laso E, Artuch R. Urinary sulphatoxymelatonin as a biomarker of serotonin status in biogenic amine-deficient patients. *SCIENTIFIC REPORTS*. 2017.7():-14675. IF: 4,259
Q: 1

Olza J, Ruperez AI, Gil-Campos M, Leis R, Canete R, Tojo R, Gil A, Aguilera CM. Leptin Receptor Gene Variant rs11804091 Is Associated with BMI and Insulin Resistance in Spanish Female Obese Children:

A Case-Control Study. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. 2017.18(8):-1690.
IF: 3,226
Q: 2

Di Cataldo A, Agodi A, Balaguer J, Garaventa A, Barchitta M, Segura V, Bianchi M, Castel V, Castellano A, Cesaro S, Couselo JM, Cruz O, D'Angelo P, De Bernardi B, Donat J, de Andoin NG, Hernandez MI, La Spina M, Lillo M, Lopez-Almaraz R, Luksch R, Mastrangelo S, Mateos E, Molina J, Moscheo C, Mura R, Porta F, Russo G, Tondo A, Torrent M, Vetrilla S, Villegas JA, Viscardi E, Zanazzo GA, Canete A. Metastatic neuroblastoma in infants: are survival rates excellent only within the stringent framework of clinical trials? CLINICAL & TRANSLATIONAL ONCOLOGY. 2017.19(1):76-83.
IF: 2,353
Q: 3

Hurtado JA, Maldonado-Lobon JA, Diaz-Ropero MP, Flores-Rojas K, Uberos J, Leante JL, Affumicato L, Couce ML, Garrido JM, Olivares M, Fonolla J, PROLAC Grp. Oral Administration to Nursing Women of Lactobacillus fermentum CECT5716 Prevents Lactational Mastitis Development: A Randomized Controlled Trial. BREASTFEEDING MEDICINE. 2017.12(4):202-209.
IF: 1,551
Q: 3

Rey Galán C, Alsina Manrique de Lara L, Antón Gamero M, Cano Garcinuño A, Solís Sánchez G. Anales De Pediatría: Onward and upward. An Pediatr. 2017:186-187.
IF: 1,14
Q: 3

Research Funding

Regional

Anton Gamero, M. Developing of clinical decision supports system for management chronic kidney disease no terminal in children based on data mining about REPIR I. Funding Agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PIN-0385-2016

Ordóñez MD. Lactoprem: Clinical trial to effectiveness lactoferrin assessment in the prevention of sepsis in preterm neonates. Biomonitoring antiin-

flamatories mechanisms, antioxidants, and the intestine microbiota. Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0323-2016

National

Gil Campos, M. CIBERObn. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: CB15/00131

Gil Campos, M. Mediterranean Lifestyle in Pediatric Obesity Prevention (MELI-POP). Funding agency: proyectos intramurales CIBEROBN 2017.

Gil Campos, M.V olumetric Measuring System. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-5661-1_02

Pérez Navero, JL. Randomized double-blind, parallel-control, placebo-controlled clinical trial to assess the efficacy and safety of docoxahenoic acid in the adjuvant treatment of children with autism spectrum disorder". Funding Agency: Premio Ambiente de la Infancia XX Convocatoria 2016. Premio Fundació Agrupación. Reference: FAGRUPACIO_002

Roa Rivas, J (Co-PI: Gil-Campos M). Ethio-pathogenic role and diagnostic/therapeutic implications of microRNAs on early puberty in obesity". Proyecto Convocatoria Miguel Servet I. 2015 CP15/0004 Año: 2016-2018

Roa Rivas J (Co-PI: Flores Rojas, K). Puberty and metabolic risk in obese children: Epigenetic alterations and pathophysiological and diagnostic implications. PUBMEP Study. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI16/01243

International

Perez Navero JL. EUCLIDS -The genetic basis of meningococcal and other life threatening bacterial infections of childhood. Funding Agency: European Commission. Reference: OPI2010/200

Mateos Gonzalez, ME. ChiLTERN - Children's Liver Tumour European Research Network Funding Agency: European Commission. Reference: PHC-18-2015-001

Contracts with Companies

Gil Campos, M. Design and development of nutritionally balanced foods, appealing and comfortable/easy to handle specified for ages 3 and 4. Funding agency: Grupo Sada P.A.S.L. Reference: ITC-20151270

Gil Campos, M. Development of advanced fats. Funding agency: Aceites Del Sur-Coosur S.A. Reference: ITC-20151323

Clinical Trials

0316/15. An International Prospective Study on Clinically Standard-risk Medulloblastoma in Children Older Than 3 to 5 Years With Low-risk Biological Profile (PNET 5 MB-LR) or Average-risk Biological Profile (PNET 5 MB-SR).
PI: Dr Mateos González, María Elena

3332. LCH-IV, International Collaborative Treatment Protocol for Children and Adolescents With Langerhans Cell Histiocytosis.
PI: Dr Mateos González, María Elena

The International working group on inborn errors of neurotransmitter metabolism.
PI: Dr López Laso, Eduardo

2010-021396-81. LINES European Low and Intermediate Risk Neuroblastoma.
PI (node): Dr María Elena Mateos

3335. Clinical trial to assess the efficacy of lactoferrin in the prevention of sepsis in premature infants. Bimonitorization of the anti-inflammatory, antioxidant and intestinal microbiota mechanisms. LACTOPREM.
PI: Dr Ordoñez Díaz, María Dolores

3477. A Phase 3, Open-Label, Multicenter Study of ALXN1210 in Children and Adolescents With Atypical Hemolytic Uremic Syndrome (aHUS).
PI: Dr Anton Gamero, Montserrat

3616. Paediatric Hepatic International Tumour Trial.
PI: Dr Mateos Gonzalez, Maria Elena

2060. An international registry which collects data on disease manifestations, interventions and out-

comes in patients with tuberous sclerosis complex.
PI: Dr López Laso, Eduardo

1783. International patient registration with Niemann-Pick tipo C.
PI: Dr López Laso, Eduardo



HIGHLIGHTS

Publications

8

Impact Factor

34,033

Average Impact Factor

4,254

Principal Investigator (PI)

Luis Martínez Martínez

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Spanish Network for Research on Infectious Diseases (REIPI)

Researchers

Bañón Arias, Rafael
 Causse del Río, Manuel
 Correa Gómez, Ignacio
 Gutiérrez-Aroca, Juan Bautista
 Gracia Ahufinger, Irene
 Harboui, Sarra
 Jenayah, Rim
 Pérez Jiménez, Ana Belén
 Rodríguez-López, Fernando Carlos
 Tejero García, Rocío

Pre-Doctoral Researchers (PhD and MSc Students)

Gutiérrez D'Onofrio, Bruno
 Guzmán Puche, Julia María
 Marfil Pérez, Eduardo
 Muñoz de la Rosa, Montserrat

Other members of the Group (Nursing, Technical and Administrative Staff)

Elías López, Cristina

Scientific Activity

The Consolidated Research Group of Clinical and Molecular Microbiology integrates (1) Clinical Microbiology Staff and Residents of the Unit of Microbiology, University Hospital Reina Sofía, (2) Professors of the Department of Microbiology-Medical School, University of Cordoba, and (3) Other Researchers and Technicians with a contractual tie to our group.

The research interests of the group include:

- Antimicrobial resistance in bacteria of medical interest, with special attention to multiresistant gram-negative organisms.
- In vitro activity of new antimicrobial agents.
- Diagnostic methods in Clinical Microbiology.

In the area of major interest for the group (antimicrobial resistance), we consider both Enterobacteria (*Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter* spp., etc.) and non-fermenters (*Pseudomonas aeruginosa* and other species, *Acinetobacter baumannii* and related species, *Stenotrophomonas maltophilia*, among others). Other studies are focused on methicillin-resistant *Staphylococcus aureus* and coryneform bacteria. Our objectives include: (1) To study mechanisms causing low-level resistance: porin alterations, (over)production of efflux pumps, (2) To study mechanisms of resistance to specific antimicrobial groups, extended-spectrum beta-lactamases, carbapenemases, plasmid-me-

diated quinolone resistance, type II topoisomerases, aminoglycoside-modifying enzymes, ARN 16S methyl-transferases)..., and (3) To characterize genes and mobile elements (plasmids, transposons, integrons, gene cassettes, etc.) involved in antimicrobial resistance.

We are also considering molecular epidemiology of multiresistant bacteria causing nosocomial infections, and the study of the relationship between antimicrobial resistance and virulence.

The achievements of our research include:

- Discovery of *qnr* genes, causing plasmid-mediated quinolone resistance. Detailed contribution of these genes to resistance and design of molecular methods for their detection.
 - Demonstration of the importance of porins in low-level resistance.
 - Analysis of penicillin-binding proteins of multiresistant *A. baumannii*.
 - Characterization of mechanisms of resistance to aminoglycosides in multiresistant enterobacteria, non-fermenters and corynebacteria.
 - Demonstration of the importance of manganese contents in culture media when testing tigecycline.
 - Collaboration in multiples clinical studies on treatment and prognosis of infections caused by multiresistant bacteria.
- We contribute to the Programs "Resistance" and "Infections in Transplanted Patients" of the Spanish network for research on infectious diseases (REIPI, <http://reipi.org/>) supported by the Institute of Health

Carlos III (ISCIII). This network has developed and is developing different multicenter studies on clinical and microbiological aspects of infections caused by resistant bacteria of clinical relevance.

Research Lines

- Mechanisms of resistance to antimicrobial agents in (multi)resistant bacteria
- In vitro activity of new antimicrobial agents
- Diagnostic methods in Clinical Microbiology

Keywords

Antimicrobial-resistance, beta-lactamases, aminoglycoside-modifying-enzymes, methyl-transferases, *Qnr*, quinolones, polymyxins, carbapenems, cephalosporins, heteroresistance, antibiogram, susceptibility-testing, molecular-typing, enterobacteria, *Pseudomonas*, *Acinetobacter*.

Scientific Production

Publications

Delgado-Valverde M, Valiente-Mendez A, Torres E, Almirante B, Gomez-Zorrilla S, Borrell N, Aller-Garcia AI, Gurgui M, Almela M, Sanz M, Bou G, Martinez-Martinez L, Canton R, Lepe JA, Causse M, Gutierrez-Gutierrez B, Pascual A, Rodriguez-Bano J, REIPI/GEIH-SEIMC BACTERAEMIA-MIC Group. MIC of amoxicillin/clavulanate according to CLSI and EUCAST: discrepancies and clinical impact in patients with bloodstream infections due to Enterobacteriaceae. *JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY*. 2017;72(5):1478-1487.

IF: 5,071

Q: 1

del Barrio-Tofino E, Lopez-Causape C, Cabot G, Rivera A, Benito N, Segura C, Montero MM, Sorli L, Tubau F, Gomez-Zorrilla S, Tormo N, Dura-Navarro R, Viedma E, Resino-Foz E, Fernandez-Martinez M, Gonzalez-Rico C, Alejo-Cancho I, Martinez JA, Labayru-Echverria C, Duenas C, Aystaran I, Zamorano L, Martinez-Martinez L, Horcajada JP, Oliver A. Genomics and Susceptibility Profiles of Extensively Drug-Resistant *Pseudomonas aeruginosa* Isolates from Spain. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017.61(11):-e01589-17.
IF: 4,302
Q: 1

Sanchez-Diener I, Zamorano L, Lopez-Causape C, Cabot G, Mulet X, Pena C, del Campo R, Canton R, Domenech-Sanchez A, Martinez-Martinez L, Arcos SC, Navas A, Oliver A. Interplay among Resistance Profiles, High-Risk Clones, and Virulence in the *Caenorhabditis elegans* *Pseudomonas aeruginosa* Infection Model. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017.61(12):-e01586-17.
IF: 4,302
Q: 1

Lazaro-Diez M, Chapartegui-Gonzalez I, Redondo-Salvo S, Leigh C, Merino D, Segundo DS, Navas J, Icardo JM, Acosta F, Ocampo-Sosa A, Martinez-Martinez L, Ramos-Vivas J. Human neutrophils phagocytose and kill *Acinetobacter baumannii* and *A-pittii*. *SCIENTIFIC REPORTS*. 2017.7(1):-4571.
IF: 4,259
Q: 1

Alibi S, Ferjani A, Boukadida J, Cano ME, Fernandez-Martinez M, Martinez-Martinez L, Navas J. Occurrence of *Corynebacterium striatum* as an emerging antibiotic-resistant nosocomial pathogen in a Tunisian hospital. *SCIENTIFIC REPORTS*. 2017.7(1):-9704.
IF: 4,259
Q: 1

Machuca I, Gutierrez-Gutierrez B, Gracia-Ahufinger I, Espinar FR, Cano A, Guzman-Puche J, Perez-Nadales E, Natera C, Rodriguez M, Leon R, Caston JJ, Rodriguez-Lopez F, Rodriguez-Bano J, Torre-Cisneros J. Mortality Associated with Bacteremia Due to Colistin-Resistant *Klebsiella pneumoniae* with High-Level Meropenem Resistance: Importance of Combination Therapy without Colistin and Carbapenems. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017.61(8):-e00406-17.

IF: 4,302
Q: 1

Ruiz P, Causse M, Vaquero M, Gutierrez JB, Casal M. Evaluation of a new automated Abbott RealTime MTB RIF/INH assay for qualitative detection of rifampicin/isoniazid resistance in pulmonary and extra-pulmonary clinical samples of *Mycobacterium tuberculosis*. *INFECTION AND DRUG RESISTANCE*. 2017.10(4):463-467.
IF: 3,779
Q: 1

Gonzalez-Garcia FJ, Guzman-Puche J, Redel-Montero J, Moreno P. Fatal bilateral haemopneumothoraces following double-lung transplantation caused by pretransplant colonization by *Scedosporium apiospermum*. *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*. 2017.51(6):1209-1209.
IF: 3,759
Q: 2

Research Fundings

National

Martínez-Martínez, L. Heteroresistance and persistence in carbapenem-resistant *Klebsiella pneumoniae*. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/O1911.

Gracia-Ahufinger, I. Study of epigenetic modifications induced by cytomegalovirus as risk and prognostic markers. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI14/O1225.

Martínez-Martínez, L (CO-IP). Spanish National Survey on *Pseudomonas aeruginosa* Antimicrobial Resistance and Epidemiology: Detecting High-risk Clones to Optimize Antipseudomonal Treatments. Funding agency: Merck, Sharp & Dhome.

Martínez-Martínez, L. Importance of the selection of stable mutants and persisters on colistin heteroresistance in *Klebsiella pneumoniae*. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI17-02241.
Expected start date: 2018

Contracts with Companies

Gracia Ahufinger, I. iCREST Agreement. Funding Agency: ASTRAZENCA FARMACEUTICA ESPAÑA S.A. Reference: PSS.0155

Martínez Martínez, L. Update of antimicrobial spectrum and potency of dalbavancin and other antibiotics tested in clinical isolates of Gram-positive pathogens from southern and central Europe and Russia. Funding Agency: QUINTILES SWITZERLAND SÀRL. Reference: CCB.0144

Clinical Trials

2595. Intestinal colonization by multiresistant enterobacteria in patients with renal and liver transplant: multicenter cohort study.
PI: Dr Gracia Ahufinger, Irene

3592. Impact of intestinal colonization by multiresistant enterobacter in systemic infections, GVHD and mortality of patients receiving allogeneic bone marrow transplantation.
PI: Dr Gracia Ahufinger, Irene



HIGHLIGHTS

TOTAL

10

IMPACT FACTOR

20,887

AVERAGE IMPACT FACTOR

2,320

Principal Investigator (PI)

Sebastián Ventura Soto

sventura@uco.es

PAIDI TIC-222 Scientific Group

Big Data y Análisis de Datos Escalable (Big-DADE)

Red de Excelencia en Ingeniería del Software basada en Búsqueda (SEBASENet)

Researchers

García Martínez, Carlos

Gibaja Galindo, Eva Lucrecia

Lucrecia Gibaja, Eva

Luque Rodríguez, María

Romero Morales, Cristóbal

Romero Salguero, José Raúl

Zafra Gómez, Amelia

Post-Doctoral Researchers

Cano Rojas, Alberto

Luna Ariza, José María

Reyes Pupo, Oscar Gabriel

Pre-Doctoral Researchers (PhD and MSc Students)

Delgado Osuna, José Antonio

Luque Guzmán, Carmen

Moyano Murillo, José María

Pérez Perdomo, Eduardo

Ramírez, Aurora

Scientific Activity

The Research Group “Knowledge Discovery and Intelligent Systems in Biomedicine” is a consolidated group of the IMIBIC. Our research team incorporates 10 researchers and 5 PhD. students.

Its research areas cover two main fields: knowledge discovery and data mining, and the application of artificial intelligence techniques for the industrial development of intelligent systems. We have experience in basic research on the areas of big data, machine learning, soft computing and optimization techniques. At the same time, we have proven experience on the use of these techniques over diverse application domains and, lately, we have focused on applying them to Biomedicine field.

Our line of work for the next years focuses on the development of data analysis methodologies/proposals for solving complex problems in Biomedicine field with great social relevance, such as melanoma prediction, alternative splicing, prediction and description of pathologies related to arterial hypertension, among others. Data analysis techniques play a fundamental role in medical diagnosis, especially with the growth of precision medicine and individualized prognosis; thus, early diagnosis models suppose a great advantage for both the patient and the health-care system, whereas, the models we obtain can shed light on the understanding of diseases.

The principal investigator of the group Sebastian Ventura Soto and the rest of

members collaborate with the PAIDI TIC-222 Scientific group. Other collaborations include highly competitive research groups both on national and international level.

Research Lines

- Development of predictive models: biomedical applications
- Pattern mining in Biomedicine
- Big Data Models
- Workflows for data science

Keywords

Biomedical data analysis, big data, data science, data mining, machine learning, predictive models, classification, regression, descriptive models, association, clusters.

Scientific Production

Publications

Main Publication

Cano A, Garcia-Martinez C, Ventura S. Extremely high-dimensional optimization with MapReduce: Scaling functions and algorithm. *INFORMATION SCIENCES*. 2017.415(1):110-127.

IF: 4,832
Q: 1 D: 1

Melki G, Cano A, Kecman V, Ventura S. Multi-target support vector regression via correlation regressor chains. *INFORMATION SCIENCES*. 2017.415(1):53-69.

IF: 4,832
Q: 1 D: 1

Moyano JM, Gibaja EL, Ventura S. MLDA: A tool for analyzing multi-label datasets. *KNOWLEDGE-BASED SYSTEMS*. 2017.121(1):1-3.

IF:4,529
Q: 1

Cano A, Ventura S, Cios KJ. Multi-objective genetic programming for feature extraction and data visualization. *SOFT COMPUTING*. 2017.21(8):2069-2089.

IF: 2,472
Q: 2

Romero C, Ventura S. Educational data science in massive open online courses. *WILEY INTERDISCIPLINARY REVIEWS-DATA MINING AND KNOWLEDGE DISCOVERY*. 2017.7(1):-UNSP e1187.

IF: 2,111
Q: 2

Altalhi AH, Luna JM, Vallejo MA, Ventura S. Evaluation and comparison of open source software suites for data mining and knowledge discovery. *WILEY INTERDISCIPLINARY REVIEWS-DATA MINING AND KNOWLEDGE DISCOVERY*. 2017.7(3):-UNSP e1204.

IF: 2,111
Q: 2

Juan AA, Loch B, Daradoumis T, Ventura S. Games and simulation in higher education. *INTERNATIONAL JOURNAL OF EDUCATIONAL TECHNOLOGY IN HIGHER EDUCATION*. 2017.14(1):-.

IF: n/a

Ramirez A, Barbudo R, Romero JR, Ventura S. Memetic Algorithms for the Automatic Discovery of Software Architectures. *INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS (ISDA 2016)*. 2017.557(1):437-447.

IF: n/a

Padillo F, Luna JM, Ventura S. Mining Perfectly Rare Itemsets on Big Data: An Approach Based on Apriori-Inverse and MapReduce. *INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS (ISDA 2016)*. 2017.557(1):508-518.

IF: n/a

Research Funding

National

Ventura-Soto, S. Data Mining with More Flexible Representations. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2014-55252-P

Ventura-Soto, S. EMERging trends in Data analysis.

Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2017-83445-P

Contracts with Companies

Ventura-Soto, S. Agreement with Santillana Global S.L. Reference: PSS.U.2017



HIGHLIGHTS

TOTAL

14

IMPACT FACTOR

40,562

AVERAGE IMPACT FACTOR

2,897

Principal Investigator (PI)

Isaac Túnez Fiñana

fm2tufii@uco.es

PAIDI CTS-624 scientific group

Spanish Brain Stimulation Network (Red Española de Estimulación Cerebral)

Spanish Multiple Sclerosis Network (REEM)

(PI: Eduardo Agüera Morales)

Researchers

Cruz Guerrero, Antonio

Gascón Luna, Félix

Gómez Chaparro, José María

Jimena Medina, Ignacio

Lillo Roldán, Rafael

Luque Carabot, Evelio

Ochoa Sepúlveda, Juan José

Peña Amaro, José

Ruiz Villen, María Concepción

Post- Doctoral Researchers

Agüera Morales, Eduardo

Ramirez Rivera, Alberto

Pre Doctoral-Researchers (PhD and MSc Students)

Conde Gavilán, Cristina

Galván Jurado, Alberto

Valverde Moyano, Roberto

Other members of the Group (Nursing, Technical, and Administrative Staff)

Giraldo Polo; Ana Isabel

La Torre Luque; Manuel

Scientific Activity

To improve knowledge of underlying mechanisms in neurodegenerative processes, especially in Multiple sclerosis.

To consolidate and position the group.

To Design new therapeutic strategies that improve the quality of life of patients.

To Establish biomarkers that allow a better monitoring of the disease, as well as the beneficial effect of the treatment applied.

Description of the role played by oxidative stress and antioxidant systems in neurodegenerative disease such as multiple sclerosis.

Description of the potential therapeutic effect of transcranial magnetic stimulation and dietary compounds (garlic and olive oil) in Huntington's disease and Multiple sclerosis models.

For more information see the group's publications.

Our research group maintains close collaborations with IMIBIC groups, as well as with other national and international groups and companies with which it conducts joint studies.

Research Lines

- Oxidative stress and neurodegenerative diseases (Huntington's disease and Multiple sclerosis).
- Transcranial magnetic stimulation and neuroplasticity.
- Role of Nutrition in development of Neurodegenerative diseases (Huntington's disease and Multiple sclerosis).

Keywords

Antioxidant systems, Huntington's disease, Multiple sclerosis, Neurodegenerative diseases, Neuroplasticity, Oxidative stress, Cell death, Transcranial magnetic stimulation

Scientific Productions

Publications

Main Publication

Escribano BM, Medina-Fernandez FJ, Aguilar-Luque M, Aguera E, Feijoo M, Garcia-Maceira FI, Lillo R, Vieyra-Reyes P, Giraldo AI, Luque E, Drucker-Colin R, Tunez I. Lipopolysaccharide Binding Protein and Oxidative Stress in a Multiple Sclerosis Model. *NEUROTHERAPEUTICS*.2017;14(1):199-211.

IF:5,166
Q:1

Rivero-Juarez A, Gonzalez R, Frias M, Manzanera-Martin B, Rodriguez-Cano D, Perez-Camacho I, Gordon A, Cuenca F, Camacho A, Pineda JA, Pena J, Rivero A. KIR2DS2 as predictor of thrombocytopenia secondary to pegylated interferon-alpha therapy. *PHARMACOGENOMICS JOURNAL*.2017;17(4):360-365.

IF:3,815
Q:1

Casado-Diaz A, Tunez-Finana I, Mata-Granados JM, Ruiz-Mendez MV, Dorado G, Romero-Sanchez MC, Navarro-Valverde C, Quesada-Gomez JM. Serum from postmenopausal women treated with a by-product of olive-oil extraction process stimulates osteoblastogenesis and inhibits adipogenesis in human mesenchymal stem-cells (MSC). *EXPERIMENTAL GERONTOLOGY*.2017;90():71-78.

IF:3,34
Q:1

Medina-Fernandez FJ, Escribano BM, Aguera E, Aguilar-Luque M, Feijoo M, Luque E, Garcia-Maceira FI, Pascual-Leone A, Drucker-Colin R, Tunez I. Effects of transcranial magnetic stimulation on oxidative stress in experimental autoimmune encephalomyelitis. *FREE RADICAL RE-*

SEARCH.2017;51(5):460-469.

IF:3,188
Q:2

Medina-Fernandez FJ, Luque E, Aguilar-Luque M, Aguera E, Feijoo M, Garcia-Maceira FI, Escribano BM, Pascual-Leone A, Drucker-Colin R, Tunez I. Transcranial magnetic stimulation modifies astrogliosis, cell density and lipopolysaccharide levels in experimental, autoimmune encephalomyelitis. *LIFE SCIENCES*.2017;169():20-26.

IF:2,936
Q:2

Escribano BM, Luque E, Aguilar-Luque M, Feijoo M, Caballero-Villarraso J, Torres LA, Ramirez V, Garcia-Maceira FI, Aguera E, Santamaria A, Tunez I. Dose-dependent S-allyl cysteine ameliorates multiple sclerosis disease-related pathology by reducing oxidative stress and biomarkers of dysbiosis in experimental autoimmune encephalomyelitis. *EUROPEAN JOURNAL OF PHARMACOLOGY*.2017;815():266-273.

IF:2,896
Q:2

Fernandez FJM, Escribano BM, Tunez I. COMMENTARY Transcranial Magnetic Stimulation in Multiple Sclerosis: A Method to Improve Movement. *CNS & NEUROLOGICAL DISORDERS-DRUG TARGETS*.2017;16(3):218-219.

IF:2,506
Q:3

Others Publication

de Lima ME, Colpo AC, Maya-Lopez M, Rosa H, Tunez I, Galvan-Arzate S, Santamaria A, Folmer V. Protective effect of Yerba mate (*Ilex paraguariensis* St. Hill.) against oxidative damage in vitro in rat brain synaptosomal/mitochondrial P2 fractions. *JOURNAL OF FUNCTIONAL FOODS*.2017;34():447-452.

IF:3,144
Q:1

Becerril-Chavez H, Colin-Gonzalez AL, Villada-Hernandez J, Galvan-Arzate S, Chavarria A, de Lima ME, Tunez I, Santamaria A. Protective effects of S-allyl cysteine on behavioral, morphological and biochemical alterations in rats subjected to chronic restraint stress: Antioxidant and anxiolytic effects. *JOURNAL OF FUNCTIONAL*

FOODS.2017.35(1):105-114.
IF:3,144
Q:1

Escamilla-Ramirez A, Garcia E, Palencia-Hernandez G, Colin-Gonzalez AL, Galvan-Arzate S, Tunez I, Sotelo J, Santamaria A.URB597 and the Cannabinoid WIN55,212-2 Reduce Behavioral and Neurochemical Deficits Induced by MPTP in Mice: Possible Role of Redox Modulation and NMDA Receptors.NEUROTOXICITY RESEARCH.2017.31(4):532-544.
IF:2,942
Q:2

Maya-Lopez M, Colin-Gonzalez AL, Aguilera G, de Lima ME, Colpo-Ceolin A, Rangel-Lopez E, Ville-da-Hernandez J, Rembao-Bojorquez D, Tunez I, Luna-Lopez A, Lazzarini-Lechuga R, Gonzalez-Puertos VY, Posadas-Rodriguez P, Silva-Palacios A, Konigsberg M, Santamaria A.Neuroprotective effect of WIN55,212-2 against 3-nitropropionic acid-induced toxicity in the rat brain: involvement of CB1 and NMDA receptors.AMERICAN JOURNAL OF TRANSLATIONAL RESEARCH.2017.9(2):261-274.
IF:2,829
Q:2

Rubio-Arias JA, Ramos-Campo DJ, Amaro JP, Esteban P, Mendizabal S, Jimenez JF.Gender variability in electromyographic activity, invivo behaviour of the human gastrocnemius and mechanical capacity during the take-off phase of a countermovement jump.CLINICAL PHYSIOLOGY AND FUNCTIONAL IMAGING.2017.37(6):741-749.
IF:2,3
Q:2

Moreno-Solis G, dela Torre-Aguilar MJ, Torres-Borrego J, Llorente-Cantarero FJ, Fernandez-Gutierrez F, Gil-Campos M, Tunez-Finana I, Perez-Navero JL.Oxidative stress and inflammatory plasma biomarkers in respiratory syncytial virus bronchiolitis.CLINICAL RESPIRATORY JOURNAL.2017.11(6):839-846.
IF:2,356
Q:3

Acosta FD, Gomez EJ, Rey IB, Rodriguez FAB, Sepulveda JJO, Fernandez RO.Intracranial stents in the endovascular treatment of acute ischemic stroke. RADIOLOGIA.2017.59(3):218-225.
IF:0

Research Funding

National

Túnez Fiñana, I. Drug development against tumor cells mothers (CSC) by screening libraries using synthetic kinase inhibitors of GPCRs and NFAT - calcineurininteraction. Funding Agency: Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2015-3386-1_1

Agüera Morales, E. Spanish Multiple Sclerosis Network. Funding agency: Institute of Health Carlos III (ISCIII). Reference: RD16/0015/0026

Contract with Companies

Agüera Morales, E. Agreement Fundacion. Funding agency: FPS. Reference: CCB.0136

Túnez Fiñana, I. Agreement Canvax. Funding agency: CANVAX BIOTECH S.L. Reference: CCB.0143

Agüera Morales, E. Agreement Roche. Funding agency: Roche Pharma SA. Reference: CCB.0156

Agüera Morales, E. Agreement Merck. Funding agency: Merck SLU. Reference: CCB.0157

Agüera Morales, E. Agreement Biogen. Funding agency: Biogen Spain SLU. Reference: PSS.0195

Túnez Fiñana, I. Development of in vitro CNS disease models and trial of the activity of active compounds identified using FRIDA. Funding agency: Canvax Biotech S.L. Reference: INTER.0001

Tunez Fiñana, I. Agreement with MBT. Funding agency: MBT SL. Reference: PSS.0115

Agüera Morales, E. Agreement with Biogen. Funding agency: Biogen Spain S.L.U. Reference: PSS.0056

Tunez Fiñana, I. Agreement with Canvax. Funding agency: Canvax Biotech S.L. Reference: PSS.0135

Clinical Trials

/3275. A Double-Blind, Placebo-Controlled Study to Examine the Safety and Efficacy of Pimavanse-

rin for the Treatment of Agitation and Aggression in Alzheimer's Disease.
PI: Dr/a Agüera Morales, Eduardo

/3478. Estudio en fase III, multicéntrico, aleatorizado, doble ciego, controlado con placebo y de grupos paralelos para evaluar la eficacia y seguridad de Crenezumab en pacientes con enfermedad de alzheimer de prodrómica o leve
PI: Dr/a Agüera Morales, Eduardo

/3630. Estudio multicéntrico, aleatorizado, doble ciego y controlado con placebo en sujetos con esclerosis múltiple recurrente para evaluar la eficacia y la seguridad de BIIB033 como tratamiento adicional a los tratamientos antiinflamatorios modificadores de la enfermedad.
PI: Dr/a Agüera Morales, Eduardo

0050/15. Estudio fase II, prospectivo, multicentrico, randomizado, doble ciego, controlado con placebo, de grupos paralelos para comparar la eficacia y seguridad de masitinib frente a placebo en pacientes con deterioro cognitivo asociado a la enfermedad de Parkinson. A prospective, multicenter, randomised, double-blind, placebo-controlled, parallel group, phase 2 study to compare the efficacy and safety of masitinib versus placebo on cognitive impairment associated with Parkinson's disease.
PI: Dr/a Agüera Morales, Eduardo

2569. Estudio observacional y prospectivo para evaluar la efectividad de inyecciones de la toxina botulínica tipo A (BoNT-A) en pacientes con espasticidad de miembros superiores y/o inferiores tras un ictus, en la fase temprana del desarrollo de la espasticidad. (ETREAT)
PI: Dr/a Ochoa Sepulveda, Juan José

3042. Estudio observacional, no intervencionista para evaluar los cambios en la calidad de vida en pacientes con esclerosis múltiple remitente recurrente tratados con alemtuzumab (Lemtrada) en condiciones de práctica clínica habitual.
PI: Dr/a Agüera Morales, Eduardo

3596. Evaluación de las necesidades de información de pacientes con esclerosis múltiple en España: preocupaciones, preferencias y nivel de satisfacción según su personalidad y características clínicas y funcionales (infoseek-ms).
PI: Dr/a Agüera Morales, Eduardo

/3067. A randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of sage-547 injection in the treatment of subjects with super-refractory status epilepticus
PI: [Dr/a Estevez María, José Carlos](#)

/3625. Estudio de extensión abierto y multicéntrico para evaluar la seguridad y eficacia a largo plazo de Lacosamida como tratamiento complementario para las crisis tónico-clónicas generalizadas primarias no controladas en pacientes con epilepsia idiopática generalizada
PI: [Dr/a Estevez María, José Carlos](#)

/3626. Estudio doble ciego, aleatorizado, controlado con placebo, de grupos paralelos, multicéntrico para evaluar la seguridad y la eficacia de Lacosamida como tratamiento complementario para las crisis tónico-clónicas generalizadas primarias no controladas en pacientes con epilepsia idiopática generalizada.
PI: [Dr/a Estevez María, José Carlos](#)

0255/13. Ensayo Clínico Fase II, Multicéntrico, Abierto, Controlado y Aleatorizado, para valorar la eficacia de la Infusión Intra arterial de células Mononucleadas de Médula Ósea Autóloga en Pacientes Con Ictus Isquémico
PI: [Dr/a Valverde Moyano, Roberto](#)

0133/09. A multicenter, extension, blind-dose study to determine the safety and efficacy of long-term monotherapy dose of BG00012 in patients with relapsing-remitting multiple sclerosis
PI: [Dr/a Agüera Morales, Eduardo](#)

0106/11. A long-term, prospective, observational safety study of patients with multiple sclerosis who participated in clinical trials with cladribine
PI: [Dr/a Agüera Morales, Eduardo](#)

0301/13. A prospective, multicenter, randomized, double-blind, parallel-group, placebo-controlled, phase III 96-week duration study to assess the efficacy and safety of masitinib 4.5mg/kg/day vs placebo.
PI: [Dr/a Agüera Morales, Eduardo](#)

0011/14 .A multicenter, randomized, double-blind, placebo-controlled study to assess the safety and efficacy of eculizumab in patients with recurrent optic neuromyelitis (NMO).
PI: [Dr/a Valverde Moyano, Roberto](#)

0235/14. An open, multicenter, aleatorized study to assess the impact of natalizumab against tissue damage fingolimod in central nervous system and in recovery of subjects with multiple sclerosis
PI: [Dr/a Sánchez López, Fernando](#)

0150/15. A phase 3 multicenter, randomized, double-blind, placebo-controlled, parallel-group study to evaluate the efficacy and safety of aducanumab (biib037) in subjects with early Alzheimer's disease.
PI: [Dr/a Agüera Morales, Eduardo](#)

0321/15. Multicenter Follow-Up Study to Assess Log-Term Electrophysiological and Clinical Outcomes in Subjects Previously Enrolled in Study 215ON201.
PI: [Dr/a Agüera Morales, Eduardo](#)

*3268. Open-Label, Randomised, Multicenter, Multiple-Dose, Active Controlled, Parallel-Group, Efficacy and Safety Study of BG00012 in Children from 10 to less than 18 years of age with relapsing-remitting multiple sclerosis, with optional open-label extension.
PI: [Dr/a Agüera Morales, Eduardo](#)

*3066. An International, Double-blind, Randomised, Placebo-controlled Phase IIb Trial to Assess the Efficacy, Safety, and Pharmacokinetics of GNBAC1 in Patients With Relapsing Remitting Multiple Sclerosis.
PI: [Dr/a Agüera Morales, Eduardo](#)

3007. Spanish patient registration treated with glatiramer acetate (Copaxone®) 40mg/ml.
PI: [Dr/a Agüera Morales, Eduardo](#)

3012. Retrospective epidemiological study to analyse clinical and radiological disease activity in patients with relapsing-remitting multiple sclerosis following withdrawal of Natalizumab in routine medical practice.
PI: [Dr/a Agüera Morales, Eduardo](#)

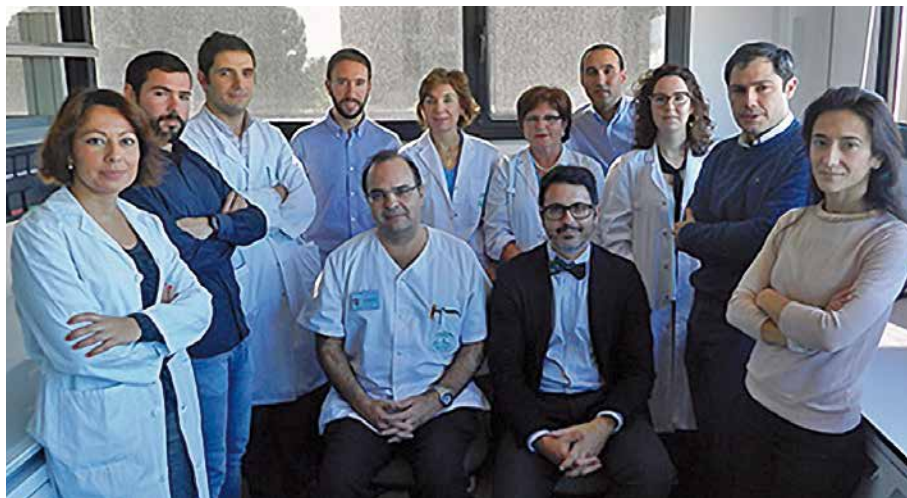
3196. Retrospective study of adherence to the Spanish consensus to treatments for spasticity in multiple sclerosis in Spain.
PI: [Dr/a Agüera Morales, Eduardo](#)

3222. A multicenter, global, retrospective, observational study to characterize real-world clinical outcomes in patients with relapsing-remitting multiple sclerosis treated with disease-modifying therapies

(Tecfidera, Copaxone, Aubagio, or Gilenya) (EFFECT)
PI: [Dr/a Agüera Morales, Eduardo](#)

GE3

Inflammatory immune-mediated cutaneous diseases



HIGHLIGHTS

Publications

15

Impact Factor

51,822

Average Impact Factor

3,4548

Principal Investigator (PI)

Juan A Ruano Ruíz

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Researchers

Isla Tejera, Beatriz

Vélez García-Nieto, Antonio

Post-Doctoral Researchers

González Padilla, Marcelino

Gómez García, Francisco

Pre-Doctoral Researchers (PhD and MSc Students)

Aguilar Luque, Macarena

Carmona Fernández, Pedro Jesús

Gay Mimbrera, Jesús

Hernandez Romero, José Luis

Sanz Cabanillas, Juan Luis

Vigueras Guerra, Isabel

Other members of the Group (Nursing, Technical and Administrative Staff)

Alcalde Mellado, Patricia

Clemente Milla, María del Carmen

López García, María

López González, Carmen

Maestre López, Beatriz

Montilla López, Ana María

Scientific Activity

The final goal of our team, established since 2015 as an emergent research group at the IMIBIC, is to find those evidences that help to make decisions in the clinical setting to improve the diagnosis and the treatment of the patients with immune-mediated chronic inflammatory skin diseases of high prevalence or of special severity, such as psoriasis, atopic dermatitis, chronic urticaria, vitiligo, suppurative hidrosadenitis, and various chronic alopecias such as alopecia areata or frontal fibrosing alopecia.

Our group consists of 17 researchers: 11 Clinicians (6 Dermatologists, 2 Hospital Pharmacists, and 3 Nurses) and 6 non-clinicians (1 Study Coordinator, 2 BSc in Biology PhD candidates, 3 Medical Students).

Our group also promotes the participation of students of undergraduate, postgraduate, and physician specialists in training by means of collaboration with the degrees and postgraduate programs of Medicine, Chemical sciences, and Biotechnology (medical Education, MSc programs, PhD programs).

All research activities of the group are guided by our commitment to:

1. Encourage participation of citizens in observational studies and clinical trials promoted and participated by our group.
2. Promote actions that attract the R + D + I industry by offering collaborations in the form of service delivery models or co-development agreements of in-

novative ideas from results obtained by our group or from needs or problems found in relation to some research product of the industry itself.

3. Stimulate transversal collaboration with other research groups dedicated to areas such as applied physics, nanotechnology, and evidence synthesis or with other high level Spanish or foreign centers (Cochrane collaboration, Rockefeller University, Mount Sinai Hospital).
4. Communicate to other researchers and citizens the results obtained, through participation in scientific meetings, publications in journals and meetings with associations of patients and young people in training, who visit us regularly.
5. Collaborate with the other groups of the IMIBIC in generating talent in future generations of researchers, especially in those with clinical profile, through collaboration with the Degree and Postgraduate programs of the University of Cordoba and the University of Granada.

Research lines

- Characterization at the molecular level of the immunological mechanisms that determine the pathogenesis of immune-mediated chronic inflammatory skin diseases
- Identification of new environmental, clinical and molecular factors that help us to better understand the behavior of

the different drugs in real practice setting

- The development of systematic reviews, meta-analysis and meta-epidemiological studies
- The development of different clinical trials to evaluate the efficacy, tolerance and safety of drugs before they are approved by the corresponding regulatory agencies, in our case to EMA and AEMPS

Keywords

Immune-mediated skin diseases, psoriasis, atopic dermatitis, vitiligo, alopecia areata, genetic polymorphisms, biological therapies, cell culture, cold atmospheric plasma, cost-efficiency analyses, systematic reviews, meta-analyses, meta-epidemiology.

Scientific Production

Publications

Main Publications

Gomez-Garcia F, Ruano J, Gay-Mimbrera J, Aguilar-Luque M, Sanz-Cabanillas JL, Alcalde-Mellado P, Maestre-Lopez B, Carmona-Fernandez PJ, Gonzalez-Padilla M, Garcia-Nieto AV, Isla-Tejera B. Most systematic reviews of high methodological quality on psoriasis interventions are classified as high risk of bias using ROBIS tool. *JOURNAL OF CLINICAL EPIDEMIOLOGY*. 2017;92():79-88.

IF: 4,978
Q:1 D:1

Gomez-Garcia F, Epstein D, Isla-Tejera B, Lorente A, Garcia-Nieto AV, Ruano J. Short-term efficacy and safety of new biological agents targeting the interleukin-23-T helper 17 pathway for moderate-to-severe plaque psoriasis: a systematic review

and network meta-analysis. BRITISH JOURNAL OF DERMATOLOGY. 2017;176(3):594-603.
IF: 4,706
Q: 1 D:1

Gomez-García F, Ruano J, Aguilar-Luque M, Gay-Mimbrera J, Maestre-Lopez B, Sanz-Cabanillas JL, Carmona-Fernandez PJ, Gonzalez-Padilla M, Garcia-Nieto AV, Isla-Tejera B. Systematic reviews and meta-analyses on psoriasis: role of funding sources, conflict of interest and bibliometric indices as predictors of methodological quality. BRITISH JOURNAL OF DERMATOLOGY. 2017;176(6):1633-1644.
IF: 4,706
Q: 1 D:1

Gomez-García F, Ruano J, Aguilar-Luque M, Alcalde-Mellado P, Gay-Mimbrera J, Hernandez-Romero JL, Sanz-Cabanillas JL, Maestre-Lopez B, Gonzalez-Padilla M, Carmona-Fernandez PJ, Garcia-Nieto AV, Isla-Tejera B. Abstract analysis method facilitates filtering low-methodological quality and high-bias risk systematic reviews on psoriasis interventions. BMC MEDICAL RESEARCH METHODOLOGY. 2017;17():-180.
IF: 3,295
Q: 1

Sanz-Cabanillas JL, Ruano J, Gomez-García F, Alcalde-Mellado P, Gay-Mimbrera J, Aguilar-Luque M, Maestre-Lopez B, Gonzalez-Padilla M, Carmona-Fernandez PJ, Garcia-Nieto AV, Isla-Tejera B. Author-paper affiliation network architecture influences the methodological quality of systematic reviews and meta-analyses of psoriasis. PLOS ONE. 2017;12(4):-e0175419.
IF: 2,806
Q: 1

Gay-Mimbrera J, Garcia MC, Isla-Tejera B, Rodeiro-Serrano A, Garcia-Nieto AV, Ruano J. Clinical and Biological Principles of Cold Atmospheric Plasma Application in Skin Cancer (vol 33, pg 894, 2016). ADVANCES IN THERAPY. 2017;34(1):280-280.
IF: 2,709
Q: 2

Other Publications

Davila-Seijo P, Dauden E, Descalzo MA, Carretero G, Carrascosa JM, Vanaclocha F, Gomez-García FJ, de

la Cueva-Dobao P, Herrera-Ceballos E, Belinchon I, Lopez-Estebarez JL, Alsina M, Sanchez-Carazo JL, Ferran M, Torrado R, Ferrandiz C, Rivera R, Llamas M, Jimenez-Puya R, Garcia-Doval I, BIOBADADERM Study Grp. Infections in Moderate to Severe Psoriasis Patients Treated with Biological Drugs Compared to Classic Systemic Drugs: Findings from the BIOBADADERM Registry. JOURNAL OF INVESTIGATIVE DERMATOLOGY. 2017;137(2):313-321.
IF: 6,287
Q: 1 D: 1

Belinchon I, Ramos JM, Carretero G, Ferrandiz C, Rivera R, Dauden E, De la Cueva-Dobao P, Gomez-García FJ, Herrera-Ceballos E, Sanchez-Carazo JL, Lopez-Estebarez JL, Alsina M, Ferran M, Torrado R, Carrascosa JM, Llamas-Velasco M, Ortiz PL, Garcia-Doval I, Descalzo MA, Biobadaderm Study Grp. Adverse events associated with discontinuation of the biologics/classic systemic treatments for moderate-to-severe plaque psoriasis: data from the Spanish Biologics Registry, Biobadaderm. JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY. 2017;31(10):1700-1708.
IF: 3,528
Q: 1

Perez-Plaza A, Carretero G, Ferrandiz C, Vanaclocha F, Gomez-García FJ, Herrera-Ceballos E, De la Cueva-Dobao P, Belinchon I, Sanchez-Carazo JL, Alsina M, Lopez-Estebarez JL, Ferran M, Torrado R, Carrascosa JM, Llamas-Velasco M, Rivera R, Jimenez-Puya R, Garcia-Doval I, Descalzo MA, Biobadaderm Study Grp. Comparison of phenotype, comorbidities, therapy and adverse events between psoriatic patients with and without psoriatic arthritis. Biobadaderm registry. JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY. 2017;31(6):1021-1028.
IF: 3,528
Q: 1

Mejias SG, Carretero G, Ferrandiz C, Vanaclocha F, Dauden E, Gomez-García FJ, Herrera-Ceballos E, Belinchon-Romero I, Sanchez-Carazo JL, Lopez-Estebarez JL, Alsina M, Ferran M, Torrado R, Carrascosa JM, Rivera R, Llamas-Velasco M, Jimenez-Puya R, Mendiola MV, Ruiz-Genao D, Descalzo MA, de la Cueva Dobao P, del grupo Biobadaderm. Management of Biologic Therapy In Moderate to Severe Psoriasis in Surgical Patients:

Data From the Spanish Biobadaderm registry. AC-TAS DERMO-SIFILIOGRAFICAS. 2017;108(1):52-58.
IF: n/a

Escribano BM, Luque E, Aguilar-Luque M, Feijóo M, Caballero-Villarraso J, Torres LA, Ramirez V, Garcia-Maceira FI, Agüera E, Santamaria A, Túnez I. Dose-dependent S-allyl cysteine ameliorates multiple sclerosis disease-related pathology by reducing oxidative stress and biomarkers of dysbiosis in experimental autoimmune encephalomyelitis. Eur J Pharmacol. 2017 Nov 15;815:266-273
IF: 2,896
Q: 2

Medina-Fernandez FJ, Escribano BM, Agüera E, Aguilar-Luque M, Feijoo M, Luque E, Garcia-Maceira FI, Pascual-Leone A, Drucker-Colin R, Túnez I. Effects of transcranial magnetic stimulation on oxidative stress in experimental autoimmune encephalomyelitis. Free Radic Res. 2017 May;51(5):460-469
IF: 3,188
Q: 2

Medina-Fernández FJ, Luque E, Aguilar-Luque M, Agüera E, Feijóo M, García-Maceira FI, Escribano BM, Pascual-Leone A, Drucker-Colin R, Túnez I. Transcranial magnetic stimulation modifies astrocytosis, cell density and lipopolysaccharide levels in experimental autoimmune encephalomyelitis. Life Sci. 2017 Jan 15;169:20-26
IF: 2,936
Q: 2

Alcantara-Reifs CM, Garnacho-Saucedo G, Salido-Vallejo R, Velez Garcia-Nieto A. Topical Amphotericin B for the treatment of localized cutaneous leishmaniasis. DERMATOLOGIC THERAPY. 2017;30(1):-UNSP e12402.
IF: 1,093
Q: 4

Escribano BM, Medina-Fernández FJ, Aguilar-Luque M, Agüera E, Feijoo M, Garcia-Maceira FI, Lillo R, Vieyra-Reyes P, Giraldo AI, Luque E, Drucker-Colin R, Túnez I. Lipopolysaccharide Binding Protein and Oxidative Stress in a Multiple Sclerosis Model. Neurotherapeutics. 2017 Jan;14(1):199-211
IF: 5,166
Q: 1

Research Funding

Regional

Ruano Ruiz, J. Éaco Project: Development and validation of a technological network instrument for support in decision making in clinical practice. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Funding Agency: PIN-0316-2017

National

Ruano Ruiz, J. Ensayo clínico aleatorizado y multicéntrico para evaluar, en términos de coste-eficiencia, un modelo predictivo de respuesta a fármacos anti-TNFs en psoriasis moderada-severa. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: IC114/00136

International

Ruano Ruiz, J. Inflammatory Skin Disease Summit. Funding agency: Icahn School Of Medicine Mount Sinai. Reference: ISDS 2016-001

Clinical Trials

0251/14. Phase 3, Multicenter, Randomized, Double-blind, Placebo and Active Comparator-controlled Study Evaluating the Efficacy and Safety of Guselkumab in the Treatment of Subjects With Moderate to Severe Plaque-type Psoriasis. PI: Dr Ruano Ruiz, Juan A.

0032/15. Long Term Clear Skin Maintenance Treatment Optimization in Patients With Moderate to Severe Chronic Plaque Psoriasis: A Randomized, Multicenter, Open-label With Blinded-assessment, Comparative, 52 Week Study to Evaluate the Efficacy, Safety and Tolerability of Secukinumab 300 mg s.c. PI: Dr Ruano Ruiz, Juan A.

0104/15. A multicenter, randomized, double-blind, placebo and active-controlled phase 2b dose-finding study of QGE031 as add-on therapy to investigate the efficacy and safety in patients with Chronic Spontaneous Urticaria (CSU). PI: Dr Ruano Ruiz, Juan A.

0020/16. An Open Label, Multicenter, Extension Study to Evaluate the Long-term Safety of QGE031 240 mg s.c. Given Every 4 Weeks for 52 Weeks in Chronic Spontaneous Urticaria Patients Who Completed Study CQGE031C2201. PI: Dr Ruano Ruiz, Juan A.

0125/15. A Double-Blind, Randomized, Parallel-Group, Active-Control Study to Compare the Efficacy and Safety of CHS-1420 Versus Humira in Subjects With Chronic Plaque Psoriasis. PI: Dr Ruano Ruiz, Juan A.

3247. A Multicentre, Randomized, Double-blind, Parallel-group, Controlled Study, to Assess the Efficacy and Safety of P-3074 Cutaneous Spray, Solution, in the Treatment of Male Pattern Baldness. PI: Dr Ruano Ruiz, Juan A.

3438. A Phase 3, Multicenter, Randomized, Double-blind Study Evaluating the Comparative Efficacy of CNTO 1959 (Guselkumab) and Secukinumab for the Treatment of Moderate to Severe Plaque-type Psoriasis. PI: Dr Ruano Ruiz, Juan A.

3587. Open clinical study to evaluate the efficacy and long-term safety of dimethyl fumarate in adults with chronic moderate to severe plaque psoriasis in clinical practice (Estudio DIMESKIN 1). PI: Dr Vélez García-Nieto, Antonio

2700. Construction of a model to predict the response to anti-TNF drugs used for the treatment of moderate-to-severe psoriasis in routine medical practice. PI: Dr Ruano Ruiz, Juan Alberto

2719. World-wide antihistamine-refractory chronic urticaria patient evaluation. AWARE Study PI: Dr/a Ruano Ruiz, Juan A.

2740. Application of genomic techniques and image processing using artificial intelligence to obtain a predictor model for risk of melanoma. PI: Dr Ruano Ruiz, Juan A.



HIGHLIGHTS

TOTAL

4

IMPACT FACTOR

5,376

AVERAGE IMPACT FACTOR

1,344

Principal Investigator (PI)

Bárbara Luque Salas

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PAIDI HUM-414 Gender, communication systems, beliefs and education
PAIDI HUM-924 Evidence-Based Psychology.
Evaluation and design of effective psychological interventions (PBE EDIPE)

Researchers

Antolí Cabrera, Adoración

Moreno Arenas, Alicia

Pérez Dueñas, Carolina

Rubio García, Sebastián

 Tabernero Urbieto, María del Carmen

Post-Doctoral Researchers

Cuadrado, Esther

Castillo Mayén, Rosario

 Moyano Pacheco, Manuel

Pre-Doctoral-Researchers (PhD and MSc Students)

 Gutiérrez Domingo, Tamara

Scientific Activity

our group studies the influence of psychosocial variables (age, sex, socioeconomic level, educational level, social support) and motivational processes (cognitive, affective and personality) on adherence to diet, life satisfaction and quality of life of patients with cardiovascular disease. We analyze the behavior of patients with cardiovascular disease from a social cognitive approach with the aim to design intervention programs based on the promotion of health through scientific evidence. More specifically, we aim to validate a model of structural equations that will allow the determination of the weight and interaction of motivational variables in adherence to diet, quality of life and well-being of patients suffering from cardiovascular diseases. Subsequently, we aim to test the effectiveness of an intervention program based on self-monitoring by the patients. One of our central research activities include the development of a training program for the regulation of emotions for facing stressful events. This intervention program will provide the keys for patients to become familiar with self-regulation of emotions in stressful situations through e-HEALTH platforms. Finally, we aim at extending our research activities to evaluate the relationship and impact of the proposed psychosocial and motivational variables with other biomedical variables collected from other IMIBIC teams (e.g. GC-09 Nutrigenomics, Metabolic Syndrome) and to widen our collaboration

to several other research areas of IMIBIC. Our current collaborators include the Universidad degli Studi Roma La Sapienza (Italy), PAIDI CTS-525, The GC-09 Nutrigenomics, metabolic syndrome of IMIBIC, and the INDRHO research group (Investigación y Desarrollo de Recursos Humanos y Organizaciones, Grupo PAIDI HUM-568) of the University of Sevilla.

Research Lines

- Relationship and impact of psychosocial and motivational variables with other biomedical variables
- Self-regulation of emotions in stressful situations through e-HEALTH platforms
- Effectiveness of interventions based on the self-monitoring of patients with cardiovascular disease
- The weight and interaction of motivational variables in adherence to diet, quality of life and well-being of patients with cardiovascular disease
- The relationship between emotional processing and greater affective well-being in aging

Keywords

Motivation, self-efficacy, aging, women, positivity, emotions, diet, cardiovascular disease, cope with stress, emotional self-regulation, management training programs, e-health.

Scientific Production

Publications

Main Publications

Cuadrado E, Tabernero C, García R, Luque B, Seibert J. The Role of Prosocialness and Trust in the Consumption of Water as a Limited Resource. *FRONTIERS IN PSYCHOLOGY*. 2017;8:694.
IF: 2,323
Q: 2

Cuadrado E, Tabernero C, García R, Luque B. The interactive effect of pro-environmental disciplinary concentration under cooperation versus competition contexts. *ENVIRONMENTAL EDUCATION RESEARCH*. 2017;23(6):797-811.
IF: 1,709
Q: 1

Luque B, Yañez V, Tabernero C, Cuadrado E. The role of coping strategies and self-efficacy as predictors of life satisfaction in a sample of parents of children with autism spectrum disorder. *PSICOTHEMA*. 2017;29(1):55-60.
IF: 1,344
Q: 2

Tabernero C, Serrano A, Merida R. A comparative study on self-esteem among students with different socio-economic status. *PSICOLOGIA EDUCATIVA*. 2017;23(1):9-17.

Research Funding

National

Tabernero Urbieta, CM. Influence of self-efficacy and other motivational variables on diet compliance, quality of life and well-being of patients with cardiovascular disease. Funding agency: Ministry of Economy and Competitiveness (MINECO). Reference: PSI2014-58609-R



HIGHLIGHTS

Publications

15

Impact Factor

40,559

Average Impact Factor

2,703

Principal Investigator (PI)

María José Requena Tapia

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Researchers

 Anglada Jurado, Francisco
 Prieto Castro, Rafael

Post-Doctoral Researchers

 Blanca Pedregosa, Ana María
 Carrasco Valiente, Julia
 Campos Hernández, Juan Pablo

Pre-Doctoral Researchers (PhD and MSc Students)

 Sánchez González, Álvaro
 Rubio Galisteo, Juan Manuel

Other members of the Group (Nursing, Technical and Administrative Staff)

 Gil Contreras, Daniel

Scientific Activity

Our research group is denominated "GE05 Genitourinary diseases", and encompasses a multidisciplinary team of both basic and clinical post-doctoral researchers who are specialised in the area, pre-doctoral researchers, and staff in charge of coordination of clinical trials. All of them are committed to quality translational research.

Our main activities include the study of the tumoral pathology of the genitourinary system and associated oncological research. We develop various lines of research in this area, aimed at the discovery of new biomarkers for the diagnosis and prognosis of urological tumors (Bladder Cancer, Prostate Cancer and Kidney).

Currently, our group carries out several research projects focused on the identification of non-muscle invasive bladder cancer prognostic factors. The results could contribute to the development of a genetic signature test to be used for the prognosis of bladder cancer. A more accurate prognosis is important as it is decisive for the selection of the most optimal and individualized treatment for each patient, thus improving patient care and health outcomes

We also maintain stable collaboration with the biotechnology company Life length in the context of the European project called ONCOCHECK that was granted to the company within the Horizon 2020 Framework Program. ONCOCHECK aims at deepening the knowl-

edge of genetic factors, such as the measurement of Chromosomal length, which can influence the development of prostate cancer and its clinical evolution. Our group is one of the partners participating in the project's clinical study in prostate cancer.

In the field of kidney transplantation, our group is focused on the search for new strategies that improve the prognosis of the transplanted organ. Finally, the group's experience in the field of robotic surgery could play an important role in the field of laparoscopic surgery.

Research Lines

- Identification and development of a gene expression profile with prognostic significance of bladder cancer behavior and predictive of response to treatment
- Identification of markers in plasma and urine of patients with prostate cancer (PCa)
- Research of new strategies and techniques to improve laparoscopic surgery, using robotic surgery

Keywords

Bladder cancer, prostate cancer, kidney transplantation, biomarkers, diagnosis, prognosis, predictive, robotic laparoscopic surgery.

Scientific Production

Publications

Main Publications

Blanca A, Cheng L, Montironi R, Moch H, Massari F, Fiorentino M, Raspollini MR, Scarpelli M, Lopez-Beltran A. Mirna Expression in Bladder Cancer and Their Potential Role in Clinical Practice. *CURRENT DRUG METABOLISM*. 2017;18(8):712-722.

IF: 2,659

Q: 2

Gomez-Gomez E, Carrasco-Valiente J, Blanca-Pedregosa A, Barco-Sanchez B, Fernandez-Rueda JL, Molina-Abril H, Valero-Rosa J, Font-Ugalde P, Requena-Tapia MJ. European Randomized Study of Screening for Prostate Cancer Risk Calculator: External Validation, Variability, and Clinical Significance. *UROLOGY*. 2017;102(1):85-91.

IF: 2,309

Q: 2

Pedregosa AMB, Sanchez-Gonzalez A, Valiente JC, Garcia JMR, Gomez EG, Beltran AL, Tapia MJR. Expression of proteins FGFR3, PI3 K, AKT, p21Waf1/Cip1 and cyclins D1 and D3 in patients with T1 bladder tumours: clinical implications and prognostic significance. *ACTAS UROLOGICAS ESPANOLAS*. 2017;41(3):172-180.

IF: 1,181

Q: 4

Valiente JC, Gomez EG, Tapia MJR. Epidemiology of urinary lithiasis in Spain: New scenarios. *ARCHIVOS ESPANOLAS DE UROLOGIA*. 2017;70(1):3-11.

IF: 0,323

Q: 4

Prieto R, Cruz N, Cabello F, Garcia F, Fernandez A, Larrazabal M, Martin A, Sanchez F, Martin CS, Viladoms J. Diagnosis, treatment and follow-up of premature ejaculation: Expert's recommendations. *REVISTA INTERNACIONAL DE ANDROLOGIA*. 2017;15(2):70-77.

IF: 0,261

Q: 4

Carrasco J, Arias MR, Perula LA, Campos JP, Prieto R, Requena MJ. Renal lithiasis, erectile dysfunction and ADAM test: Observational study using tele-

phone survey. REVISTA INTERNACIONAL DE ANDROLOGIA. 2017.15(4):153-159.
IF: 0,261
Q: 4

Other Publications

Pedraza-Arevalo S, Hormaechea-Agulla D, Gomez-Gomez E, Requena MJ, Selth LA, Gahete MD, Castano JP, Luque RM. Somatostatin receptor subtype 1 as a potential diagnostic marker and therapeutic target in prostate cancer. PROSTATE. 2017.77(15):1499-1511.
IF: 3,82
Q: 1

Hormaechea-Agulla D, Gahete MD, Jimenez-Vacas JM, Gomez-Gomez E, Ibanez-Costa A, L-Lopez F, Rivero-Cortes E, Sarmiento-Cabral A, Valero-Rosa J, Carrasco-Valiente J, Sanchez-Sanchez R, Ortega-Salas R, Moreno MM, Tsomaia N, Swanson SM, Culler MD, Requena MJ, Castano JP, Luque RM. The oncogenic role of the In1-ghrelin splicing variant in prostate cancer aggressiveness. MOLECULAR CANCER. 2017.16():-146.
IF: 6,204
Q: 1

Hormaechea-Agulla D, Jimenez-Vacas JM, Gomez-Gomez E, Lopez FL, Carrasco-Valiente J, Valero-Rosa J, Moreno MM, Sanchez-Sanchez R, Ortega-Salas R, Gracia-Navarro F, Culler MD, Ibanez-Costa A, Gahete MD, Requena MJ, Castano JP, Luque RM. The oncogenic role of the spliced somatostatin receptor sst5TMD4 variant in prostate cancer. FASEB JOURNAL. 2017.31(11):4682-4696.
IF: 5,498
Q: 1 D: 1

Izquierdo L, Montalbo R, Ingelmo-Torres M, Mallofre C, Ramirez-Backhaus M, Rubio J, Van der Heijden AG, Schaafsma E, Lopez-Beltran A, Blanca A, Lawrentschuk N, Alcaraz A, Mengual L. Prognostic microRNAs in upper tract urothelial carcinoma: multicenter and international validation study. ONCOTARGET. 2017.8(31):51522-51529.
IF: 5,168
Q: 1

Ciccarese C, Massari F, Blanca A, Tortora G, Montironi R, Cheng L, Scarpelli M, Raspollini MR, Vau N, Fonseca J, Lopez-Beltran A. Tp53 and its po-

tential therapeutic role as a target in bladder cancer. EXPERT OPINION ON THERAPEUTIC TARGETS. 2017.21(4):401-414.
IF: 4,873
Q: 1

Lopez-Beltran A, Paner G, Blanca A, Montironi R, Tsuzuki T, Nagashima Y, Chuang SS, Win KT, Madruga L, Raspollini MR, Cheng L. In reply to: letter to the editor entitled: primary pure lymphoepithelioma-like carcinoma of the ureter. VIRCHOWS ARCHIV. 2017.471(4):561-562.
IF: 2,848
Q: 2

Lopez-Beltran A, Paner G, Blanca A, Montironi R, Tsuzuki T, Nagashima Y, Chuang SS, Win KT, Madruga L, Raspollini MR, Cheng L. Lymphoepithelioma-like carcinoma of the upper urinary tract. VIRCHOWS ARCHIV. 2017.470(6):703-709.
IF: 2,848
Q: 2

Cruz-Navarro N, Prieto-Castro R, Cabello-Santamaria F, Garcia-Jose F, Fernandez-Lozano A, Larrabal-Murillo M, Martin-Morales A, Sanchez-Sanchez F, San Martin-Blanco C, Viladoms-Fuster J, Grp Elaborador Recomendaciones. From the definition to the social impact of premature ejaculation. Expert consensus. ACTAS UROLOGICAS ESPANOLAS. 2017.41(5):281-283.
IF: 1,181
Q: 4

Vega RA, de Torres LAP, Garcia CJ, Valiente JC, Tapia MJR, Castineira RC, Aycaguer LCS. Comorbidity and socio-demographic factors associated with renal lithiasis in persons aged 40 to 65: A cross-sectional study. MEDICINA CLINICA. 2017.149(9):383-390.
IF: 1,125
Q: 3

Research Funding

Regional

Carrasco Valiente, J. Prostate cancer management patterns in Andalusia and evaluation of health outcomes in prostate cancer. Funding agency: Regional Ministry of Equality, Health and Social Policy (CISPS). Reference: PI-0126-2016

National

Requena Tapia, M.J. Improved patient wellbeing and safety in management procedures using collaborative systems. m-LISTABLE. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-5149_003

Requena Tapia, MJ. Identificación de un panel de biomarcadores moleculares con significación pronóstica en pacientes con cáncer de vejiga pT1 de alto grado. Funding agency: Asociacion Española De Urologia. Reference: FIUI6/001

López Beltrán, A (IP), Requena Tapia M.J. (CO-IP). Development of a gene expression profile with prognostic and predictive value in bladder carcinoma. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI17/01981
Expected start date: 2018

International

Requena Tapia, MJ. ONCOCHEK - A simple blood test for prognosis and monitoring of patients undergoing cancer therapy. Funding agency: European Commission. Reference: SMEInst-2017-01

Contracts with Companies

Requena Tapia, MJ. Agreement with Life. Funding agency: Life Length S.L. Reference: CCB.0133

Requena Tapia, MJ. Agreement with Astellas. Funding agency: Astellas Pharma, S.A. Reference: PSS.0166

Requena Tapia, MJ. Agreement with Mecwins. Funding agency: Mecwins S.A. Reference: PSS.0214

Requena Tapia, MJ. Agreement with Janssen. Bayesian Inference. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0078

Requena Tapia, MJ. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0079

Requena Tapia, MJ. Agreement with Mecwins. Bayesian Inference. Funding agency: Mecwins S.A.. Reference: PSS.0114

Requena Tapia, MJ. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0124

Requena Tapia, MJ. Agreement with Janssen. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0125

Requena Tapia, MJ. Agreement with Fundación para la investigación en Urología. Funding agency: Fundación para la investigación en Urología. Reference: PSS.0126

Requena Tapia, MJ. Agreement with Bayer. Funding agency: Bayer Hispania S.L. Reference: PSS.0157

Clinical Trials

3387. The LEADERSHIP 301 Trial: A 12-Week, Randomized, Multi-center, double-blind, placebo-controlled, 3-Arm, Parallel-Group, Phase 3 Trial to Evaluate the Efficacy and Safety of 2 Doses of AQX-1125 targeting the SHIP1 Pathway in Subjects with Interstitial Cyst.

PI: Dr Requena Tapia, María José.

3635. Estudio observacional y transversal para la optimización del diagnóstico de metástasis en fase de CPRC MO en la práctica clínica habitual en España (Estudio IDENTIFICA).

PI: Dr Requena Tapia, María José.

0344/14.Phase III, randomized, placebo-controlled, double-blind JNJ-56021927 in combination with abiraterone acetate and prednisone compared with abiraterone acetate and prednisone in patients with metastatic-resistant prostate cancer.

PI: Dr Requena Tapia, María José

0280/12. A randomized, double-blind, comparative study of ZYTIGA (abiraterone acetate) plus prednisone at low dose plus androgen deprivation therapy (ADT) against TPA alone in subjects with a new diagnosis of high-risk metastatic hormone-naive prostate cancer (mHNPC).

PI: Dr Requena Tapia, María José

0215/15.A phase 3 randomized, placebo-controlled, double-blind study of apalutamide plus androgen deprivation therapy (ADT) in subjects with metastatic hormone-sensitive prostate cancer (mHSPC). Estudio TITAN.

PI: Dr Requena Tapia, María José

GA1

Lung transplantation Thoracic malignancies



HIGHLIGHTS

Publications

2

Impact Factor

8,053

Average Impact Factor

4,026

Principal Investigator

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Emerging Researcher (ER):

Paula Moreno Casado

Researchers

Algar Algar, Francisco Javier

Álvarez Kindelan, Antonio

Ayala Montoro, José

Baamonde Laborda, Carlos

Cerezo Madueño, Francisco

Espinosa Jimenez, Dionisio

Pre-Doctoral Researchers (PhD and MSc Students)

Carrasco Fuentes, Guadalupe

González García, Francisco Javier

Guaman Arcos, Hugo Dario

Murillo Brito, Diego Alejandro

Research Activity

Our research activity is focused on the effect of different molecules on lung preservation for transplantation. Additionally, we study the mechanism of chronic lung rejection and its effect on the regulation of different molecules. In our studies on lung preservation and chronic lung rejection we investigate the biological effects of different molecules especially serine-protease inhibitors on oxidative stress, inflammation, the endothelial function and cell signalling mechanisms.

Keywords

Lung preservation, chronic rejection, bronchiolitis obliterans, endothelium, inflammation, oxidative stress, proteomics, genomics.

Scientific Production

Publications

Herrera-Martínez AD, Gahete MD, Sánchez-Sánchez R, Salas RO, Serrano-Blanch R, Salvatierra A, Hoflandi LJ, Luque RM, Galvez-Moreno MA, Castano JP. The components of somatostatin and ghrelin systems are altered in neuroendocrine lung carcinoids and associated to clinical-histological features. *LUNG CANCER*. 2017;109():128-136.

IF: 4,294

Q: 1

Gonzalez-Garcia FJ, Guzman-Puche J, Redel-Montero J, Moreno P. Fatal bilateral haemopneumothoraces following double-lung transplantation caused by pretransplant colonization by *Scenedosporium apiospermum*. *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*. 2017;51(6):1209-1209.

IF: 3,759

Q: 2

Research Funding

Regional

Casado Moreno, P. Impact of oxygenator of extracorporeal membrane on dysfunctional lung graft in a standardized porcine model of a unipulmonary transplant. Funding agency: Andalusian Progress and Health and Social Policies (FPS). Reference: PI-0296-2014

Casado Moreno, P. Value of ex-vivo lung perfusion for optimising suboptimal lung grafts, thus expanding the pool of valid lung transplant donors. Funding agency: Fundación Mutua Madrileña. Reference: FMM16_002.

Contracts with Companies

Salvatierra Velazquez, A. 20 years of Andalusian lung transplant program functionality Funding agency: Novartis farmaceutica, S.A. Reference: PSS.003

Clinical Trials

2812. Study on the incidence of pulmonary thromboembolism in patients surgically intervened on by bronchogenic carcinoma

PI: Dr Álvarez Kindelán, Antonio



HIGHLIGHTS

Publications

5

Impact Factor

9,358

Average Impact Factor

1,871

Principal Investigator

María Aurora Rodríguez Borrego

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PAIDI CTS-666 scientific group

Researchers

Alanis López, Joaquin

Bretones, José Miguel (Collaborator)

Carmona Torres, Juan Manuel

Cuevas Pareja, Francisca (Collaborator)

Gonçalves Nitschke, Rosane

Medina Valverde, María José (Collaborator)

Moral Arroyo, Juan Antonio (Collaborator)

Muñoz Alonso, Adoración (Collaborator)

López Soto, Pablo Jesús

Redondo Pedraza, Rosa (Collaborator)

Ruiz Gándara, África

Post-Doctoral Researchers

Cobo Cuenca, Ana Isabel

Dios Guerra, Caridad

Guerra Martín, María Dolores

Hidalgo Lopezosa, Pedro

Pre-Doctoral Researchers (PhD and MSc Students)

Alcalá Albert, Gregorio J.

Arévalo Buitrago, Pedro

Clapés Roldán, Cristina

Campo Molina, M^o del Carmen

Fernández Rodríguez, Vicente

García Arcos, Aurora

González Gáncedo, Jacob

Jiménez Ruz, Andrea

López Cerdá, Elena

Luque Carrillo, Patricia

Miñarro Del Moral, Rosa

Morales Cané, Ignacio

Navarro Frutos, Gabriel J.

Rodríguez Muñoz, Pedro Manuel

Sánchez Herrera, Sergio

Sepúlveda Montijado, Miriam

Scientific Activity

The Comprehensive Nursing Care - Multidisciplinary Perspective, is a multidisciplinary and gender balanced group composed of nurses, anthropologists, psychologists and medical doctors with a comprehensive vision of the human being and his experience of health and disease. The group's mission is to develop new knowledge that guides the nursing professionals in their patient care practice, always with a broad and comprehensive view and based on available scientific evidence.

The research activities carried out by the group are mostly multidisciplinary, multicenter and international. Our scientific activity is based on four basic principles that allow flexibility in the composition of and topics addressed by this group. The four basic principles are:

1. Promotion of research activities among nursing professionals to foster evidence-based nursing care practice. This Group is a vehicle for nursing professionals interested in research.
2. Promotion of professional development of nursing professionals by generating knowledge that serves as a guideline for nursing care practice.
3. Commitment to provide scientific training for future nursing professionals.
4. Adoption of a comprehensive and integral approach to how the human being experiences health and disease.

Keywords

Integral nursing care, nursing care philosophy, professional development of nursing professionals, assessment of training methods in Higher Education, nursing service management, evidence-based nursing care, health and disease, disease experience, health communication, integral human being, female nurses, healthcare in old age, aging-life quality, fragility.

Scientific Production

Publications

Lopez-Soto PJ, Smolensky MH, Sackett-Lundeen LL, Rodriguez-Borrego MA. Reply to 'Seasonal ambient changes influence inpatient falls' Magota et al. *AGE AND AGEING*. 2017.46(6):1016-1017.

IF: 4,282

Q: 1

Dios-Guerra C, Carmona-Torres JM, Lopez-Soto PJ, Morales-Cane I, Rodriguez-Borrego MA. Prevalence and factors associated with influenza vaccination of persons over 65 years old in Spain (2009-2014). *VACCINE*. 2017.35(51):7095-7100.

IF: 3,235

Q: 2

Hidalgo-Lopezosa P, Hidalgo-Maestre M, Rodriguez-Borrego MA. Birth plan compliance and its relation to maternal and neonatal outcomes. *REVISTA LATINO-AMERICANA DE ENFERMAGEM*. 2017.25-e2953.

IF: 0,634

Q: 4

Carmona-Torres JM, Carvalhal-Silva RM, Viera-Mendes MH, Recio-Andrade B, Goergen T, Rodriguez-Borrego MA. Elder abuse within the family environment in the Azores Islands. *REVISTA LATINO-AMERICANA DE ENFERMAGEM*.2017.25-e2932.

IF: 0,634

Q: 4

Carmona-Torres JM, Recio-Andrade B, Rodriguez-Borrego MA. Intimate partner violence among health professionals: distribution by autonomous communities in Spain. *REVISTA DA ESCOLA DE ENFERMAGEM DA USP*.2017.51-UNSP e03256.

IF: 0,573

Q: 4

Research Funding

National

Rodríguez Borrego, M^o A. Violence in couples formed by health professionals working at the Spanish National Health System. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI13/01253

López Soto, PJ. Cronoprevención en las caídas intrahospitalarias de personas mayores: una intervención enfermera. Chronofalls. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0360-2017

Regional

Rodriguez Borrego, M^o A. Transfer of research results to the classroom: record of the occurrence of falls. Funding agency: Universidad de Córdoba. Reference: 2017-2-3009.

Guerra Martín, M^o D. Flipped Classroom como estrategia para un aprendizaje más significativo, individualizado y colaborativo. Funding agency: Universidad de Sevilla. Reference: 3543.

GA3 Pneumology



HIGHLIGHTS

Publications

12

Impact Factor

58,192

Average Impact Factor

4,846

Principal Investigator:

Bernabé Jurado Gámez

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PAIDI CTS-992 Incorporation of new diagnostic and control methods of respiratory therapies

Researchers

Arenas de Larriva, Marisol

Arenas Vacas, Antonio Pablo

Entrenas Costa, Luis Manuel

Feu Collado, Nuria

Gil García, Francisco Luis

Lama Martínez, Rafael

Muñoz Cabrera, Luis

Pascual Martínez, Natalia

Redel Montero, Javier

Santos Luna, Francisco

Other members of the Group (Nursing, Technical, Students and Administrative Staff)

Vega Rojas, Ana María

Scientific Activity

Our group develops research directed to the most prevalent health problems in respiratory pathologies. We are an associated group in IMIBIC composed by several emerging researcher who dedicate their principal work to clinical care in HURS. The objectives of our researches are always oriented in achieving results that have applicability in clinical practice and influence the global management (diagnosis, therapy and monitoring) of the patient with respiratory pathology. We aim at establishing alliances with other groups nationwide and internationally, that carry out research based on omics of chronic respiratory diseases. On institutional level, we welcome new researchers in the group through which to establish alliances between other IMIBIC groups and to create synergies in the common areas of research. We want to consolidate our research in the screening for lung cancer as a more effective tool to reduce the mortality of this tumor. In addition, we are beginning with new research lines to implement platforms based on the new omics for the therapeutic control and prognosis of chronic inflammatory diseases of the respiratory system (COPD-asthma); and other to determine the effect of the inhalation of toxic particles (environmental contamination) in respiratory pathology. Our group was a pioneer in demonstrating the usefulness of human sweat analysis in lung cancer. In addition we have

collaborated in the investigation of the effect of intermittent hypoxemia with the IMIBIC group of 'Nutrigenomics, Metabolic Syndrome' in patients with vascular risk factors to determine the consequences of the effect of hypoxemia on the effect of the Mediterranean diet and the vascular risk.

Currently, we collaborate with Dr. Antonio Rodríguez Ariza (Coordinator of Oncover study, GC-06 New therapies in cancer) and Dr. M^o Dolores Luque de Castro (GC-21 Metabolomics. Identification of bioactive components) in the identification and quantification of useful compounds in the diagnosis of Lung cancer in the condensate of the exhaled air. In this same line, we also collaborated with the group of Dr. M^o Dolores Luque de Castro in the identification of clinical phenotypes through metabolomic studies in exhaled air condensate, and in the search for new markers in lung cancer in various biofluids.

We are carrying out two multicenter studies, one with the San Pedro Alcántara Hospital from Cáceres and others, in which we analyse the influence of suffering Sleep Apnea in the worsening of Kidney Disease, as well as the improvement of the CKD if these apneas are corrected with either AutoCPAP or other treatments. Another collaborative study we are involved in is with the Valme Hospital in Seville and others, in which we study the association of sleep apnea with impaired metabolism and prostate tumor prognosis.

Research Lines

- Lung cancer screening and non-invasive biofluids
- Influence of sleep apnea in the metabolic syndrome and in the impact of vascular disease

Keywords

Cancer, hypoxemia, cell damage, chronic respiratory disease, metabolomics, proteomics, telecare, telemedicine, respiratory therapies.

Scientific Production

Publications

Main Publications

Merino JS, de Torres LAP, Gomez RM, Villalobos AR, Collado MNF, Ruiz-Moral R, Jurado-Gamez B. Collaborative Grp CVCPAP Study Impact of CPAP therapy on health-related quality of life in elderly patients with apnoea-hypopnea syndrome: a systematic review of randomised clinical trials. EUROPEAN RESPIRATORY JOURNAL. 2017.49(1):-1601644.

IF: 10,569

Q: 1 D: 1

Lopez-Sanchez LM, Jurado-Gamez B, Feu-Collado N, Valverde A, Canas A, Fernandez-Rueda JL, Aranda E, Rodriguez-Ariza A. Exhaled breath condensate biomarkers for the early diagnosis of lung cancer using proteomics. AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY. 2017.313(4):L664-L676.

IF: 4,281

Q: 1

Peralbo-Molina A, Calderon-Santiago M, Jurado-Gamez B, de Castro MDL, Priego-Capote F. Exhaled breath condensate to discriminate individuals with different smoking habits by GC-TOF/MS. SCIENTIFIC REPORTS. 2017.7.art 1421.

IF: 4,259

Q: 1

Other Publications

Casanova C, Celli BR, de-Torres JP, Martínez-González C, Cosío BG, Pinto-Plata V, de Lucas-Ramos P, Divo M, Fuster A, Peces-Barba G, Calle-Rubio M, Solanes I, Agüero R, Feu-Collado N, Alfageme I, De Diego A, Romero A, Balcells E, Llundell A, Galdiz JB, Marin M, Moreno A, Cabrera C, Golpe R, Lacarcel C, Soriano JB, Lopez-Campos JL, Soler-Cataluna JJ, Marin JM. Prevalence of persistent blood eosinophilia: relation to outcomes in patients with COPD. *EUROPEAN RESPIRATORY JOURNAL*. 2017;50(5):-1701162.

IF: 10,569

Q: 1 D: 1

Campos-Rodríguez F, González-Martínez M, Sánchez-Armengol A, Jurado-Gamez B, Cordero-Guevara J, Reyes-Núñez N, Troncoso MF, Abad-Fernández A, Terán-Santos J, Caballero-Rodríguez J, Martín-Romero M, Encabo-Motino A, Sacristán-Bou L, Navarro-Esteva J, Somoza-González M, Masa JF, Sánchez-Quiroga MA, Jara-Chinarro B, Orosa-Bertol B, Martínez-García MA, Spanish Sleep Network. Effect of continuous positive airway pressure on blood pressure and metabolic profile in women with sleep apnoea. *EUROPEAN RESPIRATORY JOURNAL*. 2017;50(2):-1700257.

IF: 10,569

Q: 1 D: 1

González-García FJ, Guzmán-Puche J, Redel-Montero J, Moreno P. Fatal bilateral haemopneumothoraces following double-lung transplantation caused by pretransplant colonization by *Scenedesporium apiospermum*. *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*. 2017;51(6):1209-1209.

IF: 3,759

Q: 2

Cantisán S, Paez-Vega A, Santos F, Rodríguez-Benot A, Aguado R, Rivero A, Montejo M, Torre-Cisneros J, Solana R, Spanish Network Res Infect Dis. Impact of age and cytomegalovirus on CD8(+) T-cell compartment remodeling after solid organ transplantation: A one-year follow-up study. *EXPERIMENTAL GERONTOLOGY*. 2017;95:98-106.

IF: 3,334

Q: 1

Quirce S, Delgado J, Entrenas LM, Grande M, Llorente C, Viana AL, Moragon EM, Mascaros E, Molina J, Olaguibel JM, de Llano LAP, Tordera MP,

Quintano JA, Rodríguez M, Roman-Rodríguez M, Sastre J, Trigueros JA, Valero AL, Zoni AC, Plaza V, ASMAFORUM II Grp. Quality Indicators of Asthma Care Derived From the Spanish Guidelines for Asthma Management (GEMA 4.0): A Multidisciplinary Team Report. *JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY*. 2017;27(1):69-73.

IF: 3,094

Q: 3

López-Campos JL, Abad Arranz M, Calero-Acuña C, Romero-Valero F, Ayerbe-García R, Hidalgo-Molina A, Aguilar-Pérez-Grovas RI, García-Gil F, Casas-Maldonado F, Caballero-Ballesteros L, Sánchez-Palop M, Pérez-Tejero D, Segado Soriano A, Calvo-Bonachera J, Hernández-Sierra B, Doménech A, Arroyo-Varela M, González-Vargas F, Cruz-Rueda JJ. Seasonal variability in clinical care of COPD outpatients: results from the Andalusian COPD audit. *INTERNATIONAL JOURNAL OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE*. 2017;12:785-792.

IF: 2,912

Q: 2

Guirao-Arrabal E, Santos F, Redel J, Vaquero JM, Torre-Cisneros J. Efficacy and safety of short-term treatment with isoniazid and rifampicin for latent tuberculosis infection in lung transplant candidates. *CLINICAL TRANSPLANTATION*. 2017;31(3):-e12901.

IF: 1,865

Q: 2

Monforte V, Sintés H, López-Gallo C, Delgado M, Santos F, Zurbano F, Sole A, Gavalda J, Borro JM, Redel-Montero J, Cifrián JM, Pastor A, Roman A, Ussetti P. Risk factors, survival, and impact of prophylaxis length in cytomegalovirus-seropositive lung transplant recipients: A prospective, observational, multicenter study. *TRANSPLANT INFECTIOUS DISEASE*. 2017;19(3):-UNSP e12694.

IF: 1,719

Q: 4

Martínez-Moragon E, Entrenas LM, Plaza V, Quirce S. Attitudes and barriers uncontrolled asthma in Spain. *Abanico study*. *REVISTA CLINICA ESPAÑOLA*. 2017;217(1):60-62.

IF: 0,971

Q: 3

Research Funding

Regional

Feu Collado, MN. Proyecto nº 6/2014. Funding agency: Fundación Neumour. Reference: Proyecto Neumour 6.

National

Jurado Gámez, B. Application of metabolomics platforms in the analysis of non-invasive biofluids for the search of biomarkers in respiratory pathology. Funding agency: Neumour. Reference: Neumour 16-01.

Contracts with Companies

Entrenas Costa, LM. Collaboration with Novartis. Funding agency: Novartis Farmacéutica SA. Reference: CCB.0060

Jurado Gamez, B. Collaboration with Laboratorios Dr Esteve SA. Funding agency: Laboratorios Dr Esteve SA. Reference: CCB.0145

Santos Luna, F. Collaboration with Boehringer Ingelheim España SA. Funding agency: Boehringer Ingelheim España SA. Reference: CCB.0162

Clinical Trials

2856. Phase IV observational, multinational study on disease control. Findings reported by patients treated with inhalers of a dosage combination set for persistent asthma and COPD in clinical practice (SPRINT).

PI: Dr Entrenas Costa, Luis Manuel

3444. Pilot study of reslizumab in patients with severe asthma who have not responded to Omalizumab.

PI: Dr Entrenas Costa, Luis Manuel

2711. Randomized clinical trial on the effect of a program of aerobic exercise in patients with moderate to severe sleep apnea.

PI: Dr Feu Collado, María Nuria

2733. Multicentric retrospective observational study to describe the most frequent clinical phenotypes of the patient with persistent severe asthma in treatment with omalizumab in usual clinical practice.

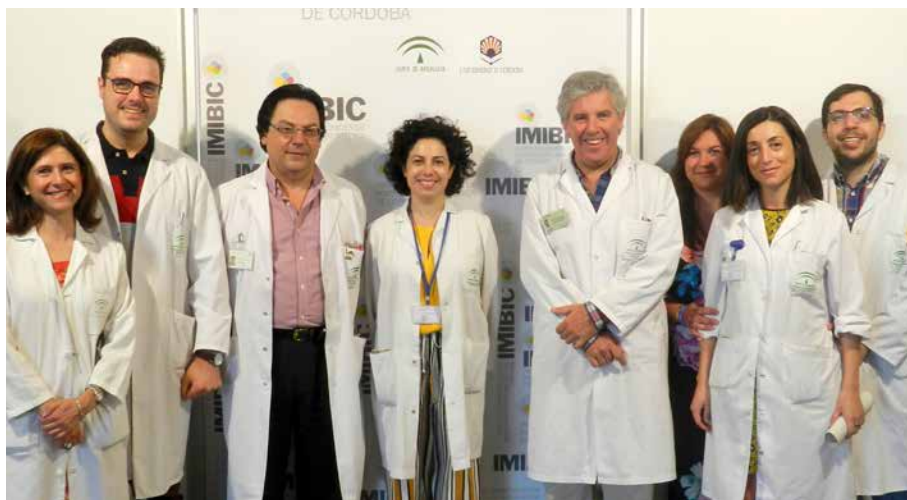
PI: Dr Arenas Vacas, Antonio Pablo

2741. Prevalence of breathing disorders during sleep in patients with COP.

PI: Dr Feu Collado, María Nuria

GA4

Endocrinology and Nutrition. Insulin resistance, diabetes and metabolism



HIGHLIGHTS

Publications

7

Impact Factor

14,902

Average Impact Factor

2,128

Principal Investigator

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Researchers

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Berral de la Rosa, Francisco José

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Corpas Jiménez, M^o Sierra

Molina Puertas, M^o José

Palomares Ortega, Rafael

Paniagua González, Juan Antonio

Vigara Madueño, Remedios

Post-Doctoral Researchers

Herrera Martínez, Aura Dulcinea

Scientific Activity

Our group investigates the effect of different nutrients on insulin resistance and body fat distribution in patients with metabolic syndrome. The two main lines of research are: 1) Endocrinology and nutrition, and 2) Insulin resistance, diabetes and metabolism.

Endocrinology and nutrition: We investigate, together with Dr. Justo Castaño Fuentes' group, the expression of different hormone receptors and intracellular mediators in the onset and development of pituitary tumors. In line with transactional research principles, we apply the findings of our research to real clinical practice using inhibitors or stimulators in order to inhibit hormone production and / or reduce their size when surgery is not fully successful. Collaborations in this area include: Dr. Quesada Gómez's group in the investigation of osteoporosis, particularly, vitamin D and bone stem cells; Dr. Soriguer in the performance of epidemiological studies of diabetes mellitus type 2 and in the prevention of diabetes through a behaviour modification programme which is being implemented in a village in southern Cordoba; and Dr. Caballero in the study of bone metabolism in pregnant women with diabetes. Insulin resistance, diabetes and metabolism: within this area, our group studies the effect of diet components and pharmacologic interventions on the insulin resistance syndrome and the risk of developing diabetes in patients with "prediabetes". For such purpose, we

characterize the specific effect of macronutrients on the release of digestive tract incretins and the subsequent signalling. In addition, we study the effect of diets with different macronutrient contents on body composition and body fat redistribution and its relationship with insulin sensitivity and secretion. We also study the role of adipose tissue expansion as a pathogenic factor of insulin resistance, beta-cell failure and diabetes. Finally, we examine the transcription of metabolic, inflammatory and adipokine pathways in peripheral adipose tissue into diet models, macronutrients and different pharmacologic agents.

Research Lines

- Endocrinology and Nutrition: the expression of different hormone receptors and intracellular mediators in the onset and development of pituitary tumors
- Insulin resistance, diabetes and metabolism

Keywords

Insulin resistance, β -pancreatic dysfunction, prediabetes, metabolic syndrome, adipotoxicity, adipose tissue, inflammation, oxidative stress, gene expression, metabolomics, Pituitary Adenoma, Somatostatin receptors, Vitamin D, Metabolic Syndrome Prevalence of Diabetes Mellitus Type 2, Diabetes Mellitus and Pregnancy.

Scientific Production

Publications

Main Publications

Alhambra-Exposito MR, Molina-Puerta MJ, Prior-Sanchez MI, Manzano-Garcia G, Calanas-Continente A, Galvez-Moreno MA. Variations in diabetes remission rates after bariatric surgery in Spanish adults according to the use of different diagnostic criteria for diabetes. BMC ENDOCRINE DISORDERS. 2017;17(1):-51.

IF: 2,275

Q: 3

Herrera-Martinez AD, Cuenca JCP, Opazo RB, Martin AB, Roman AR, Iglesia CD, Moreno MAG. ACTH Producing Pancreatic Neuroendocrine Tumors in Multiple Endocrine Neoplasia Type 1. JOURNAL OF THE PANCREAS. 2017;18(2):175-180.

Paniagua JA, Bahamondes R, Cano-Sanchez A, Velasco F. Unexpected papilledema in a young male with Type 1 diabetes. CLINICAL CASE REPORTS. 2017;5(8):1333-1338.

Other Publications

Wanden-Berghe C, Luengo LM, Alvarez J, Burgos R, Cuerda C, Matia P, Candela CG, Olmos MAM, Gonzalo M, Calleja A, Campos C, de la Cruz AP, Irlés JA, Leyes P, Sanchez R, Roman DD, Cardona D, Santacruz N, Suarez JP, Ballesta C, Sales J, Penacho MA, Gardez C, Martinez MJ, Canovas B, Moreno JM, del Olmo D, Carabana F, Virgili N, Higuera I, Mauri S, Sanchez-Vilar O, Miserachs N, Ponce MA, Garcia Y, Moran JM, Apezetxea A, Tejera C, Calanas A, Canton A, Diaz P, Nadya-Senpe G. Spanish home enteral nutrition registry of the year 2014 and 2015 from the NADYA-SENPE Group. NUTRICION HOSPITALARIA. 2017;34(1):15-18.

IF: 0,747

Q: 4

Herrera-Martinez AD, Gahete MD, Sanchez-Sanchez R, Salas RO, Serrano-Blanch R, Salvaderra A, Hoflandi LJ, Luque RM, Galvez-Moreno MA, Castano JP. The components of somatostatin and ghrelin systems are altered in neuroendocrine lung carcinoids and associated to clinical-histological fea-

tures. LUNG CANCER. 2017;109():128-136.

IF: 4,294

Q: 1

Ibanez-Costa A, Lopez-Sanchez LM, Gahete MD, Rivero-Cortes E, Vazquez-Borrego MC, Galvez MA, de la Riva A, Venegas-Moreno E, Jimenez-Reina L, Moreno-Carazo A, Tinahones FJ, Maraver-Selfa S, Japon MA, Garcia-Arnes JA, Soto-Moreno A, Webb SM, Kineman RD, Culler MD, Castano JP, Luque RM. BIM-23A760 influences key functional endpoints in pituitary adenomas and normal pituitaries: molecular mechanisms underlying the differential response in adenomas. SCIENTIFIC REPORTS. 2017;7():-42002.

IF: 4,259

Q: 1

Prior-Sanchez I, Martin AB, Ortega EM, Casas JAV, Moreno MAG. Is a second recombinant human thyrotropin stimulation test useful? The value of postsurgical undetectable stimulated thyroglobulin level at the time of remnant ablation on clinical outcome. CLINICAL ENDOCRINOLOGY. 2017;86(1):97-107.

IF: 3,327

Q: 2

Research Funding

Regional

Calañas Continente, A. Intervention study on lifestyle in obese women with infertility who need assisted reproduction techniques. Funding agency: Sociedad Andaluza de Endocrinología, Diabetes y Nutrición. Reference: SAEDYN15_002

Contracts with Companies

Gálvez Moreno, MA. Development of advanced fats. Funding agency: Aceites Del Sur-Coosur S.A. Reference: ITC-20151323_002

Gálvez Moreno, MA. Agreement with JYC. Funding agency: JYC Ediciones Medicas. Reference: PSS.0163

Calañas Continente A. Agreement with Nutri. Funding agency: Nutricia Nutricia. Reference: CCB.0116

Clinical Trials

3487. Retrospective and Multicentric Study in Habitual Clinical Practice with Isglt2 (Dapagliflozin) and Idpp4 (Sitagliptin) in Patients with Type 2 Diabetes in Spain. Dapa-Rwe study.

PI: Dr Palomares Ortega, R

O230/15. Pragmatic real-world test, 26 weeks with 6-month extension, randomized, open, 2 parallel arms, to evaluate the results of clinical and health benefits of the transition to ToujeoR compared to d insulins.

PI: Dr Gálvez Moreno, MA

3487. Retrospective and multicentric study in habitual clinical practice with Isglt2 (Dapagliflozin) and Idpp4 (Sitagliptin) in patients with type 2 Diabetes in Spain. Dapa-Rwe study.

PI: Dr Palomares Ortega, R

3216. An open-label study to assess the safety and efficacy of COR-003 (25,4R- ketoconazole) in the treatment of endogenous Cushing's Syndrome.

PI: Dr Galvez Moreno, MA

3043. Study to assess blood-sugar monitoring in patients receiving enteral nutrition in routine clinical practice. Novadi-Control Study

PI: Dr Molina Puerta, MJ

3164. International multi-centre observational study to assess the efficacy in daily clinical practice of lanreotide autogel 120 mg during a prolonged dosage period (over 4 weeks), for the treatment of acromegaly: SOMAC Study.

PI: Dr Galvez Moreno, MA

GA5

Study of growth. Endocrinology and Child Nutrition



HIGHLIGHTS

Publications

12

Impact Factor

35,835

Average Impact Factor

2,986

Principal Investigator (PI)

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*CIBER on Obesity and Nutrition (CIBERObn)
(Collaborator)*

PAIDI CTS-329 Study of Growth, Endocrinology and Nutrition

Researchers

Cañete Vázquez, M^o Dolores

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Martos Estepa, Rosario

Párraga Quiles, M^o José

Tofé Valera, Inés

Torres Borrego, Javier

Valle Jiménez, Miguel

Vázquez Rueda, Fernando

Ruiz González, M^o Dolores

García Martínez, Elena

Pre-Doctoral Researchers

Gómez Guzmán, Elena

Other members of the Group (Nursing, Technical, and Administrative Staff)

Cañete Vázquez, M^o Dolores

Scientific Activity

Our research group is an associated research group of IMIBIC, formed by clinical and basic researchers and pre-doctoral students. The group is currently formed by 11 clinical and basic researchers: 9 Phd MD, 1 Phd and 1 Pre-Doctoral Researcher. The line of research that we have been developing for many years on growth disorders focuses on improving both the follow up and specialized care for children with deficits in Growth Hormone treated at the Pediatric Endocrinology Unit.

Many of our projects have resulted in publications and doctoral theses, contributing to our knowledge about the metabolic consequences of growth hormone related diseases in children, as well as the possible secondary and long-term alterations caused by them.

We have recently gained experience in the study of the human serum proteome with the completion of a doctoral thesis entitled "Proteomic alterations in serum of newborns with intrauterine growth retardation" by Dr. Dolores Ruiz González.

The group leader is responsible of the PAIDI CTS-329 group on Study of Growth, Endocrinology and Nutrition (Andalusian Plan for Research, Development and Innovation (PAIDI)), as well as the Network of Physiopathology of Obesity and Nutrition (CIBERobn) of the Spanish National Institute of Health Carlos III (ISCIII).

Research Lines

- Growth and nutrition in prepubertal children

- Nutrition in children with extrauterine growth retardation
- Comparative proteomic analysis of umbilical cord blood from preterm infants
- Food allergies

Keywords

Child obesity, metabolic syndrome, diet, endothelium, inflammation, cardiovascular biomarkers, gene expression, proteomics, intrauterine-growth-retardation (IUGR), growth hormone (GH), food allergy.

Scientific Production

Publications

Cabezas OR, Flanagan SE, Stanescu H, Garcia-Martinez E, Caswell R, Lango-Allen H, Anton-Gameiro M, Argente J, Busse AM, Brandli A, Cheshire C, Crowne E, Dumitriu S, Drynda R, Hamilton-Shield JP, Hayes W, Hofherr A, Iancu D, Issler N, Jefferies C, Jones P, Johnson M, Kesselheim A, Klootwijk E, Koettgen M, Lewis W, Martos JM, Mozere M, Norman J, Patel V, Parrish A, Perez-Cerda C, Pozo J, Rahman SA, Sebire N, Tekman M, Turnpenny PD, van't Hoff W, Viering DHHM, Weedon MN, Wilson P, Guay-Woodford L, Kleta R, Hussain K, Ellard S, Bockenhauer D. Polycystic Kidney Disease with Hyperinsulinemic Hypoglycemia Caused by a Promoter Mutation in Phosphomannomutase 2. *JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*. 2017;28(8):2529-2539.

IF: 8,966

Q: 1 D: 1

Pastor-Villaescusa B, Canete MD, Caballero-Villarraso J, Hoyos R, Latorre M, Vazquez-Cobela R, Plaza-Diaz J, Maldonado J, Bueno G, Leis R, Gil A, Canete R, Aguilera CM. Metformin for Obesity in Prepubertal and Pubertal Children: A Randomized Controlled Trial. *PEDIATRICS*. 2017;140(1):e20164285.

IF: 5,705

Q: 1 D: 1

Sanchez-Illana A, Nunez-Ramiro A, Cernada M, Parra-Llorca A, Valverde E, Blanco D, Moral-Pumarega MT, Cabanas F, Boix H, Pavon A, Chafanel M, Benavente-Fernandez I, Tofe I, Loureiro B, Fernandez-Lorenzo JR, Fernandez-Colomer B, Garcia-Robles A, Kuligowski J, Vento M. HYPOTOP Study Group. Evolution of Energy Related Metabolites in Plasma from Newborns with Hypoxic-Ischemic Encephalopathy during Hypothermia Treatment. *SCIENTIFIC REPORTS*. 2017;7():-17039.

IF: 4,259

Q: 1

Ibáñez-Costa A, López-Sánchez LM, Gahete MD, Rivero-Cortés E, Vázquez-Borrego MC, Gálvez MA, de la Riva A, Venegas-Moreno E, Jiménez-Reina L, Moreno-Carazo A, Tinahones FJ, Maraver-Selfa S, Japón MA, García-Arnés JA, Soto-Moreno A, Webb SM, Kineman RD, Culler MD, Castaño JP, Luque RM. BIM-23A760 influences key functional endpoints in pituitary adenomas and normal pituitaries: molecular mechanisms underlying the differential response in adenomas. *SCI REP*. 2017 Feb 9;7:42002.

IF: 4,25

Q: 1

Perez-Navero JL, de la Torre-Aguilar MJ, de la Rosa II, Gil-Campos M, Gomez-Guzman E, Merino-Cejas C, Munoz-Villanueva MC, Llorente-Cantarero FJ. Cardiac Biomarkers of Low Cardiac Output Syndrome in the Postoperative Period After Congenital Heart Disease Surgery in Children. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017;70(4):267-274.

IF: 4,485

Q: 1

Olza J, Ruperez AI, Gil-Campos M, Leis R, Canete R, Tojo R, Gil A, Aguilera CM. Leptin Receptor Gene Variant rs11804091 Is Associated with BMI and Insulin Resistance in Spanish Female Obese Children: A Case-Control Study. *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*. 2017;18(8):-1690.

IF: 3,226

Q: 2

Moreno-Solis G, de la Torre-Aguilar MJ, Torres-Borrego J, Llorente-Cantarero FJ, Fernandez-Gutierrez F, Gil-Campos M, Tunez-Finana I, Perez-Navero JL. Oxidative stress and inflammatory plasma biomarkers in respiratory syncytial virus bronchiolitis. *CLINICAL RESPIRATORY JOURNAL*. 2017;11(6):839-846.

IF: 2,356

Q: 3

Tortajada-Girbes M, Torres-Borrego J. The influence of microorganisms in allergic diseases. ALLERGOLOGIA ET IMMUNOPATHOLOGIA. 2017;45(6):519-520.

IF: 1,439

Q: 4

Rodríguez JMR, Muñoz ADA, Muñoz JB, Rodríguez PC, Estrada RC, López ID, Solís MMH, Ollero MJMA, Dehli ACR, Toda LI, en representación del Grupo de trabajo para el estudio del paciente pequeño para la edad gestacional (PEG) de la Sociedad Española de Endocrinología Pediátrica (SEEP). Growth hormone treatment in small for gestational age children in Spain. ANALES DE PEDIATRIA. 2017;86(5):249-254.

IF: 1,14

Q: 3

Perez-Navero JL, Tejero-Hernandez MA, Gomez-Guzman E, Merino-Cejas C, De La Torre-Aguilar MJ, Llorente-Cantarero FJ. Left ventricle training before late arterial switch to correct congenital transposition of the great arteries with intact ventricular septum. GAZZETTA MEDICA ITALIANA ARCHIVIO PER LE SCIENZE MEDICHE. 2017;176(6):359-362.

Betancourth-Alvarenga JE, Vázquez Rueda F, Siu Uribe A, Escassi Gil A, Vargas Cruz V, Sánchez Sánchez R, Ortega Salas R, Paredes Esteban RM. Clinical and immunohistochemical correlation of balanitis xerotica obliterans. CIR PEDIATR. 2017;30(4):211-215.

Murcia Pascual FJ, Delgado Cotán L, Jiménez Crespo V, Vázquez Rueda F, Rodríguez Cano E, Miño Mora M, Paredes Esteban RM. Correlation between prenatal ultrasound and postnatal diagnosis of birth defects. CIR PEDIATR. 2017;30(3):126-130.

Research Funding

Local

Cañete Estrada, R. Short-term effects on body composition of growth hormone treatment in pre-pubertal children with growth hormone (GH) deficiency. Funding Agency: UNIVERSIDAD DE CORDOBA-OTRI. Reference: 103343

National

Tofe Valera, IM. Research grant. Funding Agency: Asociación Española Pediatría. Reference: AEP/2017

Clinical Trials

2079. Observational, non-interventional, multi-centre, multi-national study of patients with atypical hemolytic-uremic syndrome (AHUS Registry).

PI: Dr García Martínez, E.

3336. Multicenter, Open-label study to evaluate safety, tolerability, pharmacokinetics, and pharmacodynamics of LCZ696 followed by a 52-week randomized, double-blind, parallel group, active-controlled study to evaluate the efficacy and safety of LCZ696 compared with enalapril in pediatric patients from 1 month to < 18 years of age with heart failure due to systemic left ventricle systolic dysfunction.

PI: Dr Gómez Guzmán, E.

3580. A Phase 2b randomized, double-blind, placebo-controlled study to evaluate the safety and efficacy of MEDI8897, a monoclonal antibody with an extended half-life against respiratory syncytial virus, in healthy preterm infants.

PI: Dr Ruíz González, MD.

3633.A Double-Blind, placebo-controlled study to examine the safety and efficacy of pimavanserin for the treatment of agitation and aggression in Alzheimer's Disease.

PI: Dr Gómez Guzmán, E.

3013. Tolerance to the introduction of a formula based on highly hydrolyzed lactoserum proteins enriched with Lactobacillus fermentum (Damiara-Pro1) cow's milk protein allergy in children.

PI: Dr Torres Borrego, Javier



HIGHLIGHTS

Publications

5

Impact Factor

23,809

Average Impact Factor

4,762

Principal Investigator (PI)

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Post-Doctoral Researchers

Barcos Martínez, Montserrat

Espejo Portero, Isabel

Pre-Doctoral Researchers (PhD and MSc Students)Moyano Gallego, M^o José

Peña García, Victoria

Romero Baldonado, Cristina

Scientific Activity

Our group is currently developing two main lines of research. The first is the evaluation of emerging health technologies, including studies of effectiveness and efficiency of techniques and equipment in the clinical laboratory environment, and falling into the framework of Health Technology Assessment (HTA). The second area of research is concerned with programming activities, where we develop the study titled Impact of endocrinology and nutrition during pregnancy and pediatric age on metabolic programming.

Our research in the area of evaluation of health technologies and testing of laboratory techniques focuses on the metrological evaluation of techniques, autoanalyzers and technical procedures. An example is the technological evaluation of point-of-care testing (POCT) and the transferability of its results, with special attention to the parameters of quality control (QC). We have assessed new point-of-care testing (POCT) methodologies such as gas, blood metabolite and ion determination; diagnosis and evolution of celiac disease, and use of POCT methods in coagulometry for the follow-up of anticoagulated patients.

In the area of programming, our main focus is the study of impact of endocrinology and nutrition during pregnancy and pediatric age on metabolic programming (programming the diseases of adult life from early stages of life). In addition, we study bone and mineral metabolism in

programming. More recently, we have also widened our research to neurodevelopment and its potential further impact on neuroinvolvement, as well as to neurodegenerative diseases in general.

Research lines

- Evaluation of health technologies and testing of laboratory techniques
- Impact of endocrinology and nutrition during pregnancy and pediatric age on metabolic programming

Keywords

Evidence-based medicine (EBM): systematic reviews of the literature, bibliometric studies and economic evaluations; point-of-care testing, POCT, programming.

Scientific Production

Publications

Main Publications

Vieyra-Reyes P, Millan-Aldaco D, Palomero-Rivero M, Jimenez-Garcés C, Hernandez-Gonzalez M, Caballero-Villarraso J. An iron-deficient diet during development induces oxidative stress in relation to age and gender in Wistar rats. *JOURNAL OF PHYSIOLOGY AND BIOCHEMISTRY*. 2017.73(1):99-110. IF: 2,444 Q: 3

Other Publications

Rivero-Juarez A, Frias M, Lopez-Lopez P, Risalde MD, Brieva T, Machuca I, Camacho A, Martinez-Peinado A, Gomez-Villamandos JC, Rivero A. Hepatitis E Virus (HEV) Infection in Anti-HEV Immunoglobulin G-Carrying Patients After Successful Hepatitis C Virus Treatment: Reactivation or Reinfection? *CLINICAL INFECTIOUS DISEASES*.

2017.64(7):964-966.

IF: 8,216

Q: 1 D: 1

Pastor-Villaescusa B, Canete MD, Caballero-Villarraso J, Hoyos R, Latorre M, Vazquez-Cobela R, Plaza-Diaz J, Maldonado J, Bueno G, Leis R, Gil A, Canete R, Aguilera CM. Metformin for Obesity in Prepubertal and Pubertal Children: A Randomized Controlled Trial. *PEDIATRICS*. 2017. 140(1):e20164285.

IF: 5,705

Q: 1 D: 1

Guerendiain M, Mayneris-Perxachs J, Montes R, Lopez-Belmonte G, Martin-Matillas M, Castellote AI, Martin-Bautista E, Marti A, Martinez JA, Moreno L, Garagorri JM, Warnberg J, Caballero J, Marcos A, Lopez-Sabater MC, Campoy C, EVASYON Study Grp. Relation between plasma antioxidant vitamin levels, adiposity and cardio-metabolic profile in adolescents: Effects of a multidisciplinary obesity programme. *CLINICAL NUTRITION*. 2017.36(1):209-217. IF: 4,548

Q: 1

Escribano BM, Luque E, Aguilar-Luque M, Feijoo M, Caballero-Villarraso J, Torres LA, Ramirez V, Garcia-Maceira FI, Aguera E, Santamaria A, Tunez I. Dose-dependent S-allyl cysteine ameliorates multiple sclerosis disease-related pathology by reducing oxidative stress and biomarkers of dysbiosis in experimental autoimmune encephalomyelitis. *EUROPEAN JOURNAL OF PHARMACOLOGY*. 2017.815():266-273.

IF: 2,896

Q: 2

GA8 Radiology



HIGHLIGHTS

Publications

1

Impact Factor

2,959

Average Impact Factor

—

Principal Investigator (PI)

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Álvarez Benito, Marina
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Cano Sánchez, Antonio
Cara García, María
Delgado Acosta, Fernando
García Ortega, María José
García-Revilla García, José
Izquierdo Palomares, Lucia Nuria
Muñoz Carrasco, Rafaela
Roldán Romero, Elisa
Santos Romero, Ana Luz
Ysamat Marfa, Roser

Other members of the Group (Nursing, Technical and Administrative Staff)

Amate Rivas, Cristina

Scientific Activity

Continuous advances in diagnostic imaging techniques have allowed physician to make highly accurate diagnoses, perform a close follow-up of the evolution of the disease and assess TJE response of a large number of nosologic entities to a range of drugs and therapies. The collaboration of the Diagnostic Radiology Unit has allowed to assess the effect of new drugs on the evolution of a large number of neoplasms, rheumatologic diseases, demyelinating diseases of the central nervous system or inflammatory diseases of the digestive tract. In other cases, the group has helped other researchers to quantify the prevalence of certain complications associated to different therapies such as corticosteroids-based therapies.

Apart from strictly diagnostic scans, the group also performs innovative interventional procedures. Among them, it is worth mentioning the intra-arterial infusion of autologous bone marrow mononuclear cells in diabetic and non-diabetic patients with chronic critical ischemia of the lower limbs.

Keywords

Stem cells, arterial ischemia of the lower limbs, therapeutic angiogenesis, neoplasms, demyelinating diseases, rheumatic diseases, pathochrony, radiological assessment of response to drugs, diagnostic radiological scans, therapeutic radiological scans.

Scientific Production

Publications

Martinez-Galdamez M, Perez S, Vega A, Ruiz P, Caniego JL, Barcena E, Saura P, Mendez JC, Delgado F, Ortega-Gutierrez S, Romance A, Diaz T, Gonzalez E, Gil A, Murias E, Vega P. Endovascular treatment of intracranial aneurysms using the Pipeline Flex embolization device: a case series of 30 consecutive patients. *Journal of Neurointerventional Surgery*. 2016. 8(4):396-401. IF: 2,959 Q: 2

Research Funding

National

Álvarez Benito, M. Comparación de la Mamografía Digital con la Tomosíntesis en Programas de detección Precoz de Cáncer de Mama. Comparison of Digital Mammography with Tomosynthesis in Early Breast Cancer Detection Programs. Funding Agency: Sociedad Española de Radiología Médica. Reference: Seram14.001

In Collaboration with other IMIBIC Groups:

Rodríguez Ariza, A. Role of nitric oxide and nitrosothiols homeostasis in the generation and maintenance of tumor stem cells: new approaches to colon and breast cancer. Funding agency: National Institute of Health Carlos III (ISCIII). Reference: PI13/00553

Contracts with Companies

López Ruíz, DJ. Oncoexpert. Funding agency: Intra Sistemas SA. Reference: INTER.0003/3

Clinical Trials

2802. Pilot endovascular recanalization study of stroke beyond 8 hours from the selected start via imaging techniques
PI: Dr Delgado Acosta, F.

2763. Primary post-angioplasty permeability of native dysfunctional arteriovenous fistulas in hemodialysis: treatment by means of balloon versus conventional pre-loaded balloon.
PI: Dr García-Revilla García, J.

3118. Efficacy and safety of intra-arterial administration of rexmylecel t to treat critical limb ischemia in subjects with diabetes mellitus: a multicenter, randomized, double-blind, placebo controlled trial.
PI: Dr García-Revilla García, J.



HIGHLIGHTS

PUBLICATIONS

9

IMPACT FACTOR

14,332

AVERAGE IMPACT FACTOR

1,592

Principal Investigator (PI)

Ignacio Muñoz Carvajal

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PAIDI TEP-226 PRINIA Scientific Group (Co-laborator)

Researchers

Alados Arboledas, Pedro Jose
 Blazquez Ruiz, Maria Del Valle
 Canis López, Miguel
 Casares Mediavilla, Jaime Guillermo
 Chacón Quevedo, Antonio
 Elías Fuentes, Agustín (Collaborator)
 Hervas Sotomayor, Daniela
 Jiménez Castilla, Agustina
 Jurado Morata, Aurea
 López Romero, Rosalia
 Merino Cejas, Carlos Manuel
 Moya González, Javier
 Ortega Lopera, Bibián
 Pernía Orena, Isabel
 Turegano Cisneros, Jose María
 Zurita Martinez, Federico

Pre Doctoral-Researchers (PhD and MSc Students)

Conejero Jurado, Maria Teresa
 Arias Dachary, Francisco Javier
 Fernandez Carbonell, Azahara
 Dominguez del Castillo, Jose Joaquin

Other members of the Group (Nursing, Technical and Administrative Staff)

Canales Ruiz, Rafael
 Riballo Cortes, Raquel
 Romero Morales, María del Carmen

Scientific Activity

Our group is made up of professionals from different levels and specialties (graduates and doctors in medicine, nurses, engineers, biologists and research managers) for the realization of basic biomedical research, clinical research and development of technology, in the field of cardiovascular diseases.

The research activities are formally associated with the clinical and teaching activities of the Clinical Management Unit of Cardiovascular Surgery of the Reina Sofia University Hospital, which provides clinical support to research projects carried out at IMIBIC.

Our objectives are to carry out and manage high level research projects and clinical trials, funded by national and international agencies, and collaborate with private companies to conduct pre-commercial clinical trials or projects to develop new biomedical technologies in the field of cardiovascular diseases.

As a result of our basic and clinical research activities and teaching, numerous scientific articles in high-impact journals are published every year, and doctoral theses awarded. Furthermore, we collaborate in patents for new products or utility models, as well as in projects focusing on initial development of novel biomedical technologies.

Keywords

Cardiovascular, cardiac surgery

Scientific Production

Publications

Main publications

Valencia-Nunez DM, Kreutler W, Moya-Gonzalez J, Alados-Arboledas P, Munoz-Carvajal I, Carmona A, Ramirez-Chamond R, Carracedo-Anon J. Endothelial vascular markers in coronary surgery. *HEART AND VESSELS*. 2017. 32(11):1390-1399.

IF: 3,434

Q: 2

Pernia-Orena I, Sanchez-Silos FM, Alados-Arboledas P, Hervas-Sotomayor DI, Arias-Dachary J, Fernandez-Carbonell A, Turegano-Cisneros JM, Moya-Gonzalez J, Merino-Cejas CM, Casares-Mediavilla J, Conejero-Jurado MT, Inga-Tavara LI, Munoz-Villanueva MC, Munoz-Carvajal I. Comparing mitral valve repair and the MitraClip (R) device in the treatment of severe mitral regurgitation. *CIRUGIA CARDIOVASCULAR*. 2017.24(2):71-77.

IF: n/a

Carbonell AF, Hernandez MAT, Perez IV, Ciriza GG, Mejias CS. Correcting congenital heart diseases with 3 D models. *CIRUGIA CARDIOVASCULAR*. 2017.24(4):255-257.

IF:n/a

Carbonell AF, Jurado MTC, Bustos JJS, Carvajal IM. Vena cava and right atrium thrombectomy secondary to carcinoma renal cell. *CIRUGIA CARDIOVASCULAR*. 2017.24(5):311-312.

IF:n/a

Other publications

Perez-Navero JL, de la Torre-Aguilar MJ, de la Rosa II, Gil-Campos M, Gomez-Guzman E, Merino-Cejas C, Munoz-Villanueva MC, Llorente-Cantarero FJ. Cardiac Biomarkers of Low Cardiac Output Syndrome in the Postoperative Period After Congenital Heart Disease Surgery in Children. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2017.70(4):267-274.

IF: 4,485

Q: 1

Valverde I, Gomez-Ciriza G, Hussain T, Suarez-Mejias C, Velasco-Forte MN, Byrne N, Ordóñez A, Gonzalez-Calle A, Anderson D, Hazekamp MG, Roest AAW, Rivas-Gonzalez J, Uribe S, El-Rassi I, Simpson J, Miller O, Ruiz E, Zabala I, Mendez A, Manso B, Gallego P, Prada F, Cantinotti M, Ait-Ali L, Merino C, Parry A, Poirier N, Greil G, Razavi R, Gomez-Cia T, Hosseinpour AR. Three-dimensional printed models for surgical planning of complex congenital heart defects: an international multicentre study. *EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY*. 2017.52(6):1139-1148.

IF: 3,759

Q: 1

Pardo Gonzalez L, Ruiz Ortiz M, Delgado M, Mesa D, Villalba R, Rodriguez S, Hidalgo FJ, Alados P, Casares J, Suarez de Lezo J. Pulmonary homograft stenosis in the Ross procedure: Incidence, clinical impact and predictors in long-term follow-up. *ARCHIVES OF CARDIOVASCULAR DISEASES*. 2017.110(4):214-222.

IF: 2,331

Q: 2

Toro-Gutierrez JS, Espejo-Herrero JJ, Lombardo-Galera MS, Perez-Montilla ME, Canis-Lopez M, Zurera-Tendero L, Rubio JM. Renal tumors percutaneous ablation by microwave. Initial experience. *ARCHIVOS ESPAÑOLES DE UROLOGIA*. 2017. 70(5):525-533.

IF: 0,323

Q: 4

Perez-Navero JL, Tejero-Hernandez MA, Gomez-Guzman E, Merino-Cejas C, De La Torre-Aguilar MJ, Llorente-Cantarero FJ. Left ventricle training before late arterial switch to correct congenital transposition of the great arteries with intact ventricular septum. *GAZZETTA MEDICA ITALIANA ARCHIVIO PER LE SCIENZE MEDICHE*. 2017. 176(6):359-362.

IF: n/a

Research Funding

International

Muñoz Carvajal, I. STARS - Empowering Patients by Professional Stress Avoidance and Recovery Services. Funding agency: European Commission H2020. Reference: PM-12-2016-002

Contracts with Companies

Muñoz Carvajal, I. Prestación servicios. Funding agency: FUNDACIÓN PROFESOR NOVOA SANTOS. Reference: PSS.0165

Muñoz Carvajal, I. PROYECTO CARELINK. Funding agency: C.S.A. Tecnicas Médicas, S.L. Reference: CCB.0065

Clinical Trials

3276. European multi-centre registry to assess outcomes in patients undergoing coronary artery bypass graft surgery: treatment of vascular conduits with DuraGraft®, a novel endothelial damage inhibitor.

PI: Dr Muñoz Carvajal, I.

3128. Acute study on extravascular defibrillation, electrostimulation and electrograms. ASD2.

PI: Dr Muñoz Carvajal, I.



HIGHLIGHTS

Publications

5

Impact Factor

6,180

Average Impact Factor

1,236

Principal Investigator (PI)

Juan Antonio Vallejo Casas

jantonio.vallejo.sspa@juntadeandalucia.es

Researchers

Albalá González, María Dolores

Benítez Velasco, Ana

Carmona Asenjo, Elvira

Maza Muret, Francisco Roberto

Mena Bares, Luisa

Pacheco Capote, Carmen

Moreno Ortega, Estefanía

Pre-Doctoral Researchers (PhD and MSc Students)

Guiote Moreno, María Victoria

Rodríguez Caceres, Esther

Santos Bueno, Antonio María

Marquez Fernández, Juan

Other members of the Group (Nursing, Technical and Administrative Staff)

Martin Ruiz, Antonio

Rojas Arroyo, Anahi

Zurera Pareja, Rocio

Moriana Porras, Maria del Carmen

Scientific Activity

Our group aims is to develop new treatment lines for Differentiated Thyroid carcinoma and Neuroendocrine Tumors, as active part of SEMNIM Group. Also, we continue our active participation in clinical trials, specifically in the use of new radio isotopic treatment for Prostate Cancer and Lymphoma. We have different projects using PET/CT for diagnosis and monitoring response in brain tumors, others neoplastic diseases and dementia. New research areas are the use of machine learning for diagnosis (parkinson disease) and the Lean methodology and clustering analysis to improve the patients accessibility to public health system.

Scientific Production

Publications

Main Publications

Bares LMM, Asenjo EC, Sanchez MVG, Ortega EM, Muret FRM, Moreno MVG, Bueno AMS, Flores EI, Cantero JMB, Casas JAV. 75SeHSCAT scan in bile acid malabsorption in chronic diarrhoea. REVISTA ESPANOLA DE MEDICINA NUCLEAR E IMAGEN MOLECULAR. 2017.36(1):37-47.

IF: 0,951

Q: 4

Casas JAV. An exciting step. REVISTA ESPANOLA DE MEDICINA NUCLEAR E IMAGEN MOLECULAR. 2017.36(5):273-274.

IF: 0,951

Q: 4

Vallejo JA, Muros MA. Cost-effectiveness of using recombinant human thyroid-stimulating hormone before radioiodine ablation for thyroid cancer treatment in Spanish hospitals. REVISTA ESPANOLA

DE MEDICINA NUCLEAR E IMAGEN MOLECULAR. 2017.36(6):362-370.

IF: 0,951

Q: 4

Other Publications

Prior-Sanchez I, Martin AB, Ortega EM, Casas JAV, Moreno MAG. Is a second recombinant human thyrotropin stimulation test useful? The value of postsurgical undetectable stimulated thyroglobulin level at the time of remnant ablation on clinical outcome. CLINICAL ENDOCRINOLOGY. 2017.86(1):97-107.

IF: 3,327

Q: 2

Garcia-Cabezas S, Centeno-Haro M, Espejo-Perez S, Carmona-Asenjo E, Moreno-Vega AL, Ortega-Salas R, Palacios-Eito A. Intimal sarcoma of the pulmonary artery with multiple lung metastases: Long-term survival case. WORLD JOURNAL OF CLINICAL ONCOLOGY. 2017.8(4):366-370.

Clinical Trials

3664. Estudio epidemiológico, retrospectivo, longitudinal para caracterizar la historia natural de los pacientes con carcinoma diferenciado de tiroides avanzado en España y Portugal. Estudio ERUDIT.

PI: Dr Vallejo Casas, JA.



HIGHLIGHTS

Publications

7

Impact Factor

19,232

Average Impact Factor

2,747

Principal Investigator (PI)

Cesar Hervás Martínez

chervas@uco.es

PAIDI - TIC-148 Learning and Artificial Neural Networks (AYRNA)

Researchers

Becerra Alonso, David
 Carbonero Ruz, Mariano
 De la Paz Marín, Mónica
 Fernández Caballero, Juan Carlos
 Fernández Navarro, Francisco
 García Alonso, Carlos
 Gutiérrez, Pedro Antonio
 Martínez Estudillo, Alfonso Carlos
 Martínez-Estudillo, Francisco José
 Pérez Ortiz, María
 Sánchez Monedero, Javier
 Salcedo-Sanz, Sancho
 Salinas Pérez, José Alberto
 Rodero Cosano, M^a Luisa
 Torres Jiménez, Mercedes

Pre-Doctoral Researchers (PhD and MSc Students)

Dorado Moreno, Manuel
 Durán Rosal, Antonio M
 Guijo Rubio, David

Other members of the Group (Nursing, Technical and Administrative Staff)

Camacho Cañamón, Julio

Scientific Activity

Our research group, Learning and Artificial Neural Networks (AYRNA) (TIC-148, "Junta de Andalucía"), was founded in 1994 by a small group of researchers interested in the field of Artificial Neural Networks. During the last years, the group has diversified its interest areas by searching solutions to different problems through machine learning and soft computing techniques (artificial neural networks, kernel methods, evolutionary algorithms, among others).

Currently, our group consists of 15 doctoral and 3 pre-doctoral researchers, and is led by Professor César Hervás Martínez as the main researcher of the group. Our group has published 328 works, including 148 international journal papers, and has been involved in 11 research projects, including one project with the European Space Agency. Finally, 28 PhD thesis have been supervised in AYRNA. Additional information can be found at AYRNA's website. With respect to biomedicine, we propose to tackle problems such as donor-recipient matching in liver transplants, medical imaging analysis for melanoma detection and Parkinson disease detection including different severity degrees, and assignment of treatments for HIV/HCV patients.

The long-term objectives of the group are to contribute to the scientific community all the advances we achieve in the field of machine learning. As far as possible, we want to apply our techniques and algorithms to real societal problems, as we are already doing with dermatology, liver

transplants, Parkinson's Disease, climate change and renewable energies, among others.

Among our achievements, we highlight the importance of the research carried out by our group in the field of liver transplantation, which has been awarded on many occasions by different entities both nationally and internationally.

We collaborate with different companies who may be interested in the application of our computational solutions. Among them are General Electric, Iberdrola, Astellas Pharma, among others.

Research Lines

- Ordinal classification: development of ordinal classification by evolutionary computation
- Development of Evolutionary Artificial Neural Networks algorithms
- Donor-recipient matching in liver transplants

Keywords

Ordinal classification, artificial neural networks, processing of biomedical images, time series segmentation, regression models, ordinal regression, evolutionary computation.

Scientific Production

Publications

Main Publications

Carbonero-Ruz, M, Martínez-Estudillo, FJ, Fernández-Navarro, F, Becerra-Alonso, D, Martínez-Estudillo, AC. A two dimensional accuracy-based mea-

sure for classification performance. INFORMATION SCIENCES. 2017. 82-383. 60-80.

IF: 4,832

Q: 1

Pérez-Ortiz M, Gutiérrez PA, Ayllón-Teran MD, Heaton N, Ciria R, Briceno J, Hervás-Martínez C. Synthetic semi-supervised learning in imbalanced domains: Constructing a model for donor-recipient matching in liver transplantation. KNOWLEDGE-BASED SYSTEMS. 2017.123:75-87.

IF: 4,529

Q: 1

Dorado-Moreno M, Cornejo-Bueno L, Gutiérrez PA, Prieto L, Hervás-Martínez C, Salcedo-Sanz S. Robust estimation of wind power ramp events with reservoir computing. RENEWABLE ENERGY. 2017.111:428-437.

IF: 4,357

Q: 1

Dorado-Moreno M, Pérez-Ortiz M, Gutiérrez PA, Ciria R, Briceno J, Hervás-Martínez C. Dynamically weighted evolutionary ordinal neural network for solving an imbalanced liver transplantation problem. ARTIFICIAL INTELLIGENCE IN MEDICINE. 2017.77(1):1-11.

IF: 2,009

Q: 2

Duran-Rosal AM, Fernández JC, Gutiérrez PA, Hervás-Martínez C. Detection and prediction of segments containing extreme significant wave heights. OCEAN ENGINEERING. 2017.142:268-279.

IF: 1,894

Q: 1

Duran-Rosal AM, de la Paz-Marin M, Gutiérrez PA, Hervás-Martínez C. Identifying Market Behaviours Using European Stock Index Time Series by a Hybrid Segmentation Algorithm. NEURAL PROCESSING LETTERS. 2017.46(3):767-790.

IF: 1,62

Q: 3

Durán-Rosal AM, Dorado-Moreno M, Gutiérrez PA, Hervás-Martínez C. Identification of extreme wave heights with an evolutionary algorithm in combination with a likelihood-based segmentation. PROGRESS IN ARTIFICIAL INTELLIGENCE. 2017. 6 (1); 59-66.

IF: n/a

Research Funding

Local

Hervás-Martínez C, Gutiérrez PA, Camacho-Cañamón J. Clasificación y evaluación automática de los grados de párkinson. III Plan Propio GALILEO de Innovación y Transferencia (2017) Modalidad IV. UCO-SOCIAL-INNOVA.

National

Hervás-Martínez C. Ordinal classification and prediction algorithms in renewable energy, Orca-Re. Funding Agency: Ministry of Economy and Competitiveness (MINECO). Reference: TIN2014-54583-C2-1-R.

Other scientific Contributions from the Hospital divisions

Anesthesia Unit

Publications

1

Impact Factor

4,867

Average Impact Factor

4,867

Scientific Production

Publications

Alique M, Ruiz-Torres MP, Bodega G, Noci MV, Troyano N, Bohorquez L, Luna C, Luque R, Carmo A, Carracedo J, Ramirez R. Microvesicles from the plasma of elderly subjects and from senescent endothelial cells promote vascular calcification. *AGING-US*.2017.9(3):778-789. IF: 4,867 Q: 2

Research Funding

Galán Cabezas, A. Improved patient wellbeing and safety in management procedures using collaborative systems. m-LISTABLE. Funding agency: Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-5149_001

Herrador Montiel, I. RELIEF - Recovering Life wellbeing through pain self-management techniques involving ICTs. Funding Agency: European Commission. Reference: PHC-27-2015-001

Contracts with Companies

Herrador Montiel, I. Grünenthal Agreement. Funding Agency: GRÜNENTHAL PHARMA, S.A. Reference: PSS.0159

Clinical Trials

3219. One-arm, open-label, multi-centric phase IIIb study to evaluate the effectiveness, safety, tolerability, ease of use and use of Zalviso resources in the management of moderate-to-severe acute postoperative pain.
PI: Dr Herrador Montiel, Inmaculada

3188. Evaluation of the quality of life and satisfaction of the patient with breakthrough pain associated with chronic neuropathic pain. Economic impact assessed through quality of life. CANDI study.
PI: Dr Herrador Montiel, Inmaculada

Characterization and epidemiology in Spain of irruptive oncological pain.
PI: Dr Herrador Montiel, Inmaculada

2934. Epidemiological study to estimate the prevalence and evaluate the severity, approach and organizational structures used for the management of acute post-operative pain after major surgery in admitted patients in Spain.
PI: Dr Herrador Montiel, Inmaculada

Dermatology Unit

Publications

5

Impact Factor

13,836

Average Impact Factor

2,767

Scientific Production

Publications

Main Publications

Fernandez-Crehuet P, Vano-Galvan S, Martorell-Calatayud A, Arias-Santiago S, Grimalt R, Camacho-Martinez FM. Clinical and trichoscopic characteristics of temporal triangular alopecia: A multicenter study. *Journal Of The American Academy Of Dermatology*. 2016.75(3):634-637.

IF: 5,621

Q: 1 D: 1

Fernandez-Crehuet P, Ruiz-Villaverde R. Yellowish Papules on the Palms After Water Immersion. *Mayo Clinic Proceedings*. 2016.91(8):1149-50.

IF: 5,92

Q: 1

Fernandez-Crehuet P, Ruiz-Villaverde R. Dermoscopic features of aquagenic syringeal acrokera-toderma. *International Journal Of Dermatology*. 2016.55(7):E407-E408.

IF: 1,415

Q: 3

Reifs CMA, Salido-Vallejo R. Dermatofibrosarcoma protuberans with fibrosarcomatous transformation. *Anais Brasileiros De Dermatologia*. 2016.(91):5700-701.

IF: 0,88

Q: 4

Other Publications

Martinez-Peinado C, Ruiz-Villaverde R, Galan-Gutiérrez M, de Victoria JMM. Linear Multiple Epithelioid Hemangioma Associated With a Quiescent Vascular Malformation. *Actas Dermo-Sifiliograficas*. 2016.107(10):862-863.

IF: n/a

Contracts with Companies

Jiménez Puya, R. Agreement Pfizer. Funding agency: PFIZER, S.L.U. Reference: PSS.0060

Emergencies Unit

Publications

3

Impact Factor

4,052

Average Impact Factor

1,305

Scientific Production

Publications

Dominguez-Rodriguez A, Burillo-Putze G, Garcia-Saiz MD, Aldea-Perona A, Harmand MGC, Miro O, Abreu-Gonzalez P, MIMO Investigators. Study Design and Rationale of "A Multicenter, Open-Labeled, Randomized Controlled Trial Comparing Midazolam Versus Morphine in Acute Pulmonary Edema": MIMO Trial. *CARDIOVASCULAR DRUGS AND THERAPY*. 2017.31(2):209-213.

IF: 2,82

Q: 2

Montero-Perez FJ, Quero-Espinosa FD, Clemente-Millan MJ, Castro-Gimenez JA, de Burgos-Marin J, Romero-Moreno MA. Diagnostic validity of hand gestures in chest pain of coronary origin. *REVISTA CLINICA ESPANOLA*. 2017.217(5):252-259.

IF: 0,971

Q: 3

Carrasco J, Arias MR, Perula LA, Campos JP, Prieto R, Requena MJ. Renal lithiasis, erectile dysfunction and ADAM test: Observational study using telephone survey. *REVISTA INTERNACIONAL DE ANDROLOGIA*. 2017.15(4):153-159.

IF: 0,261

Q: 4

Clinical Trials

3270. Study Design and Rationale of A Multicenter, Open-Labeled, Randomized Controlled Trial Comparing Midazolam Versus Morphine in Acute Pulmonary Edema: MIMO Trial.

PI: Dr Calvo Rodríguez, Rafael

General and Digestive Surgery Unit

Publications

1

Impact Factor

2,342

Average Impact Factor

2,342

Scientific Production

Publications

Trenti L, Biondo S, Galvez A, Bravo A, Cabrera J, Kreisler E. Distal Doppler-guided transanal hemorrhoidal dearterialization with mucopexy versus conventional hemorrhoidectomy for grade III and IV hemorrhoids: postoperative morbidity and long-term outcomes. *TECHNIQUES IN COLOPROCTOLOGY*. 2017. 21(5):337-344.

IF: 2,342

Q: 3

Clinical Trials

3119. A multicenter, randomized, placebo-controlled, double-blind study to evaluate the efficacy and tolerability of 2% diltiazem hydrochloride in the treatment of chronic anal fissure, and open-label extension of 24 weeks.

PI: Dr Gallardo Valverde, José María

2601. Surgical strategy in the cylindrical abdominoperineal amputation of the rectum due to cancer. Lithotomy vs prone-jackknife position. Multi-center randomized prospective study.

PI: Dr Gómez Barbadillo, José

2810. Evaluation of the quality of life and satisfaction of an elderly patient with chronic pain and irruptive pain, under treatment with opioids. SAND study.

PI: Dr Collazo Chao, Eliseo

2811. Epidemiological study to evaluate the prevalence of breakthrough pain in patients with chronic pain secondary to chronic low back pain. COLUMBUS study.

PI: Dr Collazo Chao, Eliseo

Gynecology & Obstetrics Unit

Publications

6

Impact Factor

8,526

Average Impact Factor

1,421

Scientific Production

Publications

Main Publications

Lara-Dominguez MD, Lopez-Jimenez A, Grabowski JP, Arjona-Berral JE, Zapardiel I. Prospective observational study comparing traditional laparoscopy and three-dimensional laparoscopy in gynecologic surgery. *INTERNATIONAL JOURNAL OF GYNECOLOGY & OBSTETRICS*. 2017.136(3):320-324.

IF: 2,174

Q: 2

Duro-Gomez J, Garrido-Oyarzun MF, Rodriguez-Marin AB, Gonzalez AJD, Arjona-Berral JE, Castelo-Branco C. Efficacy and safety of misoprostol, dinoprostone and Cook's balloon for labour induction in women with foetal growth restriction at term. *ARCHIVES OF GYNECOLOGY AND OBSTETRICS*. 2017.296(4):777-781.

IF: 2,09

Q: 2

Duro-Gomez J, Garrido-Oyarzun MF, Rodriguez-Marin AB, Gonzalez AJD, Arjona-Berral JE,

Castelo-Branco C. What can we do to reduce the associated costs in induction of labour of intrauterine growth restriction fetuses at term? A cost-analysis study. *ARCHIVES OF GYNECOLOGY AND OBSTETRICS*. 2017.296(3):483-488.

IF: 2,09

Q: 2

Duro-Gomez J, Rodriguez-Marin AB, de Azcarete MG, Duro-Gomez L, Hernandez-Angeles C, Arjona-Berral JE, Castelo-Branco C. A trial of oral nifedipine and oral labetalol in preeclampsia hypertensive emergency treatment. *JOURNAL OF OBSTETRICS AND GYNAECOLOGY*. 2017.37(7):864-866.

IF: 1,086

Q: 4

Gomez JD, Oyarzun MFG, Marin ABR, Gonzalez AJD, Berral JEA, Castelo-Branco C. Vaginal misoprostol and cervical ripening balloon for induction of labor in late-term pregnancies. *JOURNAL OF OBSTETRICS AND GYNAECOLOGY RESEARCH*. 2017.43(1):87-91.

IF: 1,086

Q: 4

Gomez JD, Lopez RG, Tejero IMP, Sanchez EV, Berral JEA. Are hysterometers and Pozzi forceps necessary for IUD insertion? CLINICA E INVESTIGACION EN GINECOLOGIA Y OBSTETRICIA. 2017.44(4):163-166.

Contracts with Companies

Arjona Berral, JA. Johnson Agreement. Funding Agency: JOHNSON & JOHNSON S.A. Reference: PSS.0029

Guizado López, R. Agreement Takeda. Funding Agency: TAKEDA FARMACEUTICA ESPAÑA S.A. Reference: PSS.0049

Ríos Aragón, J. Agreement Merck. Funding Agency: MERCK SHARP & DOHME DE ESPAÑA SA. Reference: PSS.0085

Guizado López, R. Takeda Agreement. Funding Agency: TAKEDA FARMACEUTICA ESPAÑA S.A. Reference: PSS.0097

Guizado López, R. akeda Agreement. Funding Agency: TAKEDA FARMACEUTICA ESPAÑA S.A. Reference: PSS.0148

Guizado López, R. Medtronic Agreement. Funding Agency: MEDTRONIC IBERICA, S.A. Reference: PSS.0151

Clinical Trials

3146. Comparison of the effect of a combination of myo-inositol: D-chiro-inositol with a low proportion of D-chiro-inositol (40:1) versus a combination with a higher proportion of D-chiro-inositol (3.6:1) on oocyte quality.

PI: Dr Lorente González, Juan

2003. Protocol for clinical study, use of transvaginal ultrasound to confirm placement of Essure® microinserts in women: demonstration of efficacy. PI: Dr Arjona Berral, José Eduardo

2447. An international multi-center clinical study to evaluate the safety and efficacy of the Essure health product (Model ESS505) to prevent pregnancy in women seeking permanent contraception.

PI: Dr Arjona Berral, José Eduardo

Hematology Unit

Publications

1

Impact Factor

2,532

Average Impact Factor

2,532

Scientific Production

Publications

Caston JJ, Lacort-Peralta I, Martin-Davila P, Loeches B, Tabares S, Temkin L, Torre-Cisneros J, Pao-Pardo JR. Clinical efficacy of ceftazidime/avibactam versus other active agents for the treatment of bacteremia due to carbapenemase-producing Enterobacteriaceae in hematologic patients. INTERNATIONAL JOURNAL OF INFECTIOUS DISEASES. 2017.59:118-123.

IF: 2,532

Q: 2

Clinical Trials

3520: Estudio multicéntrico, no aleatorizado y abierto, para evaluar la eficacia y seguridad de ibr-

tinib seguido por consolidación con Ofatumumab, en pacientes con leucemia linfocítica crónica (LLC) o linfoma linfocítico de células pequeñas (LLCP) sin tratamiento.

PI: Dr Fernández de la Mata, M.

3280: ECHO: Expanding Communications on Hemophilia-A Outcomes - Estudio observacional, internacional, longitudinal, prospectivo en pacientes en tratamiento de Hemofilia A de moderada a grave para la evaluación de los resultados comunicados por los pacientes

PI: Dr Fernández Sánchez de Mora, MC.

1766: Registro de PNH (Hemoglobinuria paroxística nocturna)

PI: Dr Moreno Garrido, D.

Inmunology & Allergy Unit

Contracts with Companies

Santamaria Ossorio, M. Clinic Agreement Funding Agency: CLINICORD, S.L. Reference: CCB.0002

Clinical Trials

3040.A Multi-center, Open-label, Single-arm Trial to Evaluate Efficacy, Pharmacokinetics, and Safety and Tolerability of IGSC 20% in Subjects with Primary Immunodeficiency.

PI: Dr Santamaria Ossorio, Manuel

2927. PID-RSV study: etymological study on the incidence of acute respiratory infections (ARI) caused

by respiratory syncytial virus (RSV) requiring hospitalization in pediatric populations with primary immunodeficiency (PID).

PI: Dr Santamaria Ossorio, Manuel

Intensive Care Unit

Publications

5

Impact Factor

9,123

Average Impact Factor

1,824

Scientific Production

Publications

Machuca I, Gutierrez-Gutierrez B, Gracia-Ahufinger I, Espinar FR, Cano A, Guzman-Puche J, Perez-Nadales E, Natera C, Rodriguez M, Leon R, Caston JJ, Rodriguez-Lopez F, Rodriguez-Bano J, Torre-Cisneros J. Mortality Associated with Bacteremia Due to Colistin-Resistant *Klebsiella pneumoniae* with High-Level Meropenem Resistance: Importance of Combination Therapy without Colistin and Carbapenems. *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*. 2017.61(8):-e00406-17.

IF: 4,302

Q: 1

Montilla MEP, Rey IMB, Rodriguez MDB, Alvarado SV, Bravo-Rodriguez FD, Acosta FD. Acute occlusion of a giant aneurysm of the internal carotid artery: Recanalisation of the middle cerebral artery through the contralateral carotid artery. *NEUROLOGIA*. 2017.32(7):480-484.

IF: 2,103

Q: 3

Medina-Rodriguez KE, Almendro-Delia M, Garcia-Alcantara A, Arias-Garrido JJ, Rodriguez-Yanez JC, Alonso-Munoz G, de la Chica-Ruiz-Ruano R, Reina-Toral A, Varela-Lopez A, Arboleda-Sanchez JA, Pouillet-Brea AM, Zaya-Ganfo B, Butron-Calderon M, Cristo-Ropero MJ, Hidalgo-Urbano R, Garcia-Rubira JC, Grp SCA Plataforma Ariam-Andalucia. Prognostic implication of early ventricular fibrillation among patients with ST elevation myocardial infarction. *CORONARY ARTERY DISEASE*. 2017.28(7):570-576.

IF: 1,823

Q: 3

Llompert-Pou JA, Chico-Fernandez M, Sanchez-Casado M, Salaberria-Udabe R, Carbayo-Gorriz C, Guerrero-Lopez F, Gonzalez-Robledo J, Ballesteros-Sanz MA, Herran-Monge R, Servia-Goixart L, Leon-Lopez R, Val-Jordan E. Scoring severity in trauma: comparison of prehospital scoring systems in trauma ICU patients. *EUROPEAN JOURNAL OF TRAUMA AND EMERGENCY SURGERY*. 2017.43(3):351-357.

IF: 0,895

Q: 3

Pernia-Orena I, Sanchez-Silos FM, Alados-Arboledas P, Hervas-Sotomayor DI, Arias-Dachary J, Fernandez-Carbonell A, Turegano-Cisneros JM, Moya-Gonzalez J, Merino-Cejas CM, Casares-Mediavilla J, Conejero-Jurado MT, Inga-Tavara LI, Munoz-Villanueva MC, Munoz-Carvajal I. Comparing mitral valve repair and the MitraClip (R) device in the treatment of severe mitral regurgitation. *CIRUGIA CARDIOVASCULAR*. 2017.24(2):71-77.

Contracts with Companies

Jiménez Puya, R. Prospective observational study of the risk factors for hospital acquired and ventilator associated bacterial pneumonia. Funding agency: UNIVERSITY MEDICAL CENTER UTRECHT. Reference: PSS.0176

Clinical Trials

3461. Determinants of antimicrobial use and de-escalation in critical care (DIANA STUDY). PI: Dr Pozo Laderas, Juan Carlos

Neurology Unit

TOTAL

3

Impact Factor

6,819

Average Impact Factor

2,273

Scientific Production

Publications

Montilla MEP, Rey IMB, Rodríguez MDB, Alvarado SV, Bravo-Rodríguez FD, Acosta FD. Acute occlusion of a giant aneurysm of the internal carotid artery: Recanalisation of the middle cerebral artery through the contralateral carotid artery. *NEUROLOGIA*. 2017;32(7):480-484.

IF: 2,103

Q: 3

Serrano-Castro PJ, Fernandez-Perez J, Lopez-Gonzalez FJ, Toledo-Argany M, Estevez-Maria JC, Arjona-Padillo A, Bertol-Alegre V, Mauri-Llerda JA, Tortosa-Conesa D, Ruiz-Gimenez J, Querol-Pascual R, Garcia-Martinez A, Molto-Jorda JM, Payan-Ortiz M, Maestre-Moreno JF, Galvan-Espinosa J, ESL-LIPID Study Grp. Eslicarbazepine acetate and carotid intima-media thickness in epileptic patients. *EPILEPSY RESEARCH*. 2017;138():81-87.

IF: 2,367

Q: 3

Oreja-Guevara C, Gomez-Pinedo U, Garcia-Lopez J, Sanchez-Sanchez R, Valverde-Moyano R, Rabano-Gutierrez A, Matias-Guiu JA, Gonzalez-Suarez I, Matias-Guiu J. Inhibition of neurogenesis in a case of Marburg variant multiple sclerosis. *MULTIPLE SCLEROSIS AND RELATED DISORDERS*. 2017;18():71-76.

IF: 2,349

Q: 3

Clinical Trials

3067. A randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of sage-547 injection in the treatment of subjects with super-refractory status epilepticus.

PI: Dr Estévez María, José Carlos

3625. An Open-label, Multicenter Extension Study to Evaluate the Long-term Safety and Efficacy of Lacosamide as Adjunctive Therapy for Uncontrolled Primary Generalized Tonic Clonic Seizures in Subjects With Idiopathic Generalized Epilepsy.

PI: Dr Estévez María, José Carlos

3626. A Double-blind, Randomized, Placebo-controlled, Parallel-Group, Multicenter Study to Evaluate the Efficacy and Safety of Lacosamide as Adjunctive Therapy for Uncontrolled Primary Generalized Tonic-Clonic Seizures in Subjects With Idiopathic Generalized Epilepsy.

PI: Dr Estévez María, José Carlos

0011/14. A Phase III, Open-label, Extension Trial of ECU-NMO-301 to Evaluate the Safety and Efficacy of Eculizumab in Patients With Relapsing Neuromyelitis Optica (NMO).

PI: Dr Bahamonde Román, Carmen

0255/13. A Phase II, Multicentric, Open, Controlled and Randomized, to assess the efficacy of the intra-arterial infusion of mononuclear cells of autologous bone marrow in patients with ischemic stroke.

PI: Dr Moyano Roberto, Valverde

Neurosurgery Unit

Publications

2

Impact Factor

4,807

Average Impact Factor

2,403

Scientific Production

Publications

Ibanez-Costa A, Lopez-Sanchez LM, Gahete MD, Rivero-Cortes E, Vazquez-Borrogo MC, Galvez MA, de la Riva A, Venegas-Moreno E, Jimenez-Reina L, Moreno-Carazo A, Tinahones FJ, Maraver-Selfa S, Japon MA, Garcia-Arnes JA, Soto-Moreno A, Webb SM, Kineman RD, Culler MD, Castano JP, Luque RM. BIM-23A760 influences key functional endpoints in pituitary adenomas and normal pituitaries: molecular mechanisms underlying the differential response in adenomas. SCIENTIFIC REPORTS. 2017;7(1):42002.
IF: 4,259
Q: 1

Mesa-Quesada J, Roldan-Romero E, Lozano-Sanchez JA, Centeno-Haro M, Ortega-Salas RM, Bravo-Rodriguez F. Cervical paraspinal chordoma, a condition we should know. A case report. NEURO-CIRUGIA. 2017;28(4):197-201.
IF: 0,548
Q: 4

Research Funding

Solivera Vela, J. Diagnosis and post-operative forecast of human gliomas using a new interactomic approach. Funding agency: Regional Ministry of Health and Social Policy (CISPS). Reference: PI-0143-2016

Onco-radiotherapy Unit

Publications

4

Impact Factor

9,304

Average Impact Factor

2,258

Scientific Production

Publications

Main Publications

Garcia-Cabezas S, Centeno-Haro M, Espejo-Perez S, Carmona-Asenjo E, Moreno-Vega AL, Ortega-Salas R, Palacios-Eito A. Intimal sarcoma of the pulmonary artery with multiple lung metastases: Long-term survival case. WORLD JOURNAL OF CLINICAL ONCOLOGY. 2017;8(4):366-370.

Other Publications

del Campo ER, Rivera S, Martinez-Paredes M, Hupe P, Escarpa AS, Borget I, Mazon R, Scholl S, Eito AP, Haie-Meder C, Chargari C, Deutsch E. Assessment of the novel online delineation workshop dummy run approach using FALCON within a European multicentre trial in cervical cancer (RAIDs). RADIO-THERAPY AND ONCOLOGY. 2017;124(1):130-138.
IF: 4,328
Q: 1

Rodriguez A, Borrás JM, Lopez-Torrecilla J, Algara M, Palacios-Eito A, Gomez-Caamano A, Olay L, Lara PC. Demand for radiotherapy in Spain. CLINICAL & TRANSLATIONAL ONCOLOGY. 2017;19(2):204-210.
IF: 2,353
Q: 3

Casas F, Henriquez I, Bejar A, Maldonado X, Alvarez A, Gonzalez-Sansegundo C, Boladeras A, Ferrer F, Hervas A, Herruzo I, Caro M, Rodriguez I,

Ferrer C. Intermittent versus continuous androgen deprivation therapy to biochemical recurrence after external beam radiotherapy: a phase 3 GICOR study. CLINICAL & TRANSLATIONAL ONCOLOGY. 2017;19(3):373-378.
IF: 2,353
Q: 3

Contracts with Companies

Palacios Eito, A. Janssen Agreement. Funding Agency: JANSSEN-CILAG, S.A. Reference: PSS.0133

Palacios Eito, A. Janssen Agreement. Funding Agency: JANSSEN-CILAG, S.A. Reference: PSS.0134

Clinical Trials

2901. Measurement of the impact of radiation therapy with combined or non-hormonal therapy on quality of life in clinical practice in localized prostate cancer. VEPIC-ORT- study.
PI: Dr Palacios Eito, Amalia

2637. OPTimizing Irradiation through Molecular Assessment of Lymph node.
PI: Dr Espinosa Calvo, María

3553. Enzalutamide and External Beam Hypofractionated Radiotherapy For Intermediate Risk Localized Prostate Cancer.
PI: Dr Palacios Eito

Ophthalmology Unit

Research Funding

Gallardo Galera, JM. Prevention, Early detection, Treatment and Rehabilitation of Ocular Pathologies Funding Agency: National Institute of Health Carlos III (ISCIII). Reference: RD16/0008/0018

Gallardo Galera, JM. Improved patient wellbeing and safety in management procedures using collaborative systems. m-LISTABLE. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: RTC-2016-5149_003

Contracts with Companies

Gallardo Galera, JM. Carlson Agreement. Funding agency: CARLSON WAGONLIT ESPAÑA S.L. Reference: QUERATOCO2016

Gallardo Galera, JM. B&L Agreement. Funding agency: BAUSCH & LOMB S.A. Reference: QUERATOCO2017

Clinical Trials

0184/11. Allogeneic Tissue Engineering (Nanostructured Artificial Human Cornea) in Patients With Corneal Trophic Ulcers in Advanced Stages, Refractory to Conventional (Ophthalmic) Treatment Corneal. PI: Dr Gallardo Galera, José María

0236/13. Safety and Efficacy Assessment of Monoprost® in Comparison With Lumigan® 0.01% and Lumigan® 0.03% Unit Dose, in Patients With Primary Open Angle Glaucoma or Ocular Hypertension, Stabilized by Lumigan® 0.01% With Ocular Surface Intolerance. PI: Dr Gimenez Gomez, Rafael

0360/14. The Efficacy and Safety of Bimatoprost SR in Patients With Open-angle Glaucoma or Ocular Hypertension. PI: Dr Gimenez Gomez, Rafael

3447. A Prospective, Double-masked, Randomized, Multicenter, Active-controlled, Parallel-group, 6-month Study Assessing the Safety and Ocular Hypotensive Efficacy of PG324 Ophthalmic Solution Compared to GANFORT® (Bimatoprost 0.03% / Timolol 0.5%) Ophthalmic Solution in Subjects With Elevated Intraocular Pressure (MERCURY 3). PI: Dr Gimenez Gomez, Rafael

3564. Combination of fixed doses without preservatives of tafluprost at 0.0015% / timolol at 0.5% in patients with open-angle glaucoma or ocular hypertension: clinical effectiveness, tolerability and safety in the real world. PI: Dr Gimenez Gomez, Rafael

Pathological Anatomy Unit

Publications

2

Impact Factor

5,05

Average Impact Factor

2,750

Scientific Production

Publications

Hormaechea-Agulla D, Jimenez-Vacas JM, Gomez-Gomez E, Lopez FL, Carrasco-Valiente J, Valero-Rosa J, Moreno MM, Sanchez-Sanchez R, Ortega-Salas R, Gracia-Navarro F, Culler MD, Ibanez-Costa A, Gahete MD, Requena MJ, Castano JP, Luque RM. The oncogenic role of the spliced somatostatin receptor sst5TMD4 variant in prostate cancer. FASEB JOURNAL. 2017.31(11):4682-4696. IF: 5,498 Q: 1 D: 1

Izquierdo L, Montalbo R, Ingelmo-Torres M, Mallofre C, Ramirez-Backhaus M, Rubio J, Van der Heijden AG, Schaafsma E, Lopez-Beltran A, Blanca A, Lawrentschuk N, Alcaraz A, Mengual L, Izquierdo L, Mengual L. Prognostic microRNAs in upper tract urothelial carcinoma: multicenter and international validation study. IF: 5,168 Q: 1

Herrera-Martinez AD, Gahete MD, Sanchez-Sanchez R, Salas RO, Serrano-Blanch R, Salvatierra A, Hoflandi LJ, Luque RM, Galvez-Moreno MA, Casta-

no JP. The components of somatostatin and ghrelin systems are altered in neuroendocrine lung carcinoids and associated to clinical-histological features. LUNG CANCER. 2017.109():128-136. IF: 4,294 Q: 1

Diaz-Tocados JM, Herencia C, Martinez-Moreno JM, de Oca AM, Rodriguez-Ortiz ME, Vergara N, Blanco A, Steppan S, Almaden Y, Rodriguez M, Munoz-Castaneda JR. Magnesium Chloride promotes Osteogenesis through Notch signaling activation and expansion of Mesenchymal Stem Cells. SCIENTIFIC REPORTS. 2017.7(1):-7839. IF: 4,259 Q: 1

Gonzalez R, De la Rosa AJ, Rufini A, Rodriguez-Hernandez MA, Navarro-Villaran E, Marchal T, Pereira S, De la Mata M, Muller-Schilling M, Pascasio-Acedo JM, Ferrer-Rios MT, Gomez-Bravo MA, Padillo FJ, Muntane J. Role of p63 and p73 isoforms on the cell death in patients with hepatocellular carcinoma submitted to orthotopic liver transplantation. PLOS ONE. 2017.12(3):-e0174326. IF: 2,806 Q: 1

Perez P, Rodriguez-Peralvarez M, Guerrero L, Gonzalez V, Sanchez R, Centeno M, Poyato A, Briceno J, Sanchez-Frias M, Montero JL, De la Mata M. Incidental hepatocellular carcinoma after liver transplantation: Prevalence, histopathological features and prognostic impact. PLOS ONE. 2017.12(4):e0175010.
IF: 2,806
Q: 1

Carmona MD, Canadillas S, Romero M, Blanco A, Nogueras S, Herrera C. Intramyocardial bone marrow mononuclear cells versus bone marrow-derived and adipose mesenchymal cells in a rat

model of dilated cardiomyopathy. CYTOTHERAPY. 2017.19(8):947-961.
IF: 3,203
Q: 2

Oreja-Guevara C, Gomez-Pinedo U, Garcia-Lopez J, Sanchez-Sanchez R, Valverde-Moyano R, Rabano-Gutierrez A, Matias-Guiu JA, Gonzalez-Suarez I, Matias-Guiu J. Inhibition of neurogenesis in a case of Marburg variant multiple sclerosis. MULTIPLE SCLEROSIS AND RELATED DISORDERS. 2017.18(1):71-76.
IF: 2,349
Q: 3

Mesa-Quesada J, Romero-Martin S, Cara-Garcia M, Martinez-Lopez A, Medina-Perez M, Raya-Povedano JL. Radial scars without atypia in percutaneous biopsy specimens: can they obviate surgical biopsy? RADIOLOGIA. 2017.59(6):523-530.
IF: n/a

Contracts with Companies

Medina Pérez M. Roche Agreement, Funding agency: ROCHE FARMA, S.A. Reference: CCB.0112

Pediatrics Unit

Clinical Trials

3215 A Phase 1, open-label, single-dose, non-randomized study to evaluate pharmacokinetics and pharmacodynamics of edoxaban in pediatric patients.
PI: Dr Tejero Hernández, María Ángeles

2718 Effects of probiotic supplementation during the neonatal period on pre-term infants.
PI: Dr De La Camara Morano, Carmen

Pediatric Surgery Unit

Publications

2

Impact Factor

2,28

Average Impact Factor
1,760

Scientific Production

Publications

Main Publications

Betancourth-Alvarenga JE, Perez JIG, Fernandez ALC, Pascual FJM, Elias MAC, Gil AE, Paredes-Esteban RM. Management of gastroesophageal reflux in children. Single centre experience in conventional and laparoscopic Nissen fundoplication in the last 15 years. ANALES DE PEDIATRIA. 2017.86(4):220-225
Q: 3
IF: 1,14

Murcia Pascual FJ, Delgado Cotán L, Jiménez Cre-

spo V, Vázquez Rueda F, Rodríguez Cano E, Miño Mora M, Paredes Esteban RM. Correlation between prenatal ultrasound and postnatal diagnosis of birth defects. CIR PEDIATR. 2017. 30(3):126-130.
IF: n/a

Other Publications

Escudero JA, Esteban RMP, Lasaosa FJC, Vento M, Gil ML, Asencio JCD, Pumarega MTM. More than 3 hours and less than 3 years: Safety of anesthetics procedures in children under 3 years undergoing surgery for more than 3 hours. ANALES DE PEDIATRIA. 2017.87(4):236-236.
Q: 3
IF: 1,14

Pharmacy Unit

Publications

3

Impact Factor

4,919

Average Impact Factor

1,639

Scientific Production

Publications

Main Publications

Puente LG, Flores EI, Benitez JM, Medina RM, Rodriguez IS, Melero PA, Aranzana MJC, Fernandez RG, Martin BM, Garcia-Sanchez V. Evaluation of the Novel Methotrexate Architect Chemiluminescent Immunoassay: Clinical Impact on Pharmacokinetic Monitoring. THERAPEUTIC DRUG MONITORING. 2017. 39(5):492-498. IF:2,178 Q:2

Aumente MD, Lopez-Santamaria J, Donoso-Rengifo MC, Reyes-Torres I, Hervas PM. Optimization of biological therapy in rheumatoid arthritis patients: outcomes from the CREATE registry after 2 years of follow-up. RHEUMATOLOGY INTERNATIONAL. 2017. 37(10):1701-1708. IF:1,824 Q:3

Other Publication

Cardenas MJ, de la Fuente S, Castro-Villegas MC, Romero-Gomez M, Ruiz-Vilchez D, Calvo-Gutierrez J, Escudero-Contreras A, del Prado JR, Collan-

tes-Estevez E, Font P. Evolution after switching to biosimilar infliximab in inflammatory bowel disease patients in clinical remission. GASTROENTEROLOGIA Y HEPATOLOGIA. 2017. 40(9):595-604. IF: 0,917 Q: 4

Contracts with Companies

Del Prado Llergo, JR. Agreement Novartis. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS. 0170

Del Prado Llergo, JR. Agreement Sanofi. Funding agency: SANOFI-AVENTIS, S.A. Reference: PSS.0173

Del Prado Llergo, JR. Agreement Janssen. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS. 0175

Del Prado Llergo, JR. Agreement Teva. Funding agency: TEVA PHARMA, SLU. Reference: PSS.0182

Del Prado Llergo, JR. Agreement Novartis. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS.0186

Del Prado Llergo, JR. Agreement Novartis. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS.0187

Del Prado Llergo, JR. Agreement Sanofi. Funding agency: SANOFI-AVENTIS, S.A. Reference: PSS.0188

Del Prado Llergo, JR. Agreement Gilead. Funding agency: GILEAD SCIENCES, S.L. Reference: PSS.0189

Del Prado Llergo, JR. Agreement. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS.0194_01

Del Prado Llergo, JR. Agreement. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS.0194_02

Del Prado Llergo, JR. Agreement Alexion. Funding agency: ALEXION PHARMA SPAIN SL. Reference: 0198

Del Prado Llergo, JR. Agreement Merck. Funding agency: MERCK, S.L.U. Reference: PSS.0205

Del Prado Llergo, JR. Agreement Baxter. Funding agency: BAXTER, SL. Reference: PSS.0206

Del Prado Llergo, JR. ROCHE Agreement. Funding agency: ROCHE FARMA, S.A. Reference: CCB.0129

Del Prado Llergo, JR. Gilead Agreement. Funding agency: GILEAD SCIENCES, S.L. Reference: PSS.0160

Del Prado Llergo, JR. Novartis Agreement. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS.0149

Del Prado Llergo, JR. Sanofi Agreement. Funding agency: SANOFI-AVENTIS, S.A. Reference: PSS.0139

Del Prado Llergo, JR. Janssen Agreement. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS.0089

Del Prado Llergo, JR. Novartis Agreement. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS.0150

Del Prado Llergo, JR. Hospira Agreement. Funding agency: HOSPIRA PRODUCTOS FARMACÉUTICOS Y HOSPITALARIOS S.L.U. Reference: PSS.0046

Del Prado Llergo, JR. Novartis Agreement. Funding agency: NOVARTIS FARMACEUTICA, S.A. Reference: PSS.0087

Del Prado Llergo, JR. Janssen Agreement. Funding agency: JANSSEN-CILAG, S.A. Reference: PSS.0073

Clinical Trials

3072. The prospective study of clinical toxicity with different formulations of docetaxel. PI: Dr Gago Sanchez, Ana Isabel

3130. Impact of the PROVAUR stewardship program on linezolid resistance in a tertiary university hospital: A before-after interventional study. PI: Dr García Martínez, Lucrecia

Physical Medicine and Rehabilitation

Contracts with Companies

Mayordomo Riera FJ. Agreement Mantel. Funding Agency: Magtel Operaciones S.L.U. Reference: ITC-20151115

Mayordomo Riera FJ. Agreement Ams. Funding Agency: AMS Centro Medico de Ejercicio S.L. Reference: ITC-20151244

Clinical Trials

3005. Effectiveness of a Homebased Cardiac Rehabilitation Program of Mixed Surveillance Using NUUBO Monitoring Vest in Patients With Ischemic Heart Disease at Moderate Cardiovascular Risk. PI: Dr Heredia Torres, Ángela

Preventive Medicine Unit

Publications

1

Impact Factor

8,216

Average Impact Factor

8,216

Scientific Production

Publications

Cordero E, Roca-Oporto C, Bulnes-Ramos A, Aydilto T, Gavalda J, Moreno A, Torre-Cisneros J, Montejo JM, Fortun J, Munoz P, Sabe N, Farinas MC, Blanes-Julia M, Lopez-Medrano F, Suarez-Benjumea A, Martinez-Atienza J, Rosso-Fernandez C, Perez-Romero P. TRANSGRIPE 1-2 Study Group Two Doses of Inactivated Influenza Vaccine Improve Immune Response in Solid Organ Transplant Recipients: Results of TRANSGRIPE 1-2, a Randomized Controlled Clinical Trial. CLINICAL INFECTIOUS DISEASES. 2017;64(7):829-838.

IF: 8,216

Q: 1 D1

Psychiatric Unit

Publications

3

Impact Factor

10,464

Average Impact Factor

3,488

Scientific Production

Publications

Other Publications

Roncero C, Abad AC, Padilla-Mata A, Ros-Curull E, Barral C, Casas M, Grau-Lopez L Psychotic Symptoms Associated with the use of Dopaminergic Drugs, in Patients with Cocaine Dependence or Abuse. CURRENT NEUROPHARMACOLOGY. 2017;15(2).315-323.
IF: 3,365
Q:2

Munoz-Negro JE, Lozano V, Ibanez-Casas I, de la Cruz BG, Solere A, Alcalá JA, Ontiveros C, Aznarte P, Cervilla JA Negative symptoms across psychotic spectrum disorders. EUROPEAN JOURNAL OF PSYCHIATRY. 2017;31(1).37-41.
IF: 0,426
Q:4

Moriana, JA; Galvez-Lara, M; Corpas, J. Psychological treatments for mental disorders in adults: A review of the evidence of leading international organizations. CLINICAL PSYCHOLOGY REVIEW. 2017;54:29-53.
IF: 8,897
Q:1 D1

Research Funding

Sarramea F. Efficacy in patients with severe mental disorders of an intensive motivational interventional programme offering individualized information on respiratory damage for smoking cessation. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI16/00802

Clinical Trials

3451/3. Nalmefeno para la reducción del consumo de alcohol en el trastorno bipolar en comorbilidad con trastorno por consumo de alcohol.
PI: Dr Sarramea Crespo, Fernando

Quality Unit

Research Funding

Jimber Del Rio, M. EPP - eHealth - European Procurers Platform - eHealth - Transforming the market for eHealth Solutions. Funding Agency; European Commission. Reference: ICT-35-2014-002

Jimber Del Rio, M. Mejora de la Seguridad del Paciente en Base A la Introducción de Esta Perspectiva en Tecnologías de la Información Sanitarias Mediante Metodologías para Su Evaluación. Funding Agency: CONSEJERIA DE SALUD. Reference: PIN-0483-2017

Radiotherapeutic Oncology

Contracts with Companies

Palacios Eito A. Agreement Janssen. Funding Agency: Janssen-Cilag, S.A. Reference: PSS.0133

Palacios Eito A. Agreement Janssen. Funding Agency: Janssen-Cilag, S.A. Reference: PSS.0134

Traumatology Unit

Publications

1

Impact Factor

3,124

Average Impact Factor

3,124

Scientific Production

Publications

Caeiro JR, Bartra A, Mesa-Ramos M, Etxebarria I, Montejo J, Carpintero P, Sorio F, Gatell S, Farre A, Canals L, PROA Investigators. Burden of First Osteoporotic Hip Fracture in Spain: A Prospective, 12-Month, Observational Study. *CALCIFIED TISSUE INTERNATIONAL*. 2017;100(1):29-39.

IF: 3,124

Q: 2

Clinical Trials

0339/15. A Multicentre, Randomised, Double-blind, Controlled, Phase IIIb Study to Assess the Efficacy

and Safety of Rivaroxaban 10mg od Versus Enoxaparin 4000 UI for VTE PROphylaxis in NOn Major Orthopaedic Surgery.

PI: Dr Mesa Ramos, Manuel

0339/15/2. A Multicentre, Randomised, Double-blind, Controlled, Phase IIIb Study to Assess the Efficacy and Safety of Rivaroxaban 10mg od Versus Enoxaparin 4000 UI for VTE PROphylaxis in NOn Major Orthopaedic Surgery.

PI: Dr Sotillo Marmol, Jose Maria

3041. Multicenter Register of Treatment of Scoliosis Patients in Andalusia.

PI: Dr Fuentes Caparros, Simón

9

Facts & Figures

9. Facts & Figures

9.1 Publications

The scientific activities carried out by researchers in their respective groups have led to the following global production:

Nr of Publications 424	Total IF 1845,259	Average IF 4,352
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Evolution in the last 5 years

The following graph shows the evolution of Impact Factor over the past five years:

	Nr of publications	Total IF	Average IF
2012	349	1254	3,593
2013	362	1250	3,453
2014	384	1237	3,221
2015	346	1236	3,572
2016	401	1528	3,8105
2017	424	1845	4,352

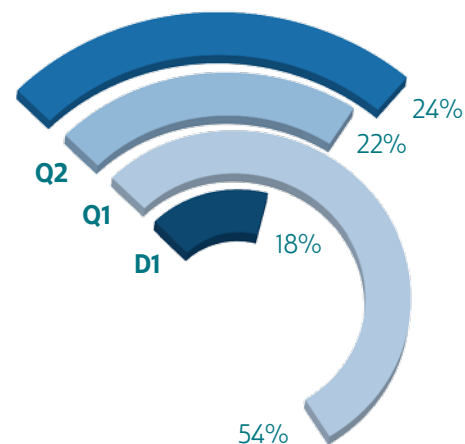
Distribution of publications per quartiles and first decile

Of note, more than half of these publications appeared in journals within the first quartile, and of those, 17,92 % in the first decile, which underscores the growing rates of scientific quality of the published articles.

	Nr of publications	Total IF	Average IF	%
Q1	228	1.391,76	6,104	54%
Q2	102	316,45	3,102	24%
Q3+Q4	94	137,06	1,458	22%
TOTAL	424	1845,259	4,352	100%

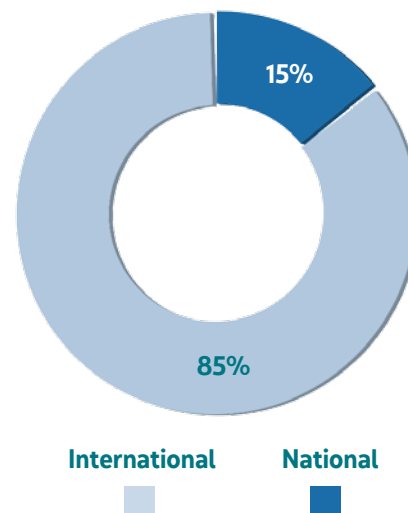
	Nr of publications	Total IF	Average IF	%
D1	76	725,92	9,55157895	18%

Regarding the authorship, in 57% of the published articles, the first/last or corresponding author is an IMIBIC researcher, whereas the remaining 43% corresponds to co-authorships in the framework of collaborative research projects.



Distribution of national and international journals

	Nr of Publications	Total IF	Average IF
Articles in international journals	310	1392,362	4,491
Articles in national journals	39	68,117	1,747
Editorials in International Journals	8	48,990	6,124
Editorials in national journal	8	14,975	1,872
Reviews in international journals	31	142,698	4,603
Reviews in national journals	2	4,219	2,110
Letters in national journals	13	131,806	10,139
Letters in international journals	13	42,092	3,238
TOTAL	424	1845,259	

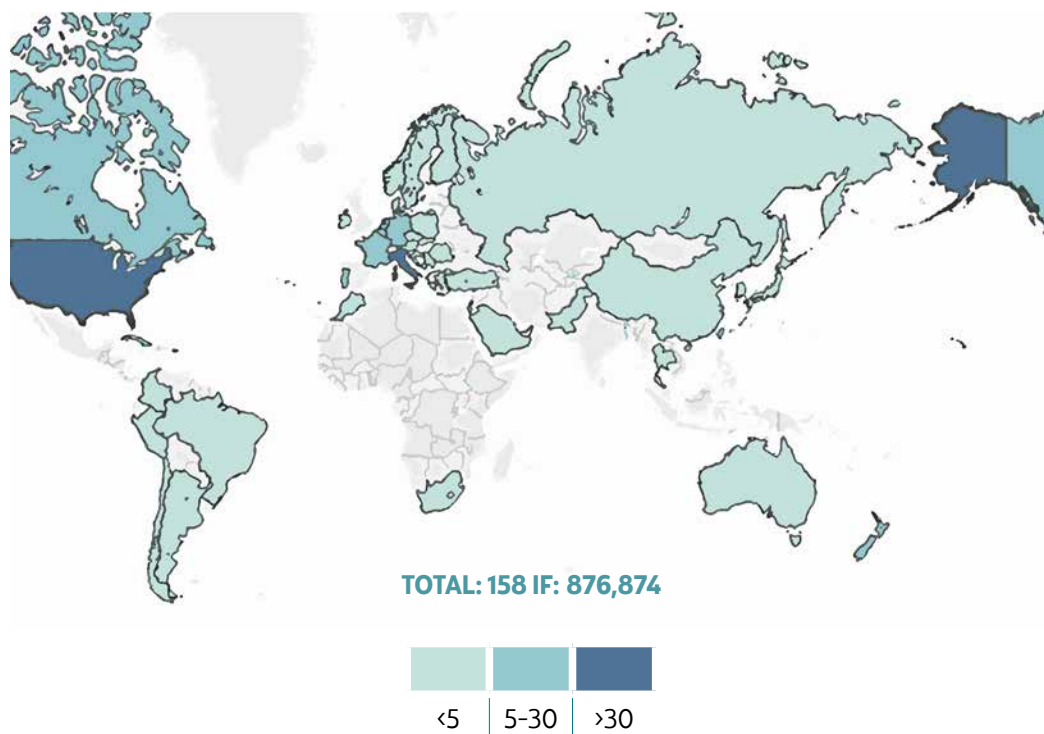


Distribution of affiliation of the authors

Regarding the affiliation of the authors, the articles published in collaboration with groups from other research organisations are shown in the table below:

Affiliation of the authors pertains to	Total IF	Nr of publications	%
International Groups	876,874	158	31%
National Groups	667,896	178	44%
Local Groups	300,489	88	24%
	1845,259	424	100%
IMIBIC Groups	481,552	127	32%

International Collaborations



9.2 Research projects & networks

Ongoing Projects in 2017

	NATIONAL 118	INTERNATIONAL 16	REGIONAL 79
National Projects – Funding agency			Nr of ongoing projects
National Institute of Health Carlos III (ISCIII)			59
Ministry of Economy and Competitiveness (MINECO)			27
Ministry of Education, Culture and Sport (MECD)			3
Foundation for innovation and health prospective in Spain (FIPSE)			1
Private			28
Regional Projects – Funding agency			
Regional Ministry of Health and Social Policy (CISPS)			41
Regional Ministry of Economy, Innovation, Science and Employment (CEICE)			7
Andalusian Progress and Health Foundation (FPS)			8
The official college of medical doctors in the province of Cordoba (ComCordoba)			1
Private			5
FIBICO. Research Programme			17
International Projects – Funding agency			
European Commission			13
Jpi Hdhl: Biomarkers For Nutrition And Health			1
Academy of Finland			1
Private			1

Granted Projects & Networks in 2017

National	International	Regional
29	1	26

National projects – Funding agency	Nr of granted projects
National Institute of Health Carlos III (ISCIII)	12
Research Programme (PI+D+i)	10
Networks Programme (RC, PT)	2
Ministry of Economy and Competitiveness (MINECO)	2
Foundation for innovation and health prospective in Spain (FIPSE)	1
Private Funding	14
Regional projects – Funding agency	
Regional Ministry of Health and Social Policy (CISPS)	13
Regional Ministry of Economy, Innovation, Science and Employment (CEICE)	1
FIBICO. Research Programme	12
International projects – Funding agency	
European Commission H2020	1

Personnel contracted by funding from competitive grants & networks in 2017

Senior Researchers	24
Post-MIR Researchers	5
Post-Doctoral Researchers	9
Pre-Doctoral Researchers	6
Support Staff	23
Total	67

Senior Researchers	
Nicolas Monarde - Andalusian Health Service	6
Miguel Servet Programme II	5
Juan Rodés Programme	1
Juan de la Cierva Programme	1
Strengthening of research activity Programme - National Institute of Health Carlos III (ISCIII) - SNS	4
Strengthening of research activity Programme - Regional Ministry of Health and Social Policy (CISPS)	7
POSTDOCTORAL RESEARCHERS	
SAS Postdoctoral Programme	1
Sara Borrell	4
Marie Skłodowska-Curie	1
POST-MIR RESEARCHERS	1
Río Hortega Programme	4
PRE-DOCTORAL RESEARCHERS	
PFIS	2
FPU	2
I-PFIS	2
Pre-doctoral Programme Ministry of Economy and Competitiveness (MINECO)	2
Pre-doctoral Programme (CEICE)	1
SUPPORT STAFF	
Support staff Programme	2
Ministry of Economy and Competitiveness (MINECO)	14
National Institute of Health Carlos III (ISCIII) - GIS	1
Andalusian Health System	6
Total	67

9.3 Clinical Trials

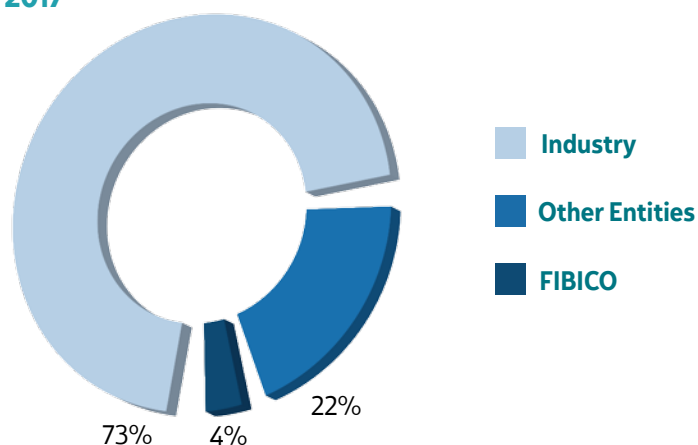
Ongoing Clinical Trials in 2017

*Classified according to the Trial Phase or study type (EPA, observational study)

NO PHASE	PHASE IV	PHASE III	PHASE II	PHASE I	EPA	Total
14	18	195	91	4	141	463

Clinical Trials classified according to promoter in 2017

73%	INDUSTRY	340
22%	OTHER ENTITIES	103
4%	FIBICO	20
	Total	463



Clinical Trials Submitted to Ethics Committees in 2017

Clinical Trials	6
Observational Studies	55
Research Projects	144
TFGs	65
PAS Ammendments	25
Sample transformations and integrations	1

9.4 Innovation

Evolution of patents

	National & international Priority patents	Extensions (PCTS & entry in national phases)	Licenses	TOTAL
2011	6	2	0	8
2012	8	3	4	15
2013	13	3	4	20
2014	11	4	2	17
2015	14	7	2	23
2016	9	6	0	15
2017	10	5	2	17

Evolution of Start-up or spin-off companies created

Start-up or spin-off companies created	
2012	2
2013	1
2014	1
2015	0
2016	0
2017	0

9.5 Media

Website imibic.org

Visited Pages	Single Users	Frequent Users
240.490	104.153	136.337

Social Media



2.420

2.269

Followers

PAGE Likes

Awards

Potro de Oro Award 2017



10



Knowledge
Transfer

10. Knowledge Transfer

IMIBIC acknowledges the importance of developing and promoting scientific and innovative collaboration. The institute works as a multidisciplinary space where different research projects' focus is to answer unmet medical needs. Thus, IMIBIC promotes the translation of results derived from its research activities - as well as the ideas generated - into concrete solutions that improve patient care and health. IMIBIC encourages its researchers to build an innovative culture within the institute and approach innovation from a broad perspective with the objective to improve both the quality of the patient care as well as the professional praxis of the personnel belonging to IMIBIC.

In 2017, one of the priority challenges of the Innovation Unit was the identification of innovations (new products, services, devices, or organizational processes) implemented by the different Clinical Management Units of the Reina Sofia University Hospital and by the IMIBIC research groups. A series of meetings were organized with the research groups and the Clinical Management Units of the hospital to identify and map innovations implemented in 2017. The main criteria taken into account was the innovations' capacity to improve clinical practice or quality of life of patients or society. Based on this study, altogether 91 innovations implemented during 2017 were identified. The following graph illustrates the type of innovations that were detected, including Organization and support, Information Technologies, Imaging, Materials and devices, and Biotechnology.

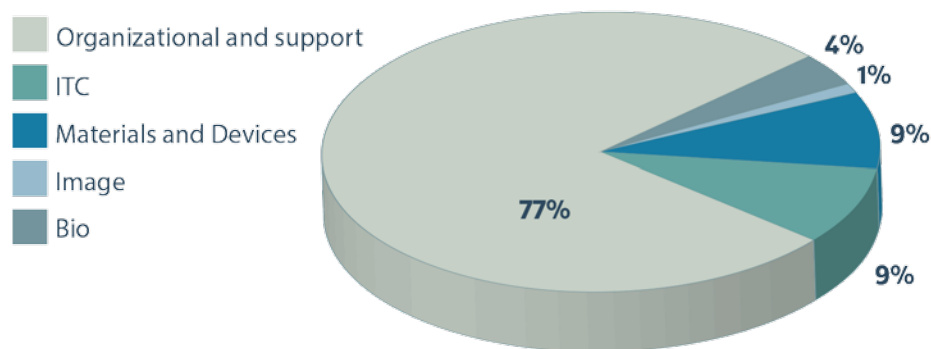


Chart 1 - Types of innovation

The report of the study shows that the majority of the implemented innovative solutions are improvements of organizational and support procedures. Those are a result of the continuous improvement methodology applied throughout all activities and the com-

mitment of the health professionals of the Reina Sofia University Hospital. The second most commonly implemented new solution corresponds to information and communication technologies, in specific new software, and novel devices. Implementation of new biotechnological solutions is also a growing trend among the health professionals.

Other key activities carried out by the Innovation Unit in 2017 were:

1. IMIBIC is part of ITEMAS platform (Innovation Platform in Medical and Health Technologies) funded by the National Institute of Health Carlos III (ISCIII) which promotes innovation in health technologies as a key tool to provide sustainability to the National Health System since 2013. The Innovation Unit actively participated in the ITEMAS' ISO 166.002:2014 Certification Work Group. Furthermore, the Innovation Unit also collaborated with ITEMAS in the organization of courses targeted to the IMIBIC research community.
2. The Innovation Unit implemented a management quality system according to the ISO 166.002:2014 standard.
3. With the purpose of promoting innovation culture, and to maintain close contact with the healthcare professionals and researchers, the Innovation Unit organized meetings with the different clinical management units of the hospital. The objective of these meetings was to inform clinicians about the services of the Innovation Unit and about the basics of innovation and technology transfer processes. In addition, the meetings served to share insights regarding the process of detecting ideas, innovations and research results that could potentially be protected by means of intellectual property.
4. The Innovation Unit's team attended various national and international conferences and fairs, with the main objective to establish links and collaboration with company representatives and other research centres. The most important ones were:
 - a. MEDICA 2017 13th-16th November, Düsseldorf (Germany).
 - b. EATRIS 2017, European infrastructure for translational medicine 24th-26th September, Prague (Czech Republic).
 - c. Convention ITEMAS 2017, 26th-27th October, Santander (Spain). Award for the best poster: "Experiences in International Pre-commercial Purchase".
 - d. Farmaindustria XVI Cooperation Farma-Biotech meeting 2017, 14th November, Madrid (Spain).
 - e. SME Instrument H2020 meeting, 19th December, Seville (Spain).
 - f. Conference on Innovation Procurement 2017, Estonian EU presidency 17th-18th October, Tallinn (Estonia).
5. The Innovation Unit participates in two Pre-Commercial Procurement (PCP) projects funded by the European Commission H2020 program. The RELIEF project, which started in 2016, concerns chronic pain management, and the STARS project, stress reduction and measurement management (project started in 2017).
6. Two project proposals were submitted to the FIPSE competitive call (The Foundation for Innovation and Prospective in Health in Spain), and one of them was selected for funding. The project will help to carry out the validation and feasibility studies of new biomarkers for prediction and prognosis of response to cancer treatment, towards a successful transference to the market.

7. The Innovation Unit has promoted the participation of different research groups of IMIBIC in public-private collaboration via competitive calls. Specifically, 2 project proposals were submitted to the Leonardo programme of the BBVA Foundation, 3 projects for the Caixa Impulse grants, and 4 projects within the Explore Science and Explore Technology programme. Of those, 1 Caixa Impulse project was selected for funding with 70.000€.
8. The Innovation Unit has established collaboration with technological and industrial networks, as well as with technological groups of other research entities. The Innovation Unit carried out technical workshops with Tecnalia, CEIA3 and with the biomedical engineering department of the University of Seville US-CIBER-BBN, among others.
9. In relation to activities to promote the creation of start-up companies, the Innovation Unit has supported three important projects, in Units of regenerative medicine, new prostate cancer biomarkers and surgical robotics, by negotiating with potential investors and searching for additional funds for their development.

As a result of all the activities described above, the following results were obtained:

Evolution of Results	2011	2012	2013	2014	2015	2016	2017
PATENTS	6	8	13	11	14	9	10
PCTs	2	3	3	4	7	6	6
LICENSES	0	4	4	2	2	0	2
COMPANIES	1	2	0	1	0	0	0

Industrial and intellectual property patents

During 2017, a total of 16 industrial/intellectual property registrations were applied for:

Title	Registry type	Owner Entity	Research Groups
Biomarkers for the diagnosis of growth hormone deficiency, procedure and kit.	National Patent	SAS, UCO	GA05, GA06, Proteomics Unit
Breast templates to breast cancer diagnosis.	Utility Model	SAS	GA08

Software for the evaluation of healthy aging (Nutri-clock).	Intellectual Property Registration	SAS, UCO, CIBEROBN	GC09
Software for the prediction of type 2 diabetes risk (Glucogene).	Intellectual Property Registration	SAS, UCO, CIBEROBN	GC09
Biomarkers to cancer diagnosis and new therapeutic targets in tumour pathologies.	National Patent	SAS, UCO	GC08, GE05
Pencil tip to sentinel node mark in limpho-gammagraphy.	Utility Model	SAS	GA10
Biomarkers in exhaled breath condensate for the diagnosis, classification and monitoring of lung cancer.	International Patent (PCT)	SAS, UCO	GC05, GC06
Biomarkers to diagnosis and screening of primary antiphospholipid syndrome.	International Patent (PCT)	SAS, UCO	GC05
Tool coupling.	International Patent (PCT)	SAS, UCO, TECNALIA, UMA	GC19, GC18, GE05, GA01, GA09, Gynaecology, Paediatric surgery
Biomarkers to screening and diagnostic of Prostate Cancer with LC-QTOF.	International Patent (PCT)	SAS, UCO	GE05, GC08, GC21
Non-invasive method for the diagnostic of cancer.	International Patent (PCT)	SAS, UCO	GC08, GE05
Lysates of mesenchymal stem cells for the treatment of skeletal muscle injuries.	National Phases	SAS, UCO	GC13
Procedure to obtain useful data to detect angiogenesis on lower limbs.	National Phases	SAS	GA08

A stylized graphic of the number '11'. The first '1' is a solid green vertical bar. The second '1' is a dark teal vertical bar with a slight shadow effect, appearing to be slightly behind the first one. Both numbers have a slight slant at the top.

11

A solid teal horizontal bar that serves as a background for the text.

Goals for 2018



11. Goals for 2018

Goals	Indicators
1. Promote and consolidate institutional integration in relation to human resources, by fostering synergies among IMIBIC institutions and corporate social responsibility (CSR) projects; by offering social benefits to IMIBIC professionals; and encouraging strategic alliances with companies.	Obtain it. - Development and implementation of an Equality and Transparency Plan. - Implementation of existing agreements between the institutions and other companies (e.g. special conditions with financial institutions, travel agencies, hotels, etc.). - Development and realization of initiatives and activities in collaboration with companies. (e.g. Roche "Stop brain drain" grant).
2. Develop strategies to increase the quality and number of scientific publications and leadership of IMIBIC researchers.	50 articles published in first decile journals
3. Promote and improve clinical research at IMIBIC, increasing the number, quality and efficiency of independent clinical research projects.	≥ 11 clinical trials carried out as promoter
4. Maximize and improve IMIBIC's self-sustainability. Optimize the management of own resources by increasing the fund from European and public competitive calls, as well as via fostering collaborations with the business fabric.	Structure income ≥ 2.1 million euros Private/public activity revenues ≥ 44%
5. Develop a strategy for incorporating new clinical and academic groups, as well as for promoting the existing groups.	2 new groups (of which at least one emerging group) incorporated to IMIBIC 1 group promoted to Emerging or Consolidated group category.
6. Increase the attraction of research talent and promote their professional development.	Nr. of researcher contracts funded by competitive calls > 66 Nr. of new Emerging Researchers > 3
7. Foster, specify and consolidate international alliances and collaborations.	38 projects applied for funding
8. Promote and increase the protection of intellectual property generated and the transfer of technology to the business fabric.	>20% of the patents exploited
9. Ensure the quality of the service provided by the Research Support Units (UCAIB) and institute's management units, and promote cross-sector innovation through them.	User satisfaction ≥ 85%
10. Develop and implement an action plan to promote the research activities of medical residents.	90% of the plan implemented
11. Develop and implement an action plan to promote research in primary care and nursing.	Active projects in these areas > 7



12



IMIBIC
Highlights

12. IMIBIC Highlights

2008	2009	2010
<ul style="list-style-type: none"> • Signature of the IMIBIC development agreement • Creation of the institute and configuration of IMIBIC governing bodies 	<ul style="list-style-type: none"> • Creation of the External Scientific Advisory Board 	<ul style="list-style-type: none"> • Development and drafting of the 2011–2015 Strategic Plan



2011

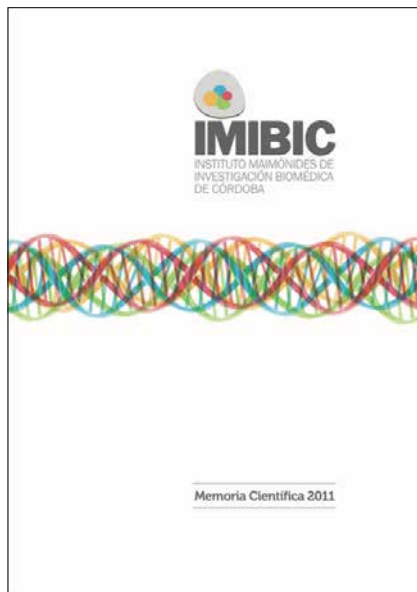
- Accreditation as a Health Research Institute by the National Institute of Health Carlos III (ISCIII)
- Financing obtained for three UCO-IMIBIC innovative public procurement projects

2012

- Start of construction of the IMIBIC building

2013

- New structure for scientific programs
- Cordoba award for 2013 – Cordoba newspaper



2014

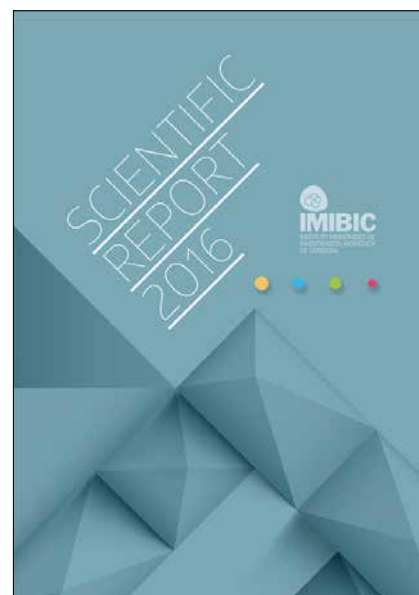
- ISCIII – FLEXIMET integrated project
- Gold Averroes award for Medical Sciences from the city of Cordoba

2015

- Opening of the new IMIBIC building
- RELIEF and STARS, innovative public procurement projects
- Robotics conference – ROBOT presentation
- Launch of the two clinical research units
- YOUTH Andalusian prize in UNIVERSITY category
- Changes in IMIBIC's scientific management and designation of two scientific departments (Fundamental Research and Clinical Research)

2016

- Launch of the new 2016-2020 Strategic Plan
- YOUTH Cordoba prize in UNIVERSITY category



2017

- Renewal of accreditation by the National Institute of Health Carlos III
- QUALITY:
- Certificate on R&D management system (AENOR)
 - Official European Seal of HR Excellence in Research, awarded by the European Commission
- Potro de Oro award (2017)





ANIVERSARIO

IMIBIC

2008 - 2018



JUNTA DE ANDALUCIA



UNIVERSIDAD DE CORDOBA