

SCIENTIFIC REPORT 2014



IMIBIC

MAIMONIDES BIOMEDICAL
RESEARCH INSTITUTE OF
CORDOBA

CONTENTS

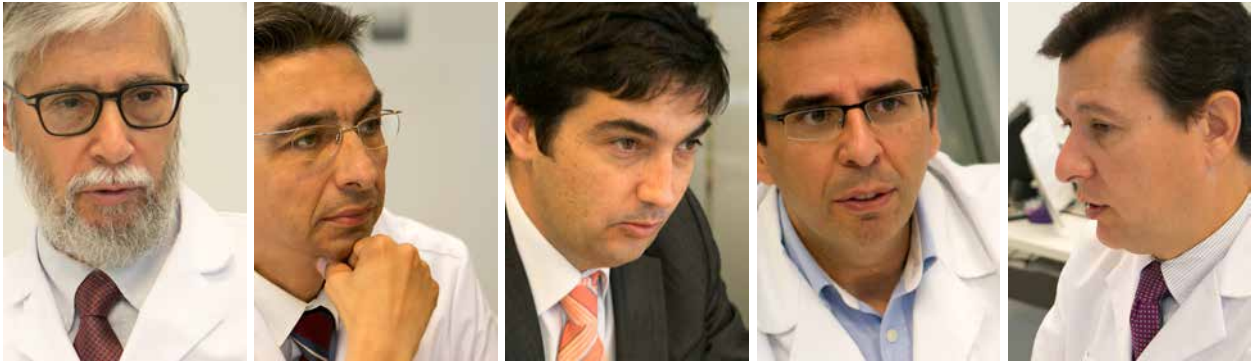
01	Director's Foreword	pg. 5
02	Human and Economic Resources	pg. 9
03	Goals achieved in 2014	pg. 19
04	External Scientific Advisory Board	pg. 21
05	Participation in Networks	pg. 25
06	Training Activities	pg. 29
07	Infrastructures	pg. 39
08	Biomedical Research Support Units	pg. 43
09	Scientific Production	pg. 55
10	Scientific Production at a glance	pg. 177
11	Knowledge Transfer	pg. 183
12	Goals for 2015	pg. 187



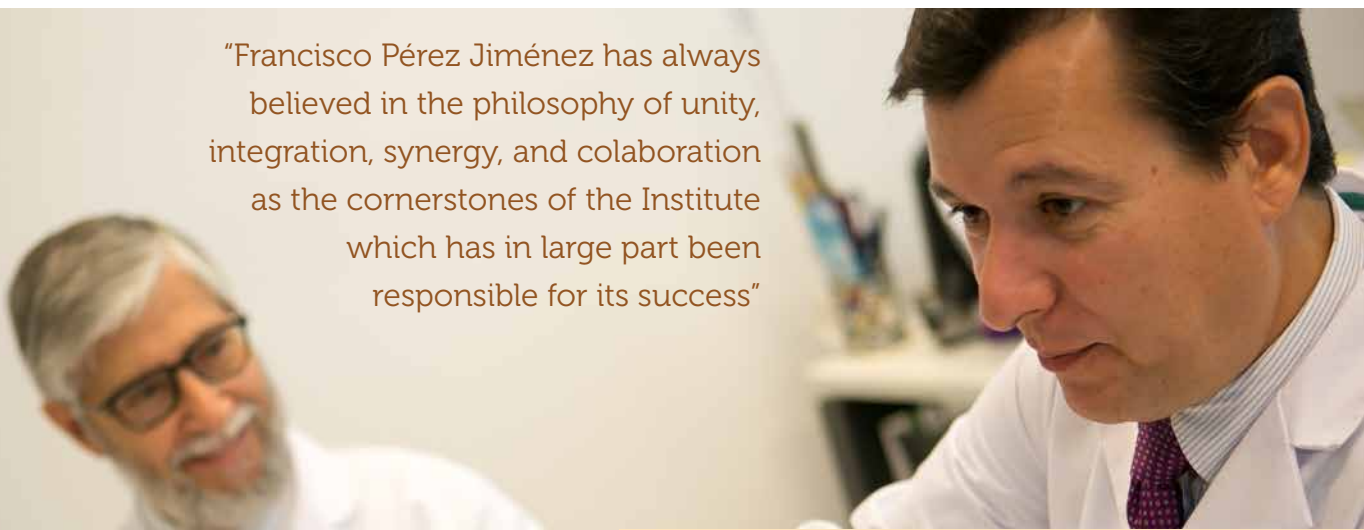
01



Director's
Foreword



“Francisco Pérez Jiménez has always believed in the philosophy of unity, integration, synergy, and collaboration as the cornerstones of the Institute which has in large part been responsible for its success”



“Responsibility now lies with the management team, which will continue to work with the same dedication and determination as ever. The goal is to remain as the benchmark of biomedical science carried out in Córdoba and the signature of excellence and tireless work of more than 450 researchers, whose talent is oriented to bring hope to patients.”

The Maimonides Institute for Biomedical Research of Córdoba (IMIBIC) has its roots in the promotion of high quality research of a decidedly translational nature. Our calling is to improve the quality of life of patients.

Founded in 2008 thanks to a generous collaboration by several, which exercised exemplary coordination, IMIBIC was accredited in 2011 by the Health Institute Carlos III as a health research center. Since then, IMIBIC has undertaken different strategies to establish itself as a hallmark of excellence in research. This achievement would not have been possible without the tireless work and dedication carried out by IMIBIC's team with more than 450 researchers.

As a result of such intense activity, year after year this report shows excellent indicators of generation and transfer of knowledge. In 2014, IMIBIC managed to continue increasing its scientific output via 327 documents, of which 28% were completed with foreign groups and institutions. The total impact factor was 1084.19 points. The improvement in the quality of our work is striking given that 20% of our publications are found within the first decile journals and 52% in first quartile journals.

Moreover, the Institute has made great advances in one of our main objectives: promoting biomedical innovation as a powerful engine for economic and social development. In 2014, 15 property registries were fostered and one spin-off was created at the heart of the Institute. These facts clearly show how that there has been more growth compared to the previous year.

Director's Foreword



In addition to the always praiseworthy work done by research groups, IMIBIC experienced an extraordinary year in 2014. It has undertaken the necessary actions to complete the installation and launch of its main infrastructures and equipments. What specifically stands out is the definitive backing that the Institute has given to clinical research. In the last trimester, IMIBIC launched a space dedicated exclusively to this end, located in one of the offices of the Reina Sofía University Hospital (Provincial Hospital). In this space, IMIBIC's Clinical Research Unit joined the small number of units in Andalucía that have at their disposal resources to develop phase I clinical trials. In this space, IMIBIC's Clinical Research Unit joined the small number of units in Andalucía having resources at their disposal to develop phase I clinical trials. Furthermore, in the final stage of the year, IMIBIC undertook construction work to remodel a new space dedicated to clinical trials for which the unit set aside 2,000 square meters. Of these, the 200 square meters reserved for Pediatrics are especially noteworthy. This space will be put into use throughout 2015.

In 2014, our Institute reached another critical milestone upon completing construction and equipment preparation for the Institute's new headquarters. Here can be found all of the fundamental and translational research laboratories as well as the research support units, including the experimental animal services, and spaces for the management staff. With over 10,000 square meters, this

building has become the largest research center in our region.

These and other details demonstrate that this Institute, although still young, succeeds year after year in growing and burnishing its reputation thanks to the effort day-in day-out of its researchers, technicians, and management staff. Throughout this continuous success, unquestionably the most decisive work has been done by Dr. Francisco Pérez Jiménez, who has been the scientific director of the Institute since its inception.

By practicing effective and responsible leadership, he demonstrated his commitment to the philosophy of unity, integration, synergies and collaboration as the cornerstones of the Institute. Responsibility now lies with the new management team, which will continue to work with the same dedication and determination as ever. The goal is to remain as the benchmark of biomedical science carried out in Córdoba and the signature of excellence and tireless work of more than 450 researchers, whose talent is oriented to bring hope to patients. People in Córdoba are already conscious of this daily effort, which was awarded with the two main awards of the city in 2014.

With great enthusiasm, we hope this report portrays a general impression of the quality and breadth of the work undertaken by the multidisciplinary team of this Institute.

Justo P. Castaño
Scientific Director



02

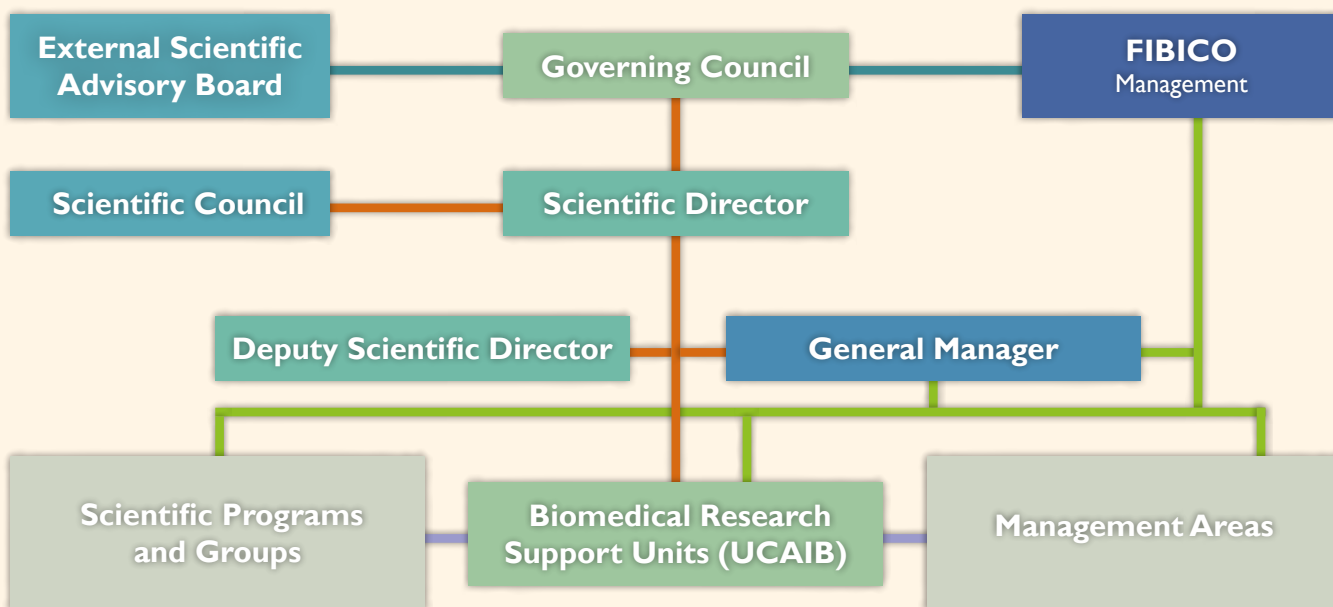


Human and Economic Resources

2. Human and Economic Resources

2.1.- Organization Chart

IMIBIC's governing and representative bodies are detailed below:



A. Collegiate Bodies

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	Aquilino Alonso Miranda Deputy Minister of the Regional Ministry of Equity, Health and Social Policies of the Andalusian Regional Government
	Marina Alvarez Benito Managing Director of the Reina Sofia University Hospital and President of FIBICO
Two representatives from the Regional Ministry of Economy, Innovation, Science and Employment	Eva María Vázquez Sánchez General Director for Research, Technology and Business
	José Ignacio Expósito Prats. Provincial Delegate of Economy, Innovation, Science and Employment of Córdoba
Two representatives of the University of Córdoba	José Carlos Gómez Villamandos Rector of the University of Córdoba
	Carmen Pueyo de la Cuesta Vice-Chancellor for Research of the University of Córdoba
IMIBIC's Scientific Director	Francisco Pérez Jiménez
One representative from the Progress and Health Foundation	Juan Jesús Bandera González. Managing Director
IMIBIC's General Manager	José Miguel Guzmán de Damas

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 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

Francisco Pérez Jiménez, PhD. Professor of Medicine and Head of the Internal Medicine Service at Reina Sofía University Hospital. He was re-named scientific director of IMIBIC by the Governing Council at a meeting held on December 11, 2012. As of the date of the release of this report, the new Scientific Director is Justo P. Castaño Fuentes.

Deputy Scientific Director

Manuel Tena Sempere, PhD. Professor of Physiology at the Faculty of Medicine of the University of Córdoba. He was named Deputy Scientific Director by the Governing Council at a meeting held on June 21, 2012.

General Manager

José Miguel Guzmán de Damas, PhD. Hospital Pharmacist. He also holds a Bachelor Degree in Business Administration, a MSc in Health Care Management and a Executive MBA from the IESE Business School. He was appointed IMIBIC's General Manager by the Governing Council at a meeting held on December 21, 2010.

2.2. Scientific Structure

The scientific structure of IMIBIC is based on its research groups, which cooperate in the development of the Scientific Programs approved by the Governing Council on July 12, 2013. These programs have been compiled following the recommendations of the Strategic Health Action Plan 2013-2016, which are oriented towards the European Union's 'Horizon 2020' program. The aim of this structure is to define the horizon that should guide researchers towards translational and clinical research into human health. We aim to encourage interaction and cooperation through it, as well as foster participation to increase talent and critical mass and improve young people's training, which will make it easier for them to find a job. Our Scientific Programs are therefore 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	
<p>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:</p>	<ul style="list-style-type: none">• 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
- Leukemias 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

The IMBIC's 37 research groups are assemblies of scientists –both from the clinical and basic science fields–with common research interests. In the list below, the groups are divided into three categories: established; emerging and associated groups.

Code	Title	Researchers
GC1	T and NK immunosenescence. Antiviral immune response. 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)
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) Dr. Julia Carracedo Añón (CO-PI)

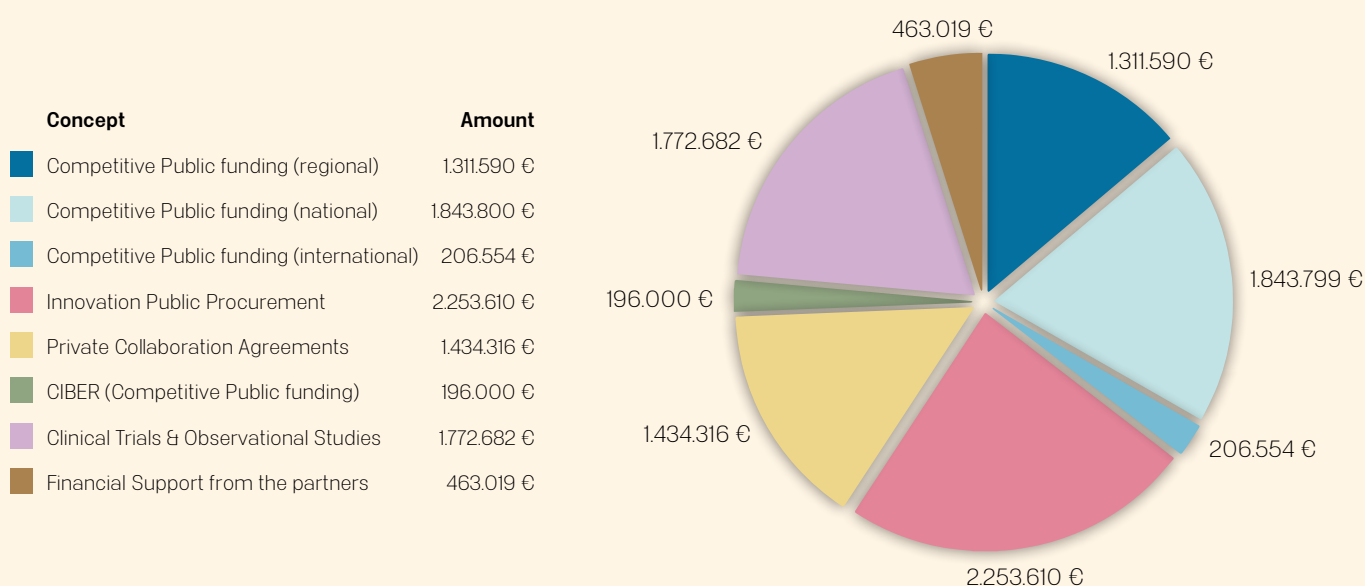
GC8	Hormones and cancer. PROGRAMS 2, 4	Dr. Justo P. Castaño Fuentes (PI) Dr. Francisco Gracia Navarro (CO-PI) Dr. Raúl Luque (CO-PI)
GC9	Nutrigenomics. Metabolic syndrome. PROGRAMS 1, 2, 4, 5	Dr. José López Miranda (PI) Dr. Francisco Pérez Jiménez (CO-PI) Dr. Javier Delgado Lista (CO-PI) Dr. Pablo Pérez Martínez (CO-PI)
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	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)
GC14	Cell therapy. PROGRAM 5	Dr. I. Concepción Herrera Arroyo (PI)
GC15	Invasive cardiology and cell therapy. PROGRAM 5	Dr. José Suárez De Lezo Cruz-Conde (PI)
GC16	Cell biology in hematology. Hypercoagulability. PROGRAM 4	Dr. Joaquín Sánchez García (PI) Dr. Francisco Velasco Gimena (CO-PI)
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 transplants. PROGRAMS 4, 5	Dr. Javier Briceño Delgado (PI)
GC19	Applications of Artificial vision. PROGRAM 5	Dr. Rafael Medina Carnicer (PI)
GC20	Genetics and behavioural diseases. PROGRAM 5	Dr. Manuel Ruiz Rubio (PI)
GC21	Metabolomics. Identification of bioactive components. PROGRAMS 2, 4, 5	Dr. María Dolores Luque De Castro (PI) Dr. Feliciano Priego Capote (ER)
GC22	Epigenetics. PROGRAM 4	Dr. Teresa Roldán Arjona (PI)
GC23	Metabolism in Childhood PROGRAMS 2, 4	Dr. Mercedes Gil Campos (PI)
GE1	Oxidative stress and nutrition. PROGRAMS 1, 2, 5	Dr. Isaac Túnez Fiñana (ER)
GE2	Knowledge Discovery and Intelligent Systems PROGRAMS 1,2,3	Dr. Sebastián Ventura Soto (ER)
GE3	Inflammatory immune-mediated cutaneous diseases PROGRAM 5	Dr. Juan A. Ruano Ruiz (ER)
GA1	Lung transplantation. Thoracic malignancies. PROGRAM 4	Dr. Ángel Salvatierra Velázquez (AR)
GA2	Comprehensive care nurses. A multidisciplinary perspective. PROGRAMS 1, 5	Dr. María Aurora Rodríguez Borrego (AR)
GA3	Pneumology PROGRAMS 2, 4, 5	Dr. Bernabé Jurado Gámez (AR)
GA4	Endocrinology and Nutrition. Insulin resistance, diabetes and metabolism. PROGRAM 2	Dr. Juan Antonio Paniagua González (AR)

GA5	Study of growth. Endocrinology and Child Nutrition. PROGRAM 2	Dr. Ramón Cañete Estrada (AR)
GA6	Clinical Analysis. PROGRAM 2	Dr. Fernando Rodríguez Cantalejo (AR)
GA7	Urology and sexual medicine PROGRAM 5	Dr. María José Requena Tapia (AR) Dr. Rafael Prieto Castro (AR)
GA8	Radiology PROGRAMS 2, 4, 5	Dr. Marina Álvarez Benito (AR) Dr. Daniel López Ruiz (AR)
GA9	Cardiovascular Pathology PROGRAMS 2, 4,	Dr. Ignacio Muñoz Carvajal (AR)
GA10	Nuclear Medicine PROGRAMS 2, 4	Dr. Juan A. Vallejo Casas (AR)
GA11	Learning and Artificial Neural Networks-AYRNA PROGRAMS 2, 3, 4, 5	Dr. César Hervás Martínez (AR)

GC- Established Groups; GA - Associated Groups; GE - Emerging Groups

2.4.- Economic Resources

The table below shows IMIBIC's sources of income for the year 2014. The total revenue amounted to 9,5m €.



The incomes specified in the previous table have been obtained from the Profits and Losses Statement of IMIBIC in 2014. It should be noted how important the 'Innovation Public Procurement' projects are for the Institute, reaching a 24% out of the total incomes. Every line of income have grown from the previous period of 2013, also the financial support from the partners due to the new facilities that have been built for the Institute. In fact, it only represents a 5% out of the total amount of incomes.

In addition to this, in 2014 IMIBIC has incorporated scientific equipment for more than 5 million euros. All these equipments are described in the 'Acquisition Scientific Equipment' part of this Scientific Annual Report.



03

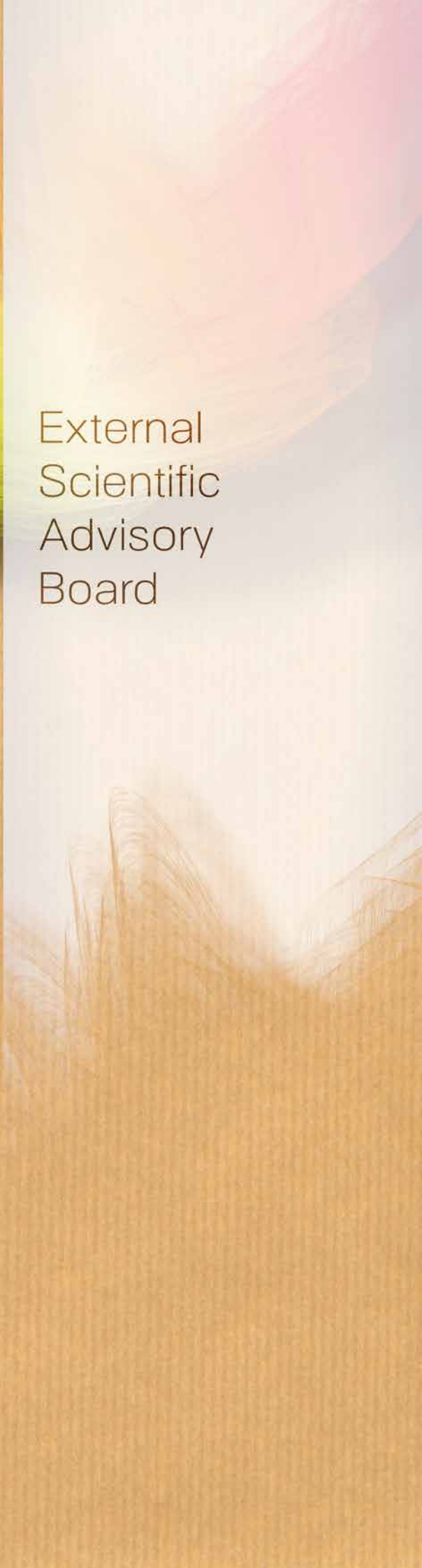
Goals
achieved
in 2014

3. Goals achieved in 2014

Goals achieved in 2014	Comments
To transfer research groups to the new IMIBIC's building.	Personnel transfer was initiated in 2014 with the move of the UCAIBs. Research groups will be transferred to the new building in the first trimester of 2015.
Increasing affiliations to the IMIBIC, the Reina Sofía University Hospital and the University of Cordoba	In this sense, we have increased affiliations, resulting in a 15% increase in our institutional visibility. In total, we have achieved that affiliations are correctly shown in 46% of publications.
Setting up a Clinical Research and Trial Platform including a unit of Phase I trials.	Launching a dissemination strategy to promote clinical research in healthcare centers. In the last trimester, the Unit of Clinical Research of the Hospital Provincial has initiated its activity attending more than 50 patients. More than 20 clinical trials have been performed in this Unit, which is currently conducting six clinical studies.
Promoting strategies for the development of the Unit of Technological Innovation.	Apart from the dissemination campaign launched to promote this Unit, its experts have intensified their involvement in the preparation of specifications for competitive calls. As a result, the quality of the projects developed has increased and new opportunities have emerged, such as the development of new ITC tools by the UCAIBs. In fact, several software development projects have been successfully carried out by different units.
Putting the facilities and equipment funded through 2007, 2008 and 2010 competitive calls into service and integrating them in the UCAIB area of the IMIBIC.	The funds obtained through said competitive calls were invested in the acquisition of the scientific equipment detailed in the applications forms, which has been installed in a specific site of IMIBIC headquarters at the disposal of the head of each UCAIB.
Promoting strategies for the development of the Platform for Innovation in Medical Technology (ITEMAS)	Promoting cooperation with ITEMAS workgroups "Emprendimiento" and "Compra pública-innovadora" ("Entrepreneurship" and "Innovative public acquisitions"). The latter workgroup -which was created recently- counts on the especially intense participation of IMIBIC. Similarly, IMIBIC representatives have attended the meetings held by national and regional ITEMAS nodes to enhance the activity of the network.
Creating special centralized units such as the Isotopes Laboratory and the Animal House.	By the end of 2014, the Isotopes Laboratory was given authorization by the regulatory authorities, whereas the installation of the Animán House has taken the whole year.
Giving continuity to our fundraising strategy based on public acquisition calls.	IMIBIC representatives have attended different national and international public acquisition events for networking purposes. The objective was to contact institutions from other regions in Spain and UE countries in order to present joint proposals at national and European level, respectively. In this regard, seven innovative public acquisition proposals have been submitted in response to several national calls for proposals. Two innovative public acquisition proposals have been accepted following two international call for proposals.
Increasing public funding, donations and sponsorships.	In 2014, fundraising increased by 25% through competitive tenders for research, HHRR and thematic network projects. Similarly, private agreements and income from clinical trials increased by 10%.
Activating the IMIBIC node in the ProteoRed-ISCIII Platform.	In this regard, considerable efforts have been catalysed by the coordinators of the Platform. Also, IMIBIC hosted the X Meeting of Clinical Proteomics that the ProteoRed-ISCIII Platform holds every year in a different node.
Increasing the number of bio-samples and donations to the Biobank.	The activity of the Biobank Unit has increased significantly. The number of bioresources collected -40,469- account for a 27% increase with respect to 2013. Also, the number of bioresources donated in 2014 was 6708, which accounts for a 55% increase with respect to 2013.
Increasing affiliations to the IMIBIC among research groups from healthcare centers.	Three research groups from different healthcare centers and two research groups from the University of Cordoba became IMIBIC members in 2014.
Signing a new agreement among IMIBIC member institutions.	A new agreement is expected to be signed during the first trimester of 2015.



04



External
Scientific
Advisory
Board

4. External Scientific Advisory Board

The composition of the External Scientific Advisory Board was modified in 2014. The annual ordinary meeting took place in December 16, 2014. Its structure is as follows:

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

Dr. Carlos Diéguez. 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)

D. Jorge Barrero. Deputy Chairman of the Spanish Association of Biotech Companies (ASEBIO) (Madrid)

According to the internal operation procedure, the main contents of the meeting were focused on mandatory matters. The members forwarded their opinions on the management of the Institute, such as the incorporation of new research groups, the implementation of strategic initiatives, the master plan to change the scientific structure and the approval of the budget for 2015.



From left to right: Manuel Tena Sempere, Carlos Diéguez, Francisco Sánchez, Lina Badimón, José María Ordovás and Francisco Pérez Jiménez



05



Participation in Networks

5. Participation in Networks

IMIBIC researchers are involved in a wide range of strategic initiatives coordinated by the Health Institute Carlos III 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.

In fact, among the 37 groups integrated in the IMIBIC, 15 participate in partnership programs related to different ISCIII strategic initiatives. 10 groups are involved in 11 RETICs. Additionally, 6 groups are involved in 3 CIBERs and there are 26 groups involved in the Andalusian Plan for Research, Development & Innovation (PAIDI Program).

CIBER Program

Our researchers lead the following CIBERs' nodes:

CIBER	Group and Principal Investigator
CIBER on Obesity and Nutrition (CIBERobn)	José López Miranda (PI) GC9-Nutrigenomics. Metabolic Syndrome.
CIBER on Obesity and Nutrition (CIBERobn)	Manuel Tena-Sempere (PI) GC10-Hormonal regulation of energy balance, puberty and reproduction
CIBER on Liver and Digestive Diseases (CIBERehd)	Manuel de la Mata García (PI) GC2-Oxidative and nitrosative stress in acute and chronic liver disease.

CIBER	Collaborating Researcher
CIBER on Obesity and Nutrition (CIBERobn)	Justo P. Castaño Fuentes (PI) GC8-Hormones and Cancer
CIBER on Obesity and Nutrition (CIBERobn)	María del Mar Malagón Poyato (PI) GC11 Metabolism and adipocyte differentiation. Metabolic syndrome
CIBER on Rare Diseases (CIBERER)	Mercedes Gil Campos (PI) GC23- Metabolism in Childhood

Platforms

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

- Medical Technology Innovation Platform (ITEMAS)
- Biomolecular and Bioinformatics Resources Platform –Proteored
- Clinical Research and Clinical Trials Units Platform –SCReN
- Biobanks Platform

RETICS Program

Some of our researchers lead the following network nodes:

Name of the Network	Principal Investigator
AIDS Research Network (RIS)	Eduardo Muñoz Blanco
Cooperative Research Thematic Network on Aging and Frailty (RETICEF)	Jose Manuel Quesada Gómez, Isaac Túnez Fiñana
Spanish Renal Research Network (REDinREN)	Pedro Aljama García
Spanish Network for Research into Infectious Pathologies (REIPI)	Julián de la Torre Cisneros
National Biobank Network	Manuel Medina Pérez
Cooperative Research Thematic Network on Cancer (RETICO)	Enrique Aranda Aguilar

Other cooperative networks:

Name of the Network	Collaborating Researcher
AIDS Research Networks (RIS)	Antonio Rivero Román
AIDS Research Networks (RIS)	José Peña Martínez
Spanish Network for Research in Infectious Pathology (REIPI)	Rafael Solana Lara
Network for Research on Mother-Child Health (RedSAMID)	Mercedes Gil Campos
Research Network on Preventive and Health Promotion in Primary Care (RedIAPP)	Luis A. Pérula de Torres

Other research networks:

Name of the Network	Principal Investigator
Spanish Society for Rheumatology (REGISPONSER)	Eduardo Collantes Estévez
Spanish Myelodysplastic Syndrome Registry (RESMD)	Joaquín Sánchez García (*)
Observational Immune Tolerance Induction research program (obsITI)	Francisco Velasco Gimena (*)

*Members of the same group

PAIDI Groups

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

BIO-139	Principal investigator	Francisco Gracia Navarro
BIO 208	Principal investigator	José Suárez de Lezo Cruz Conde
BIO 216	Principal investigator	José Antonio Bárcena Ruiz
BIO-272	Principal investigator	Manuel Ruiz Rubio
BIO-301	Principal investigator	Rafael Rodríguez Ariza
BIO-304	Principal investigator	Eduardo Muñoz Blanco
BIO-310	Principal investigator	Manuel Tena Sempere
CTS-179	Principal investigator	Escolástico Aguilera Tejero
CTS 260	Principal investigator	Pedro Aljama García
CTS-208	Principal investigator	José Peña Martínez
CTS-212	Principal investigator	Francisco Pérez Jiménez
CTS-234	Principal investigator	Enrique Aranda Aguilar
CTS-273	Principal investigator	Manuel de la Mata García
CTS-413	Principal investigator	José Manuel Quesada Gómez
CTS-452	Principal investigator	Roger Ruiz Moral
CTS-525	Principal investigator	José López Miranda
CTS-651	Principal investigator	Juan Antonio Paniagua González
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-666	Principal investigator	Aurora Rodríguez Borrego
CTS-639	Principal investigator	María Mercedes Gil Campos
FQM-227	Principal investigator	María Dolores Luque de Castro
TIC-161	Principal investigator	Rafael Medina Carnicer
TIC-148	Principal investigator	César Hervás Martínez
TIC-122	Principal investigator	Sebastián Ventura Soto



06

Training
Activities

6. Training Activities

6.1. Introduction

The Institute conceives training as a basic, crucial and institutional tool to achieve its scientific goals. Thus, it has designed a program aimed at promoting knowledge and reinforcing its current lines of research.

The Training Coordinator is Dr. Rosario López Pedrera. IMIBIC together with the University of Cordoba leads a unique PhD Program in Biomedicine. This PhD Program is coordinated by Dr. Francisco Gracia Navarro and helps to obtain highly qualified researchers, promote teaching and favor professional qualification in the field of biomedical sciences.

6.2. Training

The following sections list the research training activities, which took place in 2014.

6.2.1 PhD in Biomedicine

IMIBIC leads a unique PhD Program in Biomedicine. This new program, coordinated by Prof. Francisco Gracia Navarro, PhD, pretends to qualify human resources and stimulate professional qualification in the field of biomedical sciences.

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

6.2.2. Masters' Degrees. University of Cordoba

The three master's degrees are driven by academic directors who are members of the IMIBIC:

- Translational Biomedical Research

Academic Director:

Prof. Francisco Gracia Navarro

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

- Metodology of Research in Health Sciences

Academic Director:

Prof. Eduardo Collantes Estévez

Website: <http://www.uco.es/estudios/idep/masteres/metodologia-investigacion-ciencias-de-la-salud>

- Nutrition and Metabolism (with Quality Accreditation by ANECA)

Academic Director:

Prof. Francisco Pérez Jiménez

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

6.2.3. Courses and other training activities:

Specific courses in Research Methodology and other key research áreas at IMIBIC have been held during 2014.

6.2.3.1. Courses

IMIBIC organized the following list of activities:

Type of Activity	Title	Duration*(h)
Institutional Event	4th Maimonides Commemorative Lecture	4
Institutional Event	5th Conference of Young Researchers	10
Seminar	Seminar-Sample size calculation in clinical research-IMIBIC's Methodology and Biostatistics Unit	3
Seminar	Seminar-Introduction to Systems Biology-IMIBIC's Bioinformatics Unit	2
Seminar	Seminar-Introduction to Colocalization in Analysis (ImageJ)-IMIBIC's Microscopy, Cytomics and Scientific Imaging Unit	1,5

IMIBIC collaborated in the following list of activities:

Type of Activity	Title	Duration*(h)
Workshop	Mass Spectrometry. ABSciex and IMIBIC's Proteomic Unit	2
Workshop	Droplet Digital PCR-BioRad and IMIBIC's Proteomic Unit	2
Seminar	Genomics-Thermo Scientific and IMIBIC's Bioinformatics Unit	2
Workshop	Maldi Imaging-ABSciex and IMIBIC's Proteomic Unit	2

6.2.3.2. IMIBIC Research Seminars

IMIBIC research seminars promote networking and contribute to the knowledge of the researchers. The Institute organized 29 seminars during the course 2013-2014 and 6 of them were given by international speakers.

The seminars organized by the Institute during the course 2013-2014 were:

Date	Speaker	Institution & Title
25/09/2013	Manfredi Rizzo	Institution: Universidad de Palermo (Italia) Title: Atherogenicity and clinical significance of LDL subclasses
26/09/2013	Manuel Santos Rosa	Institution: University of Coimbra (Portugal) Title: Immunity and sepsis
3/10/2013	Sergey Degtyarev	Institution: SibEnzyme Ltd, Novosibirsk (Rusia) Title: GLAD-PCR assay: a new epigenetic method for cancer diagnostics
7/11/2013	Alberto Muñoz Terol	Institution: Biomedical Research Institute "Alberto Sols" Title: The pleiotropic actions of vitamin D
12/12/2013	Jesús Argente	Institution: Niño Jesús Hospital Title: Obesity in children and teenagers: new concepts and future perspectives
19/12/2013	Marc Claret	Institute: IDIBAPS-Esther Koplowitz Centre Title: Mitofusin 2 in POMC neurons connects ER stress with leptin resistance and energy imbalance
9/01/2014	Luis Miguel García Segura	Institution: Cajal-CSIC Research Centre Title: Neuroprotective actions of estradiol: myth or reality?
16/01/2014	Miguel Ángel Martínez	Institution: University of Navarra Clinic Title: Mediterranean diet and chronic disease: new results of Predimed clinical trial
17/01/2014	Manel Puig	Institution: Germans Trias i Pujol Health Sciences Research Institute Title: Treatment of acromegaly in the era of personalized and predictive medicine
23/01/2014	José Becerra	Institution: University of Malaga-CIBER BBN Title: Tissue engineering for bone defect healing
30/01/2014	Ramón Gomis	Institution: IDIBAPS Title: Adipose tissue: impact on diabetes and β cell
6/2/2014	Carmen Jerónimo	Institution: Portuguese Oncology Institute (Portugal) Title: Epigenetics as a tool for cancer detection and prognosis/prediction assessment
13/2/2014	Marta Garaulet	Institution: University of Murcia Title: Chronobiology and obesity: the weight of hours
20/2/2014	Marta Sánchez-Carbayo	Institution: CIC bioGUNE Title: Molecular profiling in bladder cancer: from -omics signatures to individual candidates
27/2/2014	Mónica de la Fuente del Rey	Institution: Complutense University of Madrid Title: Control of ageing process
7/03/2014	Susan M. Webb	Institution: Hospital Sant Pau Title: How to define 'healing' in Cushing's Syndrome
13/3/2014	Ramón Trullas	Institution: CSIC Research Centre Title: Fusion or fission?: Mitochondrial Dynamics and neuronal pentraxine

20/3/2014	Mónica Marazuela	Institution: La Princesa University Hospital Title: Regulator cells, lymphocytes, TH 117 and dendritic cells in thyroid autoimmune diseases
27/03/2014	Gema Moreno	Institution: MD Anderson Cancer Center Title: Identification of predictive biomarkers for breast cancer response
3/04/2014	Luis Martínez	Institution: Marqués de Valdecilla University Hospital Title: Carbapenem-resistant enterobacteriaceae: from microbiological research to clinical research
9/04/2014	José Antonio Cancelas	Institution: University of Cincinnati College of Medicine Title: Inter-cellular signaling through connexin-43 and its role in hematopoiesis
10/4/2014	María Berdasco	Institution: IDIBELL Title: Epigenetic dysregulation in cancer: implications on clinical management
24/4/2014	Sergio Rodríguez Cuenca	Institution: University of Cambridge (United Kingdom) Title: PGC1b role in carbohydrates and lipid metabolism: implications on obesity
30/4/2014	Constantino Martínez Gómez	Institution: University of Murcia Title: MicroRNAs as the new regulators of the haemostatic system
9/05/2014	José Viña	Institution: University of Valencia Title: MicroRNAs regulations and its importance for exceptional longevity
15/05/2014	José Medina Moya	Institution: University of Barcelona Title: Qualitative Research Methodology
22/05/2014	José Verdú	Institution: University of Alicante Title: Chronic ulcers. Paradigm shift. New physiopathological approach
5/06/2014	José Córdoba Chacón	Institution: University of Illinois (Chicago, USA) Title: Growth hormone and gender as important factors for hepatic steatosis: Growth hormone (GH) resistant mouse model
12/05/2014	Gema Frühbeck	Institution: University of Navarra Clinic Título: Basic and Clinical perspectives of adipobiology of obesity and its related comorbidities.

6.2.3.3. Institutional Events

5th Conference of Young Researchers

Date: 6th May 2014

Programme:

9.00-9.30 Registration and pinning up of posters

9.30-10.00

Introduction and welcome

10:00-11:00 Session I

Infectious Inflammatory and Immunological diseases. Active ageing and frailty. Organ Transplantation

I.a 10:00-10:15

External european validation of a multicenter model for donor-recipient matching in liver transplantation based on artificial neural networks.
M^a Dolores Ayllón

I.b 10:15-10:30

Postsurgical drainage fluid as predictor marker of surgical-site infection after cervical neck dissection.
Alberto Candau Álvarez

I.c 10:30-10:45

Lack of consensus for defining clinical suspicion of rejection after liver transplantation: Implications on clinical practice and possible solutions.
Manuel Rodríguez Perálvarez

I.d 10:45-11:00

Acceptability and feasibility of the opportunist search of patients with HIV infection in primary care centers of the national health service.
Rafael Carlos Puentes Torres

11:00-11:30 Coffee Break. Poster session

11:30-13:00 Session II

Chronic and Inflammatory diseases

II.a 11:30-11:45

Charaterization of MicroRNAs involved in the regulation of atherotrumbosis in Antiphospholipid Syndrome and Systemic Lupus Erythematosus.
Carlos Pérez Sánchez

II.b 11:45-12:00

Testosterone induces transgenerational impairments on the behavior of *C. elegans*. A model to explain androgen-dependent autistic traits.
M^a del Mar Gámez del Estal

II.c 12:00-12:15

Functional validation of SNP rs6105269 in Crohn's disease.
Patricia Aguilar Melero

II.d 12:15-12:30

Inflammation impairs regulation of FGF23 by phosphorus in renal failure.
María Encarnación Rodríguez Ortiz

II.e 12:30-12:45

Transcriptional analysis reveals different immune regulation between scalp and skin psoriasis with potential therapeutic implications. Juan Ruano Ruiz

II.f 12:45-13:00

Effects of calcitriol and paricalcitol on osteogenesis of bone marrow mesenchymal stem cells. Carmen Herencia Bellido

13:00-14:00 Plenary conference

Dr. José Luis García Pérez

14:00-16:00 Lunch

16:00-17:15 Session III**Cancer (Oncology and Onco-hematology)**

III.a 16:00-16:15

Hypoxia Response Induces the Formation of Polyploid Giant Cells and Cancer Stem Cells in Colon Cancer.

Laura M. López Sánchez

III.b 16:15-16:30

Lack of endogenous cortistatin but not somatostatin exacerbates carcinogen-induced mammary gland tumorigenesis in mice.

Alicia Villa Osaba

III.c 16:30-16:45

The fungal metabolite galiellalactone blocks cell cycle progression in prostate cancer cells through STAT3 and NF- κ B independent pathways.

Víctor García González

III.d 16:45-17:00

In vivo effect of 5-azacitidine treatment in regulatory T cells in patients with aml / mds.

Diana Buenasmañanas Cervantes

III.e 17:00-17:15

Modern surgical liver resections offer better results than transarterial chemoembolization in cirrhotic patients with b-bclc stage hcc.

Ana Belén Gallardo Herrera

17:15-17:45 Poster showcase

17:45-19:00 Session IV**Nutrition. Endocrine and metabolic diseases**

IV.a 17:45-18:00

SEPT1: a novel adipocyte marker related to obesity and insulin resistance.

Natalia Rocío Moreno Castellanos

IV.b 18:00-18:15

Expression of Mkrn3 and mir-30b in the hypothalamus during postnatal maturation and in preclinical models of altered puberty: A novel regulatory system in the control of puberty onset?

Violeta Heras Domínguez

IV.c 18:15-18:30

Levels of fitness and physical activity influence changes on response of plasma adipokines at pre-pubertal stage.

Francisco Jesús Llorente Cantarero

IV.d 18:30-18:45

Beneficial Effect of CETP Gene Polymorphism rs3764261 in Combination with a Mediterranean Diet on Lipid Metabolism in the Patients with Metabolic Syndrome.

Ruth Blanco Rojo

IV.e 18:45-19:00

Genetic targets which could determine the shortening of telomeres in obese people.

Oriol Rangel Zúñiga

19:00-19:15 Award-giving and closing ceremony

Programme:

11.00 Opening Ceremony

11.10 IMIBIC Awards

- “Enrique Aguilar Benítez de Lugo” Prize for the most relevant publication

Reduced exposure to calcineurin inhibitors early after liver transplantation prevents recurrence of hepatocellular carcinoma

Manuel Rodríguez-Perálvarez (GC2)

- Prize for the most relevant scientific publication in collaboration with international groups

Changes in Hypothalamic Expression of the Lin28/let-7 System and Related MicroRNAs During Postnatal Maturation and After Experimental Manipulations of Puberty

María Manfredi Lozano (GC10)

- Prizes for the most relevant research results

P201431317: Composición para la prevención, mejora y/o tratamiento de procesos metastásicos y cánceres resistentes

Antonio Rodríguez Ariza (GC6)

Procedimiento de recogida de las infecciones hospitalarias

Inmaculada Salcedo Leal

- Award for the best master’s degree thesis

Mecanismos de regulación de la ubiquitina ligasa SIAH2 mediados por la familia de quinasas DYRK clase II

Amaranta Armesto Jiménez

- Award for the journalistic news report most valuable to IMIBIC
Pilar García Baquero. ABC Córdoba
-
-

12.00 Innovation Awards IMIBIC-ROCHE

12.15 Maimonides Lecture

Dr. Carlos Diéguez.

University of Santiago de Compostela

13.00 Prize-giving and closing ceremony

6.3. Results of Training Activities

6.3.1. Doctoral Theses

The training dedication of IMIBIC is also reflected by the large number of doctoral theses that are directed and supported by the IMIBIC members. A list is provided below of the 29 doctoral theses directed by researchers from the Centre during 2014 (only PhD Program in Biomedicine). Currently, there are 108 PhD students at IMIBIC.

Thesis Author	Thesis Director 1	Thesis Director2
Aguilar Quintero, María	Cañete Estrada, Ramon	Caballero Villarraso, Javier
Alonso Gómez, Jaime	Rufian Peña, Sebastian	Gómez Barbadillo, José
Campos Fernández, M ^a del Carmen	Solana Lara, Rafael	Pera Rojas, Alejandra
Candau Álvarez, Alberto	Perez Navero, Juan Luis	Lopez Miranda, Jose
Estévez Cordero, Orlando Allende	Santamaria Ossorio, Manuel	Ortega Gromaz, Consuelo
Florez Almonacid, Clara Inés	Rodríguez Borrego, Maria Aurora	Jurado Ramos, Alfredo
García Rodríguez, Rosa María	Guerra Pasadas, Francisco Antonio	Feo Brito, Francisco
Gómez Delgado, Francisco Jesús	Lopez Miranda, Jose	Perez Martinez, Pablo
González de la Guardia, Lorena*	Lopez Miranda, Jose	Yubero Serrano, Elena María
Hidalgo Lopezosa, Pedro*	Rodríguez Borrego, Maria Aurora	
Jiménez Gómez, Elvira	Cano Sanchez, Antonio	Oteros Fernández, Rafael
Lara de la Rosa, María del Pilar	Guerra Pasadas, Francisco Antonio	Feo Brito, Francisco
León Téllez, Silvia	Pinilla Jurado, Leonor	Tena Sempere, Manuel Jose
Mendiola de la Osa, Agustín	Perez Navero, Juan Luis	Javier García Fernández
Meza Miranda, Eliana Romina	Lopez Miranda, Jose	Antonio Camargo García
Moreno Solís, Gloria Maria	Perez Navero, Juan Luis	Torres Borrego, Javier
Muñoz Serrano, Ana	Cañete Estrada, Ramon	González González, Abel
Olaya Abril, Alfonso*	Barcena Ruiz, Jose Antonio	Rodríguez Ortega, Manuel José
Peña Orihuela, Patricia Judhit	Lopez Miranda, Jose	Camargo García, Antonio
Rabanal Ruiz, Yoana*	Malagon Poyato, Maria del Mar	Vázquez Martínez, Rafael Manuel
Rich Ruiz, Manuel*	Rodríguez Borrego, Maria Aurora	
Romero Urrutia, Alicia	Cañete Estrada, Ramon	Caballero Villarraso, Javier
Jaén Moreno, María José*	Luque Luque, Rogelio	Moreno Díaz, María José
Larraz Bustos, Marcel	Lluch Fernandez, Mercedes	Mesa Ramos, Manuel
Martínez Aranda, Luis Manuel	Ariza Vargas, Leopoldo	Pérez López, Isaac
Ogáyar Luque, Cristina	Guillen del Castillo, Manuel	Benítez Sillero, Juan de Dios
Pardo Arquero, Víctor Pablo	Suarez de Lezo Cruz-Conde, Jose	Ruiz Ortiz, Martín
Pulido Ortega, Laura	Pérula de Torres, Luis Angel	
Ramírez Pistón, Juan Manuel	Poblador Fernandez, Maria Soledad	Lancho Alonso, Jose Luis
Ríos Castillo, José Enrique	Carrasco Rico, Santiago	Arjona Berral, Jose Eduardo
Romero Nieto, María Inmaculada	Arjona Berral, Jose Eduardo	Muñoz Villanueva, Ma del Carmen

*Theses with International Mention



07

Infrastructures

7. Infrastructures



The most relevant hallmark in 2014 concerning facilities was the completion of the works of the new headquarters of the IMIBIC, which was funded by the University of Cordoba, the Spanish Ministry of Economics and Competitiveness and the FEDER programme. It is a five-floor building with 5500m² of laboratories and 800m² that will host an animal house including Eight rat/mouse polyvalent housing rooms, four laboratories and an experimental operating room. IMIBIC's research groups will be transferred to these headquarters by early 2015 once all equipments have been installed. Room will be assigned to the research groups according to their scientific production. Similarly, the new headquarters will host the UCAIBs.

Apart from this, in 2014 were acquired the following equipments that will be allocated for general and specific use of each research group or UCAIB:

- Laboratory equipment for the four floors devoted to research and the animal house.
- Reforms have been performed in the facilities that used to be employed for basic experimentation to adapt them for clinical research. Additionally, these facilities have been furnished to hold doctor offices, patient control rooms and an outpatient hospital. Also, an ultrasound scan was also acquired for these facilities.
- More room has been devoted to biological sample refrigerators.
- More equipments have been acquired for the UCAIBs:
 - Genomics:
 - A digital nucleid acid counter.
 - A Next-generation sequencing system.
 - A digital PCR
 - Experimental animal service:
 - A set of high-performance anesthesia equipments for research using animal models.
 - A respirometry and intake analysis system
 - A body composition imaging system for laboratory animals
 - A X-ray imaging arch and an ultrasound scan
 - Microscopy and cytometry:
 - Two 18 and 6-color cytometer platforms.
 - A sorter cytometer.
- The following equipments were acquired for general use at the IMIBIC:
 - A dynamic living cell analysis system
 - An optogenetic analysis system (multicomponent)
 - One high-capacity centrifuge
 - A preparative HPLC
- General equipment for the nivel culture rooms (including a P2 category room) including flow cabinets, CO₂ incubators, refrigerators and reservoirs.

Finally, IT equipment have been installed including servers (general and for bioinformatic analysis), network micro-electronics, furnishing, and basic research instruments (tubes, centrifuges and vortex).



08

Biomedical
Research
Support
Units

8. Biomedical Research Support Units

8.1. Isotope Unit

8.1.1. Composition

The Unit is composed of:

Supervisor:

Dr. Eduardo Muñoz Blanco
filmuble@uco.es

Operator:

Antonia Sánchez Arroyo
antonia.sanchez@imibic.org

8.1.2.- Equipment and Facilities

In IMIBIC, we possess two laboratories dedicated to working with radioactive isotopes both γ and β . One is located on the -2 floor and the other on the third floor.

We have had the authorization of the Nuclear Safety Council since December of 2014 to work with the following isotopes:

Isotopes	Maximum Activity (Mbc)
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 is responsible for this Unit and it supervises the operative procedures. It also checks that laboratories are free from contamination and takes charge of waste management and removal.

Equipment:

- Gamma Counters 3 units:
 - Brand: Wizard
 - Model: 2470-0100 Beta counter
- 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

8.1.3. Portfolio of Services

- Training in the handling of β and γ counters.
- Labeling of proteins with I-125.
- Identification of protein levels in serum, plasma using the RIA technique.
- ISH with P-33.
- Consultation regarding the different techniques that are employed in the laboratory.
- Optimization of protocols.

8.1.4. Highlights

In 2014, the Unit has been approved by the Nuclear Safety Council in order to begin with our activity. We have renovated the lab facility and we have also implemented the necessary equipment to perform different techniques. The staff has been trained to manage Beta and Microbeta Counters.

8.2. Animal Experimentation Unit

The animal experimentation unit at IMIBIC can be found within the Biomedical Research Central Support Unit and is connected to the Animal Experimentation Service for the University of Córdoba.

The unit is intended to provide integral support to its users at an experimental and consultation level, with the objective of carrying out present and future research for the Institute and other associated organizations through the use of animal subjects, mainly rodents (mice and rats) and pigs.

8.2.1. Composition

The Unit is composed of two technicians:

- Anabel Pozo Salas
sae@imibic.org
- Estefanía Escudero Jabonero
estefania.escudero@imibic.org

8.2.2. Equipment and Facilities

IMIBIC's animal experimentation service consists of:

- 7 rooms for housing rodents.
- 1 healing / metabolism room: This room has a respirometry team 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, 1 rodent anesthesia machine with 4 seats, 6 gas towers, 1 surgical microscope for large animals, 1 high-end ultrasound, 3 magnifiers, and 1 surgical arc.
- Quarantine Zone: 4 racks ventilated for rats / mice, 1 replacement cabinet and 1 triple gate SAS.

8.2.3. Highlights

In 2014, many different pieces of equipment were acquired, installed and put into use. Accordingly, the personnel have taken training courses with the aim of opening animal services.

In addition, the multi-purpose rooms have been renovated in order to optimize these spaces.

8.3. Microscopy, Cytomics, and Scientific Imaging Unit

The Microscopy, Cytomics and Scientific Imaging Unit is one of the common scientific and technical support platforms used for IMIBIC's research. This Unit is comprised of two technological areas: flow cytometry and advanced optical microscopy (confocal and fluorescence), both of which are considered to be of great importance in the field of biomedical research and health, and are powerful tools used in studies at the cellular, cellular subpopulation, and tissue levels.

Its mission is to provide the research community with advanced equipment, and to provide the technical and scientific-methodological support necessary for the optimization of applications of these technologies so as to obtain high-quality results for the development of excellence in translational biomedical research. The Unit services both the research staff of the Institute and other entities of the Andalusian Public Health System, the University, IPOs, and private companies that request it.

8.3. 1. Composition

The Unit is composed of a superior specialized technician

- Dr. Esther Peralbo Santaella PhD
microscopia.citometria@imibic.org

8.3. 2. Equipment and Facilities

- Area of Flow Cytometry
 - This area offers an advanced infrastructure aimed at flow cytometry for the quantification, phenotypical and functional analyses of cellular populations, and cellular sorting.
 - The Unit offers the research personnel of IMIBIC the option to use flow cytometers under the “self-service” rule (i.e. without a technical operator present).
 - ◊ Equipment
 - Flow cytometer LSR Fortessa SORP (Becton Dickinson)
 - Flow cytometer FACSCalibur (Becton Dickinson)
 - Flow cytometer Cytomics FC500 MCL (Beckman Coulter)
 - Cellular Sorter FACSAria III (Becton Dickinson)
- Area of advanced Optical Microscopy
 - The area of Advanced Optical Microscopy is an infrastructure designed for confocal fluorescent microscopy and the imaging associated with these techniques.
 - The Unit offers the research personnel of IMIBIC the option to use the microscopic equipment under the “self-service” rule (i.e. without a technical operator present).
 - ◊ Equipment
 - Spectral LSM 710 confocal microscope (Carl Zeiss), with inverted stand and lighting for brightfield, DIC and epifluorescence.
 - LSM 5 Exciter confocal microscope (Carl Zeiss), with inverted stand and lighting for brightfield and epifluorescence.
 - Inverted fluorescence microscope (Nikon Eclipse Ti-S)
 - High -Content Bioimager Pathway 855 (Becton Dickinson).

8.3. 3. Portfolio of Services

- Education and training in the management of flow cytometers and microscopic equipment, as well as the corresponding result analysis programs.
- Purification and isolation of cell subpopulations via sorting.
- Provision of technical support for the analysis of samples in flow cytometers and confocal microscopy equipment.
- Advice regarding: preparation and marking of samples for flow cytometry, sorting or confocal microscopy, experimental design and interpretation of results.
- Provision of support for data analysis by means of cytometry analysis programs available in the Unit, as well as image analysis.
- Organization of training activities (seminars, courses, etc.) related to the fundamentals and the application of the areas of flow cytometry and advanced optical microscopy .

8.3. 4. Highlights

In 2014, the Microscopy, Cytomics and Scientific Imaging Unit experienced remarkable growth with the acquisition and commissioning of three new pieces of equipment: the LSRFortessa flow cytometer, the FACSAria III cell separator and the spectral confocal microscope LSM 710. All three pieces were acquired with the aim of responding to the growing scientific, technological, and investigational needs of IMIBIC and providing a highly competitive service. The Unit lent its services to 10 research groups consolidated by IMIBIC (New Therapies in Cancer, Nephrology, Nutrigenomics, Metabolism and Adipocyte differentiation, etc.) belonging to four of the five existing scientific programs within IMIBIC, as well as three external groups from three different institutions.

8.4. Biobank Unit

The Biobank Unit of Maimonides Institute for Biomedical Research of Cordoba (IMIBIC), 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 Global Framework of Biobank of Andalusia Public Health System (SSPA) Initiative of the Department of Equality, Health and Social Policy. It is part of the Biobank Network Theme Hospital (National Biobank Network) Initiative Carlos III Health Institute (ISCIII), which is itself within the subprogram Thematic Networks for Cooperative Research in Health (RETICS).

8.4.1. Composition

- Head
 - Dr. Manuel Medina Pérez
manuel.medina.sspa@juntadeandalucia.es
- Coordinator
 - Carmen Pérez Calle
carmen.perez.calle.exts@juntadeandalucia.es
- Technicians:
 - Eugenia Carrillo Gil
eugenia.carrillo@imibic.org
 - Javier Herruzo
javier.herruzo@imibic.org
 - Desireé Gutiérrez Córdoba
desire.gutierrez@imibic.org

8.4.2. Equipment and Facilities

The Unit possesses its own laboratory resources for use of 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. During 2014, work was carried out on the second floor of the present Biobank Unit building to expand the living space preservation deep freeze and thereby accommodate 50 units of deep freeze equipment which shall be integrated into a future operation Unit.

8.4.3. Portfolio of Services

Our service portfolio is divided into four main sections:

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.

8.4.4. Highlights

In 2014, the Biobank Unit experienced a notable increase in activity in comparison to previous years, having given essential support to 55 research projects. This activity generated a total of 75,000 samples/bioresources, of which around 10,000 were awarded to different researchers. The degree of satisfaction of these users has been assessed via surveys to be 7.5 points (out of a possible 10).

As a result of this activity, the list below shows the most relevant sample collections:

Name	Type, Format and Conservation	Donors	Samples
Cancer: Oncover's project	Plasma, urine, urine sediment, nails, hair, exhaled air, feces, paraffin-embedded tissue	1619	47586
Metabolic Diseases. Metabolic syndrome	DNA, ARN, Plasma, urine, frozen tissue, peripheral blood, feces and serum	1206	5886
Infectious Diseases	Plasma, serum and peripheral blood	3276	5482
Digestive Diseases	Peripheral blood and paraffin-embedded tissue	1174	2348

8.5. Proteomics Unit

The Proteomics Unit is located within the IMIBIC research support platforms and 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 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. As a service for research assistance, the Proteomics Unit provides individualized, fit-for-purpose support including project planning, sample preparation, mass spectrometry analysis and data analysis.

8.5.1. Composition

The Unit is composed of two specialized technicians:

- Ignacio Ortea García, PhD
ignacio.ortea@imibic.org
- Eduardo Chicano Gálvez, PhD
eduardo.chicano@imibic.org

8.5.2. 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 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 and Cardinal for Maldi Imaging MS.
- Basic laboratory equipment for sample preparation .

8.5.3. Portfolio of Services

The Proteomics Unit offers the following 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.

8.5.4. Highlights

In 2014, the Proteomics Unit moved into the new IMIBIC building (July/August 2014) and installed the sample preparation and mass spectrometry laboratories where it performs its activities. This Unit has also installed two new mass spectrometers, a Q-TOF and a MALDI TOF/TOF.

8.6. Bioinformatics Unit

IMIBIC's Bioinformatics unit offers services on two levels:

- Direct analysis of relevant research projects and technical data needed for support
- Biocomputing tools to support groups conducting relevant research projects

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
- Design and development of software
- Construction of databases for storing biological data
- Development of algorithms

8.6.1. Objectives of the Bioinformatics Unit

- The mission of the Unit is to attempt to satisfy the bioinformatic requirements that result from research projects.
- Clear and direct communication with the researchers facilitates this productive collaboration.
- Finally, 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 with the aim of burnishing robust reporting and facilitating the publication of findings.

1. Composition

- David Ovelleiro Fraile
bioinformatica@imibic.org

2. Equipment and Facilities

- The Bioinformatics Unit of IMIBIC currently uses the following equipment:
- ACER Aspire M3985 Computere (i7 Processor, 16 Gb RAM)

8.7. Clinical Research Unit

IMIBIC Clinical Research Unit is located within the IMIBIC research support platforms. Its purpose is to promote clinical research as well as to establish collaborations with other research centers.

This 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 as required.

It consists of two dedicated clinical research facilities: one located at the Provincial Hospital and another by the General Hospital, which is currently under development and is expected to be completed in June 2015. Both facilities are adapted to perform phase I-IV clinical trials.

8.7.1. Composition

Head

- Dr. Jose López Miranda
jlopezmir@uco.es

Clinical Pharmacologist

- María Esther Pacheco Rodriguez, MD
esther.pacheco@imibic.org

Project Managers/CRA's

- Isabel Bejerano Blázquez
isabel.bejerano@imibic.org

- Blanca Quijano Ruiz
blanca.quijano@imibic.org

Nurse Coordinator

- Inés Carmen Rodríguez García
inesc.rodriguez.sspa@juntadeandalucia.es

Nurse Team

- Pilar Mesa Blanco
pilar.mesa@imibic.org

- Manuel Rejano Castañeda
manuel.rejano.sspa@juntadeandalucia.es

Nursing Assistants

Rubén Sánchez Nieves
Rafaela Vacas Bueno

8.7.2. Equipment and Facilities

- 10 doctor's offices and storehouse
- 2 hospital wards each containing: crash trolley with semi-automatic defibrillator and emergency medication, intravenous fluids, an insulin pump, healing trolleys, oxygen outlets in all positions and audiovisual system.
- 14 armchairs and rooms with 3 single beds, all with ongoing monitoring.
- A pediatric area
- 12-lead ECGs
- Measuring boards and scales
- Blood pressure meter in each office
- 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)
- High Definition Ultrasound Scanner
- 2 Study coordinators' offices
- 2 CRA's' offices
- 2 Archives

8.7.3. Portfolio of Services

- Methodological support
- Launch and Regulatory affairs
- Study development
- Close out
- Pharmacovigilance
- Delivery of clinical assistance

8.7.4. Highlights

During 2014, the Unit provided assistance and support in the start-up, coordination, data-management, and monitoring of 7 independent clinical trials across Internal Medicine, Pediatrics, General Surgery, Nephrology, and Rheumatology. Additionally, research activity has been increasing (to 81 patients) in the Provincial Hospital Clinical Research Unit. There are at present 13 clinical trials in progress. The main areas of activity are Oncology, Nephrology, Dermatology, Internal Medicine and Urology.

As a member of Spanish Clinical Research Network, the Unit has actively participated in 3 clinical trials interacting with different groups within Spain. The Unit also collaborates with several working groups within the network. To promote clinical research in the region, the Unit organizes meetings aimed at informing health professionals about different aspects of clinical research in the province of Córdoba. More than 45 meetings have already been organized.

8.8. Methodology and Biostatistics Unit

This Research Support Unit offers methodological consulting and statistical support for IMIBIC's researchers (HURS-UCO) and for healthcare professionals in the Public System in the Province of Córdoba.

The Unit's main objectives are:

- Offering methodological consulting in the beginning or development of the different lines of research in the phases previous to the presentation of proposals/reports to the relevant financial entities and in general throughout the projects' life cycles.
- Providing statistical support for the creation of databases and follow-up companies, use of statistical techniques and clinical-epidemiological research tools.
- Providing the highest quality possible in design, execution, interpretation and communication of results

8.8.1. Composition

Maricarmen Muñoz Villanueva, MD, PhD:
mc.munoz.exts@juntadeandalucia.es

8.8.2. 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 (Consejería de Sanidad, Xunta de Galicia, España; Organización Panamericana da saúde (OPS-OMS); Universidade CES, Colombia. Octube 2014).
- GranMo versión 7 (abril 2012)
- G-stat 2.0 (Copyright 2008 by GSK, SA.)
- Sinergy 3.0 (Copyright 2008 by GSK, SA.)

8.8.3. Portfolio of Services

Through personalized consultations (be they in person, telematic or virtual) we cover the different moments of the research process. Specifically, the financial aid that we solicit deal with:

- 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 can 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...
- 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: a review of articles and rejected projects

Consultation and execution of statistical analysis can 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 verosimilitude. ROC curves.
- Validation of statistical questionnaires and other measuring instruments.
- Other statistical techniques (Bayesian analysis, meta-analysis, etc...).

8.8.4. Highlights

In 2014 there were more than 130 activities, most of them (about 60%) related to consulting and statistical executions for dissemination of research results (some publications and dissertations). 3 teaching activities worked together in this endeavor, two of which were organized locally by IMIBIC and another externally at the nationwide level (in the Master of Research Methodology of the Autonomous University of Barcelona). There were also two training activities for updating our own knowledge of office management and epidemiological developments.



09

Scientific
Production

T and NK immunosenescence. Antiviral immune response

Publications

5

Impact Factor

20,826

Average Impact Factor

4,165

PHD Researchers

Rafael González Fernández

Post-PhD Researcher

Bárbara Martín Manzanares
Alejandra Pera Rojas

Pre-PhD Researchers

Fakhri Hassouneh
Nelson López Sejas
Juan Eduardo Molina Alcaide
Ana M^a Navas Romo

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

Corona Alonso Diaz
Carmen Campos Fernández
Ma Luisa Velarde Martínez

Team Leader

Principal Investigator (PI)

Rafael Solana Lara
rsolana@uco.es

*Red Española de Patología Infecciosa (REIPI)
(Collaborator)*

PAIDI CTS-208 Scientific Group (Collaborator)



Scientific Activity

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 analyze 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. We also analyze the immunopathogenesis of HIV infection and the impact that different therapeutic situations have on it as well as the innate immune response in HIV-1 + patients treated with "ex vivo" autologous dendritic cells as part of the protocol of developing a preventive vaccine.

Keywords

AIDS, HIV-1; HAART; preventive vaccine; Immunosenescence; aging; melanoma; NK cells; NKT cells; NK receptors; CMV; cytotoxic T lymphocytes (CTL).

Scientific Production

Publications

Original

Papers

Pera, Alejandra; Campos, Carmen; Corona, Alonso; Sanchez-Correa, Beatriz; Tarazona, Raquel; Larbi, Anis; Solana, Rafael. CMV Latent Infection Improves CD8+T Response to SEB Due to Expansion of Polyfunctional CD57+ Cells in Young Individuals. *Plos One*. 2014.9-2; e88538
IF:3,534

Campos, Carmen; Pera, Alejandra; Sanchez-Correa, Beatriz; Alonso, Corona; Lopez-Fernandez, Isabel; Morgado, Sara; Tarazona, Raquel; Solana, Rafael. Effect of age and CMV on NK cell subpopulations. *Experimental Gerontology*. 54-:130-137
IF:3,529

Campos, Carmen; Pera, Alejandra; Lopez-Fernandez, Isabel; Alonso, Corona; Tarazona, Raquel; Solana, Rafael. Proinflammatory status influences NK cells subsets in the elderly. *Immunology Letters*. 2014.162-1 Pt B;298-302
IF: 2,367

Review

Solana, Rafael; Campos, Carmen; Pera, Alejandra; Tarazona, Raquel. Shaping of NK cell subsets by aging. *Current Opinion In Immunology*. 2014.29-:56-61
IF:7,867

In Collaborations

Papers

Sansoni, Paolo; Vescovini, Rosanna; Fagnoni, Francesco F.; Akbar, Arne; Arens, Ramon; Chiu, Yen-Ling; Cicin-Sain, Luka; Dechanet-Merville, Julie; Derhovanessian, Evelyn; Ferrando-Martinez, Sara; Franceschi, Claudio; Frasca, Daniela; Fulop, Tamas; Furman, David; Gkrania-Klotsas, Effrossyni; Goodrum, Felicia; Grubeck-Loebenstein, Beatrix; Hurme, Mikko; Kern, Florian; Lilleri, Daniele; Lopez-Botet, Miguel; Maier, Andrea B; Marandu, Thomas; Marchant, Arnaud; Mathei, Catharina; Moss, Paul; Muntasell, Aura; Remmerswaal, Ester B. M.; Riddell, Natalie E.; Rothe, Kathrin; Sauce, Delphine; Shin, Eui-Cheol; Simanek, Amanda M.; Smithey, Megan J.; Soderberg-Naucler, Cecilia; Solana, Rafael; Thomas, Paul G.; van Lier, Rene; Pawelec, Graham; Nikolich-Zugich, Janko. New advances in CMV and immunosenescence. *Experimental Gerontology*. 2014.55-:54-62
IF:3,529

Research Fundings

National

Solana Lara, R. Micro-RNA expression (miRNA) in NK cell subpopulations. Role of age- and CMV-associated changes. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI13/02691

Contrat with Companies

Peña Martinez, J. Collaboration agreement with Oxoid. Influence of genotype combinations of nk receptors (KIR) and HLA molecules in the progression of HIV-1 infection in different clinical and therapeutic situations. Funding Agency: Roche Farma, S.A. Reference: CCB.0009

Peña Martinez, J. Agreement with Innogenetics Diagnostica Iberia SL. Funding Agency: Fujirebio Iberia S.L. Reference: CCB.0036

Peña Martinez, J. Agreement with Innogenetics Diagnostica Iberia SL. Funding Agency: Fujirebio Iberia S.L. Reference: CCB.0057

Oxidative and nitrosative stress in acute and chronic liver disease

Publications

13

Impact Factor

39,897

Average Impact Factor

3,069

PHD Researchers

Patricia Aguilar Melero
 Guadalupe Costán Rodero
 Gustavo Ferrín Sánchez
 Valle Garcia Sanchez
 Federico Gomez Camacho
 Emilia Martínez Galisteo
 Jose Luis Montero Álvarez
 Alicia Padilla Peña
 Jose Peinado Peinado
 Antonio Poyato González
 Manuel Rodríguez Perálvarez

Post-PhD Researchers

Raúl González Ojeda

Pre-PhD Researchers

Jose Manuel Benítez Cantero
 Sandra Gonzalez Rubio
 Juan Jurado Garcia
 Clara Linares Luna

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

Pilar Barrera Baena
 Eva Maria Morcillo Ruiz
 Rosario Medina Medina
 M^a Luisa García García
 Enrique Fragas Rivas
 Luis Vida Pérez

Team Leader

Principal Investigator (PI)

Manuel de la Mata García
hepatoh2hrs.sspa@juntadeandalucia.es
CIBER de Enfermedades Hepáticas y Digestivas (CIBERehd)
PAIDI CTS-273 Scientific Group

Co- Principal Investigator (Co-PI)

Jose Antonio Bárcena Ruiz
PAIDI BIO-216 Scientific Group



Scientific Activity

The members of the research team are divided into the BIO-216 and the CTS-273 scientific group –within the Andalusian Research Plan– and the CIBER for liver and digestive diseases (CIBERehd) in the context of a mixed group consisting of a healthcare team made up of hepatologists, surgeons and a biomedical research team of the HURS Research Unit and Department of Biochemistry and Molecular Biology of the UCO with associated teaching activity. Our biomedical research focuses on acute and chronic hepatocellular injury, hepatocarcinoma and liver transplants, with special emphasis on post-translational modifications of the proteome as a consequence of oxidative stress (reactive oxygen species, ROS) and nitrosative stress (reactive nitrogen species, RNS) in eukaryotic cells (hepatocytes and yeasts). The intracellular cytoprotection signal for molecules of various antioxidants (N-acetylcysteine, alpha-tocopherol) or cellular redox state regulators (redoxins) have been characterized in models of cellular injury. The mitochondrial dysfunction caused by redox imbalance is at the root of a large number of pathologies. The group of proteins from the family of cellular and mitochondrial redoxins plays a major part in antioxidant defence, the maintenance of thiol systems and the interaction between reduced glutathione, ROS and RNS. For this purpose, normal and chimeric mutants and recombinant proteins are produced using techniques of molecular biology and in vitro characterization; and (second generation) targeted proteomics are carried out using biochemical analysis techniques.

The group's proven experience in the analysis of post-translational modifications is employed in the identification of biomarkers for hepatocellular carcinoma detection and diagnosis using proteomic analysis tools. In the area of liver transplants, we have identified the cytoprotection mechanisms mediated by cardiotrophin-1 in the preservation injury in liver transplantation developed in experimental animals (rats and "mini-pigs"). In addition, the clinical group is involved in the development of a large number of phase II, III and IV clinical trials in the areas of viral hepatitis (boceprevir), hepatocellular carcinoma (sorafenib), liver cirrhosis (sativaptan), acute liver failure (bioartificial liver, MARS) and liver transplantation (immunosuppression strategies).

Keywords

Reactive oxygen species; nitric oxide; antioxidants; redoxins; proteomics; apoptosis; necrosis; hepatocytes; yeast; mitochondri; liver cancer; biomarkers; liver transplantation; cirrhosis; viral hepatitis; acute and chronic liver failure.

Scientific Production

Publications

Original

Papers

Ferrin, Gustavo; Ranchal, Isidora; Llamaza, Camilo; Rodríguez-Peralvarez, Manuel L.; Romero-Ruiz, Antonio; Aguilar-Melero, Patricia; Lopez-Cillero, Pedro; Briceno, Javier; Muntane, Jordi; Montero-Alvarez, Jose L.; De la Mata, Manuel. Identification of candidate biomarkers for hepatocellular carcinoma in plasma of HCV-infected cirrhotic patients by 2-D DIGE. *Liver International*.2014.34-3:438-446
IF:4.412

Letter

Vida Perez, Luis; Solis Garcia, Eduardo; Ruiz Morales, Rebeca; Zafra Jimenez, Carmen; Marquez Galan, Francisco; Robles Olid, Jose Antonio. Colonic stromal pseudolipomatosis. An unexpected finding of histopathological analysis. *Gastroenterologia Y Hepatologia*.2014.37-7:440-1
IF:0.832

Rodríguez-Peralvarez, Manuel; Manousou, Penelopi; Lerut, Jan; De la Mata, Manuel; Burroughs, Andrew Kenneth. How much immunosuppression is needed after liver transplantation?. *Clinical Transplantation*.2014.28-1:6-7
IF:1.486

Review

Rodríguez-Peralvarez, Manuel; De la Mata, Manuel; Burroughs, Andrew K. Liver transplantation: immunosuppression and oncology. *Current Opinion In Organ Transplantation*.2014.19-3:253-260
IF:2.379

In Collaborations

Papers

Julià A, Domènech E, Chaparro M, García-Sánchez V, Gomollón F, Panés J, Mañosa M, Barreiro-De Acosta M, Gutiérrez A8, Garcia-Planella E9, Aguas M, Muñoz F, Esteve M, Mendoza JL, Vera M, Márquez L, Tortosa R, López-Lasanta M, Alonso A, Gelpi JL, García-Montero AC, Bertranpetit J, Absher D, Myers RM, Gisbert JP, Marsal S. A genome-wide association study identifies a novel locus at 6q221 associated with ulcerative colitis. *Human Molecular Genetics*.2014.23(25):6927-6934
IF:6.667

Navarro P, Trevisan-Herraz M, Bonzon-Kulichenko E, Núñez E, Martínez-Acedo P, Pérez-Hernández D, Jorge I, Mesa R, Calvo E, Carrascal M, Hernáez ML, García F, Bárceña JA, Ashman K, Abian J, Gil C, Redondo JM, Vázquez J. General Statistical Framework for Quantitative Proteomics by Stable Isotope Labeling. *Journal Of Proteome Research*.2014.13-3:1234-1247
IF:5.001

Calvet, Xavier; Panes, Julian; Alfaro, Noelia; Hinojosa, Joaquin; Sicilia, Beatriz; Gallego, Marta; Perez, Ildefonso; Lazaro y de Mercado, Pablo; Gomollon, Fernando; Aldeguer, Xavier; Alos, Rafael; Andreu, Montserrat; Barreiro, Manuel; Bermejo, Fernando; Casis, Begona; Domenech, Eugeni; Espin, Eloy; Esteve, Maria; Garcia-Sanchez, Valle; Lopez-Sanroman, Antonio; Martinez-Montiel, Pilar; Luis Mendoza, Juan; Gisbert, Javier P.; Vera, Maribel; Dosal, Angelina; Sanchez, Elena; Marin, Laura; Sanroman, Luciano; Pinilla, Pilar; Murciano, Francisca; Torrejon, Antonio; Ramon Garcia, Jose; Ortega, Mayte; Roldan, Julio Consensus Grp. Delphi consensus statement: Quality indicators for Inflammatory Bowel Disease Comprehensive Care Units. *Journal Of Crohns & Colitis*.2014.8-3:240-251
IF:3.562

Andreu, M.; Marquez, L.; Domenech, E.; Gisbert, J. P.; Garcia, V.; Marin-Jimenez, I.; Penalva, M.; Gomollon, F.; Calvet, X.; Merino, O.; Garcia-Planella, E.; Vazquez-Romero, N.; Esteve, M.; Nos, P.; Gutierrez, A.; Vera, I.; Cabriada, J. L.; Martin, M. D.; Canas-Ventura, A.; Panes, J. Spanish GETECCU Grp ENEIDA Project. Disease severity in familial cases of IBD. *Journal Of Crohns & Colitis*.2014.8-3:234-239
IF:3.562

Canas-Ventura, A; Marquez, L; Ricart, E; Domenech, E; Gisbert, JP; Garcia-Sanchez, V; Marin-Jimenez, I; Rodriguez-Moranta, F; Gomollon, F; Calvet, X; Merino, O; Garcia-Planella, E; Vazquez-Romero, N; Esteve, M; Iborra, M; Gutierrez, A; Vera, M; Andreu, M. Risk of colectomy in patients with ulcerative colitis under thiopurine treatment. *Journal Of Crohns & Coli-*

tis.2014.8-10:1287-1293
IF:3.562

Paniagua, J. A.; Escandell-Morales, J. M.; Gil-Contreras, D.; Berral de la Rosa, F. J.; Romero-Jimenez, M.; Gomez-Urbano, A.; Sanchez-Lopez, A.; Bellido, E.; Poyato, A.; Calatayud, B.; Vidal-Puig, A. J. Central obesity and altered peripheral adipose tissue gene expression characterize the NAFLD patient with insulin resistance: Role of nutrition and insulin challenge. *Nutrition*.2014.30-2:177-185
IF:3.046

Cabre, Eduard; Manosa, Miriam; Garcia-Sanchez, Valle; Gutierrez, Ana; Ricart, Elena; Esteve, Maria; Guardiola, Jordi; Aguas, Mariam; Merino, Olga; Ponferrada, Angel; Gisbert, Javier P.; Garcia-Planella, Esther; Cena, Gloria; Cabriada, Jose L.; Montoro, Miguel; Domenech, Eugeni Spanish Working Grp Crohn's Dis U. Phenotypic concordance in familial inflammatory bowel disease (IBD) Results of a nationwide IBD Spanish database. *Journal Of Crohns & Colitis*.2014.8-7:654-661
IF:3.562

Arjona-Sanchez, A.; Sanchez-Hidalgo, JM; Ciria-Bru, R.; Munoz-Casares, FC; Ruiz-Rabelo, JF; Gallardo, A.; Orti, R.; Luque, A.; Rufian-Pena, S.; Lopez-Cillero, P.; de la Mata, M.; Briceno-Delgado, FJ. Prediction Model to Discard A Priori Liver Allografts. *Transplantation Proceedings*.2014.46-9:3076-3078
IF:0.984

Marin-Jimenez, I.; Sanchez, VG; Gisbert, JP; Calle, JLP; Lujan, M.; Abalos, JG; Taberner, S.; Julia, B.; Romero, C.; Cea-Calvo, L.; Garcia-Vicuna, R.; Vanaclocha, F. Immune-mediated inflammatory bowel disease Baseline data from the Aquiles study. *Gastroenterologia Y Hepatologia*.2014.37-9:495-502
IF:0.832

Research Findings

National

De la Mata Garcia, M. Inhibition of the mTOR pathway in liver transplantation for hepatocellular carcinoma and its impact on disease recurrence. Funding agency: Institute of Health Carlos III (ISCIII). Reference: PI11-02867

García Sánchez, MV. Functional validation of SNP rs6105269 in Crohn disease. Funding agency: Institute of Health Carlos III (ISCIII). Reference: PI12/02091

Bárcena Ruiz, JA. Modulation of the Thiol proteome by redoxins: mechanisms and implications in iron metabolism, mitochondrial function and apoptosis. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO) Reference: BFU2012-32056

Montero Álvarez, JLA multicenter, randomized, placebo-controlled, double-blinded phase IV study to assess the efficacy and safety of sorafenib in patients with advanced liver cell cancer with radiological progression. Funding agency: Spanish Ministry of Health, Social Services and Equality. Reference: EC11-185

Regional

García Sánchez, MV. Functional validation of

SNP rs6105269 in Crohn disease Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0485-2012

Aguilar Meler, 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-0199-201

International

Rodríguez Perálvarez, ML. mTOR pathway inhibition in liver transplant patients with hepatocellular carcinoma and its impact on tumour recurrence. Funding Agency: European Association for the Study of the Liver. Reference: EASL-2014-002

Contract with Companies

De la Mata Garcia, 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 Garcia, M. Molecular predictors of response to sorafenib as adjuvant Therapy A after resection in Hepatocellular Carcinoma (Bio-Storm). Funding agency: Bayer Pharma AG. Reference: PSS.0036

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

De La Mata Garcia, M. Contract to manage Database. Funding agency: Bayer Hispania SL. Reference: PSS.0061

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

García Sánchez, MV. Funding for collaborators at the Digestive Tract Unit. Funding agency: Merck Sharp & Dohme SA. Reference: CCB.0037

De la Mata Garcia, M. Funding for collaborators at the Digestive Tract Unit. Funding agency: Merck Sharp & Dohme SA. Reference: CCB.0038

De la Mata Garcia, M. Support agreement for collaborators at the Digestive Tract Unit. Funding agency: Merck Sharp & Dohme SA. Reference: CCB.0051

De la Mata Garcia, M. Funding for collaborators at the Digestive Tract Unit. Funding agency: Merck Sharp & Dohme SA. Reference: CCB.0072

Clinical Trials

0103/08: A randomized, double-blind, placebo-controlled phase III study of sorafenib as

adjuvant treatment for liver cell carcinoma after surgical resection or local ablation. PI: Dr/a De La Mata Garcia, Manuel

0009/10: Long-term follow-up of participants in a phase II or III SCG 503034 trial for the treatment of chronic hepatitis C. PI: Dr/a De La Mata Garcia, Manuel

0120/10: A multicenter, randomized, placebo-controlled, double-blind phase III study to assess the efficacy and safety of everolimus (RAD001) in adult patients with advanced liver cell cancer after failure of treatment with sorafenib. PI: Dr/a Montero Alvarez, Jose Luis

0041/11: A multicenter, prospective, randomized, comparative trial to assess the effectiveness of two vaccines against the hepatitis B virus in patients with inflammatory bowel disease. PI: Dr/a Iglesias Flores, Eva

0066/11: Simplification trial with tenofovir in patients with chronic hepatitis B resistant to lamivudina and undetectable viral load in treatment with lamivudina in combination with adefovir dipivoxil (Tenosimp-B study). PI: Dr/a Fraga Rivas, Enrique

0068/11: Trial of tenofovir in the prophylaxis of hematological anti-HBc positive and AgHBs-negative patients on treatment with rituximab. PREBLIN study. PI: Dr/a Fraga Rivas, Enrique

0192/11: An Open-Label multicenter study to evaluate the impact of Adalimumab on quality of life, health care utilization and costs of ulcerative colitis subjects in the usual clinical practice setting. PI: Dr/a Iglesias Flores, Eva

0215/11: High-sensitivity calprotectin and C-reactive protein as markers of a new diagnostic-therapeutic strategy that evaluates mucosa activity to individualize treatments and improve the prognosis of patients with Crohn disease. PI: Dr/a García Sánchez, Valle

0232/11: A multicenter, randomized, double-blind parallel-group trial to assess the effectiveness of Adalimumab versus Azathioprine in the prevention of postsurgical recurrence of Crohn disease after 52 weeks. PI: Dr/a García Sánchez, Valle

0015/12: A multicenter, randomized, placebo-controlled, double-blind phase IV study to assess the efficacy and safety of sorafenib in patients with advanced liver cell cancer with radiological progression. PI: Dr/a Montero Alvarez, Jose Luis

0304/12: A phase 3, randomized, double-blind study of tivantinib (ARQ 197) in subjects with met diagnostic-high inoperable hepatocellular carcinoma (HCC) treated with one prior systemic therapy. PI: Dr/a Montero Alvarez, Jose Luis

0039/13: Radomized, doubled blind, placebo-controlled, multicenter phase III study of regorafenib in patients with hepatocellular carcinoma (HCC) after srafenib. PI: Dr/a Barrera Baena, Pilar

0113/13: Multicentric, randomized, open-label, controlled study, of 12 months of follow-up to

assess the effect in renal function of an immunosuppressive treatment based on tacrolimus minimization in combination with everolimus in patients with novo liver transplantation.
PI: Dr/a De La Mata García, Manuel

0162/13: A randomized, open-label, multicenter, controlled study to assess safety and efficacy of elad in subjects with alcohol-induced liver decompensation (AILD).
PI: Dr/a Montero Alvarez, Jose Luis

0201/13: Albumin administration in the prevention of hepatorenal syndrome and death in patients with cirrhosis, bacterial infections other than spontaneous bacterial peritonitis and high risk of hospital mortality.
PI: Dr/a Montero Alvarez, Jose Luis

0329/13: A randomized, open-label, multicenter, controlled study to assess safety and efficacy of elad in subjects with acute alcoholic hepatitis (AAH) who have failed steroid therapy.
PI: Dr/a Montero Alvarez, Jose Luis

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-I) of Hepatitis C virus (HCV).
PI: Dr/a Fraga Rivas, Enrique

0022/14: Rapidity of response to adalimumab in patients with luminal Crohn's disease. RAPIDA study
PI: Dr/a Iglesias Flores, Eva

1312: Study of co-morbidity and clinical expression of immunologically-mediated inflammatory diseases (psoriasis, Spondyloarthropathy and inflammatory bowel disease).
PI: Dr/a Gómez Camacho, Federico

1875: Use of Everolimus in liver transplantation
PI: Dr/a De La Mata García, Manuel

2057: Cost, effectiveness, usefulness and efficacy of adalimumab in the management of Crohn's disease.
PI: Dr/a García Sánchez, Valle

2058: Improving the safety of biologic-agent-based treatments in patients with inflammatory bowel disease through early detection of latent tuberculosis.
PI: Dr/a García Sánchez, Valle

2061: Predicting short-term response to anti-TNF treatment in patients with Crohn's disease.
PI: Dr/a García Sánchez, Valle

2072: Enterourinary fistulas in Crohn's disease: prevalence and clinical characteristics.
PI: Dr/a Iglesias Flores, Eva

2171: Chronic-UC: Assessing the diagnostic capacity of Walmsley's questionnaire available on an online application (online completion by patients) versus the same questionnaire delivered by the physician to patients with ulcerative colitis.
PI: Dr/a Iglesias Flores, Eva

2242: A multicenter, prospective, randomized, comparative study of endoscopic treatment of stenosis in patients with Crohn's disease. Self-expanding prosthesis vs balloon dilatation.
PI: Dr/a Naranjo Rodríguez, Antonio

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/a García Sánchez, Valle

2342: Registry of Telaprevir and Boceprevir in regular clinical practice.
PI: Dr/a De La Mata García, Manuel

2366: A retrospective study of clinical practice in patients with Crohn's disease and ileocolic surgery in Spain.
PI: Dr/a García Sánchez, Valle

2395: An observational study of the effect of minimizing immunosuppression in liver recipients.
PI: Dr/a De La Mata García, Manuel

2540: A retrospective, observational study to determine the usefulness of ART score for assessing retreatment with transarterial chemoembolization in patients with liver cell carcinoma. DALIA study.
PI: Dr/a De La Mata García, Manuel

2565: A cross-sectional study to describe the natural course of chronic pancreatitis and its evolution in non-followed up patients (PAN-CR-EVOL).
PI: Dr/a Perez Rodriguez, Esperanza

2567: Assessing adherence to triple therapy for Hepatitis C.
PI: Dr/a Fraga Rivas, Enrique

2572: Defining high risk variceal bleeding: a rationale for the use of early tips in acute bleeding and preventing rebleeding.
PI: Dr/a De La Mata García, Manuel

2647: Prognosis of patients with ulcerative colitis in remission after discontinuation of thiopurine therapy.
PI: Dr/a Moreno Rincón, Estefanía

0014/07/EPAI: Recurrence rates and predictive factors in the treatment of Hepatitis C in real clinical practice in Spanish hospitals (FAST-4 Study).
PI: Dr/a Fraga Rivas, Enrique

0020/08/EPA: Long-term non-interventionist registration to assess the safety and effectiveness of HUMIRA® (adalimumab) in patients with active mild to moderate Crohn disease (CD).
PI: Dr/a García Sánchez, Valle

0026/10/EPA-SP: Validation of a treatment adherence questionnaire in patients with hepatitis B. HABIT study.
PI: Dr/a Fraga Rivas, Enrique

Publications

31

Impact
Factor

135,53

Average
Impact Factor

4,371

PhD Researchers

Ángela Camacho Espejo
Sara Cantisán Bohórquez
Milagros García Lazaro
Ana Gordon Bermundez-Coronel
Irene Gracia Ahufinger
Rafael Jurado Jimenez
Jose M^a Kindelan Jaquotot
Clara Natera Kindelan
Jose Rumbao Aguirre
Elisa Vidal Verdu

Post-PhD Researchers

Mario Frias Casas
Antonio Rivero Juarez
Cristina Ogayar Luque

Pre-PhD Researchers

Francisca Cuenca López
Isabel Machuca Sánchez
Loreto Martínez-Dueñas Lopez-Marín
Rosario Lara Contreras

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

M^a Teresa Añon Gámez
Laura Ruiz Torres
Aurora Paez Vega
Ismael Zafra Soto

Team Leader**Principal Investigator (PI)**

Julián de la Torre Cisneros
julian.torre.sspa@juntadeandalucia.es
*Spanish Network for Research in Infectious
Pathology (REIPI)*
PAIDI CTS-647 Scientific Group

Co-Principal Investigator (Co-PI)

Antonio Rivero Roman
AIDS Research Network (RIS) (Collaborator)



Scientific Activity

Our group studies infectious diseases from two approaches:

- Clinical-epidemiological studies (which include clinical trials). In these studies, our objective is to differentiate risk factors, clinical features and efficacy/safety of new treatments, thus aiming to improve the prognosis of infectious diseases.
- Studies on pathogenesis from which specific clinical strategies are planned. The most relevant are our studies on immunopathology (in collaboration with the Immunology group) and mitochondrial toxicity (in collaboration with the Clinical Analysis Service).

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

In particular, our lines of research are as follows:

- Immunopathology, pathogenesis and treatment of HIV infection.
- Pathogenesis and treatment of HIV / HCV co-infection.
- Clinical and epidemiological characterization of infection in transplant patients
- Immunopathology of cytomegalovirus infection.

Keywords

HIV; CMV; HCV; Immunopathology; Transplant; Antiretroviral therapy; Mitochondrial toxicity.

Scientific Production

Publications

Original

Papers

Rivero-Juarez, Antonio; Lopez-Cortes, Luis F.; Camacho, Angela; Mira, Jose A.; Tellez, Francisco; Marquez, Manuel; Merino, Dolores; Pineda, Juan A.; Rivero, Antonio Grp Andaluz Estudio Hepatitis, Soc Andaluza Enfermedades. A 24-Week Treatment Strategy With Pegylated Interferon/Ribavirin in HIV/Hepatitis C Virus Genotype 3-Coinfected Patients Who Achieved a Rapid Virologic Response Results in a High Sustained Virologic Response Rate. *Clinical Infectious Diseases*. 2014; 58(1):130-133 IF:9.416

Rivero-Juarez, A; Lopez-Cortes, LF; Camacho, A; Torres-Cornejo, A; Gordon, A; Ruiz-Valderas, R; Torre-Cisneros, J; Pineda, JA; Viciano, P; Rivero, A. HCV Viral Decline at Week 2 of Peg-IFN-Alpha-2a/RBV Therapy as a Predictive Tool for Tailoring Treatment in HIV/HCV Genotype 1 Co-Infected Patients. *Plos One*. 2014; 9(6):nº de artículo e99468 IF:3.534

Rivero-Juarez, Antonio; Neukam, Karin; Labarga, Pablo; Camacho, Angela; Macias, Juan; Barreiro, Pablo; Torre-Cisneros, Julian; Pineda, Juan A.; Soriano, Vicente; Rivero, Antonio. Sustained virological response in HIV/HCV co-infected patients treated with pegylated interferon/ribavirin can be predicted from the overall rate of viral load decline over the first 4 weeks of therapy. *Journal of Infection*. 2014; 68(4):372-377 IF:4.017

Berenguer, J; Polo, R; Lozano, F; Aldeguer, JL; Antela, A; Arribas, JR; Asensi, V; Blanco, JR; Clotet, B; Domingo, P; Galindo, MJ; Gatell, JM; Gonzalez-Garcia, J; Iribarren, JA; Locutura, J; Lopez, JC; Mallolas, J; Martinez, E; Miralles, C; Miro, JM;

Moreno, S; Palacios, R; Elias, MJP; Pineda, JA; Podzamczar, D; Portilla, J; Pulido, F; Ribera, E; Riera, M; Rubio, R; Santos, J; Sanz, J; Tuset, M; Vida, F; Rivero, A Expert Panel GESIDA; Natl AIDS Plan. Executive summary of the GeSIDA/National AIDS Plan consensus document on antiretroviral therapy in adults infected by the human immunodeficiency virus (updated January 2014). *Enfermedades Infecciosas y Microbiologia Clinica*. 2014; 32(7):447-458 IF:1.881

Letter

Rivero-Juarez, Antonio; Lopez-Cortes, Luis F.; Giron-Gonzalez, Jose A.; Pineda, Juan A.; Rivero, Antonio.Grupo Andaluz para el Estudio de las Hepatitis Viricas (HEPAVIR) de la Sociedad Andaluza de Enfermedades Infecciosas. Atazanavir-based therapy with pegylated interferon and ribavirin for patients with hepatitis C and HIV. *Lancet Infectious Diseases*. 2014; 14(1):13-14 IF:19.446

Gonzalez-Padilla, Marcelino; Jurado, Rafael; Rodriguez Martin, Ana Maria; Torre-Cisneros, Julian. Whirlpool folliculitis: 6 cases outbreak report. *Medicina Clinica*. 2014;21:142(2):87-88 IF:1.252

In Collaborations

Papers

Sironi M, Biasin M, Cagliani R, Gnudi F, Saulle I, Ibbá S, Filippi G, Yahyaei S, Tresoldi C, Riva S, Trabattoni D, De Gioia L, Lo Caputo S, Mazzotta F, Forni D, Pontremoli C, Pineda JA, Pozzoli U, Rivero-Juarez A, Caruz A, Clerici M. Evolutionary analysis identifies an MX2 haplotype associated with natural resistance to HIV-1 infection. *Molecular Biology and Evolution*. 2014; 31:9:2402-2414 IF:14.308

Merchante, Nicolas; Merino, Esperanza; Rodriguez-Arrondo, Francisco; Tural, Cristina; Mu-

noz, Josefa; Delgado-Fernandez, Marcial; Jover, Francisco; Galindo, Maria J.; Rivero, Antonio; Lopez-Aldeguer, Jose; Aguirrebengoa, Koldo; Romero-Palacios, Alberto; Martinez, Eduardo; Pineda, Juan A. HIV/hepatitis C virus-coinfected patients who achieved sustained virological response are still at risk of developing hepatocellular carcinoma. *AIDS*. 2014; 28(1):41-47 IF:6.557

Pineda, Juan A.; Cifuentes, Celia; Parra, Manuel; Merchante, Nicolas; Perez-Navarro, Elisabet; Rivero-Juarez, Antonio; Monje, Patricia; Rivero, Antonio; Macias, Juan; Miguel Real, Luis. Incidence and natural history of hepatitis E virus coinfection among HIV-infected patients. *AIDS*. 2014; 28(13):1931-1937 IF:6.557

Podzamczar, D; Imaz, A; Perez, I; Viciano, P; Valencia, E; Curto, J; Martin, T; Castano, M; Rojas, J; Espinosa, N; Moreno, V; Asensi, V; Iribarren, JA; Clotet, B; Force, L; Bachiller, P; Knobel, H; De Quiros, JCLB; Blanco, JR; Rozas, N; Vergas, J; Ocampo, A; Camacho, A; Flores, J; Gomez-Sirvent, JL. Abacavir/lamivudine plus darunavir/ritonavir in routine clinical practice: a multicentre experience in antiretroviral therapy-naive and -experienced patients. *Journal of Antimicrobial Chemotherapy*. 2014; 69:9:2536-2540 IF:5.439

Real, Luis M.; Caruz, Antonio; Rivero-Juarez, Antonio; Soriano, Vicente; Neukam, Karin; Rivero, Antonio; Cifuentes, Celia; Mira, Jose A.; Macias, Juan; Pineda, Juan A. A polymorphism linked to RRAS, SCAF1, IRF3 and BCL2L12 genes is associated with cirrhosis in hepatitis C virus carriers. *Liver International*. 2014; 34(4):558-566 IF:4.447

Espigado I, de la Cruz-Vicente F, Ben Marzouk-Hidalgo OJ, Gracia-Ahufinger I, Garcia-Lozano JR, Aguilar-Guisado M, Cisneros JM, Urbano-Ispizua A, Perez-Romero P. Timing of CMV-specific effector memory T cells predicts viral replication and survival after allogeneic hematopoietic stem cell transplantation.

Transpl Int. 2014 Dec; 27(12):1253-62. doi: 10.1111/tri.12406. Epub 2014 Oct 21. IF: 3,120

Estévez OA, Ortega C, Fernández S, Aguado R, Rumbao J, Perez-Navero J, Santamaria M. A novel IL2RG mutation presenting with atypical T(-)B(+)NK+ phenotype: rapid elucidation of NK cell origin. *Pediatr Blood Cancer*. 2014 Jan; 61(1):178-9. doi: 10.1002/psc.24717. Epub 2013 Aug 12. IF: 2,562

Lopez-Cerero, L; Egea, P; Gracia-Ahufinger, I; Gonzalez-Padilla, M; Rodriguez-Lopez, F; Rodriguez-Bano, J; Pascual, A. Characterisation of the first ongoing outbreak due to KPC-3-producing *Klebsiella pneumoniae* (ST512) in Spain. *International Journal of Antimicrobial Agents*. 2014; 44(6):538-540. IF: 4,259

Neukam K, Espinosa N, Merino D, Rivero-Juárez A, Carrero A, Rios MJ, Ruiz-Morales J, Gómez-Berrocal A, Téllez F, Díaz-Menéndez M, Collado A, Pérez-Camacho I, Delgado-Fernández M, Vera-Méndez F, Pineda JA. Hepatic safety of RPV/FTC/TDF single tablet regimen in HIV/HCV-coinfected patients. Preliminary results of the hEPATIC Study. *J Int AIDS Soc*. 2014; 17(4):nº de artículo 19631 Suppl 3. IF: 4,207

Lopez-Cortes, Luis F.; Viciano, Pompeyo; Giron-Gonzalez, Jose A.; Romero-Palacios, Alberto; Marquez-Solero, Manuel; Martinez-Perez, Maria A.; Lopez-Ruz, Miguel A.; de la Torre-Lima, Javier; Tellez-Perez, Francisco; Delgado-Fernandez, Marcial; Garcia-Lazaro, Milagros; Lozano, Fernando; Mohamed-Balghata, Mohamed O. Sociedad Andaluza Enfermedades Infecciosas. Clinical and Virological Efficacy of Etravirine Plus Two Active Nucleos(t)ide Analogs in a Heterogeneous HIV-Infected Population. *Plos One*. 2014; 9(5):nº de artículo e97262. IF: 3,534

Sironi, M; Biasin, M; Gnudi, F; Cagliani, R; Saulle, I; Furni, D; Rainone, V; Trabattini, D; Garziano, M; Mazzotta, F; Real, LM; Rivero-Juarez, A; Caruz, A; Lo Caputo, S; Clerici, M. A Regulatory Polymorphism in HAVCR2 Modulates Susceptibility to HIV-1 Infection. *Plos One*. 2014; 9(9): Número de artículo: e106442. IF: 3,534

Real, Luis M.; Neukam, Karin; Herrero, Rocio; Guardiola, Josep M.; Reiberger, Thomas; Rivero-Juarez, Antonio; Salazar, Juliana; Mandorfer, Mattias; Merino, Dolores; Soriano, Vicente; Rivero, Antonio; Macias, Juan; Pineda, Juan A.; Caruz, Antonio. IFNL4 rs469415590 Variant Shows Similar Performance to rs12979860 as Predictor of Response to Treatment against Hepatitis C Virus Genotype 1 or 4 in Caucasians. *Plos One*. 2014; 9(4): Número de artículo: e95515. IF: 3,534

Corchado, Sara; Lopez-Cortes, Luis F.; Rivero-Juarez, Antonio; Torres-Cornejo, Almudena; Rivero, Antonio; Marquez-Coello, Mercedes; Giron-Gonzalez, Jose-Antonio. Liver Fibrosis, Host Genetic and Hepatitis C Virus Related Parameters as Predictive Factors of Response to Therapy against Hepatitis C Virus in HIV/HCV Coinfected Patients. *Plos One*. 2014; 9(7): Número de artículo: e101760. IF: 3,534

Mandorfer, M; Neukam, K; Rivero, A; Puoti, M; Boesecke, C; Baumgarten, A; Grzeszczuk, A; Zangerle, R; Ernst, D; Rockstroh, JK; Trauner, M; Pineda, JA; Peck-Radosavljevic, M; Reiberger, T. Strategies for assignment of HIV-HCV genotype-1-coinfected patients to either dual-therapy or direct-acting antiviral agent-based triple-therapy. *Antivir Ther*. 2014; 19(4):407-14. IF: 3,143

del Toro, M. D.; Nieto, I.; Guerrero, F.; Corzo, J.; del Arco, A.; Palomino, J.; Nuno, E.; Lomas, J. M.; Natera, C.; Fajardo, J. M.; Delgado, J.; Torres-Tortosa, M.; Romero, A.; Martin-Rico, P.; Muniaín, M. A.; Rodriguez-Bano, J. PJIG-SAEI REIPI Grp. Are hip hemiarthroplasty and total hip arthroplasty infections different entities? The importance of hip fractures. *European Journal of Clinical Microbiology & Infectious Diseases*. 2014; 33(8):1439-1448. IF: 2,544

Meije, Y.; Fortun, J.; Len, O.; Aguado, J. M.; Moreno, A.; Cisneros, J. M.; Gurgui, M.; Carratala, J.; Munoz, P.; Montejo, M.; Blanes, M.; Bou, G.; Perez, J. L.; Torre-Cisneros, J.; Ramos, A.; Pahissa, A.; Gavalda, J. Spanish Network Res Infect; Spanish Network Res Infect. Prevention strategies for cytomegalovirus disease and long-term outcomes in the high-risk transplant patient (D+/R-): experience from the RESITRA-REIPI cohort. *Transplant Infectious Disease*. 2014; 16(3):387-396. IF: 2,25

Len, O.; Montejo, M.; Cervera, C.; Farinas, M. C.; Sabe, N.; Ramos, A.; Cordero, E.; Torre-Cisneros, J.; Martin-Davila, P.; Azanza, J. R.; Pahissa, A.; Gavalda, J. DAPTOSOT Daptomycin Solid Organ. Daptomycin is safe and effective for the treatment of gram-positive cocci infections in solid organ transplantation. *Transplant Infectious Disease*. 2014; 16(4):532-538. IF: 2,25

Caruz, A.; Neukam, K.; Rivero-Juarez, A.; Herrero, R.; Real, L. M.; Camacho, A.; Barreiro, P.; Labarga, P.; Rivero, A.; Pineda, J. A. Association of low-density lipoprotein receptor genotypes with hepatitis C viral load. *Genes and Immunity*. 2014; 15(1):16-24. IF: 3,789

Martinez-Atienza, J.; Rosso-Fernandez, C.; Roca, C.; Aydllo, TA; Gavalda, J.; Moreno, A.; Montejo, JM; Torre-Cisneros, J.; Farinas, MC; Fortun, J.; Sabe, N.; Munoz, P.; Blanes-Julia, M.; Suarez-Benjumea, A.; Lopez-Medrano, F.; Perez-Romero, P.; Cordero, E. TRANSGRIPE 1-2 Study Grp. Efficacy and safety of a booster dose of influenza vaccination in solid organ transplant recipients. TRANSGRIPE 1-2: study protocol for a multicenter, randomized, controlled clinical trial. *Trials*. 2014; 15:nº de artículo 338. IF: 2,117

Gorriz, JL; Gutierrez, F; Trullas, JC; Arazo, P; Arribas, JR; Barril, G; Cervero, M; Cofan, F; Domingo, P; Estrada, V; Fulladosa, X; Galindo, MJ; Gracia, S; Iribarren, JA; Knobel, H; Lopez-Aldeguer, J; Lozano, F; Martinez-Castelao, A; Martinez, E; Mazuecos, MA; Miralles, C; Montanes, R; Negredo, E; Palacios, R; Perez-Elias, MJ; Portilla, J; Praga, M; Quereda, C; Rivero, A; Santamaria, JM; Sanz, J; Sanz, J; Miro, JM. Executive summary of the consensus document on the management of renal disease in HIV-infected patients. *Nefrologia*. 2014; 34(6):768-788. IF: 1,442

Araujo S, Bañón S, Machuca I, Moreno A, Pérez-Elias MJ, Casado JL. Prevalence of insulin resistance and risk of diabetes mellitus in HIV-infected patients receiving current antiretroviral drugs. *Eur J Endocrinol*. 2014 Nov; 171(5):545-54. doi: 10.1530/EJE-14-0337. Epub 2014 Aug 12. IF: 3,686

Gorriz JL, Gutiérrez F, Trullas JC, Arazo P, Arribas JR, Barril G, Cervero M, Cofán F, Domingo P, Estrada V, Fulladosa X, Galindo MJ, Gracia S, Iribarren JA, Knobel H, López-Aldeguer J, Lozano F, Martínez-Castelao A, Martínez E, Mazuecos MA, Miralles C, Montañés R, Negredo E, Palacios R, Pérez-Elias MJ, Portilla J, Praga M, Quereda C, Rivero A, Santamaria JM, Sanz J, Sanz J, Miró JM. Panel de Expertos del Grupo de Estudio de Sida (GESIDA); la Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC); la Sociedad Española de Nefrología (SEN); la Sociedad Española de Bioquímica Clínica y Patología Molecular (SEQC). Executive summary of the recommendations on the evaluation and management of renal disease in human immunodeficiency virus-infected patient. *Enferm Infecc Microbiol Clin*. 2014 Nov; 32(9):583-97. doi: 10.1016/j.eimc.2014.09.002. Epub 2014 Oct 7. IF: 1,881

Górriz JL, Gutiérrez F, Trullas JC, Arazo P, Arribas JR, Barril G, Cervero M, Cofan F, Domingo P, Estrada V, Fulladosa X, Galindo MJ, Gracia S, Iribarren JA, Knobel H, López-Aldeguer J, Lozano F, Martínez-Castelao A, Martínez E, Mazuecos MA, Miralles C, Montañés R, Negredo E, Palacios R, Pérez-Elias MJ, Portilla J, Praga M, Quereda C, Rivero A, Santamaria JM, Sanz J, Sanz J, Miró JM. Panel of experts from the AIDS Working Group (GESIDA) of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC), the Spanish Society of Nephrology (S.E.N.), and the Spanish Society of Clinical Chemistry and Molecular Pathology (SEQC). Consensus document on the management of renal disease in HIV-infected patients. *Nefrologia*. 2014 Sep 18; 34 Suppl(2):1-81. IF: 1,442

Sun HY, Munoz P, Torre-Cisneros J, Aguado JM, Lattes R, Montejo M, Garcia-Reyne A, Bouza E, Valerio M, Lara R, Wagener MM, John GT, Bruno D, Singh N. Tuberculosis in solid-organ transplant recipients: disease characteristics and outcomes in the current era. *Progress in Transplantation*. 2014; 24(1):37-43. IF: 0,686

Review

Meije, Y; Piersimoni, C; Torre-Cisneros, J; Dilektaşli, AG; Aguado, JM. ESCMID Study Grp Infection. Mycobacterial infections in solid organ transplant recipients. *Clinical Microbiology and Infection*. 2014; 20:89-101. IF: 5,197

Research Fundings

National

De la Torre Cisneros, J. Study of the kinetics of CMV infection in CMV-Seronegative patients receiving an organ from a seropositive donor and its potential association with early immune senescence. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI11/02091.

De la Torre Cisneros, J. Spanish Network for Research on Infectious Diseases (REIPI).Funding agency: Institute Carlos III Health (ISCIII). Reference: RD12/0015/0002.

Gracia Ahufinger, I. Study of epigenetic modifications induced by cytomegalovirus as risk and prognostic markers.Funding agency: Institute Carlos III Health (ISCIII). 2014. Reference: PI14/01225 To Begin in 2015.

Regional

Rivero Román, A Predictive value of immediate VHC viral kinetics on the sustained viral response in patients co-infected with the VIH/ VHC. Funding Agency: Progress and Health Foundation. Reference: PI-0157-2011

Cantisán Bohórquez, SA translational study to assess the clinical usefulness of determining the IFN γ secreted by specific T CD8+ CMV cells to guide the prevention of CMV infection in low-risk solid organ-transplanted patients. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0004-2012.

Rivero Juárez, A. Influence of inhibitory natural killer cell receptors (KIRs) on response to treatment for VHC in HIV/HCV co-infected patients. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0430-2012

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 (node). Study Group for Viral Hepatitis (Grupo de estudio de Hepatitis Viricas "HEPAVIR").Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: RH-0024-2013

De la Torre Cisneros, J (node). Study Group for bacterial infections. (Grupo de estudio.Optimización en el uso de antibióticos y tratamiento de infecciones bacterianas complejas causadas por cepas resistentes (GRUPO PRO-ACTIVO)).Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: AC-0044-2013

International

De la Torre Cisneros, J (node). PROYECTO COMBACTE-1 (Combating Clinical resistance in Europe. Program Innovative Medicines Initiatives (IMI Call IMI-IU-6). Eol Number Eol Number 115523-1.Funding agency: European Commission. Reference: IMI Call IMI-IU-6-12

De la Torre Cisneros, J (node). PROYECTO COMBACTE-2 (Combating Clinical resistance in Europe. Program Innovative Medicines Initiatives (IMI Call IMI-IU-8). Eol Number 115523. Funding agency: European Commission. Reference: IMI Call IMI-IU-8-12

Rivero Juaréz, A (node).Partners of people on Antiretrovirals (ART) New Evaluation of Risk (The PARTNER Study). Funding agency: National Institute for Health Research in the UK (NIHR)

Contract with Companies

De la Torre Cisneros, JC. Contract for the provision of MSD monitoring. Funding agency: Merck Sharp & Dohme de España SA. Reference: PSS.0007

Rivero Román, A.PARTNER study of the HIV Copenhagen program. Funding agency: Copenhagen HIV Programme.Reference:PSS.0010

Rivero Román, A. Contract for web design. Funding agency: Janssen-Cilag, S.A. Reference: PSS.0026

Rivero Román, A.Contract to manage BMS-FIBICO. Funding agency: Bristol-Myers Squibb International Corporation (BMSIC).Reference: PSS.0031

Rivero Román, A. Agreement with Gilead Sciences. Funding agency: Gilead Sciences, S.L. Reference: PSS.0038

De la Torre Cisneros, JC. Agreement with Brahms Iberia (Conference Infectious Pathology).Funding agency: Brahms Iberia, S.L.Reference: PSS.0045

De la Torre Cisneros, JC. Agreement with Pizfer. Funding agency: PFIZER, S.L.U.Reference: PSS.0058

Rivero Román, A.Funding of activities of the staff of the Division of Infectious Diseases. Funding agency: Merck Sharp & Dohme de España SA.Reference: CCB.0039

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

Rivero Román, A.Agreement with Merck Sharp & Dohme. Funding agency: Merck Sharp & Dohme de España A Reference: CCB.0058

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

Rivero Román, A.Agreement with Merck Sharp & Dohme. Funding agency: Merck Sharp & Dohme de España SA. Reference: CCB.0073

Rivero Román, A.Agreement with Roche Pharma. Funding Agency: Roche Pharma, SA Reference:CCB.0075

Clinical Trials

0045/09: Effectiveness of high doses of Pegylated interferon-alpha-2a and Ribavirin in the treatment of HIV co-infected patients with C virus-induced cirrhosis (genotypes 1 '0 4) not responding to previous therapy with standard pegylated interferon and Ribavirin doses. Pl: Dr/a Rivero Román, Antonio

0011/10: A comparative clinical trial of two therapeutic decision-making strategies in the study of tuberculosis contacts: standard strategy based on the tuberculin sensitivity test (PT) versus PT in combination with QuantiFERON -TB Gold In Tube. Pl: Dr/a Kindelan Jaquotot, Jose M^a

0199/10: A randomized, double-blind, phase III study to assess the safety and effectiveness of GSK1349572 50 mg once a day versus Raltegravir 400 mg twice a day both adminis-

tered as a double combination at a fixed dose of nucleoside-analog reverse- transcriptase inhibitors for a 96-week period in adult patients VIH-1 co-infected patients who have not received previous antiretroviral treatment. Pl: Dr/a Rivero Román, Antonio

0273/10: A prospective, randomized, comparative trial to assess the effectiveness and safety of Levofloxacin versus Isoniazid in the treatment of latent tuberculosis infection of liver transplant. Pl: Dr/a De La Torre Cisneros, Julian Carlos

0334/10: A pilot, phase III clinical trial to assess antiviral activity of pegylated interferon + ribavirin + nitazoxanide in chronic patients with genotype-4 HCV and HIV. Pl: Dr/a Rivero Román, Antonio

0044/11: A multicenter, randomized, blinded, placebo-controlled study to assess the safety of Maraviroc in combination with other antiretrovirals in subjects infected with HIV-1 and hepatitis C and/or B. Pl: Dr/a Rivero Román, Antonio

0079/11: A randomized, open, controlled, 48-week clinical trial to assess the activity and tolerability of a combination therapy of lopinavir/ritonavir and 3TC replacing a triple therapy of lopinavir/ritonavir and 3TC or FTC in patients with HIV and viral suppression. Pl: Dr/a Rivero Román, Antonio

0088/11: An open, randomized, noninferiority trial and 96 week-follow-up study to assess the effectiveness of azatanavir/ritonavir + lamivudine as maintenance treatment in patients with viral load suppression. Pl: Dr/a Rivero Román, Antonio

0177/11: A randomized, prospective, comparative trial assessing the effectiveness and safety of a seasonal vaccine dose versus two vaccine doses for the prevention of influenza in solid organ recipients. Pl: Dr/a De La Torre Cisneros, Julian Carlos

0197/11: Protease (DRV/RTV) inhibitor in monotherapy or triple therapy in patients with HIV-1 suppression. Pl: Dr/a Rivero Román, Antonio

0201/11: A multicenter, randomized, double blind, comparative study of maraviroc + dolutavir/ritonavir versus emtricitabin/tenofovir + darunavir/ritonavir for the treatment of patients with HIV-1 CCR5 tropism not previously treated with antiretrovirals. Pl: Dr/a Rivero Román, Antonio

0246/11: An open study of retreatment with pegylated interferon alpha-2a ribavirin and BMS-79003067-30 with or without BMS-650032 in patients with chronic hepatitis C. Pl: Dr/a Rivero Román, Antonio

0255/11: A randomized, double-blind, placebo-controlled, phase III study of the effectiveness, safety and tolerability of a single infusion of MK 3415 (human monoclonal antibody versus Clostridium difficile toxin A) and MK 3415A (human monoclonal antibody versus Clostridium difficile toxins A and B) in patients undergoing antibiotic treatment for Clostridium difficile infection. (MODIFY I). Pl: Dr/a De La Torre Cisneros, Julian Carlos

0283/11: A multicenter, randomized, blind, parallel-group, non-inferiority comparative trial of

the effectiveness and safety of an immunotherapy versus a viremia-guided approach in the prophylaxis of cytomegalovirus infection in seropositive renal recipients.
PI: Dr/a De La Torre Cisneros, Julian Carlos

0016/12: An open, phase IIIb study to assess the effectiveness and safety of Telaprevir, Pegylated interferon-alpha-2a and ribavirin in chronic genotype 1 hepatitis C and HIV-1 co-infected patients with or without previous treatment for hepatitis C.
PI: Dr/a Rivero Román, Antonio

0072/12: An open study to assess the safety, antiviral activity and pharmacokinetics of direct acting antivirals (DAAs) in combination with peginterferon alpha-2a and ribavirin (pegIFN/RBV) in chronic HCV patients presenting virological failure in a previous study of Abbvie or Abbott in combination with DAAs.
PI: Dr/a Rivero Román, Antonio

0308/12: A randomized, double-blind, placebo-controlled study to assess the efficacy and safety of ABT450/ritonavir/ABT-267 (ABT-450/r/abt-267) and ABT-333 administered in combination with ribavirin (RBV) in previously treated chronic HCV-1 adult patients (SAPPHIRE-III).
PI: Dr/a Rivero Román, Antonio

0040/13: Efficacy of a sequential short therapy vs standards intravenous treatment in patients with uncomplicated catheter-related bacteremia using S. Aureus Meticilin-Sensible.
PI: Dr/a Natera Kindelan, Clara

28/13: A randomized, open, controlled, single-pattern, phase III study with active product of bi 207127 in combination with faldaprevir and ribavirin versus telaprevir in combination with pegylated alpha interferon plus ribavirin for the treatment of chronic genotype-1b HCV infection in naive patients.
PI: Dr/a Rivero Román, Antonio

0138/13: Changes in liver steatosis after replacing efavirenz with raltegravir in HIV/HCV co-infected patients treated with two nucleoside analogs plus efavirenz: Sternal study.
PI: Dr/a Rivero Román, Antonio

0152/13: Follow-up study to assess the resistance and durability of response to treatment with AbbVie direct-acting antivirals in patients who participated in phase II/III studies for the treatment of chronic HCV infection.
PI: Dr/a Rivero Román, Antonio

0039/14: A randomized, multicenter, open-label, controlled, phase III trial to assess the efficacy of fosfomicin vs. meropenem in targeted therapies for bacteremic urinary tract infection with extended-spectrum beta-lactamase (ESBL).
PI: Dr/a Natera Kindelan, Clara

0062/14: Optimal duration of the antimicrobial treatment for bloodstream infections produced by Enterobacteriaceae. Clinical trial SHORTEN.
PI: Dr/a Natera Kindelan, Clara

0081/14: A randomized, open-label study to assess the efficacy of darunavir/ritonavir plus lamivudine once a day vs. continuing treatment with darunavir/ritonavir once a day plus tenofovir/emtricitabine or abacavir/lamivudine in HIV patients with suppressed viremia. DUAL study.
PI: Dr/a Rivero Román, Antonio

0009/10/2: Long-term follow-up of participants in a phase II or III SCH 503034 trial for the treatment of chronic Hepatitis C.
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/a Rivero Román, Antonio

1431: A multicenter, retrospective study to identify the incidence of severe hepatotoxicity in patients co-infected with hepatitis B or C and HIV-1 who previously received treatment with Maraviroc: (LIVERMAC study).
PI: Dr/a Rivero Román, Antonio

1714: Influence of nevirapin on hepatitis C viral load levels in patients co-infected with VIH/VHC. HELICON study.
PI: Dr/a Rivero Roman, Antonio

1716: An observational study to determine the clinical management of in-hospital patients with community acquired pneumonia or complex skin and soft tissue infections: REACH Study.
PI: Dr/a Gracia Ahufinger, Irene

1764: Bacterial infection with Staphylococcus aureus: impact of an intervention program on the improvement of the clinical management and study of its clinical and molecular epidemiology.
PI: Dr/a Natera Kindelan, Clara

1893: A study of risk factors of nosocomial pneumonia due to infection with methicillin-resistant staphylococcus aureus. A case and control study.
PI: Dr/a Natera Kindelan, Clara

2302: Impact of genetic variations of TLR2, 4 and 9 on the risk of cytomegalovirus infection after transplantation and its usefulness in prevention.
PI: Dr/a Cantisán Bohorquez, Sara

2542: Changes in the lipid profile of HIV patients shifting to a simplified antiretroviral therapy with a single tablet of tenofovir/emtricitabine and rilpivirine (Eviplera). Efficacy and safety of the treatment. LIRA study
PI: Dr/a Rivero Román, Antonio

2548: Hepatic safety of Eviplera in HIV/hepatitis C (HCV)-coinfected patients without HCV treatment in the The HEPAVIR HEPATIC SAFETY Cohort. hEPATic study
PI: Dr/a Rivero Román, Antonio

Publications

11

Impact
Factor

48,41

Average
Impact Factor

4,400

Post-PhD Researchers

Irene Cantarero Carmona
Noel García Medel

Pre-PhD Researchers

Victor Garcia Gonzalez
Carla Jiménez Jiménez
M^a Isabel Lara Chica
Carmen del Río Mercado
Belén Palomares Cañero
Estrella Millán Ortega
Rafael Soler Torronteras
Paula Moreno Casado

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

Juan Antonio Collado Rojas
Rosario Molina Moran

Team Leaders

Principal Investigator (PI)

Eduardo Muñoz Blanco
filmuble@uco.es

PAIDI BIO-304 Scientific Group

Emerging Researcher (ER)

Marco Antonio Calzado Canale



Scientific Activity

The 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. On the one hand we are identifying the hypoximimetic mechanism of action of endocannabinoids type N-acyl dopamines and exploring 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 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. In this research line we also have a particular interest in the study of new chemical entities able to inhibit molecular targets of pharmacological interest in cancer.

Keywords

Inflammation; cancer; tissue regeneration;cannabinoids; SIAH2; pharmacology and Nutraceuticals.

Scientific Production

Publications

Original

Papers

Soler-Torronteras, R; Lara-Chica, M; Garcia, V; Calzado, MA; Munoz, E. Hypoximimetic activity of N-acyl-dopamines N-arachidonoyl-dopamine stabilizes HIF-1 alpha protein through a SIAH2-dependent pathway. *Biochimica Et Biophysica Acta-Molecular Cell Research*. 2014; 1843(11):2730-2743
IF:5,297
Q:1 D:2

Carrillo-Salinas, Francisco J.; Navarrete, Carmen; Mecha, Miriam; Feliu, Ana; Collado, Juan A.; Cantarero, Irene; Bellido, Maria L.; Munoz, Eduardo*; Guaza, Carmen*. A Cannabigerol Derivative Suppresses Immune Responses and Protects Mice from Experimental Auto-immune Encephalomyelitis. *Plos One*. 2014; 9(4):e94733
IF:3,534
* Equal senior contributing authors.

Perez, Moises; Soler-Torronteras, Rafael; Collado, Juan A.; Limones, Carmen G.; Hellsten, Rebecca; Johansson, Martin; Sterner, Olov; Bjartell, Anders; Calzado, Marco A.; Munoz, Eduardo. The fungal metabolite galiellalactone interferes with the nuclear import of NF-kappa B and inhibits HIV-1 replication. *Chemico-Biological Interactions*. 2014; 214:69-76
IF:2,982

In Collaborations

Papers

Fernández-Arenas E, Calleja E, Martínez-Martin N, Gharbi SI, Navajas R, García-Medel N, Penela P, Alcamí A, Mayor F Jr, Albar JP, Alarcón B. β -Arrestin-1 mediates the TCR-triggered re-routing of distal receptors to the immunological synapse by a PKC-mediated mechanism. *EMBO J*. 2014 Mar 18;33(6):559-77.
IF: 10,748

García-Medel N, Sanz-Bravo A, Alvarez-Navarro C, Gómez-Molina P, Barnea E, Marcilla M, Admon A, de Castro JA. Peptide handling by HLA-B27 subtypes influences their biological behavior, association with ankylosing spondylitis and susceptibility to endoplasmic reticulum aminopeptidase 1 (ERAP1). *Mol Cell Proteomics*. 2014 Dec;13(12):3367-80.
IF: 7,254

Koeberle, Andreas; Munoz, Eduardo; Appendino, Giovanni B.; Minassi, Alberto; Pace, Simona; Rossi, Antonietta; Weinigel, Christina; Barz, Dagmar; Sautebin, Lidia; Caprioglio, Diego; Collado, Juan A.; Werz, Oliver. SAR Studies on Curcumin's Pro-inflammatory Targets: Discovery of Prenylated Pyrazolocurcuminoids as Potent and Selective Novel Inhibitors of 5-Lipoxygenase. *Journal of Medicinal Chemistry*. 2014; 57(13):5638-5648
IF:5,48

Don-Doncow, Nicholas; Escobar, Zilma; Johansson, Martin; Kjellstrom, Sven; Garcia, Victor; Munoz, Eduardo; Sterner, Olov; Bjartell, Anders; Hellsten, Rebecca. Galiellalactone Is a Direct Inhibitor of the Transcription Factor STAT3 in Prostate Cancer Cells. *Journal Of Biological Chemistry*. 2014; 289(23):15969-15978
IF:4,6

Dudognon, Benoit; Romero-Santacreu, Lorena; Gomez-Sebastian, Silvia; Hidalgo, Ana B.; Lopez-Vidal, Javier; Bellido, Maria L.; Munoz, Eduardo; Escribano, Jose M. Production of functional active human growth factors in insects used as living biofactories. *Journal of Biotechnology*. 2014; 184:229-239
IF:2,884

Escobar Z, Solano C, Larsson R, Johansson M, Salamanca E, Gimenez A, Munoz E, Sterner O. Synthesis of poinsettifolin A. *Tetrahedron*. 2014; 70(4):9052-9056
IF:2,817

Moreno P, Alvarez A, Santos F, Vaquero JM, Baamonde C, Redel J, Cerezo F, Algar FJ, Salvatierra A. Extended recipients but not extended donors are associated with poor outcomes following lung transplantation. *Eur J Cardiothorac Surg*. 2014 Jun;45(6):1040-7.
IF: 2,814

Luesma MJ, Cantarero I, Álvarez-Dotu JM, Santander S, Junquera C. New insights into c-Ret signalling pathway in the enteric nervous system and its relationship with ALS. *Biomed Res Int*. 2014; 2014:328348.
IF: 0 (IF 2013)

Research Fundings

National

Muñoz Blanco, E. Pre-clinical development of new cannabinoid derivatives for the treatment of neuro-inflammatory diseases. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: IPT-2011-0861-900000

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

Muñoz Blanco, E. Actividad hipoximimética de nuevos derivados del cannabidiol. Implicaciones terapéuticas. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2014-53763-P To begin in 2015

Calzado Canale, M.A. Siah-2-mediated chk2 modulation mechanisms in response to oncogenic stress. Sponsored by: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2010-17122 Prorogued to 2014

Muñoz Blanco, E. A study of hif-1alpha factor regulation mechanisms using endocannabinoids. Implications for neuroprotection. Sponsored by: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: SAF2010-19292 Prorogued to 2014

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: Institute of Health Carlos III (ISCIII) Reference: PIE14/00005 To Begin in 2015

Regional

Muñoz Blanco, E. A study of dyrk2 regulation mechanisms in response to hiposis and oncogenic stress. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P09-CTS-4973 Prorogued to 2014

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

Contract with Companies

Muñoz Blanco, E. Biological activity of natural biomedical products. Funding agency: Beros

Consulting S.L. Reference: CCB.UCO.0040

Muñoz Blanco, E. Project for the production and research on hemp and derivatives. Funding agency: Phytoplant Research S.L. Reference: CCB.UCO.0057

Muñoz Blanco, E. Isolation, purification and characterization of the biological activity of active plant ingredients. Funding agency: Phytoplant Research S.L. Reference: CCB.UCO.0060

Muñoz Blanco, E. Outsourcing within the IN-TERCONNECTA project: ATENA-"Olive oil and other healthy fats. Technological applications for the transformation of olive oil fats into high value added products. Funding agency: Phytoplant Research S.L. Reference: CCB.UCO.0062

Muñoz Blanco, E. Outsourcing within the IN-TERCONNECTA project SNC-INTEGRA. "Integration of technological platforms for the development of drugs for the treatment of central neural system diseases". Funding agency: Vivacell Biotechnology Spain SL. Reference: CCB.UCO.1201215

Systemic and chronic inflammatory autoimmune diseases of the locomotor system and connective tissue

Publications

14

Impact Factor

65,501

Average Impact Factor

4,678

PhD Researchers

M^a Ángeles Aguirre Zamorano
Alejandro Escudero Contreras
Pilar Font Ugalde
Verónica Perez Guijo

Post-PhD Researchers
Nuria Barbarroja Puerto
Yolanda Jiménez Gómez

Pre-PhD Researchers
Carlos Pérez Sanchez
Patricia Ruiz Limón
Rafaela Ortega Castro
Maria Del Carmen Castro Villegas
Jerusalem Calvo Gutierrez

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

Miguel Angel Caracuel Ruiz
Desiree Ruiz Vílchez
Inmaculada Gomez Gracia
Rosario M^a CarreteroPrieto
Carmen López Montilla
M^a Carmen Abalos Aguiler

Team Leader

Principal Investigator (PI)

Rosario López Pedrera
rosario.lopez.exts@juntadeandalucia.es
Nicolás Monardes Contract

Co-Principal Investigator (Co-PI)

Eduardo Collantes Estevez
*Professor at University of Cordoba. Head of the
Clinical Management Unit of Rheumatology*



Scientific Activity

Our research team works in two main investigation areas, which involve systemic autoimmune diseases (mainly Systemic Lupus Erythematosus, Primary Antiphospholipid Syndrome and Rheumatoid Arthritis) and chronic arthropathies (with special emphasis on Spondyloarthritis including Psoriatic Arthritis). We use synergistically clinical-therapeutic, molecular and cellular approaches.

1.- Research Area: Systemic autoimmune diseases

1.1 Atherothrombosis in Systemic autoimmune diseases. IR: Rosario López Pedrera.

Description: Our team studies the cellular and molecular mechanisms of atherothrombosis development in three systemic autoimmune diseases: Systemic Lupus Erythematosus (SLE), Antiphospholipid syndrome (APS) and Rheumatoid Arthritis (RA). We further analyze the regulatory mechanisms promoted by new therapeutic approaches such as Statins, biological therapies (i.e. anti-TNF, anti-IL6, anti-Blyss), biosimilars, and new drugs with antioxidant and anti-inflammatory effects (i.e. Coenzyme Q10)

Main Objectives.

1. Study of cellular and molecular mechanisms of atherothrombosis in Systemic Autoimmune Diseases (EAS): Implementation of genomic, epigenetic and proteomics approaches to identify new biomarkers to delineate unique pathogenic mechanisms in each autoimmune condition.
2. Analysis of the mitochondrial dysfunction and oxidative stress in EAS as key mechanisms in the evolution of cardiovascular disease and in the response to new therapeutic approaches.
3. Study of the cellular and molecular mechanisms that regulate the effects of statins, CoQ10 and other biologic therapies in the prevention of atherothrombosis in EAS.
3. Molecular and cellular mechanisms involved in the metabolic complications associated with autoimmune diseases: Systemic lupus erythematosus, Rheumatoid arthritis and antiphospholipid syndrome. Effects of mainstream and biological therapies in the prevention of these disorders.

1.2. Biomarkers for Systemic Autoimmune Diseases. IR: Eduardo Collantes Estévez and Rosario López Pedrera.

- Description and objectives: Our research group also investigates new molecular biomarkers involved in the development of systemic autoimmune diseases. Specifically, the group conducts various research projects among which we can detach the so-called PRECISESADS (Molecular Reclassification to Find clinically Useful Biomarkers for Systemic Autoimmune Diseases), an European project funded by the "Innovative Medicines Initiative (IMI)".
- The aim of PRECISESADS is the use of -omics and bioinformatics tools for the reclassification of EAS that share common pathophysiological mechanisms. The project aims to push for personalized medicine based on clinical and molecular profiles of the individual by promoting a substantial improvement in the processes of prediction, diagnosis, and clinical developments as well as in monitoring therapeutic response.

2.- Research Area: Inflammation and Chronic Arthropathies. IR: Eduardo Collantes Estévez.

- Description: Our group has 3 lines of research in this field:

- Clinical and epidemiological aspects of ankylosing spondylitis (AS) (activity and disease severity) at local, national (Spanish Registry EA: REGISPONSER) and international levels (European and Latin American Registry of EA (E: RESPONDIA). In the two former we are coordinators. 2) Development of a new system for evaluating the mobility of patients with AS (as an expression of structural damage and disease severity) by informatics technologies developed by our group (UCOTRACK. computerized motion capture using artificial vision; patented). 3) Study of the cellular and molecular mechanisms of the inflammatory and osteoproliferative pathways, in order to find new therapeutic targets.

- Main Objectives.

1. To describe and analyze the clinical, epidemiological, demographic, genetic, radiographic, of therapeutic and pathophysiological response of patients with AS in Spain and compare that data with the ones obtained in Latin American patients. The most interesting point will be to know if the differences in the clinical manifestations are due to the genetic load that derive from the same genotype (in relation to HLA-B27) and its relationship to the interaction with the environment.
2. To apply the new patented system (UCOTRACK) to evaluate the mobility of patients with AS.
3. To assess the relevance of the overall oxidative status, mitochondrial dysfunction and endoplasmic reticulum stress as agents involved in the development of inflammation and / or structural damage present in this disease.

Keywords

Systemic autoimmune diseases (Primary Antiphospholipid Syndrome, Systemic Lupus Erythematosus, Rheumatoid Arthritis); oxidative stress; microRNAs; proteomics; inflammation; cardiovascular disease; new therapies; spondyloarthropathies; epidemiology; diagnostic criteria, structural damage.

Scientific Production

Publications

Original

Papers

Barbarroja, Nuria; Perez-Sanchez, Carlos; Ruiz-Limon, Patricia; Castro-Villegas, Carmen; Aguirre, Maria Angeles; Carretero, Rosario; Segui, Pedro; Jimenez-Gomez, Yolanda; Santana, Manuela; Rodriguez-Ariza, Antonio; Collantes-Estevez, Eduardo; Escudero, Alejandro. Anticyclic citrullinated protein antibodies are implicated in the development of cardiovascular disease in rheumatoid arthritis. *Arteriosclerosis Thrombosis and Vascular Biology*. 2014.34(12):2706-16
IF:5.533

Jimenez-Gomez Y, Cruz-Teno C, Rangel-Zuniga OA, Peinado JR, Perez-Martinez P, Delgado-Lista J, Garcia-Rios A, Camargo A, Vazquez-Martinez R, Ortega-Bellido M, Perez-Jimenez F, Roche HM, Malagon MM, Lopez-Miranda J. Effect of dietary fat modification on subcutaneous white adipose tissue insulin sensitivity in patients with metabolic syndrome. *Molecular Nutrition & Food Research*. 2014.58-11:2177-2188
IF:4.909

Garrido-Castro, Juan L.; Escudero, Alejandro; Medina-Carnicer, Rafael; Galisteo, Alfonso M.; Gonzalez-Navas, Cristina; Carmona, Loreto; Collantes-Estevez, Eduardo. Validation of a new objective index to measure spinal mobility: the University of Cordoba Ankylosing Spondylitis Metrology Index (UCOASMI). *Rheumatology International*. 2014.34-3:401-406
IF:1.627

Schiotis, Ruxandra; Sanchez, Alejandra; Escudero, Alejandro; Bartolome, Nerea; Szczypiorska, Magdalena; Font, Pilar; Martinez, Antonio; Tejedor, Diego; Artieda, Marta; Mulero, Juan; Buzoianu, Anca; Collantes-Estevez, Eduardo. Candidate's single-nucleotide polymorphism predictors of treatment non-response to the first anti-TNF inhibitor in ankylosing spondylitis. *Rheumatology International*. 2014. 34-6:793-801
IF:1.627

In Collaborations

Papers

Smolen, Josef S.; Braun, Juergen; Dougados, Maxime; Emery, Paul; FitzGerald, Oliver; Hellmich, Philip; Kavanaugh, Arthur; Kvien, Tore K.; Landewe, Robert; Luger, Thomas; Mease, Philip; Olivieri, Ignazio; Reveille, John; Ritchlin, Christopher; Rudwaleit, Martin; Schoels, Monika; Sieper, Joachim; de Wit, Martinus; Baraliakos, Xenofon; Betteridge, Neil; Burgos-Vargas, Ruben; Collantes-Estevez, Eduardo; Deodhar, Atul; Elewaut, Dirk; Gossec, Laure; Jongkees, Merry; Maccarone, Mara; Redlich, Kurt; van den Bosch, Filip; Wei, James Cheng-Chung; Winthrop, Kevin; van der Heijde, Desiree. Treating spondyloarthritis, including ankylosing spondylitis and psoriatic arthritis, to target: recommendations of an international task force. *Annals of The Rheumatic Diseases*. 2014.73-1:6-16
IF:9.27

Erkan D, Willis R, Murthy VL, Basra G, Vega J, Ruiz-Limon P, Carrera AL, Papalardo E, Martinez-Martinez LA, Gonzalez EB, Pierangeli SS. A prospective open-label pilot study of fluvastatin on proinflammatory and prothrombotic biomarkers in antiphospholipid antibody positive patients. *Annals of The Rheumatic Diseases*. 2014.73(6):1176-80.
IF:9.27

Fernandez-Espartero, C.; de Miguel, E.; Loza, E.; Tomero, E.; Gobbo, M.; Descalzo, M. A.; Collantes-Estevez, E.; Mulero, J.; Munoz-Fernandez, S.; Zarco, P.; Carmona, L. ESPERANZA Study Grp. Validity of the Ankylosing Spondylitis Disease Activity Score (ASDAS) in patients with early spondyloarthritis from the Esperanza programme. *Annals of The Rheumatic Diseases*. 2014.73-7:1350-1355
IF:9.27

Tomero, Eva; Mulero, Juan; de Miguel, Eugenio; Fernandez-Espartero, Cruz; Gobbo, Milena; Descalzo, Miguel A.; Collantes-Estevez, Eduardo; Zarco, Pedro; Munoz-Fernandez, Santiago; Carmona, Loreto. ESPERANZA Study Grp. Performance of the Assessment of Spondyloarthritis International Society criteria for the classification of spondyloarthritis in early spondyloarthritis clinics participating in the ESPERANZA programme. *Rheumatology*. 2014.53-2:353-360
IF:4.435

Lopez-Sanchez, Laura M.; Jimenez, Carla; Valverde, Araceli; Hernandez, Vanessa; Penarando, Jon; Martinez, Antonio; Lopez-Pedra, Chary; Munoz-Castaneda, Juan R.; De la Haba-Rodriguez, Juan R.; Aranda, Enrique; Rodriguez-Ariza, Antonio. CoCl₂, a Mimic of Hypoxia, Induces Formation of Polyploid Giant Cells with Stem Characteristics in Colon Cancer. *Plos One*. 2014. 16:9(6):e99143.
IF:3.534

Torre-Alonso JC, Gratacós J, Rey-Rey JS, Valdazo de Diego JP, Urriticoechea-Arana A, Daudén E, Moreno M, Zarco-Montejo P, Collantes-Estevez E, Fernández-López JA. Development and Validation of a New Instrument to Measure Health-related Quality of Life in Patients with Psoriatic Arthritis: The VITACORA-19. *Journal Of Rheumatology*. 2014.41(10):2008-17.
IF:3.173

Montilla, C; Diaz-Alvarez, A; Calero-Paniagua, I; Collantes-Estevez, E; Font, P; Almodovar, R; Zarco, P; Queiro-Silva, R; Canete, JD; Juanola, X; Mulero, J; de Miguel, E; Gratacos, J REGISPONSER Study Grp. Ankylosing Spondylitis without Axial Progression: Analysis of Associated Factors. *Journal of Rheumatology*. 2014.41-12:2409-2412
IF:3.173

Angel Abad, Miguel; Ariza Ariza, Rafael; Jose Aznar, Juan; Battle, Enrique; Beltran, Emma; de Dios Canete, Juan; de Miguel, Eugenio; Escudero, Alejandro; Fernandez-Carballido, Cristina; Gratacos, Jordi; Loza, Estibaliz; Francisco Linares, Luis; Montilla, Carlos; Moreno Ramos, Manuel; Mulero, Juan; Queiro, Ruben; Raya, Enrique; Rodriguez Lozano, Carlos; Rodriguez Moreno, Jesus; Sanz, Jesus; Silva-Fernandez, Lucia; Torre Alonso, Juan Carlos; Zarco, Pedro; Luis Fernandez-Sueiro, Jose; Juanola, Xavier 2e Study Grp. Standards of care for patients with spondyloarthritis. *Rheumatology International*. 2014.34-2:165-170
IF:1.627

Ortiz-Sanjuan, Francisco; Blanco, Ricardo; Calvo-Rio, Vanesa; Narvaez, Javier; Rubio Romero, Esteban; Olive, Alejandro; Castaneda, Santos; Gallego Flores, Adela; Victoria Hernandez, M.; Mata, Cristina; Ros Vilamajo, Inmaculada; Sifuentes Giraldo, Walter Alberto; Caracuel, Miguel A.; Freire, Mercedes; Gomez Arango, Catalina; Llobet, Jose; Manrique Arijia, Sara; Marras, Carlos; Moll-Tuduri, Concepcion; Plasencia-Rodriguez, Chamaida; Rosello, Rosa; Urriticoechea, Ana; Velloso-Feijoo, Maria L.; del Blanco, Jordi; Carmen Gonzalez-Vela, M.; Rueda-Gotor, Javier; Pina, Trinitario; Loricera, Javier; Gonzalez-Gay, Miguel A. Efficacy of Tocilizumab in Conventional Treatment-Refractory Adult-Onset Still's Disease. *Arthritis & Rheumatology*. 66-6:1659-1665
IF:0

Review

Lopez-Sanchez, Laura M.; Lopez-Pedra, Chary; Rodriguez-Ariza, Antonio. Proteomic approaches to evaluate protein s-nitrosylation in disease. *Mass Spectrometry Reviews*. 33-1:7-20
IF:8.053

Research Fundings

National

Lopez Pedra, R. Mechanisms of atherosclerosis and cardiovascular disease in systemic autoimmune diseases: New therapeutic approaches. Funding agency: Institute Carlos III Health (ISCIII). Reference: PII2/O1511

Font Ugalde, P. Characterization of new molecular targets involved in the inflammation and bone neoformation in the Ankylosing Spondylitis. Therapeutic alternatives. Funding agency: Fundacion Española de Reumatologia (Spanish Rheumatology Foundation). _Reference: FER14.001
To begin in 2015

Regional

Lopez Pedra, R. Cellular and molecular mechanisms of atherothrombosis in systemic autoimmune diseases: Epigenetic study and assessment of response to new therapies. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CTS-7940

Pérez Guijo, V. Performing a biomechanical analysis of movement and balance to assess the effectiveness of intraarticular treatments in patients with osteoarthritis in the knee. Funding agency: Andalusian Progress and Health Foundation (FPS). Reference: PI-0049-2011

Escudero Contreras, A. A study of molecular targets involved in the inflammation and apposition of fibrous and bone tissue in ankylosing spondylitis. Alternative therapies. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0314-2012.

Font Ugalde, P. Clinical applicability of a standardized dose-reduction protocol in patients in persistent clinical remission diagnosed with rheumatoid arthritis and treated with TNF antagonists. Funding agency: Regional

Ministry of Equality, Health and Social Policies (CISPS).Reference: PI-0182-2013

Barbarroja Puerto, N. Role of joint inflammation in the development of rheumatoid arthritis-associated insulin resistance and atherosclerosis. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0191-2013

International

Collantes Estevez, E. PRECISESADS > 'Molecular reclassification to find clinically useful biomarker for systemic autoimmune diseases'. Funding agency: European Commission Reference: IMI/0002

Contract with Companies

Collantes Estevez, E. CLEIA Project: Online health care system for the individualized treatment of low back pain. Funding agency: Spanish Ministry of Industry, Energy and Tourism. Reference: AVANZA.001

Collantes Estevez, E. Service provided by Dr. Collantes Programa Esperanza.Funding agency: Fundacion Española de Reumatología (Spanish Rheumatology Foundation). Reference: PSS.0008

Collantes Estevez, E. Monitoring therapeutic response in patients with ankylosing spondylitis using a new metrological index basing on the analysis of movement. Funding agency: Fundacion Española de Reumatología (Spanish Rheumatology Foundation). Reference: PSS.0019

Collantes Estevez, E. Movement as a support tool for clinical decision in rheumatology patients. Funding agency: MT Global (Specials Events). Reference: PSS.0023

Collantes Estevez, E. Asas Comospa. Funding agency: Association de Recherche Clinique en Rheumatologie. Reference: PSS.0024

Collantes Estevez, E. Agreement Rheumatoid arthritis.Funding agency: Fundacion Española de Reumatología (Spanish Rheumatology Foundation). Reference:CCB.0013

Pérez Sanchez, C. Agreement between the Clinical Management Unit of Rheumatology and UCB Pharma. Funding agency: UCB Pharma, S.A. Reference:CCB.0033

Collantes Estevez, E. A study of new molecular targets involved in the inflammation and apposition of fibrous and bone tissue in ankylosing spondylitis.Funding agency: Roche Farma, S.A. Reference:CCB.0035

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

Collantes Estevez, E.Sponsored Research Agreement (Publications) Funding agency: PFIZER S.L.U. Reference: CCB.0050

López Pedrera, R. Sponsored Research Agreement KANEKA.Funding agency: Kaneka Corporation. Reference: CCB.0054

Clinical Trials

0201/08: A randomized, placebo-controlled, phase III study to assess the effectiveness and safety of odanacatib (MK-0822) to reduce fracture risk in postmenopausal women with osteoporosis treated with Vitamin D and calcium.

PI: Dr/a Escudero Contreras, Alejandro

0196/09: A multicenter, randomized, double-blind, parallel-group study to assess the safety, disease remission and prevention of articular structural damage in patients with early, moderate to severe rheumatoid arthritis on tocilizumab monotherapy.

PI: Dr/a Escudero Contreras, Alejandro

0284/09: Assessing response to etoricoxib in patients with ankylosing spondylitis and inadequate response to > 2 AINES.

PI: Dr/a Collantes Estevez, Eduardo

0100/11: A multicenter, double-blind, randomized trial to assess the safety and effectiveness of tocilizumab (TCZ) plus methotrexate (MTX) versus changing to TCZ (placebo-controlled) in patients with active rheumatoid arthritis showing inadequate response to previous treatment with MTX and having attained a low activity of the disease (DAS 28 ≤ 3.2) with TCZ in combination with MTX.

PI: Dr/a Escudero Contreras, Alejandro

0220/11: A multicenter, randomized, placebo-controlled, double-blind phase III study to assess the efficacy,safety,tolerability and pharmacokinetics ofBMS-817399 in adult patients with active moderate to severe rheumatoid arthritis and inadequate response to methotrexate.

PI: Dr/a Escudero Contreras, Alejandro

0113/12: Assessment of the clinical utility of a standardized dose reduction protocol in patients with axial spondyloarthritis in persistent clinical remission on treatment with TNF antagonists:An open, multicenter, controlled, randomized study.

PI: Dr/a Collantes Estevez, Eduardo

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/a Collantes Estevez, Eduardo

0291/12: A randomized, double-blind, placebo-controlled study to assess the safety, tolerability, pharmacokinetics, pharmacodynamic and clinical effectiveness of multiple subcutaneous doses of BI655064in healthy subjects and patients with rheumatoid arthritis showing not satisfactory response to a previous treatment with methotrexate.

PI: Dr/a Escudero Contreras, Alejandro

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/a Aguirre Zamorano, M^a Ángeles

0015/13: A randomized, placebo-controlled study of sarilumab and methotrexate vs etanercept in combination with MTX in patients with rheumatoid arthritis showing unadequate response after four months of treatment with adalimumab and MTX.

PI: Dr/a Collantes Estevez, Eduardo

0034/13: A randomized, double-blind, multicenter, placebo-controlled, 24-week duration study to assess the long-term efficacy and safety ofIxekizumab (LY2439821) in patients with active psoriatic arthritis that have not received disease-modifying anti-rheumatic drugs.

PI: Dr/a López Montilla, M^a Dolores

0079/13: A randomized, double-blind, placebo-controlled, phase II, dose-finding study to assess the efficacy and safety of tofacitinib in patients with active ankylosing spondylitis.

PI: Dr/a Collantes Estevez, Eduardo

0105/13: A multicenter, randomized, double-blind, placebo-controlled, phase IIB, dose-finding study of GLPG0634 administered for 24 weeks in combination with methotrexate to patients with active moderate to severe rheumatoid arthritis with unadequate response to methotrexate alone.

PI: Dr/a Escudero Contreras, Alejandro

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/a Collantes Estevez, Eduardo

0139/13: A phase IIIb study to assess the efficacy, safety and tolerability of subcutaneous Tocilizumab (TCZ) administered alone or in combination with methotrexate (MTX) and other non-biological DMARDs in patients with rheumatoid arthritis.

PI: Dr/a Escudero Contreras, Alejandro

0208/13:Estudio multicéntrico, abierto, de seguimiento a largo plazo de la seguridad y eficacia del tratamiento con GLPG0634 en pacientes con artritis reumatoide activa de moderada a grave.

PI: Dr/a Escudero Contreras, Alejandro

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, toelrability and effiacy in a period of three years in patients with active ankylosing spondylitis.

PI: Dr/a Collantes Estevez, Eduardo

0300/13: A randomized, placebo-controlled, double-blind, phase III study to assess the effectiveness, safety and effects of brodalumab on radiographic progression in patients with psoriatic arthritis: AMVISION-1

PI: Dr/a López Montilla, M^a Dolores

0054/14:A non-controlled study to assess the effectiveness of tocilizumab in patients with moderate or severe rheumatoid arthritis who are candidate for monotherapy with a biological agent

PI: Dr/a Escudero Contreras, Alejandro

0000/10: A multicenter study of the effectiveness and safety of the human monoclonal anti-TNF Adalimumab in patients with peripheral spondylitis.
PI: Dr/a Collantes Estevez, Eduardo

1644: Clinical value of the ASDAS index in Spanish patients with ankylosing spondylitis. AXIS study.
PI: Dr/a Collantes Estevez, Eduardo

1729: A national, multicenter, observational, retrospective follow-up study of the patients who took part in the loadet trial "loadet study".
PI: Dr/a Collantes Estevez, Eduardo

1789: Assessing cardiovascular risk and its determinants in patients with rheumatoid arthritis, ankylosing spondylitis and psoriatic arthritis.
PI: Dr/a Collantes Estevez, Eduardo

1794: National Lupus Register of the Spanish Society of Rheumatology.
PI: Dr/a Aguirre Zamorano, M^a Ángeles

1811: SCORE: Follow-up and control in rheumatology-nursing.
PI: Dr/a Collantes Estevez, Eduardo

1815: Prevalence of axial and peripheral spondyloarthritis in first-degree relatives in patients with ankylosing spondylitis.
PI: Dr/a Collantes Estevez, Eduardo

2031: Immunogenicity in anti-TNF therapies in patients with rheumatic diseases.
PI: Dr/a Castro Villegas, M^a Carmen

2035: Pain assessment in Rheumatology.
PI: Dr/a Collantes Estevez, Eduardo

2139: A cross-over, observational study of the functional limitation and limitations of work and daily activities in patients with systemic sclerosis with or without digital ulcers.
PI: Dr/a Escudero Contreras, Alejandro

2148: Rheumatologists and patients preferences regarding the biological agents used to treat rheumatic diseases in Spain.
PI: Dr/a Collantes Estevez, Eduardo

2219: Beneficial effects of coenzyme Q10 treatment on the mitochondrial dysfunction and oxidative stress associated to atherothrombosis development in antiphospholipid syndrome patients.
PI: Dr/a López Pedrera, Rosario

2273: Spanish registry of patients with axial ankylosing spondylitis treated with anti-TNF.
PI: Dr/a Collantes Estevez, Eduardo

2276: A retrospective study of patients with rheumatic diseases initiating treatment with biological therapies (SE-BIO Study).
PI: Dr/a Castro Villegas, M^a Carmen

2457: Multi-Country Registry of clinical characteristics, including radiographic progression, and burden of disease over 5 years in real-life setting) PROOF.
PI: Dr/a Collantes Estevez, Eduardo

2541: A study of treatment adherence in patients with rheumatoid arthritis receiving subcutaneous administration of biological agents. Arco study
PI: Dr/a Escudero Contreras, Alejandro

2611: GEMA 2 project. Evaluation and management.
PI: Dr/a Escudero Contreras, Alejandro

2687: Assessing and certifying healthcare quality in the clinical management of rheumatoid arthritis according to the Treat to Target (T2T) strategy.
PI: Dr/a Escudero Contreras, Alejandro

Publications

11

Impact
Factor

38,236

Average
Impact Factor

3,476

PhD Researchers

Isidoro Barneto Aranda
 Maria Auxiliadora Gomez España
 Antonio Martinez Peinado
 Carlos Villar Pastor
 Ruth Zarate Romero
 Francisco Manuel Conde Perez
 M^a Carmen Cañabate Arias
 Maria Jose Méndez Vidal
 María Jesús Rubio Pérez

Post-PhD Researchers

Araceli Valverde Estepa
 Laura Maria López Sanchez
 Gema M^a Varo Sánchez

Pre-PhD Researchers

Amanda Cañas Rodriguez
 Nuria Galera Carrillo
 Jon Peñarando Saez

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

Jesus Garcia Foncillas
 M^a Ángeles Diaz Diaz
 Vanesa Hernández Nieto
 Isabel Jaraba Mezquida
 Jacinta Marín Serrano
 Maria Jose Marín Serrano
 M^a Eugenia Carrillo Gil
 Amalia Leña Barranco
 Rosario Miranda Garcia
 María López Garcia
 Inmaculada Diéguez Cantueso
 Inmaculada Ruiz Cáceres
 Sonia Rodriguez De Julian

Team Leaders

Principal Investigator (PI)

Enrique Aranda Aguilar
earandaa@seom.org
*Red Temática de Investigación Cooperativa en
 Cáncer (RETICC)*

Co-Principal Investigator (Co-PI)

Antonio Rodríguez Ariza
Nicolás Monardes Contract
PAIDI CTS-234 Scientific Group (collaborator)

Emerging Researcher (ER)

Juan Rafael de la Haba Rodríguez
PAIDI CTS-234 Scientific Group (collaborator)



Scientific Activity

Our research group conducts its scientific activities 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 published clinical evolutionary models for predicting colon and breast cancer; in addition, we have conducted studies on polymorphisms such as UGT1A1, GSTT1 and CYP2D6, and neoplasms in relation to both their toxicity and response. We participate very actively in the development of new therapeutic strategies using drugs aimed at specific targets. To achieve this, we are currently carrying out research studies to develop response markers to this type of (mostly anti-angiogenic) therapies. The development of these markers will optimize the use of new therapies in cancer patients. Another research area looks into the role of nitrosative stress and the regulation of nitrosothiol homeostasis in different experimental models and diseases. Our research is aimed at exploring pathogenic mechanisms and identifying new therapeutic options and targets. Using the latest proteomic approaches to identify posttranslational nitrosative modifications, notably the S-nitrosylation of proteins, we analyse the importance of maintaining the homeostasis of nitrosothiols and the formation of S-nitrosoproteins. Our research has focused so far on different models of hepatocellular injury. However, given the importance of inflammation and nitric oxide production in cancer, we are also conducting studies in experimental models of colon and breast cancer and in clinical samples of patients with this type of neoplasm undergoing different antitumoural treatments.

Keywords

Colon Cancer; Breast Cancer; Polymorphisms; Gene Expression; Pharmacogenomics; Predictive Models; Angiogenesis; Angiotensins; anti Her-2 therapies; anti-EGFR Therapy; Clinical Trial; Nitric Oxide; Nitrosative Stress; S-nitrosylation; Proteomics; Genomics.

Scientific Production

Publications

Original

Papers

Lopez-Sanchez, Laura M.; Jimenez, Carla; Valverde, Araceli; Hernandez, Vanessa; Penarando, Jon; Martinez, Antonio; Lopez-Pedraza, Chary; Muñoz-Castañeda, Juan R.; De la Haba-Rodriguez, Juan R.; Aranda, Enrique; Rodriguez-Ariza, Antonio. "CoCl₂, a Mimic of Hypoxia, Induces Formation of Polyploid Giant Cells with Stem Characteristics in Colon Cancer." *Plos One*.2014 Jun 16;9(6):e99143. IF: 3,534

Losa, F.; Barrios, P.; Salazar, R.; Torres-Melero, J.; Benavides, M.; Massuti, T.; Ramos, I.; Aranda, E. Cytoreductive surgery and intraperitoneal chemotherapy for treatment of peritoneal carcinomatosis from colorectal origin. *Clinical & Translational Oncology*.2014. 16-2:128-140 IF: 1,6

Benavides M, Abad A, Ales I, Carrato A, Díaz Rubio E, Gallego J, García-Foncillas J, Grávalos C, Laquente B, Pericay C, Rivera F, Tabernero J, Aranda E. TTD consensus document on the diagnosis and management of exocrine pancreatic cancer. *Clinical & Translational Oncology*. 2014 Oct; 16(10):865-78. IF: 1,6

Review

Lopez-Sanchez, Laura M.; Lopez-Pedraza, Chary; Rodriguez-Ariza, Antonio. Proteomic approaches to evaluate protein s-nitrosylation in disease. *Mass Spectrometry Reviews*.2014. 33-1:7-20 IF: 8,053

Castellano, D.; Aparicio, LMA; Esteban, E.; Sanchez-Hernandez, A.; Germa, JR; Batista, N.; Maroto, P.; Perez-Valderrama, B.; Luque, R.; Mendez-Vidal, MJ EXPERT OPINION ON DRUG SAFETY. Cabazitaxel for metastatic castration-resistant prostate cancer: safety data from the Spanish expanded access program. *Expert Opinion On Drug Safety*.2014.13-9:1165-1173 IF:2,735

Castellano D, Antón Aparicio LM, Esteban E, Sánchez-Hernández A, Germà JR, Batista N, Maroto P, Pérez-Valderrama B, Luque R, Méndez-Vidal MJ; "Cabazitaxel EAP study. "Cabazitaxel for metastatic castration-resistant prostate cancer: safety data from the Spanish expanded access program." *Expert Opin Drug Saf*. 2014 Sep;13(9):1165-73 IF:2,735

In Collaborations

Papers

Barbarroja, Nuria; Perez-Sanchez, Carlos; Ruiz-Limon, Patricia; Castro-Villegas, Carmen; Aguirre, Maria Angeles; Carretero, Rosario; Segui, Pedro; Jimenez-Gomez, Yolanda; Sanna, Manuela; Rodriguez-Ariza, Antonio; Collantes-Estevez, Eduardo; Escudero, Alejandro. "Anticyclic citrullinated protein antibodies are implicated in the development of cardiovascular disease in rheumatoid arthritis." *Arteriosclerosis Thrombosis and Vascular Biology*. 2014. 34(12):2706-16 IF: 5,533

Alba, E.; Albanell, J.; de la Haba, J.; Barnadas, A.; Calvo, L.; Sanchez-Rovira, P.; Ramos, M.; Rojo, F.; Burgues, O.; Carrasco, E.; Caballero, R.; Porras, I.; Tibau, A.; Camara, M. C.; Lluch, A. Trastuzumab or lapatinib with standard chemotherapy for HER2-positive breast cancer: results from the GEICAM/2006-14 trial. *British Journal*

of Cancer.2014. 110-5:1139-1147 IF: 4,817

Reina, JJ; Serrano, R; Codes, M; Jimenez, E; Bolanos, M; Gonzalez, E; Sevilla, I. Second primary malignancies in patients with neuroendocrine tumors. *Clinical & Translational Oncology*.2014.16-10:921-926 IF: 1,6

Review

Leon, Luis; Garcia-Figueras, Roberto; Suarez, Cristina; Arjonilla, Antonia; Puente, Javier; Vargas, Blanca; Mendez Vidal, Maria Jose; Sebastia, Carmen. Recommendations for the clinical and radiological evaluation of response to treatment in metastatic renal cell cancer. *Targeted Oncology*.2014. 9-1:9-24 IF:3,458

Garcia del Muro, Xavier; Gallardo, Enrique; Garcia Carbonero, Iciar; Lainez, Nuria; Jose Mendez, Maria; Maroto, Pablo; Ochoa de Olza, Maria; Puente, Javier; Reyes, Gaspar; Rubio, Jose; Santander, Carmen; Suarez, Cristina; Vazquez Estevez, Sergio; Castellano, Daniel. Recommendations from the Spanish Oncology Genitourinary Group for the treatment of patients with renal cell carcinoma. *Cancer Chemotherapy and Pharmacology*.2014.73-6:1095-1107 IF:2,571

Research Fundings

National

Aranda Aguilar, E. Red Temática de Investigación Cooperativa Cancer. Funding agency: Institute Carlos III Health (ISCIII). Reference:RD12/0036/0038

De la Haba Rodriguez, J R. Analysis of polymorphisms related to hypertension as a predictor

of response to antiangiogenic treatment in cancer. Funding agency: Institute Carlos III Health (ISCIII). Reference:PI12/O2017

Aranda Aguilar, E. Genetic variations associated with hypertension and thrombosis as predictors of response to antiangiogenic therapy in patients with colon cancer. Funding agency: Institute Carlos III Health (ISCIII). Reference:PI13/O0951

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: Institute Carlos III Health (ISCIII). Reference:PI13/O0553

Rodríguez Ariza, A. ONCOVER: Detection system of volatile compounds for early diagnosis of lung and colon cancer. Funding agency: Collaboration Agreements between entre el MINECO (FEDER) and the Univeristy of Cordoba for the implementation of a biomedical research project. Reference:CCB.O30PM

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 To Begin in 2015

Regional

Aranda Aguilar, E. A study of genetic polymorphisms in the renin angiotensin and the Vegf & Vegfr-1 system in colon and breast cancer as predictors of response to antiangiogenic therapy. Funding agency: Regional Ministry of Equality, Health and Social Policy (CISPS). Reference:0009/2010

Aranda Aguilar, E. Microangioteacan. Funding agency: (IMIBIC-CIBERBBN). Reference: Ciberbnn-Imibic14-1

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/O02

Contract with Companies

Aranda Aguilar, E. VISNU project. Funding agency: Treatment of digestive tumours (TTD Group). Reference: PSS.0022

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 biomarkers KRAS /NRAS. Funding agency: AMGEN SA. Reference: PSS.0053

Aranda Aguilar, E. Contract for determination of biomarkerr rAS. Funding agency: Treatment of digestive tumours (TTD Group). Reference: PSS.0054

Aranda Aguilar, E. Interconecta Oncoexpert biotechnology for the diagnosis and treatment of cancer. Funding agency: Oncoexpert. Reference: INTER.0003

De la Haba Rodríguez, JR. Analytical assays for the evaluation of AGTRI 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

Clinical Trials

0276/03: A multicenter, phase III trial to compare 6 cycles of FAC (fluorouracil, doxorubicin and cyclophosphamide) and 4 cycles of FAC followed by 8 weekly doses of taxol in a sequential regimen as adjuvant therapy in patients who underwent surgery for breast cancer without axillary involvement. PI Dr/a Aranda Aguilar, Enrique

0012/04: A multicenter, randomized, phase III comparative study of epirubicin. PI: Dr/a Aranda Aguilar, Enrique

0215/04: An open, multicenter, randomized trial to assess the effectiveness of zoledronic acid in preventing bone loss associated with cancer treatment in postmenopausal women with RE+ breast cancer. PI: Dr/a Aranda Aguilar, Enrique

0198/05: An open, multicenter, randomized phase IV-III study to assess the effectiveness of maintenance treatment with capecitabine (X) after standard adjuvant chemotherapy in patients with operable breast cancer who have hormone-receptor- and HER2neu-negative tumors. PI: Dr/a De la Haba Rodríguez, Juan Rafael

0254/06: A phase III trial to assess ovarian function suppression and Exemestane as adjuvant treatments for premenopausal women with endocrine-sensitive breast cancer -Tamoxifen versus ovarian function suppression + Exemastane. PI: Dr/a De la Haba Rodríguez, Juan Rafael

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/a De la Haba Rodríguez, Juan Rafael

0106/07: A randomized study of adjuvant chemotherapy individualized according to BRCA1 ARNm levels in patients with non-small cell lung cancer. PI: Dr/a Barneto Aranda, Isidor

0148/07: A multicenter, randomized study to assess the effectiveness and safety of bevacizumab in combination with letrozol alone in postmenopausal women with locally recurrent or metastatic breast cancer with indication of hormone therapy as first-line treatment. PI: Dr/a De la Haba Rodríguez, Juan Rafael

0165/07: An open, multicenter, randomized, parallel-group, phase III trial to compare the effectiveness and tolerability of administering Fulvestrant (FASLO- DEX®) for three years in combination with Anastrozol (ARIMIDEX®) for five years versus Anastrozol for five years as adjuvant hormone treatment in postmenopausal women with early hormone-receptor

positive breast cancer. PI: Dr/a De la Haba Rodríguez, Juan Rafael

0179/07: A multicenter, international, randomized phase II study of trastuzumab and docetaxel versus trastuzumab, docetaxel and pertuzumab versus trastuzumab and pertuzumab in patients with locally advanced inflammatory or early breast cancer. PI: Dr/a Aranda Aguilar, Enrique

0002/08: A randomized, phase II study of continuous treatment vs. standard treatment with capecitabine in patients with metastatic breast cancer. PI: Dr/a De la Haba Rodríguez, Juan Rafael

0133/08: A multicenter, randomized, phase II study of treatment with epirubicin and cyclophosphamide followed by docetaxel and trastuzumab versus epirubicin and cyclophosphamide followed by docetaxel and lapatinib in women with resectable primary or locally-advanced HER2-positive breast cancer. PI: Dr/a De la Haba Rodríguez, Juan Rafael

0144/08: A randomized, phase II clinical study of radiotherapy, hormone therapy and chemotherapy with docetaxel versus radiotherapy and hormone therapy in patients with high-risk localized prostate cancer (Stage III and IV). PI: Dr/a Aranda Aguilar, Enrique

0253/08: An open, multicenter, randomized, exploratory study to assess the effectiveness and safety of panitumumab in combination with FOLFOX 4 chemotherapy or panitumumab with FOLFIRI chemotherapy in subjects with colorectal cancer with non-mutated KR. PI: Dr/a Aranda Aguilar, Enrique

0265/08: Topotecan plus carboplatin vs standard treatment (paclitaxel plus carboplatin or gemcitabine + carboplatin) in the treatment of patients with recurrent platinum-sensitive peritoneal carcinoma, fallopian tube carcinoma or epithelial ovarian carcinoma. PI: Dr/a Rubio Pérez, María Jesús

0046/09: An open, multicenter, phase II study to assess the safety and effectiveness of panitumumab in combination with irinotecan in patients with metastatic colorectal cancer with non-mutated KRAS refractory to irinotecan-based chemotherapy. PI: Dr/a Aranda Aguilar, Enrique

0048/09: A randomized, phase II study of citabine + Bevacizumab + external radiotherapy versus Capecitabine + external radiotherapy as preoperative treatment in patients with resectable locally advanced rectal cancer. PI: Dr/a Aranda Aguilar, Enrique

0076/09: A randomized, double-blind, multicenter, phase II study to assess the efficacy of AZD2281 in the treatment of patients with platinum-sensitive serous ovarian cancer after treatment with two or more platinum regimens. PI: Dr/a Rubio Pérez, María Jesús

0131/09: Selective treatment in colorectal cancer: selection of capecitabine or 5-fluorouracil based on TS-3'UTR and ERCC1-118 polymorphisms for combination with oxaliplatin or irinotecan as chemotherapy in combination with first-line bevacizumab in advanced colon cancer. PI: Dr/a Aranda Aguilar, Enrique

- 0139/09: A multicenter, open, randomized, two-arm, phase III study of bevacizumab plus chemotherapy vs chemotherapy alone for the treatment of patients with platinum-resistant primary peritoneal carcinoma, fallopian tube carcinoma or epithelial ovarian carcinoma.
PI: Dr/a Rubio Pérez, María Jesús
-
- 0181/09: A randomized, double-blind, placebo-controlled trial with neratinib (HKI-272) after trastuzumab in women with initial stage breast cancer with overexposure/amplification of HER-2/neu.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0226/09: A multicenter, multinational, randomized, phase II study to assess pertuzumab in combination with trastuzumab administered concomitantly or sequentially to a regular anthracycline-based chemotherapy or concomitantly to a non-anthracycline chemotherapy as neoadjuvant treatment in patients with breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0250/09: A phase II study of panitumumab as a first-line single agent in fragile elderly patients with advanced colorectal cancer with non-mutated kras.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0260/09: A multicenter, randomized, double-blind, placebo-controlled phase III study of everolimus daily administered in combination with trastuzumab and vinorelbine in women previously treated with metastatic or locally advanced breast cancer with HER2/neu over-expression.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0002/10: A phase II study of capecitabine-trastuzumab (xelox-trastuzumab) as perioperative treatment in patients with nonresectable gastric gastroesophageal junction adenocarcinoma.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0013/10: A multicenter, randomized, phase II, pilot study to assess the safety and efficacy of a treatment with mFOLFOX-6 plus cetuximab versus an initial treatment with mFOLFOX-6 plus cetuximab (8 cycles) followed by exclusive maintenance treatment with cetuximab as first-line treatment in patients with metastatic colorectal cancer and KRAS tumors.
PI: Dr/a 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 regimens of SAR240550 (BSI-201), a PARP-1 inhibitor, in combination with paclitaxel administered weekly as neoadjuvant therapy in patients with stage II-III triple-negative breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0194/10: A multicenter, randomized, placebo-controlled, double-blinded phase III study to assess the efficacy and safety of pazopanib as adjuvant treatment in patients with localized or locally advanced kidney cell carcinoma after nephrectomy.
PI: Dr/a Rubio Pérez, María Jesús
-
- 0215/10: A randomized, double-blind, phase III trial of paclitaxel administered weekly plus MAG386 or placebo in women with recurrent partially platinum-sensitive or platinum-resistant peritoneal carcinoma, fallopian tube carcinoma or epithelial ovarian carcinoma.
PI: Dr/a Rubio Pérez, María Jesús
-
- 0229/10: A global study to assess the addition of bevacizumab to carboplatin and paclitaxel as first-line treatment of primary peritoneal carcinoma, fallopian tube carcinoma or epithelial ovarian carcinoma.
PI: Dr/a Rubio Pérez, María Jesús
- 0243/10: A randomized, phase IIb trial to assess the effectiveness of gemcitabine-erlotinib-capecitabine in patients with metastatic pancreatic cancer. GECA.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0270/10: An open, multicenter, randomized, phase III study to assess the safety and effectiveness of TKI258 versus sorafenib in patients with metastatic renal cell cancer after therapy failure (mTOR inhibitor VEGF-targeted).
PI: Dr/a Aranda Aguilar, Enrique
-
- 0284/10: A randomized, phase III trial of cisplatin plus paclitaxel with and without bevacizumab vs non-platinum doublet, topotecan plus paclitaxel, with or without bevacizumab in recurrent or persistent IVB stage cervical carcinoma.
PI: Dr/a Rubio Pérez, María Jesús
-
- 0294/10: An open, multicenter, one-group trial to provide access to cabazitaxel prior to its commercialization to patients with metastatic hormone-resistant prostate cancer previously treated with a docetaxel-containing regimen and assess its safety in this type of patients.
PI: Dr/a Méndez Vidal, María José
-
- 0318/10: A multicenter, placebo-controlled, phase II study to assess the safety and effectiveness of the cream ATH008 in patients with Palmar Plantar Erythrodysesthesia Syndrome (SEPP) secondary to capecitabine monotherapy.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0327/10: An open, multicenter, expanded access study of R05185426 in patients with metastatic melanoma.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0024/11: A phase II trial of cetuximab in refractory colorectal cancer with mutated K-RAS and favorable FcyRII/IIIa genotypes.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0054/11: A multicenter, controlled, double-blind trial by the Gynaecologic Cancer Intergroup of Cediranib (AZD 2171) in combination with platinum-based chemotherapy and as a single agent in maintenance therapy in women with relapsing ovarian cancer six months after completion of first-line platinum-based treatment.
PI: Dr/a Rubio Pérez, María Jesús
-
- 0129/11: A phase II study of Axitinib as maintenance treatment in patients with metastatic colorectal carcinoma.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0133/11: A randomized, phase III study of ABI-007 plus Gemcitabine versus Gemcitabine alone weekly administered in patients with metastatic pancreatic adenocarcinoma.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0135/11: Anamorelin HCl in the treatment of cachexy associated with non-small cell lung cancer (NSCLC). A multicenter, randomized, double-blind, placebo-controlled trial to assess the efficacy and safety of anamorelin HCl.
PI: Dr/a Barneto Aranda, Isidoro
-
- 0138/11: Anamorelin HCl in the treatment of cachexy associated with non-small cell lung cancer. An extension study.
PI: Dr/a Barneto Aranda, Isidoro
-
- 0143/11: A randomized, double-blind, phase III study to assess the effectiveness and safety of PF-00299804 versus erlotinib in the treatment of advanced non-small cell lung cancer after progression for at least a previous chemotherapy or in case of intolerance.
PI: Dr/a Barneto Aranda, Isidoro
-
- 0190/11: A phase II trial of first-line treatment with dovitinib (TKI-258) for metastatic or non-resectable locally advanced adrenocortical carcinoma.
PI: Dr/a Méndez Vidal, María José
-
- 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/a De la Haba Rodríguez, Juan Rafael
-
- 0226/11: A phase II open label study of cabazitaxel in patients with advanced or metastatic transitional cell carcinoma of the urothelium who have progressed 12 months after a previous platinum-based chemotherapy.
PI: Dr/a Méndez Vidal, María José
-
- 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/a De la Haba Rodríguez, Juan Rafael
-
- 0240/11: An open, multicenter, phase II study of E7080 alone or in combination with Everolimus in patients with nonresectable or metastatic renal cell cancer after a targeted anti-VEGF therapy.
PI: Dr/a Méndez Vidal, María José
-
- 0285/11: A randomized phase II trial to assess the efficacy and safety of an individualized neoadjuvant chemotherapy scheme based on the level of brca1 for primary her-2 negative breast cancer (BERNAQ).
PI: Dr/a De la Haba Rodríguez, Juan Rafael
-
- 0017/12: A randomized, open, phase II study of MM-121 controlled with paclitaxel vs paclitaxel alone in patients with platinum resistant or refractory ovarian cancer.
PI: Dr/a Rubio Pérez, María Jesús
-
- 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 treatment of patients with metastatic colorectal cancer with native KRAS and less than three circulating tumor cells.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0073/12: A randomized, phase III clinical trial to assess the effectiveness of FOLFOX + bevacizumab versus FOLFOXIRI + bevacizumab as first-line treatment in naive patients with metastatic colorectal cancer with three or more circulating tumor cells.
PI: Dr/a Aranda Aguilar, Enrique
-
- 0075/12: A phase IIIb study of regorafenib in patients with metastatic colorectal cancer with progression to conventional treatments.
PI: Dr/a Aranda Aguilar, Enrique

0081/12: An open, multicenter, single-arm, non-randomized, phase II study to assess the effectiveness of oral TKI258 as second-line therapy in patients with advanced and/or metastatic endometrial cancer with mutated or wild-type FGFR2.
PI: Dr/a Rubio Pérez, María Jesús

0086/12: LUX-Breast 3: A randomized, phase II study of afatinib alone or in combination with vinorelbine versus the researcher's treatment of choice in HER2-positive breast cancer patients with progressive cerebral metastasis after a trastuzumab- and/or lapatinib-based therapy.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0098/12: An open, exploratory, pharmacogenomic, single-group phase II study of eribulin (HALAVEN®) monotherapy as neoadjuvant treatment for operable I-II stage breast cancer without HER2 overexpression.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0104/12: An expanded access study for postmenopausal women with estrogen receptor positive locally advanced or metastatic breast cancer who have progressed following prior endocrine therapy, investigating the treatment of everolimus (RAD001) in combination with exemestane.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0123/12: Radium-233 chloride (Alphardín) in patients with castration-resistant (hormone-resistant) prostate cancer with bone metastasis.
PI: Dr/a Méndez Vidal, María Jose

0127/12: An open, phase II study of ketoconazole as CYP17 inhibitor in locally advanced or disseminated ovarian granulosa cell cancer.
PI: Dr/a Rubio Pérez, María Jesús

0146/12: A randomized, double-blind, placebo-controlled, phase II study of BKM120 plus paclitaxel in patients with inoperable, HER2-negative, metastatic or locally-advanced breast cancer with or without PI3K signalling pathway activation.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0156/12: An open, multicenter, single-arm clinical trial to assess the safety and health-related quality of life of aflibercept in metastatic colorectal cancer patients.
PI: Dr/a Aranda Aguilar, Enrique

0160/12: A randomized, multicenter, double-blind, two-part, phase II study to assess the efficacy and safety of pertuzumab in combination with standard chemotherapy vs placebo plus standard chemotherapy in women with epithelial cancer.
PI: Dr/a Rubio Pérez, María Jesús

0171/12: A randomized, double-blind, placebo-controlled, phase III study of BKM120 in combination with fulvestrant in postmenopausal women with locally advanced or metastatic hormone-receptor positive and HER2-negative breast cancer with progression after a treatment with an aromatase inhibitor.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0174/12: A randomized, double-blind, placebo-controlled, phase IIb/III study of first-line immunotherapy with or without TF4010 in patients with IV-stage non-small cell lung cancer (NSCLC).
PI: Dr/a Barneto Aranda, Isidoro

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/a De la Haba Rodríguez, Juan Rafael

0233/12: A randomized, phase I/II trial of neoadjuvant paclitaxel vs. BIBF112 priming followed by BIBF112 plus capecitabine in HER-2 negative cancer with correlative proteomic and dynamic-image studies.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0235/12: A randomized, double-blind, phase III trial of PROSTVAC-V/F ± FEC-GM in patients with asymptomatic or minimally symptomatic castration-resistant prostate cancer.
PI: Dr/a Méndez Vidal, María Jose

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/a Aranda Aguilar, Enrique

0347/12: An open, randomized, multicenter, phase II trial to assess the toxicity and efficacy or pre-surgical chemotherapy with or without Bevacizumab in patients with advanced ovarian cancer.
PI: Dr/a Rubio Pérez, María Jesús

0363/12: An open, randomized, phase III trial of cisplatin and 5-FU with or without panitumumab for patients with nonresectable advanced or metastatic esophageal squamous cell cancer.
PI: Dr/a Aranda Aguilar, Enrique

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/a Barneto Aranda, Isidoro

0049/13: A randomized, double-blind, phase III study to assess the efficacy and safety of Gemcitabine in combination with TH-302 vs. Gemcitabine plus placebo in patients with locally advanced nonresectable pancreas adenocarcinoma.
PI: Dr/a Aranda Aguilar, Enrique

0059/13: A phase II study of regorafenib as single agent for first-line treatment of fragile patients with metastatic colorectal cancer and/or not candidates for polychemotherapy.
PI: Dr/a Aranda Aguilar, Enrique

65/13: Neoadjuvant chemotherapy with nab-paclitaxel in patients with high-risk her2-negative breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael

82/13: An open study of afatinib in naive patients (first-line) or patients previously treated with chemotherapy with locally advanced or metastatic non-small cell lung cancer and EGFR mutations.
PI: Dr/a Barneto Aranda, Isidoro

91/13: A randomized, double-blind, phase III study of Vintafolide (EC 145) in combination with pegylated liposomal doxorubicin (DLP/ Doxil®/Caelyx®) vs. DLP in patients with platinum-resistant ovarian cancer.

PI: Dr/a Rubio Pérez, María Jesús

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/a 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/a Rubio Pérez, María Jesús

0144/13: A randomized, multicenter, open, phase II/III study of nab®-paclitaxel administered weekly in combination with gemcitabine or carboplatin vs gemcitabine/carboplatin as first-line treatment in patients with RE-, RPg- and HER2-negative metastatic breast cancer (triple negative).
PI: Dr/a De la Haba Rodríguez, Juan Rafael

0230/13: A randomized, double-blind, placebo-controlled, phase III study of adjuvant regorafenib vs. placebo in patients with IV stage colorectal cancer after curative treatment of liver metastasis.
PI: Dr/a Aranda Aguilar, Enrique

0252/13: An open, single-arm, pilot study to assess the association of the hormone resistance biomarkers and mTOR pathway with the clinical efficacy of everolimus plus letrozol in first-line treatment of postmenopausal women with nonresectable metastatic or locally advanced hormone-receptor positive breast cancer.
PI: Dr/a 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/a Méndez Vidal, María Jose

0281/13: A study of the safety of repeating treatment with Radium-233 chloride in patients with castration-resistant prostate cancer with bone metastasis receiving an initial cycle with six 50 kBq/kg doses of Radium-233 chloride.
PI: Dr/a Méndez Vidal, María Jose

0323/13: El estudio MLO (Inhibidor de la MEK para el Tratamiento del Cáncer Seroso de Ovario de Bajo Grado): Estudio fase 3, multinacional, aleatorizado y abierto de MEK162 frente a la quimioterapia elegida por el médico en pacientes con carcinomas serosos en bajo grado, recurrentes o persistentes de ovario, trompas de Falopio o peritoneales primarios.
PI: Dr/a Rubio Pérez, María Jesús

65/13: Quimioterapia neoadyuvante con nab-paclitaxel en pacientes con cáncer de mama her2 negativo de alto riesgo (ETNA)
PI: Dr/a De la Haba Rodríguez, Juan Rafael

82/13: Estudio abierto de afatinib en pacientes no tratados (primera línea) o tratados previamente con quimioterapia con cáncer de pulmón no microcítico (cpnm) localmente avanzado o metastásico portadores de mutación de EGFR.
PI: Dr/a Barneto Aranda, Isidoro

- 97/13: Estudio de fase 3, aleatorizado y doble ciego para comparar Vintafolida (EC 145) y doxorubicina liposómica pegilada (DLP/Doxil®/Caelyx®) en combinación frente a DLP en pacientes con cáncer de ovario resistente al platino.
PI: Dr/a Rubio Pérez, María Jesús
- 0026/14: Estudio de fase II abierto, aleatorizado, de tres grupos, de dicloruro de radio-223 de 50kBq/kg en comparación con 80 kBq/kg y 50 kBq/kg en un programa de dosis ampliado en pacientes con cáncer de próstata resistente a la castración con metástasis ósea
PI: Dr/a Méndez Vidal, María Jose
- 0036/14: A PHASE II randomized, double-blind study of neoadjuvant letrozole plus GDC-0032 versus letrozole plus placebo in postmenopausal women with er positive/her2-negative, early stage breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 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/aRubio Pérez, María Jesús
- 0052/14 : A multicenter, randomized, open, controlled, phase III study to assess the efficacy and safety of olaparib alone vs. chemotherapy of choice in patients with metastatic breast cancer with mutations.
PI Dr/aDe la Haba Rodríguez, Juan Rafael
- 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/a De la Haba Rodríguez, Juan Rafael
- 0065/14: A phase II study of Regorafenib alone in patients with metastatic colorectal cancer with mutations in RAS or BRAF previously treated withFOLFOXIRI PLUS bevacizumab.
PI Dr/aAranda Aguilar, Enrique
- 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/aDe la Haba Rodríguez, Juan Rafael
- 0107/14: A multicenter, randomized, double-blind phase II study to assess the efficacy and safety of R05520985 plus FOLFOX vs. bevacizumab plus FOLFOX in patients with naive metastatic colorectal cancer.
PI Dr/aAranda 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/aDe la Haba Rodríguez, Juan Rafael
- 0151/14: Assessing an immunomodulatory maintenance therapy in patients with metastatic colorectal cancer with tumor shrinkage during induction therapy. A phase III trial.
PI Dr/aAranda 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/aRubio 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/aBarneto Aranda, Isidoro
- 1134: Lifestyle and breast cancer risk in Spain.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 1759: A retrospective study of cases of patients with renal cell carcinoma or mantle cell lymphoma treated with Temsirolimus.
PI: Dr/a Méndez Vidal, María José
- 1760: A prospective, observational study to determine circulating endothelial cell levels in patients with advanced clear-cell renal-cell carcinoma without radiological progression after three months of first-line treatment according to regular clinical practice.
PI: Dr/a Méndez Vidal, María José
- 1834: Assessing the usefulness of targeted drug management guides in renal cancer in clinical practice.
PI: Dr/a Méndez Vidal, María José
- 1894: A post-authorisation, observational study to assess the tolerability of Raltitrexed and the profile of patients treated with Raltitrexed alone or in combination with oxaliplatin (TOMOX) to treat advanced colorectal cancer following regular clinical practice.
PI: Dr/a Gómez España, María Auxiliadora
- 1988: A combined analysis of the genome wide association study and the microarm study (miarn) for the identification of predictors of effectiveness of therapy with bevacizumab inpatients with metastatic breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 2030: Assessing rapid in situ mRNA (RISH™) hybridization as a technique for detecting HER2 overexpression in breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 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/a Aranda Aguilar, Enrique
- 2081: Analysing the epidemiological characteristics of patients with metastatic renal cancer with long progression-free survival after receiving treatment with sunitinib.
PI: Dr/a Méndez Vidal, María Jose
- 2149: An observational, prospective study to assess the impact of determining the intrinsic subtypes of breast cancer with PAM50 using manostrng technology to use adjuvant chemotherapy in patients with hormone-recep-
- tor positive, node-negative breast cancer.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 2107: A retrospective study of the management of patients with metastatic colorectal cancer resistant to first-line oxalipatin-based therapy.
PI: Dr/a Aranda Aguilar, Enrique
- 2172: An observational, retrospective, multicenter study to assess the clinical benefit of lapatinib in combination with trastuzumab in patients with HER2-positive metastatic breast cancer previously treated with trastuzumab and/or lapatinib in Spain.
PI: Dr/a De la Haba Rodríguez, Juan Rafael
- 2177: A retrospective, observational study to describe the management of patients with advanced or metastatic non-small cell lung cancer with EGFR mutations in Spain.
PI: Dr/a Barneto Aranda, Isidoro
- 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/a Barneto Aranda, Isidoro
- 2274: Circulating markers in patients with advanced or metastatic renal carcinoma on first-line treatment.
PI: Dr/a Méndez Vidal, María Jose
- 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/a Méndez Vidal, María Jose
- 2348: Register of rare sarcomas: A tool to assess the number of cases registered for each subtype and the therapeutic approach used by the Grupo Español de Investigación en Sarcomas (GEIS).
PI: Dr/a Barneto Aranda, Isidoro
- 2456: An epidemiologic study of the natural course and management of locally advanced or metastatic breast cancer: CASCADE study.
PI Dr/aDe la Haba Rodríguez, Juan Rafael
- 2571: ROSE project: Management of advanced ovarian cancer in Spain between 2008 and 2010.
PI Dr/aRubio Pérez, María Jesús
- 2573: Molecular profiling of gestational breast cancer.
PI Dr/aDe la Haba Rodríguez, Juan Rafael
- 2632: Improving the selection of patients with metastatic colorectal cancer who are candidate for biological therapies: Expanded genotyping using next-generation platforms with different sensitivities.
PI Dr/aAranda Aguilar, Enrique
- 2636: A retrospective study to assess the efficacy and safety of targeted therapies following first-line therapy with pazopanib in patients with metastatic renal cell cancer in regular clinical practice.
PI Dr/aMéndez Vidal, María Jose

Nephrology. Cell damage in chronic inflammation

Publications

9

Impact
Factor

21,864

Average
Impact Factor

2,423

PhD Researchers

Maria Antonia Alvarez De Lara
Sanchez
Maria Luisa Agüera Morales
Francisco Javier Ariza Fuentes
Mario Espinosa Hernández
Alejandro Martin Malo
Maria Dolores Navarro Cabello
Alberto Rodriguez Benot
Rafael Santamaria Olmo
Sagrario Soriano Cabrera

Post-PhD Researchers

Fátima Guerrero Pavón
Paula Buendia Bello

Pre-PhD Researchers

Andrés Carmona Carpio
Rodolfo Crespo Montero
Maria López Andreu
Carlos Luna Ruiz
Cristian Rodelo Haad

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

Maria Jose Jimenez Moral
M^a Rosa Moyano Garcia

Team Leaders

Principal Investigator (PI)

Pedro Aljama García
pedro.aljama.sspa@juntadeandalucia.es
Red de Investigación Renal (REINREN)
PAIDI CTS-260 Scientific Group

Co-Principal Investigator (Co-PI)

Julia Carracedo Añón
Nicolás Monardes Contract



Scientific Activity

1. The latest technological advances in the treatment of chronic kidney disease have helped minimize the inflammation associated with the disease and improve our patients' survival rates and quality of life. However, in these patients a microinflammatory state persists accompanied by a high percentage of activated cells that are capable of producing a sustained inflammatory response and can produce pathological complications when combined with other low-intensity stimuli. Our team assesses the effectiveness of pharmacological therapies, hemodialysis and kidney transplantation in improving this chronic microinflammatory state associated with kidney disease.
2. Mechanisms of cell damage and repair conditioning 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.

Keywords

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

Scientific Production

Publications

Original

Papers

Soriano, Sagrario; Carmona, Andres; Trivino, Francisco; Rodriguez, Mariano; Alvarez-Benito, Marina; Martin-Malo, Alejandro; Alvarez-Lara, Maria-Antonia; Ramirez, Rafael; Aljama, Pedro; Carracedo, Julia. Endothelial damage and vascular calcification in patients with chronic kidney disease. *American Journal Of Physiology-Renal Physiology*. 2014.307-11:F1302-F1311
IF:3.3

de Mier MVPR, Espinosa-Hernandez M, Rodelo-Haad C, Esquivias-De Motta E, Gomez-Carrasco J, Ortega R, Aljama P. Prospective study of the complications associated with percutaneous renal biopsy of native kidneys: experience in a centre. *Nefrologia*. 2014.34-3:383-387
IF:1.442

Editorial Material

Alvarez-de Lara, MA; Martin-Malo, A. Hypersensitivity to synthetic membranes for hemodialysis, an emerging problem? *Nefrologia*. 2014.34-6:698-702
IF:1.442

In Collaborations

Papers

Espinosa, Mario; Ortega, Rosa; Sanchez, Marina; Segarra, Alfons; Teresa Salcedo, Maria; Gonzalez, Fayna; Camacho, Rafael; Angel Valdivia, Miguel; Cabrera, Rocio; Lopez, Katia; Pinedo, Fernando; Gutierrez, Eduardo; Valera, Alfonso; Leon, Miryam; Angeles Cobo, Maria; Rodriguez, Rosa; Ballarin, Jose; Arce, Yolanda; Garcia, Beatriz; Dolores Munoz, Maria; Praga, Manuel Spanish Grp Study Glomerular Dis. Association of C4d Deposition with Clinical Outcomes in IgANephropathy. *Clinical Journal Of The American Society Of Nephrology*. ---
IF:5.25

Torregrosa, Jose-Vicente; Morales, Enrique; Manuel Diaz, Juan; Crespo, Josep; Bravo, Juan; Gomez, Gonzalo; Angel Gentil, Miguel; Rodriguez Benot, Alberto; Rodriguez Garcia, Minerva; Lopez Jimenez, Veronica; Gutierrez Dalmau, Alex; Jimeno, Luisa; Perez Saez, Maria Jose; Romero, Rafael; Gomez Alamillo, Carlos CINAREN Study-Grp. Cinacalcet for hypercalcaemic secondary hyperparathyroidism after renal transplantation: a multicentre, retrospective, 3-year study. *Nephrology*. 2014 Feb;19(2):84-93
IF:1.864

Belen Fernandez-Martinez, Ana; Valdehita-Torija, Ana; Carracedo, Julia; Ramirez, Rafael; de Lucio-Cazana, Francisco Javier. Microparticles released by vascular endothelial cells increase hypoxia inducible factor expression in human proximal tubular HK-2 cells. *International Journal Of Biochemistry & Cell Biology*. 2014 Aug;53:334-42.
IF:4.24

Torregrosa, Josep V.; Morales, Enrique; Diaz, Juan M.; Crespo, Josep; Bravo, Juan; Gomez, Gonzalo; Gentil, Miguel A.; Rodriguez-Benot, Alberto; Rodriguez-Garcia, Minerva; Lopez-Jimenez, Veronica; Gutierrez-Dalmau, Alex; Jimeno, Luisa; Jose Perez-Saez, M.; Romero, Rafael; Gomez-Alamillo, Carlos Grp Estudio CINAREN. Cinacalcet in the management of normocalcaemic secondary hyperparathyroidism after kidney transplantation: one-year follow-up multicentre study. *Nefrologia*. 2014;34(1):62-8
IF:1.442

Castellano, S; Palomares, I; Molina, M; Perez-Garcia, R; Aljama, P; Ramos, R; Merello, JI. Clinical, analytical and bioimpedance characteristics of persistently overhydrated haemodialysis patients. *Nefrologia*. 34-6:716-723
IF:1.442

Gorostidi M, Santamaría R, Alcázar R, Fernández-Fresnedo G, Galcerán JM, Goicoechea M, Oliveras A, Portolés J, Rubio E, Segura J, Aranda P, de Francisco AL, Del Pino MD, Fernández-Vega F, Górriz JL, Luño J, Marín R, Martínez I, Martínez-Castelao A, Orte LM, Quereda C, Rodríguez-Pérez JC, Rodríguez M, Ruilope LM. Spanish Society of Nephrology document on KDIGO guidelines for the assessment and treatment of chronic kidney disease. *Nefrologia*. 2014 May 21;34(3):302-16
IF:1.442

Research Fundings

National

Aljama García, P. Red de Investigación Renal (Renal Research Network (REINREN)). Funding agency: Institute Carlos III Health (ISCIII). Reference: RDO6/0016/0007 (finalized in 2014)

Martin Malo, A. Effect of the purification efficiency of different dialysis modalities on inflammation and endothelial damage. Funding agency: Institute Carlos III Health (ISCIII). Reference: IO/00960 (finalized in 2014)

Carracedo Añón, J. Inflammation and calcifying vascular disease in uremia. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI12/01489

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: Institute Carlos III Health (ISCIII). Reference: PI12/01866

Aljama García, P. Red de Investigación Renal (Renal Research Network (REINREN)). Funding agency: Institute Carlos III Health (ISCIII). Reference: RD12/0021/0011

Regional

Aljama García, P. Endothelial damage in patients with chronic renal failure: cellular therapy. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P08-CTS-03797

Carracedo Añón, J. Modulating role of endothelial microparticles in the development of endothelial damage, Arteriosclerosis and vascular calcification. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: CTS-7352

Clinical Trials

0097/07: Utility of rapamycin for secondary prevention of skin tumors in renal transplant recipients with recurrent squamous cell carcinoma.

PI: Dr/a Navarro Cabello, M^a Dolores

0242/10: An open, multicenter, trial of eculizumab in adult patients with atypical hemolytic uremic syndrome.

PI: Dr/a Espinosa Hernández, Mario

0256/10: An open, multicenter, randomized, two-arm trial to investigate de novo diabetes mellitus in renal transplant recipients receiving an advagraf-based immunosuppressive regime with or without corticosteroids. ADVANCE.

PI: Dr/a Rodríguez Benot, Alberto

0209/11: Effect of Paricalcitol on albuminuria, inflammation and fibrosis in patients with chronic proteinuric renal disease: A randomized controlled trial.

PI: Dr/a Soriano Cabrera, Sagrario

0083/13: A randomized, prospective, open, parallel-group, multicenter study with masked assessment of evaluation criteria (PROBEI Design) to compare the efficacy of administering enalapril 20 mg plus lercanidipine.

PI: Dr/a Santamaría Olmo, Rafael

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/a Santamaría Olmo, Rafael

0102/13: Efficacy and safety of paricalcitol in reducing secondary hyperparathyroidism after kidney transplantation.

PI: Dr/a Rodríguez Benot, Alberto

0190/13: An international, multicenter, randomized, double-blind, parallel-group, placebo-controlled study of the effect of atrasentan on kidney outcomes in subjects with diabetes type 2 and nephropathy. SONAR: trial of diabetic nephropathy.

PI: Dr/a Santamaría Olmo, Rafael

0219/13: A randomized, multicenter, parallel-group, active-controlled, dose-ranging, phase 2B study to assess the dose-response relation of GSK1278863 within the first four weeks of treatment, and assess the safety and efficacy of GSK1278863 for 24 weeks in patients with anaemia associated with chronic kidney disease requiring hemodialysis re-

ceiving recombinant human erythropoietin.

PI: Dr/a Álvarez de Lara Sánchez, M^a Antonia

0221/13: A randomized, multicenter, parallel-group, active-controlled, phase 2B, 24-week duration study to assess the safety and efficacy of GSK1278863 in patients with anaemia associated with chronic kidney disease not receiving dialysis.

PI: Dr/a Sagrario Soriano, María

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 transplant recipients aged >18.

PI: Dr/a Agüera Morales, M^a Luisa

0264/13: A randomized, multicenter, open-label, parallel-group study to assess the efficacy and safety of oral administration of BAY 85-3934 and an active comparator (darbepoetin alfa) as maintenance treatment for anemia prior to dialysis.

PI: Dr/a Soriano Cabrera, Sagrario

0265/13: A multicenter, open-label, parallel-group, extension study to assess the efficacy and safety of oral administration of BAY 85-3934 and an active comparator (darbepoetin alfa) in long-term treatment for anemia prior to stable dialysis.

PI: Dr/a Soriano Cabrera, Sagrario

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

0229/14: A randomized, open, phase III study controlled with an active treatment to assess the efficacy and safety of roxadustat as maintenance therapy for anemia in end-stage renal failure patients receiving stable dialysis.

PI: Dr. Alvarez De Lara Sánchez, María Antonia

1747: Impact of screening, monitorization and reduction of immunosuppression on viral replication and incidence of VBK-associated nephropathy.

PI: Dr/a Rodríguez Benot, Alberto

1757: A post-commercialization observation study to monitor the clinical use of Renvela®

in hyperphosphatemic adult patients with chronic renal failure not receiving dialysis with serum phosphorus concentrations > 1.78 mmol / l.

PI: Dr/a Soriano Cabrera, Sagrario

1761: A multicenter, epidemiological, prospective, observational study to assess the incidence of cytomegalovirus-induced disease and associated risk factors in Receptor + renal transplant recipients.

PI: Dr/a Navarro Cabello, M^a Dolores

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/a Agüera Morales, M^a Luisa

1855: A multicenter, prospective, observational study to analyze progression factors in chronic renal disease in diabetic patients vs non-diabetic patients.

PI: Dr/a Santamaría Olmo, Rafael

1971: A multicenter, retrospective, observational study to assess long-term renal function in renal transplant recipients converted from a tacrolimus-based immunosuppressive treatment of immediate release (Prograf) to tacrolimus.

PI: Dr/a Rodríguez Benot, Alberto

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

PI: Dr/a Espinosa Hernández, Mario

2391: A multicenter, retrospective study to determine the factors affecting survival in patients who have received pancreas transplants. EFISPAN study

PI: Dr/a Navarro Cabello, María Dolores

2591: ADAPTATION: Observational Study of Correction of Anaemia with Darbepoetin Alfa at Monthly Dose Frequency in EU and Australian patients with Chronic Kidney Disease not on Dialysis).

PI: Dr/a Soriano Cabrera, Sagrario

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 (Advagraf). A multicenter, non-interventional, post-authorization study.

PI: Dr/a Rodríguez Benot, Alberto Manuel

Publications

12

Impact
Factor

53,084

Average
Impact Factor

4,432

Postdoctoral Researchers

Antonio Jesús Martínez Fuentes
Jose Córdoba Chacón
Alejandro Ibáñez Costa

Pre-PhD Researchers

Alicia Villa Osaba
Esther Rivero Cortes
David Rincón Fernández-Pacheco
Daniel Hormaechea Agulla
André Cabral Morais Sarmiento Borges
Ma Carmen Vázquez Borrego
Ramón Santamaria Peiteado
Jesús Moreno Fernández
Sergio Pedraza Arévalo
Virginia Ruiz-Murillo
María Eugenia Prados-González
Sebastiano Messineo

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

Fernando López López

Team Leaders

Principal Investigator (PI)

Justo P. Castaño Fuentes
justo@uco.es

IMIBIC's Scientific Director

CIBER on Obesity and Nutrition (CIBERobn)
(Collaborator)

Co-Principal Investigator (Co-PI)

Francisco Gracia Navarro
PAIDI BIO-139 Scientific Group
Raúl M. Luque Huertas



Scientific Activity

Our group investigates the cellular and molecular mechanisms underlying the natural processes of neuroendocrine-metabolic regulation and their dysfunctions in tumours and cancer. Special emphasis is dedicated to the role played by key neuropeptide-receptor systems and their receptors, and to emerging molecular regulatory mechanisms in cancer, like splicing. From original studies of pituitary somatotropes 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) and signalling pathways involved in the regulation of this cell type, as well as other neuro-endocrine cell types (e.g. corticotropes, gonadotropes, pancreatic beta cells) and the global role of these molecules in metabolic homeostasis and the development of tumour pathologies, including pituitary and neuroendocrine tumors, and prostate and breast cancer, etc.

To achieve this aims, we use a wide range of techniques, including primary cultures of normal and tumour cells, cell lines, genetically modified animals, hormone secretion measurements, quantification of second messengers protein and gene expression, dynamics of 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, 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 cell types (eg. pituitary tumours, breast cancer, diabetes, obesity), with the ultimate aim of contributing to the future design of innovative therapeutic strategies.

Keywords

Cellular and Molecular Endocrinology; Hypothalamus; Pituitary; Somatostatin; cortistatin; ghrelin; GHRH and Kisspeptins and their receptors; Expression and secretion of hormones (GH, PRL, IGF-I, insulin) and intracellular signalling pathways; Regulation of the somatotropic and gonadotropic-reproductive axes; Pituitary tumours; Neuroendocrine tumors; Prostate cancer; Breast cancer.

Scientific Production

Publications

Original

Papers

Cordoba-Chacon, J; Gahete, MD; Pokala, NK.; Geldermann, D; Alba, M; Salvatori, R; Luque, RM; Kineman, Rhonda D. Long-but not short-term adult-onset, isolated GH deficiency in male mice leads to deterioration of beta-cell function, which cannot be accounted for by changes in beta-cell mass. *Endocrinology*. 2014; 155(3):726-735
IF:4.644

Luque, RM; Cordoba-Chacon, J; Ibanez-Costa, A; Gesmundo, I; Grande, C; Gracia-Navarro, F; Tena-Sempere, M; Ghigo, E; Gahete, MD; Granata, R; Kineman, RD; Castaño, JP. Obesity plays an opposite role in the regulation of pituitary somatotrope and corticotrope function in female primates and male/female mice. *Endocrinology*. 2014; 155(4):1407-1417
IF:4.644

Gahete, MD; Duran-Prado, M; Delgado-Niebla, E; Garrido, JJ; Rhodes, SJ; Garcia-Navarro, S; Gracia-Navarro, F; Malagon, MM.; Luque, RM.; Castaño, JP. Porcine sst1 can physically interact with other somatostatin receptors, and its expression is regulated by metabolic/inflammatory sensors. *Am J Physiol-Endocrinol Metab*. 2014; 306(5): E483-E493
IF:4.088

Puig-Domingo, M; Luque, RM.; Reverter, JL.; Lopez-Sanchez, LM.; Gahete, MD.; Culler, MD.; Diaz-Soto, G; Lomena, F; Squarcia, M; Mate, JL.; Mora, M; Fernandez-Cruz, L; Vidal, O; Alastrue,

A; Balibrea, J; Halperin, I; Mauricio, D; Castaño, JP. The truncated isoform of somatostatin receptor 5 (sst5TMD4) is Associated with poorly differentiated thyroid cancer. 2014; *Plos One*. 9(1):e85527
IF:3.534

Cordoba-Chacon, J; Gahete, MD; McGuinness, OP; Kineman, RD. Differential impact of selective GH deficiency and endogenous GH excess on insulin-mediated actions in muscle and liver of male mice. *Am J Physiol-Endocrinol Metab*. 2014; 307(10):E928-E934
IF:4.088

Review

Castaño, J. P.; Sundin, A; Maecke, H. R.; Villabona, C; Vazquez-Albertino, R.; Navarro, E; Oberg, K. Gastrointestinal neuroendocrine tumors (NETs): new diagnostic and therapeutic challenges. *Cancer Metast Rev*. 2014; 33(1):353-359
IF:6.449

Gahete, MD.; Rincon-Fernandez, D; Villa-Osaba, A; Hormaechea-Agulla, D; Ibanez-Costa, A; Martinez-Fuentes, AJ; Gracia-Navarro, F; Castaño, JP.; Luque, RM. Ghrelin gene products, receptors, and GOAT enzyme: biological and pathophysiological insight. *J Endocrinol*. 2014; 220(1):R1-R24
IF:3.586

In Collaborations

Papers

Gahete, MD; Luque, RM; Yubero-Serrano, EM; Cruz-Teno, C; Ibanez-Costa, A; Delgado-Lista, J;

Gracia-Navarro, F; Perez-Jimenez, F; Castaño, JP; Lopez-Miranda, J. Dietary fat alters the expression of cortistatin and ghrelin systems in the PBMCs of elderly subjects: Putative implications in the postprandial inflammatory response. *Mol Nutr Food Res*. 2014; 58(9):1897-1906
IF:4.909

Gahete, MD; Cordoba-Chacon, J; Lantvit, DD; Ortega-Salas, R; Sanchez-Sanchez, R; Perez-Jimenez, F; Lopez-Miranda, J; Swanson, SM; Castaño, JP; Luque, RM; Kineman, RD. Elevated GH/IGF-I promotes mammary tumors in high-fat, but not low-fat, fed mice. *Carcinogenesis*. 2014; 35(11):2467-73
IF:5.266

Diaz-Rodriguez, E; Garcia-Rendueles, AR; Ibanez-Costa, A; Gutierrez-Pascual, E; Garcia-Lavandeira, M; Leal, A; Japon, MA; Soto, A; Venegas, E; Tinahones, FJ; Garcia-Arnes, JA; Benito, P; Galvez, MA; Jimenez-Reina, L; Bernabeu, I; Dieguez, C; Luque, RM; Castaño, JP; Alvarez, CV. Somatotropinomas, but not non-functioning pituitary adenomas, maintain a functional apoptotic RET/Pit1/ARF/p53 pathway that is blocked by excess GDNF. *Endocrinology*. 2014; 155(11):4329-4340
IF:4.644

Sanchez-Garrido, MA; Ruiz-Pino, F; Manfredi-Lozano, M; Leon, S; Garcia-Galiano, D; Castaño, JP.; Luque, RM.; Romero-Ruiz, A; Castellano, JM.; Dieguez, C; Pinilla, L; Tena-Sempere, M. Obesity-Induced hypogonadism in the male: Premature reproductive neuroendocrine senescence and contribution of Kiss1-mediated mechanisms. *Endocrinology*. 2014; 155(3):1067-1079
IF:4.644

Babu, A; Luque, RM.; Glick, R; Utset, M; Fogelfeld, L. Variability in quantitative expression of receptors in nonfunctioning pituitary macroadenomas an opportunity for targeted medical therapy. *Endocr Pract.* 2014; 20(1):15-25 IF:2.588

Research Fundings

National

Castaño Fuentes, JP. Role of somatostatin, cortistatin and ghrelin in the pathological interaction between obesity and breast cancer. Funding agency: Ministry of Economy and Competitiveness (MINECO).Reference: BFU2010-19300

Luque Huertas, RM. Identifying new molecular targets of the regulatory systems of somatostatin, ghrelin and its receptors in human pituitary pathologies: Presence, role and functional potential. Funding agency: Merck Serono Research Grants. Reference: CCB.0052

Luque Huertas, RM. Molecular, cellular, Endocrine-Metabolic and inflammatory factors involved in the pathological interaction between obesity and prostate cancer. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI13/00651

Castaño Fuentes, JP. Role of alternative splicing and its (dys)regulation in tumoral pathologies and cancer: diagnostic and therapeutic potential. Funding agency: Ministry of Econo-

my and Competitiveness (MINECO).Reference: BFU2013-43282-R
To Begin in 2015

Castaño Fuentes JP; Martínez Fuentes, AJ. Characterization of gene expression in gastro-entero-pancreatic neuroendocrine tumors and its correlation with clinical aspects and behavior of the tumor. Funding agency: Grupo Español de Tumores Neuroendocrinos (GETNE). Reference: CCB.UC00053

Rodríguez Ariza, A (This project was funded as a collaborative initiative among different research groups). Sistema de detección de compuestos volátiles para diagnóstico precoz de cáncer (Proyecto ONCOVER). Funding agency: MINECO/FEDER/UCO

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: Institute Carlos III Health (ISCIII). REF: PIE/1400005

Regional

Gracia Navarro, F. Cellular and Molecular Endocrinology scientific Group(BIO-139).Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE).

Luque Huertas, RM. Functional role and therapeutic potential of aberrant splicing variants of the ghrelin system (In1-ghrelin/GHS-R1b) and of the somatostatin receptor 5 (sst5TMD4/5) in pituitary tumors and in breast and prostate cancer. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0639-2012

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

Contract with Companies

Castaño Fuentes JP; Luque Huertas RM. Truncated sst5TMD4/5 receptors in neuroendocrine tumors, prostate cancer and Cushing disease: functional role and potential therapeutic value. Funding agency: IPSEN-SCRAS S.A.S.

Luque Huertas RM; Castaño Fuentes JP. In1-ghrelin, a novel aberrantly spliced ghrelin variant, GOAT and GHSR1a and GHSR1b in neuroendocrine tumors, prostate cancer and Cushing disease: presence, function and therapeutic potential. Funding agency: IPSEN-SCRAS S.A.S. Reference: ccb.uco0042

PhD Researchers

Yolanda Almaden Peña
M^a Ángeles Blanco Molina
Rafael Ángel Fernández De La Puebla
Francisco Fuentes Jimenez
Manuel Montero Perez-Barquero
Anabel Perez Caballero
Oriol Alberto Rangel Zuñiga
Esther Sánchez Garcia
Elena Yubero Serrano

Post-PhD Researchers

Ruth Blanco Rojo
Antonio Camargo Garcia
Juan Criado Garcia
Cristina Cruz Teno
Nieves Delgado Casado
Manuel David Gahete Ortiz
Antonio Garcia Ríos
Francisco Gomez Delgado
Purificacion Gomez Luna
Anabel Jimenez Morales
Carmen Marín Hinojosa
Eliana Romina Meza Miranda
Lorena Gonzalez De La Guardia
Patricia Judith Peña Orihuela

Pre-PhD Researchers

Juan Francisco Alcalá Diaz;
Andreaa Corina Baba
Carmen Maria Haro Mariscal

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

Ezequiel Herruzo Gómez
Rosa Jimenez Lucena
Luciano López Jimenez
Vanessa Navarro Martos
Gracia M^a Quintana Navarro
Amalia Torres Roldan
Rosario Carreras Calero
Marta Magdalena Cruz Donoso
Beatriz Lucena Porras

Team Leader

Principal Investigator (PI)

José López Miranda
jlopezmir@uco.es
IMIBIC's Deputy Scientific Director
CIBER de la Obesidad y Nutrición (CIBERObn)
PAIDI CTS-525 Scientific Group

Co- Principal Investigator (CO-PI)

Francisco Pérez Jiménez
PAIDI CTS-212 Scientific Group
Pablo Pérez Martínez
Javier Delgado Lista



Scientific Activity

Our group studies the effect of dietary components on cardiovascular risk from a dual approach: nutrigenetics and their biological action on factors and mechanisms related to the development of atherosclerosis, preferably in patients with metabolic syndrome. Through nutrigenetics, we investigate how common genetic variants modulate the influence of diet on markers such as postprandial metabolism, endothelial function, obesity or glucose metabolism. While investigating their biological effects, we analyze the action of nutrients on atherogenic mechanisms such as oxidative stress, inflammation, endothelial function, hemostasis, cellular signalling mechanisms and the activation of genes involved in atherogenesis. Finally we have ongoing a clinical trial to test the comparative effects of two healthy diets on clinical events in a coronary heart disease population.

Keywords

Atherosclerosis; metabolic syndrome; mediterranean diet; endothelium; inflammation; oxidative stress; cholesterol; polyphenols; gene expression; proteomics; nutrigenetics; nutrigenomics.

Scientific Production

Publications

Original

Papers

Montero-Perez-Barquero, M.; Flather, M.; Roughton, M.; Coats, A.; Bohm, M.; Van Veldhuisen, D.J.; Babalis, D.; Solal, A.C.; Manzano, L. Influence of systolic blood pressure on clinical outcomes in elderly heart failure patients treated with nebivolol: data from the SENIORS trial. *European Journal of Heart Failure*. 2014; 16(9):1009-1015
IF:6.577

Delgado-Lista, Javier; Perez-Martinez, Pablo; Solivera, Juan; Garcia-Rios, Antonio; Perez-Caballero, A. I.; Lovegrove, Julie A.; Drevon, Christian A.; Defoort, Catherine; Blaak, Ellen E.; Dembinska-Kiec, Aldona; Riserus, Ulf; Herruzo-Gomez, Ezequiel; Camargo, Antonio; Ordovas, Jose M.; Roche, Helen; Lopez-Miranda, Jose. Top Single Nucleotide Polymorphisms Affecting Carbohydrate Metabolism in Metabolic Syndrome: From the LIPGENE Study. *Journal of Clinical Endocrinology & Metabolism*. 2014; 99(2):E384-E389
IF:6.31

Formiga, Francesc; Chivite, David; Conde, Alicia; Ruiz-Laiglesia, Fernando; Gonzalez Franco, Alvaro; Perez Bocanegra, Carmen; Manzano, Luis; Montero Perez-Barquero, Manuel; RICA Investigators. Basal functional status predicts three-month mortality after a heart failure hospitalization in elderly patients - The prospective RICA study. *International Journal of Cardiology*. 2014;172(1):127-131
IF:6.175

Gahete, Manuel D.; Cordoba-Chacon, Jose; Lantvit, Daniel D.; Ortega-Salas, Rosa; Sanchez-Sanchez, Rafael; Perez-Jimenez, Francisco; Lopez-Miranda, Jose; Swanson, Steven M.; Castano, Justo P.; Luque, Raul M.; Kineman, Rhonda D. Elevated GH/IGF-I promotes mammary tumors in high-fat, but not low-fat, fed mice. *Carcinogenesis*. 2014. 35(11):2467-73
IF:5.266

Gutierrez-Mariscal, Francisco M.; Yubero-Serrano, Elena M.; Rangel-Zuniga, Oriol A.; Marin, Carmen; Garcia-Rios, Antonio; Perez-Martinez, Pablo; Delgado-Lista, Javier; Malagon, Maria M.;

Tinahones, Francisco J.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Postprandial Activation of P53-Dependent DNA Repair Is Modified by Mediterranean Diet Supplemented With Coenzyme Q(10) in Elderly Subjects. *Journals of Gerontology Series A-Biological Sciences and Medical Sciences*. 2014; 69(7):886-893
IF:4.984

Gomez-Delgado, Francisco; Francisco Alcalá-Díaz, Juan; Garcia-Rios, Antonio; Delgado-Lista, Javier; Ortiz-Morales, Ana; Rangel-Zuniga, Oriol; Jose Tinahones, Francisco; Gonzalez-Guardia, Lorena; Malagon, Maria M.; Bellido-Munoz, Enrique; Ordovas, Jose M.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose; Perez-Martinez, Pablo. Polymorphism at the TNF-alpha gene interacts with Mediterranean diet to influence triglyceride metabolism and inflammation status in metabolic syndrome patients: From the CORDIOPREV clinical trial. *Molecular Nutrition & Food Research*. 2014; 58(7):1519-1527
IF:4.909

Jimenez-Gomez Y, Cruz-Teno C, Rangel-Zuniga OA, Peinado JR, Perez-Martinez P, Delgado-Lista J, Garcia-Rios A, Camargo A, Vazquez-Martinez R, Ortega-Bellido M, Perez-Jimenez F, Roche HM, Malagon MM, Lopez-Miranda J. Effect of dietary fat modification on subcutaneous white adipose tissue insulin sensitivity in patients with metabolic syndrome. *Molecular Nutrition & Food Research*. 2014; 58(11):2177-2188
IF:4.909

Rangel-Zuniga, Oriol A.; Haro, Carmen; Perez-Martinez, Pablo; Delgado-Lista, Javier; Marin, Carmen; Quintana-Navarro, Gracia M.; Tinahones, Francisco J.; Malagon, Maria M.; Lopez-Segura, Fernando; Lopez-Miranda, Jose; Perez-Jimenez, Francisco; Camargo, Antoni. Effect of frying oils on the postprandial endoplasmic reticulum stress in obese people. *Molecular Nutrition & Food Research*. 2014; 58(11):2239-2242
IF:4.909

Gahete, MD; Luque, RM; Yubero-Serrano, EM; Cruz-Teno, C; Ibanez-Costa, A; Delgado-Lista, J; Gracia-Navarro, F; Perez-Jimenez, F; Castano, JP; Lopez-Miranda, J. Dietary fat alters the expression of cortistatin and ghrelin systems in the P BMCs of elderly subjects: Putative implications in the postprandial inflammatory response. *Molecular Nutrition & Food Research*. 2014; 58(9):1897-1906
IF:4.909

Blanco-Molina, Angeles; Enea, Iolanda; Gadelha, Telma; Tufano, Antonella; Bura-Riviere, Alessandra; Di Micco, Pierpaolo; Bounameaux, Henri; Gonzalez, Jose; Villalta, Jaume; Monreal, Manuel; RIETE Investigators. Sex differences in patients receiving anticoagulant therapy for venous thromboembolism. *Medicine*. 2014; 93(17):309-317
IF:4.867

Gahete, Manuel D.; Duran-Prado, Mario; Delgado-Niebla, Elena; Garrido, Juan J.; Rhodes, Simon J.; Garcia-Navarro, Socorro; Gracia-Navarro, Francisco; Malagon, Maria M.; Luque, Raul M.; Castano, Justo P. Porcine sst1 can physically interact with other somatostatin receptors, and its expression is regulated by metabolic/inflammatory sensors. *American Journal of Physiology-Endocrinology and Metabolism*. 2014; 306(5):E483-E493
IF:4.088

Camargo, Antonio; Meneses, Maria E.; Perez-Martinez, Pablo; Delgado-Lista, Javier; Jimenez-Gomez, Yolanda; Cruz-Teno, Cristina; Tinahones, Francisco J.; Paniagua, Juan A.; Perez-Jimenez, Francisco; Roche, Helen M.; Malagon, Maria M.; Lopez-Miranda, Jose. Dietary fat differentially influences the lipids storage on the adipose tissue in metabolic syndrome patients. *European Journal of Nutrition*. 2014; 53(2):617-626
IF:3.84

Alcala-Diaz, Juan F.; Delgado-Lista, Javier; Perez-Martinez, Pablo; Garcia-Rios, Antonio; Marin, Carmen; Quintana-Navarro, Gracia M.; Gomez-Luna, Purificacion; Camargo, Antonio; Almaden, Yolanda; Caballero, Javier; Tinahones, Francisco J.; Ordovas, Jose M.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Hypertriglyceridemia Influences the Degree of Postprandial Lipemic Response in Patients with Metabolic Syndrome and Coronary Artery Disease: From the Cordioprev Study. *Plos One*. 2014;9(5):-e96297
IF:3.534

Rodriguez-Ortiz, Maria E.; Canalejo, Antonio; Herencia, Carmen; Martinez-Moreno, Julio M.; Peralta-Ramirez, Alan; Perez-Martinez, Pablo; Navarro-Gonzalez, Juan F.; Rodriguez, Mariana; Peter, Mirjam; Gundlach, Kristina; Steppan, Sonja; Passlick-Deetjen, Jutta; Munoz-Castaneda, Juan R.; Almaden, Yolanda. Magnesium modulates parathyroid hormone secretion and upregulates parathyroid receptor expression at moderately low calcium concen-

tration. *Nephrology Dialysis Transplantation*. 2014;29(2):282-289
IF:3,488

González-Guardia L, Yubero-Serrano EM, Rangel-Zuñiga O, Marin C, Camargo A, Pérez-Martínez P, Delgado-Lista J, Gómez-Delgado F, García-Ríos A, Tinahones FJ, Roche HM, Pérez-Jiménez F, López-Miranda J. Influence of endothelial dysfunction on telomere length in subjects with metabolic syndrome: LIPGENE study. *Age*. 2014; 36(4):Number of Article: 9681
IF: 3.445

Romina Meza-Miranda, Eliana; Camargo, Antonio; Alberto Rangel-Zuniga, Oriol; Delgado-Lista, Javier; García-Ríos, Antonio; Pérez-Martínez, Pablo; Tasset-Cuevas, Inma; Túnnez, Isaac; Tinahones, Francisco J.; Pérez-Jiménez, Francisco; López-Miranda, Jose. Postprandial oxidative stress is modulated by dietary fat in adipose tissue from elderly people. *Age*. 2014;36(2):507-517
IF:3,445

Camargo, Antonio; Meneses, Maria E.; Pérez-Martínez, Pablo; Delgado-Lista, Javier; Rangel-Zuniga, Oriol A.; Marin, Carmen; Almadaen, Yolanda; Yubero-Serrano, Elena M.; Gonzalez-Guardia, Lorena; Fuentes, Francisco; Tinahones, Francisco J.; Roche, Helen M.; Malagon, Maria M.; Pérez-Jiménez, Francisco; López-Miranda, Jose. Dietary fat modifies lipid metabolism in the adipose tissue of metabolic syndrome patients. *Genes and Nutrition*. 2014; 9(4): Número de artículo: 409
IF:3,419

García-Ríos A, Nikolic D, Pérez-Martínez P, López-Miranda J, Rizzo M, Hoogeveen RC. LDL and HDL Subfractions, Dysfunctional HDL: Treatment Options. *Current Pharmaceutical Design*. 2014; 20(40):6249-6255
IF:3,288

Camargo, Antonio; Alberto Rangel-Zuniga, Oriol; Haro, Carmen; Romina Meza-Miranda, Eliana; Pena-Orihuela, Patricia; Eugenia Meneses, Maria; Marin, Carmen; Maria Yubero-Serrano, Elena; Pérez-Martínez, Pablo; Delgado-Lista, Javier; Manuel Fernandez-Real, Jose; Luque de Castro, M. Dolores; Jose Tinahones, Francisco; Lopez-Miranda, Jose; Pérez-Jiménez, Francisco. Olive oil phenolic compounds decrease the postprandial inflammatory response by reducing postprandial plasma lipopolysaccharide levels. *Food Chemistry*. 2014; 162:161-171
IF:3,259

Rodríguez, Mariano; Muñoz-Castaneda, Juan R; Almadaen, Yolanda. Therapeutic use of calcitriol. *Current Vascular Pharmacology*. 2014;12-2:294-299
IF:2,908

García-Ríos, Antonio; Jesus Gomez-Delgado, Francisco; Garaulet, Marta; Francisco Alcala-Diaz, Juan; Javier Delgado-Lista, Francisco; Marin, Carmen; Alberto Rangel-Zuniga, Oriol; Rodríguez-Cantalejo, Fernando; Gomez-Luna, Purificación; Maria Ordoñas, Jose; Pérez-Jiménez, Francisco; López-Miranda, Jose; Pérez-Martínez, Pablo. Beneficial effect of CLOCK gene polymorphism rs1801260 in combination with low-fat diet on insulin metabolism in the patients with metabolic syndrome. *Chronobiology International*. 2014; 31(3):401-408
IF:2,878
Q:1 D:3

Pérez-Martínez, Pablo; Alcala-Diaz, Juan F; Delgado-Lista, Javier; García-Ríos, Antonio; Gomez-Delgado, Francisco; Marin-Hinojosa, Carmen; Rodríguez-Cantalejo, Fernando; Delgado-Casado, Nieves; Pérez-Caballero, Ana I; Fuentes-Jimenez, Francisco J; Camargo, Antonio; Tinahones, Francisco J; Ordoñas, Jose M; Pérez-Jiménez, Francisco; Lopez-Miranda, Jose. Metabolic phenotypes of obesity influence triglyceride and inflammation homeostasis. *European Journal Of Clinical Investigation*. 2014; 44-11:1053-1064
IF:2,834

Camargo A, Peña-Orihuela P, Rangel-Zuñiga OA, Pérez-Martínez P, Delgado-Lista J, Cruz-Teno C, Marin C, Tinahones F, Malagón MM, Roche HM, Pérez-Jiménez F, López-Miranda J. Peripheral blood mononuclear cells as in vivo model for dietary intervention induced systemic oxidative stress. *Food And Chemical Toxicology*. 2014; 72:178-186
IF:2,61

Ruiz-Laiglesia, FJ; Sanchez-Marteles, M; Perez-Calvo, JI; Formiga, F; Bartolome-Satue, JA; Armengou-Arxe, A; Lopez-Quiros, R; Perez-Silvestre, J; Serrado-Iglesias, A; Montero-Perez-Barquero, M. Comorbidity in heart failure Results of the Spanish RICA Registry. *QJM- An International Journal of Medicine*. 2014; 107(12):989-994
IF:2,461

Carrasco-Sanchez Javier, Francisco; Gomez-Huelgas, Ricardo; Formiga, Francesc; Conde-Martel, Alicia; Carles Trullas, Joan; Betencourt, Paulo; Carlos Arevalo-Lorido, Jose; Montero Perez-Barquero, Manuel; RICA Investigators. Association between type-2 diabetes mellitus and post-discharge outcomes in heart failure patients: Findings from the RICA registry. *Diabetes Research and Clinical Practice*. 2014; 104(3):410-419
IF:2,536

Sanchez-Garcia, M. E.; Gomez-Delgado, F.; Gomez-Garduno, A.; Blanco-Molina, A.; Fernandez de la Puebla, R. A. Hypertrophic pachymeningitis associated with cerebral spinal fluid hypovolemia as initial presentation of systemic lupus erythematosus. *Lupus*. 2014; 23(2):197-200
IF:2,481

Bonfanti, Noelia; Marcelo Fernandez, Juan; Gomez-Delgado, Francisco; Pérez-Jiménez, Francisco. Effect of two hypocaloric diets and their combination with physical exercise on basal metabolic rate and body composition. *Nutrition Hospitalaria*. 2014; 29(3):635-643
IF:1,25

Editorial Material

Mata, P; Alonso, R; Pérez-Jiménez, F. Screening for Familial Hypercholesterolemia: a Model for Preventive Medicine. *Revista Española de Cardiología*. 2014; 67(9):685-688
IF:3,342

Jimenez, FP. Atherogenic dyslipidemia: A condition that should not be overlooked. *Revista Clinica Española*. 2014; 214(9):513-514
IF:1,314

Review

Gahete, Manuel D.; Rincon-Fernandez, David; Villa-Osaba, Alicia; Hormaechea-Agulla, Dan-

iel; Ibanez-Costa, Alejandro; Martinez-Fuentes, Antonio J.; Gracia-Navarro, Francisco; Castano, Justo P.; Luque, Raul M. Ghrelin gene products, receptors, and GOAT enzyme: biological and pathophysiological insight. *Journal of Endocrinology*. 2014; 220(1):R1-R24
IF:3,586

In Collaborations

Papers

Suades, Rosa; Padro, Teresa; Alonso, Rodrigo; Lopez-Miranda, Jose; Mata, Pedro; Badimon, Lina. Circulating CD45(+)/CD3(+) lymphocyte-derived microparticles map lipid-rich atherosclerotic plaques in familial hypercholesterolaemia patients. *Thrombosis and Haemostasis*. 2014; 111(1):111-121
IF:5,76

Guzman-Ruiz R, Ortega F, Rodriguez A, Vazquez-Martinez R, Diaz-Ruiz A, Garcia-Navarro S, Giralt M, Garcia-Rios A, Cobo-Padilla D, Tinahones FJ, Lopez-Miranda J, Villarroya F, Fruhbeck G, Fernandez-Real JM, Malagon MM. Alarmin high-mobility group B1 (HMGB1) is regulated in human adipocytes in insulin resistance and influences insulin secretion in beta-cells. *International Journal of Obesity*. 2014; 38(12):1545-1554
IF:5,386

Garrido-Sanchez, L; Roca-Rodriguez, MD; Fernandez-Veledo, S; Vendrell, J; Yubero-Serrano, EM; Ocana-Wilhelmi, L; Garcia-Fuentes, E; Tinahones, FJ. C/CG2 and CDK4 is associated with insulin resistance in adipose tissue. *Surgery For Obesity And Related Diseases*. 2014;1(4):691-696.
IF:4,942

Cordoba-Chacon, Jose; Gahete, Manuel D.; Pokala, Naveen K.; Geldermann, David; Alba, Maria; Salvatori, Roberto; Luque, Raul M.; Kineman, Rhonda D. Long-But Not Short-Term Adult-Onset, Isolated GH Deficiency in Male Mice Leads to Deterioration of beta-Cell Function, Which Cannot Be Accounted for by Changes in beta-Cell Mass. *Endocrinology*. 2014; 155(3):726-735
IF:4,644

Luque, RM; Cordoba-Chacon, J; Ibanez-Costa, A; Gesmundo, I; Grande, C; Gracia-Navarro, F; Tena-Sempere, M; Ghigo, E; Gahete, MD; Granata, R; Kineman, RD; Castano, JP. Obestatin Plays an Opposite Role in the Regulation of Pituitary Somatotrope and Corticotrope Function in Female Primates and Male/Female Mice. *Endocrinology*. 2014; 155(4):1407-1417
IF:4,644

Cordoba-Chacon, J; Gahete, MD; McGuinness, OP; Kineman, RD. Differential impact of selective GH deficiency and endogenous GH excess on insulin-mediated actions in muscle and liver of male mice. *American Journal of Physiology-Endocrinology and Metabolism*. 2014;307(10):E928-E934
IF:4,088

Vazquez, C.; Botella-Carretero, J. I.; Corella, D.; Fiol, M.; Lage, M.; Lurbe, E.; Richart, C.; Fernandez-Real, J. M.; Fuentes, F.; Ordonez, A.; de Cos, A. I.; Salas-Salvado, J.; Burguera, B.; Estruch, R.; Ros, E.; Pastor, O.; Casanueva, F. F. WISH-CARE Study Investigators. White fish reduces cardiovascular risk factors in patients with metabolic syndrome: The WISH-CARE study.

a multicenter randomized clinical trial. *Nutrition Metabolism and Cardiovascular Diseases*. 2014; 24(3):328-335
IF:3.875

Puig-Domingo, Manel; Luque, Raul M.; Reverter, Jordi L.; Lopez-Sanchez, Laura M.; Gahete, Manuel D.; Culler, Michael D.; Diaz-Soto, Gonzalo; Lomena, Francisco; Squarcia, Mattia; Luis Mate, Jose; Mora, Mireia; Fernandez-Cruz, Laureano; Vidal, Oscar; Alastrue, Antonio; Balibrea, Jose; Halperin, Irene; Mauricio, Didac; Castaño, Justo P. The Truncated Isoform of Somatostatin Receptor5 (sst5TMD4) Is Associated with Poorly Differentiated Thyroid Cancer. *Plos One*. 2014; 9(1): E85527
IF:3.534

Montes de Oca, Addy; Guerrero, Fatima; Martinez-Moreno, Julio M; Madueno, Juan A; Herencia, Carmen; Peralta, Alan; Almaden, Yolanda; Lopez, Ignacio; Aguilera-Tejero, Escolastico; Gundlach, Kristina; Buchel, Janine; Peter, Mirjam E; Passlick-Deetjen, Jutta; Rodriguez, Mariano; Munoz-Castaneda, Juan R. Magnesium inhibits Wnt/beta-catenin activity and reverses the osteogenic transformation of vascular smooth muscle cells.*Plos One*.2014 25:9(2):e89525
IF:3.534

Guerrero, F; Herencia, C; Almaden, Y; Martinez-Moreno, JM; de Oca, AM; Rodriguez-Ortiz, ME; Diaz-Tocados, JM; Canalejo, A; Florio, M; Lopez, I; Richards, WG; Rodriguez, M; Aguilera-Tejero, E; Munoz-Castaneda, JR. TGF-beta Prevents Phosphate-Induced Osteogenesis through Inhibition of BMP and Wnt/beta-Catenin Pathways.*Plos One*.2014. 27:9(2):e89179
IF:3.534

Peralta-Ramirez, A.; Montes de Oca, A.; Raya, A. I.; Pineda, C.; Lopez, I.; Guerrero, F.; Diez, E.; Munoz-Castaneda, J. R.; Martinez, J.; Almaden, Y.; Rodriguez, M.; Aguilera-Tejero, E. Vitamin E protection of obesity-enhanced vascular calcification in uremic rats.*American Journal Of Physiology-Renal Physiology*.2014.15:306(4):F422-9
IF:3.3

Walsh, Marianne C.; McLoughlin, Gerard A.; Roche, Helen M.; Ferguson, Jane F.; Drevon, Christian A.; Saris, Wim H. M.; Lovegrove, Julie A.; Riserus, Ulf; Lopez-Miranda, Jose; Defoort, Catherine; Kiec-Wilk, Beata; Brennan, Lorraine; Gibney, Michael J. Impact of geographical region on urinary metabolomic and plasma fatty acid profiles in subjects with the metabolic syndrome across Europe: the LIPGENE study. *British Journal of Nutrition*. 2014; 111(3):424-431
IF:3.342

Cote, LP; Greenberg, S; Caprini, JA; Stone, J; Arcelus, JI; Lopez-Jimenez, L; Rosa, V; Schellong, S; Monreal, M. Outcomes in Neurosurgical Patients Who Develop Venous Thromboembolism: A Review of the RIETE Registry. *Clinical and Applied Thrombosis-Hemostasis*. 2014; 20(8):772-778
IF:1.575

Pinto, X; Valdivielso, P; Perez de Juan, J. M.; Plana, N.; Garcia-Arias, C.; Fuentes, F. J.; Hernandez-Mijares, A.; Mostaza, J. M. Spanish Registry Hypertriglyceride; Spanish Soc Arteriosclerosis; SAS. Predictive factors of achieving therapeutic goals of hypertriglyceridemia. *Current Medical Research and Opinion*. 2014; 30(1):19-26
IF:2.372

Gonzalez-Garcia, Andres; Montero Perez-Barquero, Manuel; Formiga, Francesc; Gonzalez-Juanatey, Jose R.; Angustias Quesada, M.; Epelde, Francisco; Oropesa, Roberto; Diez-Mangano, Jesus; Cerqueiro, Jose M.; Manzano, Luis; RICA Registry Investigators. Has Beta-blocker Use Increased in Patients With Heart Failure in Internal Medicine Settings? Prognostic Implications: RICA Registry. *Revista Española de Cardiología*. 2014; 67(3):196-202
IF:3.342

Trujillo-Santos, Javier; Gussoni, Gualberto; Gadelha, Telma; Saenchez Munoz-Torrero, Juan Francisco; Barron, Manuel; Lopez, Luciano; Ruiz-Ruiz, Justo; Fernandez-Capitan, Carmen; Lorente, Manuel; Monreal, Manuel; RIETE Investigators. Influence of recent immobilization or surgery on mortality in cancer patients with venous thromboembolism. *Thrombosis Research*. 2014; 133(Suplemento 2):S29-S34
IF:2.427

Research Fundings

National

Fuentes Jiménez, F. Evaluation and Characterization of Coronary Atherosclerosis. Funding agency:Institute Carlos III Health (ISCIII).Reference:PII2/01461

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:Institute Carlos III Health (ISCIII).Reference:PII3/00023

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:Institute Carlos III Health (ISCIII).Reference:PII3/00185

Pérez Jiménez, F. Identifying the bowel microbiota patter to predict the development of the metabolic syndrome and diet-based modulation.Funding agency:Institute Carlos III Health (ISCIII).Reference:PII3/00619

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: Institute Carlos III Health (ISCIII).Reference: PII4/00618
To Begin in 2015

Almaden Peña, Y. Association between mineral metabolism parameters and cardiovascular Disease. Influence of the mediterranean diet. Funding agency: Institute Carlos III Health (ISCIII).Reference: PII4/00872
To Begin in 2015

López Miranda J. Early predictors and causes of loss of phenotypic flexibility as individual risk factor of metabolicdisease: towards a personalized medicine (FLEXI-MET). Funding agency: Institute Carlos III Health (ISCIII).Reference: PIE14/00005
To Begin in 2015

López Miranda, J. CODIGO: Understanding obesity (Ob), metabolic syndrome (MetS), type 2 diabetes (T2DM) and fatty liver disease (FL): a multidisciplinary approach. Funding agency:

Institute Carlos III Health (ISCIII).Reference: PIE 14/00031
To Begin in 2015

Pérez Jiménez, F. Formalization of Economic Compensation Agreement.Funding agency:Spanish Ministry of Economy and Competitiveness (MINECO) Reference MCI.CIBEROBN

López 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.Funding agency:Spanish Ministry of Economy and Competitiveness (MINECO). Reference:AGL2012-39615

Pérez Martínez, P. Merck Serono research grant to the study: Characterization of the genetic architecture of metabolic syndrome related to the inflammatory response and interaction with the Mediterranean diet.Funding agency:Fundacion Salud 2000. Reference: MSO1-2011-

International

Lopez Miranda, J.(NUTRITECH). Application on new technologies and methods in nutrition research-the example of phenotypic flexibility.Funding agency:Comisión Europea / 7pm-Programa Cooperación -Tema Salud- Single Stage- 2011.Reference: FP7-289511

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 CVI-7450

Pérez Jiménez, F. Biomodulatory effects of olive oil on the molecular mechanisms of inflammation and oxidative stress in patients with metabolic syndrome. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference PO9-CTS-5015

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

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

López Miranda, J- Perez Jimenez, F. Effectiveness of the olive oil-rich Mediterranean diet in reducing coronary risk in patients with ischemic heart disease (Cardioprev). Funding agency: CEAS, Diputación Córdoba, Diputación Jaén, y Fundación Progresoy Salud. Reference: NCT00924937

Contract with Companies

López Miranda, J. Astrazeneca agreement. Funding agency:Astrazeneca Farmaceutica Spain S.A. Reference:CCB.0046

Martínez Fuentes, A. Grupo Español de Tumores Neuroendocrino Agreement. Funding agency: Grupo Español de Tumores Neuroendocrino. Reference: CCB.UC00053

López Miranda, J. Assessing the effect of the new model of healthy pastry making on health. Funding agency: Iniciativas Comunitarias Estepa Sierra Sur S.A. Reference: CCB.UC00059

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

Pérez Jiménez, F. Nutritional Intervention Study to assess the evolution of health benefits derived from the consumption of hake in populations at high cardiovascular risk. PESCANOVA project. Funding agency: Centro de Investigación Biomédica en Red de la Fisiopatología de la Obesidad y Nutrición (CIBER on Obesity and Nutrition (CIBERobn)). Reference: PSS.0011

López Miranda, J. Services Agreement TNO-FIBICO. Funding agency: Tno Earth, Environmental and LS. Reference: PSS.0014

Montero Pérez-Barquero, M. Laboratorios Servier Agreement. Funding agency: Laboratorios Servier, S.L. Reference: PSS.0051

Clinical Trials

0021/08: Two-year extension of a global, multicenter, randomized, placebo-controlled, 76-week study to assess the tolerability and effectiveness of anacetrapib added to an ongoing statin-based treatment in patients with heart disease or equivalent risk of developing a heart disease. Extension of the reversibility period from 12 weeks to one year. PI: Dr/a Pérez Jiménez, Francisco

0159/11: Open label extension (OLE), controlled, multicenter study to assess the safety and long-term efficacy of AMG 145. PI: Dr/a López Miranda, Jose

0267/11: 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/a López Miranda, Jose

0014/12: Long-term safety and tolerability profile of REGN727/SAR236553 in patients at high cardiovascular risk with inadequately controlled hypercholesterolemia with a lipid-modifying therapy: A randomized, double-blind, controlled study. PI: Dr/a Pérez Jiménez, Francisco

0136/12: A multicenter, randomized, double-blind study to assess the safety and efficacy of AMG 145, compared with ezetimibe in

hypercholesterolemic subjects intolerant to an effective dose of an HMG-CoA reductase inhibitor. PI: Dr/a López Miranda, Jose

0139/12: Multicenter, randomized, double-blind, placebo-controlled study to assess the safety, tolerability and efficacy of AMG 145 in LDL cholesterol in subjects with heterozygous familial hypercholesterolemia. PI: Dr/a López Miranda, Jose

0166/12: 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/a López Miranda, Jose

0183/12: A multicenter, double-blind, placebo-controlled, parallel-group study to assess the effectiveness and safety of SAR236553/REGN727 in patients with heterozygous familial hypercholesterolemia that is not adequately controlled with their treatment. PI: Dr/a Pérez Jiménez, Francisco

0231/12: Evaluation of the clinical effects of cholesteryl ester transfer protein inhibition induced with evacetrapib in patients at a high cardiovascular risk. PI: Dr/a Pérez Jiménez, Francisco

0314/12: 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/a Fuentes Jiménez, Francisco

0346/12: A multicenter, randomized, double-blind, double-simulation, parallel-group, active-control, 52-week study of the effect of QVA149 versus salmeterol/fluticasone. PI: Dr/a Delgado Lista, Javier

0032/13: 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/a Fuentes Jiménez, Francisco

0033/13: A two-part, phase 2/3 study to assess the safety, tolerability and long-term efficacy of AMG 145 in subjects with heterozygous familial hypercholesterolemia. PI: Dr/a 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/a López Miranda, Jose

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/a 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/a 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-naïve patients with primary heterozygous familial hypercholesterolemia. PI: Dr/a Fuentes Jiménez, Francisco

0282/13: A randomized, double-blind, double-blind, placebo-controlled, parallel-group, 52-week study to assess the efficacy, safety and tolerability of PF-04950615 in patients with heterozygous familial hypercholesterolemia. PI: Dr/a Pérez Martínez, Pablo

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/a 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/a 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/a Fuentes Jiménez, Francisco

2053: Xalixa-Xarelto® for initial long-term anticoagulation in venous thromboembolism (VTE). PI: Dr/a Blanco Molina, M^a Ángeles

2239: Prevention of thromboembolism episodes/ European Registry of venous thromboembolism. ESTUDIO PREFER study of VTE. PI: Dr/a López Jimenez, Luciano

2239/0: Prevention of thromboembolism episodes/ European Registry of venous thromboembolism. ESTUDIO PREFER study of VTE. PI: Dr/a Blanco Molina, M^a Ángeles

2566: Validating the ACTS questionnaire for patients with atrial fibrillation treated with oral anticoagulants in Internal Medicine and Neurology units in Spain. ALADI study. PI: Dr/a Montero Pérez-Barquero, Manuel

2615/2: General, long-term registry of atrial fibrillation. EORP registry. PI: Dr/a Montero Pérez-Barquero, Manuel

Hormonal regulation of energy balance, puberty and reproduction

Publications

22

Impact Factor

112,269

Average Impact Factor

5,1

Senior PhD Researchers

Leonor Pinilla Jurado
Francisco Gaytan Luna
Antonio Romero Ruiz

Post-doctoral Researchers

M^a Soledad Avendaño Herrador
Juan Manuel Castellano Rodríguez
Silvia León Téllez
David García Galiano
Juan Roa Rivas
Miguel Sánchez-Garrido Nogueras
María Jesús Vázquez Villar

Pre-PhD Researchers

Alexia Barroso Romero
Violeta Heras Domínguez
Inmaculada Velasco Aguayo
María Manfredi Lozano
Francisco Ruiz Pino
Encarnación Torres Jiménez

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

Rocío Onieva Jiménez
Ana Belén Pedraza Casado
Ana Rodríguez Sánchez
M^a Jesús Sánchez Tapia

Team Leader

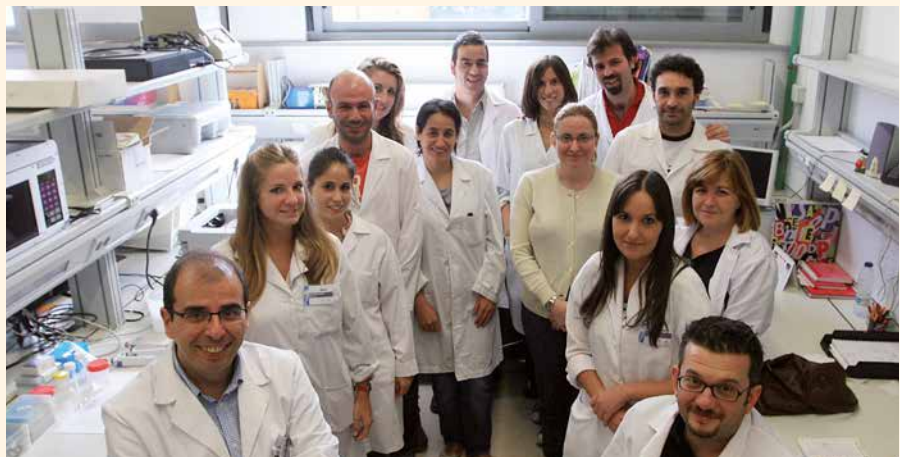
Principal Investigator (PI)

Manuel Tena-Sempere
fitesem@uco.es

IMIBIC's Deputy Scientific Director

Group leader: CIBER Obesity and Nutrition (CIBERobn)

Responsible researcher: PAIDI BIO-310 Scientific Group



Scientific Activity

Our research group studies the neuroendocrine mechanisms responsible for the integrated control of food intake, body weight, puberty and reproductive function. By using various analytical methods and animal models, in recent years our group has identified new neuropeptides and hormones involved in the joint regulation of metabolic status and reproduction. Thus, we have made substantial contributions to the characterization of the physiological role, mechanisms of action, and pathophysiological and therapeutic implications of kisspeptins in the control of puberty, ovulation and the secretion of gonadotropins. In addition, we have characterized the actions of different gastrointestinal hormones (ghrelin, PYY) and adipose tissue (leptin, resistin, adiponectin), as well as the control of food intake and reproductive function. Additionally, we have defined the role in the reproductive axis of the different neuropeptides (GALP, neuromedins, 26/43RFa, VGF) primarily involved in the control of food intake. Moreover, we have undertaken research activities on the regulatory roles of microRNAs in the control of puberty, fertility and metabolism. Even when our research activity is basic in nature, it has allowed us to identify mechanisms of action and pharmacological effects of practical interest for a broad group of neuroendocrine factors with the potential translational results in the context of increasingly prevalent diseases such as obesity and other body weight disorders, changes of puberty and various forms of infertility. In addition, translational studies in the fields of gynaecology, urology and paediatrics have been recently initiated.

Keywords

Body weight; obesity; puberty; fertility; kisspeptins; GPR54; gonadotropins; GnRH; leptin; ghrelin; adipokines; neuropeptides; microRNAs; Polycystic ovary syndrome (PCOS).

Scientific Production

Publications

Original

Papers

Castellano JM, Wright H, Ojeda SR, Lomniczi A. An alternative transcription start site yields estrogen-unresponsive Kiss1 mRNA transcripts in the hypothalamus of prepubertal female rats. *Neuroendocrinology*. 2014;99(2):94-107
IF: 4.934

Dorfman, MD; Garcia-Rudaz, C; Alderman, Z; Kerr, B; Lomniczi, A; Dissen, GA; Castellano, JM; Garcia-Galiano, D; Gaytan, F; Xu, BJ; Tena-Sempere, M*; Ojeda, SR*. Loss of Ntrk2/Kiss1r Signaling in Oocytes Causes Premature Ovarian Failure. *Endocrinology*. 2014; 155(8): 3098-3111
IF: 4.644 (*: *joint corresponding authors*)

Gaytan, F; Garcia-Galiano, D; Dorfman, MD; Manfredi-Lozano, M; Castellano, JM; Dissen, GA; Ojeda, SR; Tena-Sempere, M. Kisspeptin Receptor Haplo-insufficiency Causes Premature Ovarian Failure Despite Preserved Gonadotropin Secretion. *Endocrinology*. 2014; 155(8): 3088-3097
IF: 4.644

Sanchez-Garrido, MA; Ruiz-Pino, F; Manfredi-Lozano, M; Leon, S; Garcia-Galiano, D; Castano, JP; Luque, RM; Romero-Ruiz, A; Castellano, JM; Dieguez, C; Pinilla, L; Tena-Sempere, M. Obesity-Induced Hypogonadism in the Male: Premature Reproductive Neuroendocrine Senescence and Contribution of Kiss1-Mediated Mechanisms. *Endocrinology*. 2014; 155(3): 1067-1079
IF: 4.644

Leon, S; Garcia-Galiano, D; Ruiz-Pino, F; Barroso, A; Manfredi-Lozano, M; Romero-Ruiz, A; Roa, J; Vazquez, MJ; Gaytan, F; Blomenrohr, M; van Duin, M; Pinilla, L; Tena-Sempere, M. Physiological roles of gonadotropin-inhibitory hormone

signaling in the control of mammalian reproductive axis: studies in the NPFF1 receptor null mouse. *Endocrinology*. 2014; 155(8): 2953-65
IF: 4.644

Garcia-Ortega, J; Pinto, F M; Fernandez-Sanchez, M; Prados, N; Cejudo-Roman, A; Almeida, T A; Hernandez, M; Romero, M; Tena-Sempere, M*; Candenas, L*. Expression of neurokinin B/NK3 receptor and kisspeptin/KISS1 receptor in human granulosa cells. *Human Reproduction*. 2014; 29(12):2736-46
IF: 4.585 (*: *joint corresponding authors*)

Gaytan, F; Morales, C; Manfredi-Lozano, M; Tena-Sempere, M. Generation of multi-oocyte follicles in the peri-pubertal rat ovary: link to the invasive capacity of granulosa cells? *Fertility And Sterility*. 2014; 101(5): 1467-1476
IF: 4.295

Lozoya T, Dominguez F, Romero-Ruiz A, Stefani L, Martinez S, Monterde M, Ferri B, Núñez MJ, Romero-Espinós A, Zamora O, Gurrea M, Sangiao-Alvarellos S, Vega O, Simón C, Pellicer A, Tena-Sempere M. The Lin28/Let-7 System in Early Human Embryonic Tissue and Ectopic Pregnancy. *PLoS One*. 2014; 9(1): e87698
IF: 3.534

Reviews

Roa J, Tena-Sempere M. Connecting metabolism and reproduction: Roles of central energy sensors and key molecular mediators. *Molecular and Cellular Endocrinology*. 2014; 397(1-2): 4-14
IF: 4.241

In Collaboration

Papers

Martinez de Morentin PB, Gonzalez-Garcia I, Martins L, Lage R, Fernandez-Mallo D, Martinez-Sanchez N, Ruiz-Pino F, Liu J, Morgan DA,

Pinilla L, Gallego R, Saha AK, Kalsbeek A, Fliers E, Bisschop PH, Dieguez C, Nogueiras R, Rahmouni K, Tena-Sempere M, Lopez M. Estradiol Regulates Brown Adipose Tissue Thermogenesis via Hypothalamic AMPK. *Cell Metabolism*. 2014; 20(1):41-53
IF: 16.747

Topaloglu AK, Lomniczi A, Kretzschmar D, Dissen GA, Kotan LD, McArdle CA, Koc AF, Hamel BC, Guclu M, Papatya ED, Eren E, Menggen E, Gurbuz F, Cook M, Castellano JM, Kekil MB, Mungan NO, Yuksel B, Ojeda SR, J. Loss-of-function mutations in PNPLA6 encoding neuropathy target esterase underlie pubertal failure and neurological deficits in Gordon Holmes syndrome. *J Clin Endocrinol Metab*. 2014; 99(10): E2067-75.
IF: 6.310

Novelle, Marta G.; Vazquez, Maria J.; Marti-nello, Katia D.; Sanchez-Garrido, Miguel A.; Tena-Sempere, Manuel; Dieguez, Carlos. Neonatal events, such as androgenization and postnatal overfeeding, modify the response to ghrelin. *Scientific Reports*. 2014; 4: 4855
IF: 5.078

Overgaard, A; Ruiz-Pino, F; Castellano, JM; Tena-Sempere, M; Mikkelsen, JD. Disparate Changes in Kisspeptin and Neurokinin B Expression in the Arcuate Nucleus After Sex Steroid Manipulation Reveal Differential Regulation of the Two KNDy Peptides in Rats. *Endocrinology*. 2014; 155(10):3945-3955
IF: 4.644

Sangiao-Alvarellos, Susana; Pena-Bello, Lara; Manfredi-Lozano, Maria; Tena-Sempere, Manuel; Cordido, Fernando. Perturbation of hypothalamic microRNA expression patterns in male rats after metabolic distress: impact of obesity and conditions of negative energy balance. *Endocrinology*. 2014; 155(5): 1838-50
IF: 4.644

Luque, RM; Cordoba-Chacon, J; Ibanez-Costa, A; Gesmundo, I; Grande, C; Gracia-Navarro, F;

Tena-Sempere, M; Ghigo, E; Gahete, MD; Granata, R; Kineman, RD; Castano, JP. Obestatin Plays an Opposite Role in the Regulation of Pituitary Somatotrope and Corticotrope Function in Female Primates and Male/Female Mice. *Endocrinology*. 2014; 55(4): 1407-1417
IF: 4,644

Bhattarai JP, Roa J, Herbison AE, Han SK. Serotonin acts through 5-HT1 and 5-HT2 receptors to exert biphasic actions on GnRH neuron excitability in the mouse. *Endocrinology*. 2014 Feb;155(2): 513-24.
IF: 4,644

Ferrero H, García-Pascual CM, Gaytán M, Morales C, Simón C, Gaytán F, Pellicer A, Gómez R. Dopamine receptor 2 activation inhibits ovarian vascular endothelial growth factor secretion in an ovarian hyper-stimulation syndrome (OHSS) animal model: implications for treatment of OHSS with dopamine receptor 2 agonists. *Fertil Steril*. 2014 Nov;102(5): 1468-1476.e1.
IF: 4,295

Ferrero H, García-Pascual CM, Gómez R, Delgado-Rosas F, Cauli O, Simón C, Gaytán F, Pellicer A. Dopamine receptor 2 activation inhibits ovarian vascular endothelial growth factor secretion in vitro: implications for treatment of ovarian hyper-stimulation syndrome with dopamine receptor 2 agonists. *Fertil Steril*. 2014 May;101(5): 1411-8.
IF: 4,295

Martinez de Morentin, P. B.; Martinez-Sanchez, N.; Roa, J.; Ferno, J.; Nogueiras, R.; Tena-Sempere, M.; Dieguez, C.; Lopez, M. Hypothalamic mTOR. The Rookie Energy Sensor. *Current Molecular Medicine*. 2014;14(1):3-21
IF: 3,612

Meza-Herrera, C. A.; Reyes-Avila, J. M.; Tena-Sempere, M.; Veliz-Deras, F. G.; Macias-Cruz, U.; Rodriguez-Martinez, R.; Arellano-Rodriguez, G. Long-term betacarotene supplementation positively affects serum triiodothyronine concentrations around puberty onset in female goats. *Small Ruminant Research*. 2014; 116(2-3): 176-182
IF: 1,099

Editorial Material

Gore, A. C.; Balthazart, J.; Bikle, D.; Carpenter, D. O.; Crews, D.; Czernichow, P.; Diamanti-Kandarakis, E.; Dores, R. M.; Grattan, D.; Hof, P. R.; Hollenberg, A. N.; Lange, C.; Lee, A. V.; Levine, J. E.; Millar, R. P.; Nelson, R. J.; Porta, M.; Poth, M.; Power, D. M.; Prins, G. S.; Ridgway, E. C.; Rissman, E. F.; Romijn, J. A.; Sawchenko, P. E.; Sly, P. D.; Soder, O.; Taylor, H. S.; Tena-Sempere, M.; Vaudry, H.; Wallen, K.; Wang, Z.; Wartofsky, L. Policy

decisions on endocrine disruptors should be based on science across disciplines: A response to Dietrich, et al. (Reprinted). *Frontiers in Neuroendocrinology*. 2014; 35(1): 2-5
IF: 7,581

Gore AC, Balthazart J, Bikle D, Carpenter DO, Crews D, Czernichow P, Diamanti-Kandarakis E, Dores RM, Grattan D, Hof PR, Hollenberg AN, Lange C, Lee AV, Levine JE, Millar RP, Nelson RJ, Porta M, Poth M, Power DM, Prins GS, Ridgway EC, Rissman EF, Romijn JA, Sawchenko PE, Sly PD, Söder O, Taylor HS, Tena-Sempere M, Vaudry H, Wallen K, Wang Z, Wartofsky L, Watson CS. Reprint of: policy decisions on endocrine disruptors should be based on science across disciplines: a response to Dietrich et al. *Horm Behav*. 2014 Feb;65(2): 190-3.
IF: 4,511

Research Fundings

National

Tena-Sempere, M. Puberty: new microRNAs and neuropeptide regulating systems and their interaction with obesity and metabolic signals. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2011-25021

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
To Begin in 2015

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

Lopez Miranda JM (Tena-Sempere, M; Co-PI). Early predictor and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine. Agency: Institute of Health Carlos III (ISCIII) Reference: PIE14/00005
To Begin in 2015

Castellano Rodríguez, JM (Tutor: 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: BFU2014-
To Begin in 2015

International

Tena-Sempere, M. Epi-puberty-metabolic control of puberty: role of epigenetic regulatory mechanisms. Funding agency: European Commission. Reference: PI-OF-GA-2010-273034

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

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

Vázquez Villar, MJ. Etiopatogenic 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

Contract with Companies

Tena-Sempere, M. Optimization of protocols for functional manipulation of Let-7 miRNA levels in the hypothalamus in vivo using nasal delivery in suitable preclinical models. LET 7A Hypothalamus. Funding agency: N-Life, S.L. Reference: CCB.UC000054

Tena-Sempere, M. Proof-of-principle studies for the validation of Gpr54 agonists as therapeutic tool in preclinical (rodent) models of functional hypogonadotropic hypogonadism and ovulatory dysfunction. GPR54-PCOS. Funding agency: Ferring. Reference: CCB.UC000061

Tena-Sempere, M. Proof-of-principle studies for the validation of Gpr54 agonists as therapeutic tool in preclinical (rodent) models of functional hypogonadotropic hypogonadism and ovulatory dysfunction. Extension. Funding agency: Ferring. Reference: CCB.UC000061 (Ext)

Tena-Sempere, M. Physical, chemical and biological characterization of active compounds (BIONATURIS). Funding agency: Bioorganic Research and Services, S.A. Reference: PSS.0044

Metabolism and Adipocyte Differentiation. Metabolic Syndrome

Publications

14

Impact Factor

64,555

Average Impact Factor

4,611

PhD Researchers

Socorro García Navarro
Rafael Vázquez Martínez

Post-PhD Researchers

Farid Almabouada
Jose Alberto Diaz-Ruiz Ruiz
Rocio Guzman Ruiz

Pre-PhD Researchers

Natalia Rocio Moreno Castellanos
Yoana Rabanal Ruiz
Andrés Través García
Andreia Cristina Sá Gomes
Julia Sánchez Ceinos

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

Laura Molero Murillo
Karen Gwendolyne Crespo Echeverria

Team Leaders

Principal Investigator (PI)

M^a del Mar Malagón Poyato
bc1mapom@uco.es

CIBER on Obesity and Nutrition (CIBERobn)
(Collaborator)

Co- Principal Investigator (PI)

Francisco Gracia Navarro
PAIDI BIO-139 Scientific Group



Scientific Activity

This research group investigates the cellular and molecular mechanisms that control adipose tissue activity. Thus, this group is focused on the central role of adipose tissue in the regulation of lipid metabolism and in the response to insulin and other hormonal regulators of metabolic homeostasis, as well as on its role as an endocrine organ. Specifically, this group analyzes the different components of adipose tissue, mature adipocytes and the stromal vascular fraction, including the study of preadipocytes and adipogenesis. In particular, this group is interested in the identification and characterization of novel biomarkers related to fundamental processes in adipocytes, including the control of lipid transport, accumulation and mobilization, as well as the signalling/metabolic pathways underlying these processes. In addition, the relationship between cell stress processes (oxidative stress, endoplasmic reticulum stress, inflammation, mechanical stress, fibrosis, etc) is analyzed in in vitro models of insulin resistance. These studies are performed in the context of disorders associated with adipose tissue dysfunction, obesity and lipodystrophy, that result in the development of metabolic disease. Finally, this group also investigates the effects of interventions that improve the metabolic profile of morbidly obese subjects (bariatric surgery, lifestyle or pharmacological interventions.). To address these goals, this group employs multiple experimental approaches, including the application of comparative proteomics and lipidomics (including MALDI imaging) to the adipose tissue under different experimental conditions and model organisms. In addition, gene expression studies, protein interaction analyses, confocal microscopy and real-time videomicroscopy, and functional studies (gene overexpression or silencing) using primary cells or cell lines are also carried out.

Keywords

Adipose tissue; adipocyte; lipid metabolism; adipogenesis; proteomics; lipidomics; intracellular trafficking; intracellular signalling; adipokines; receptors; obesity; lipodystrophy; insulin resistance; metabolic syndrome.

Scientific Production

Publications

Original

Papers

Guzman-Ruiz R, Ortega F, Rodriguez A, Vazquez-Martinez R, Diaz-Ruiz A, Garcia-Navarro S, Giralt M, Garcia-Rios A, Cobo-Padilla D, Tinahones FJ, Lopez-Miranda J, Villarroya F, Fruhbeck G, Fernandez-Real JM, Malagon MM. Alarmin high-mobility group B1 (HMGB1) is regulated in human adipocytes in insulin resistance and influences insulin secretion in beta-cells. *International Journal of Obesity*. 2014; 38(12):1545-1554
IF:5,386

Jimenez-Gomez Y, Cruz-Teno C, Rangel-Zuniga OA, Peinado JR, Perez-Martinez P, Delgado-Lista J, Garcia-Rios A, Camargo A, Vazquez-Martinez R, Ortega-Bellido M, Perez-Jimenez F, Roche HM, Malagon MM*, Lopez-Miranda J*. (*Co-corresponding authors). Effect of dietary fat modification on subcutaneous white adipose tissue insulin sensitivity in patients with metabolic syndrome. *Mol Nutr Food Res*. 2014;58(11):2177-88.
IF:4,909

Review

Peinado, Juan R.; Diaz-Ruiz, Alberto; Fruhbeck, Gema; Malagon, Maria M. Mitochondria in metabolic disease: Getting clues from proteomic studies. *Proteomics*. 2014; 14(4-5):452-466
IF:3,97

In Collaborations Papers

Kulkarni, M.; O'Loughlin, A.; Vazquez, R.; Mashayekhi, K.; Rooney, P.; Greiser, U.; O'Toole, E.; O'Brien, T.; Malagon, Maria M.; Pandit, A. Use of a fibrin-based system for enhancing angiogenesis and modulating inflammation in the treatment of hyperglycemic wounds. *Biomaterials*. 2014; 35(6):2001-2010
IF:8,312

Gutierrez-Mariscal, Francisco M.; Yubero-Serrano, Elena M.; Rangel-Zuniga, Oriol A.; Marin, Carmen; Garcia-Rios, Antonio; Perez-Martinez, Pablo; Delgado-Lista, Javier; Malagon, Maria M.; Tinahones, Francisco J.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Postprandial Activation of P53-Dependent DNA Repair Is Modified With Coenzyme Q(10) in Elderly Subjects. *Journals of Gerontology Series A-Biological Sciences and Medical Sciences*. 2014; 69(7):886-893
IF:4,984

Gomez-Delgado, Francisco; Francisco Alcalá-Díaz, Juan; Garcia-Rios, Antonio; Delgado-Lista, Javier; Ortiz-Morales, Ana; Rangel-Zuniga, Oriol; Jose Tinahones, Francisco; Gonzalez-Guardia, Lorena; Malagon, Maria M.; Bellido-Munoz, Enrique; Ordovas, Jose M.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose; Perez-Martinez, Pablo. Polymorphism at the TNF-alpha gene interacts with Mediterranean diet to influence triglyceride metabolism and inflammation status in metabolic syndrome patients: From the CORDIOPREV clinical trial. *Molecular Nutrition & Food Research*. 2014; 58(7):1519-1527
IF:4,909

Gahete, MD; Luque, RM; Yubero-Serrano, EM; Cruz-Teno, C; Ibanez-Costa, A; Delgado-Lista, J; Gracia-Navarro, F; Perez-Jimenez, F; Castaño,

JP; Lopez-Miranda, J. Dietary fat alters the expression of cortistatin and ghrelin systems in the PBMCs of elderly subjects: Putative implications in the postprandial inflammatory response. *Molecular Nutrition & Food Research*. 2014; 58(9):1897-1906
IF:4,909

Rangel-Zuniga, Oriol A; Haro, Carmen; Perez-Martinez, Pablo; Delgado-Lista, Javier; Marin, Carmen; Quintana-Navarro, Gracia M; Tinahones, Francisco J; Malagon, Maria M; Lopez-Segura, Fernando; Lopez-Miranda, Jose; Perez-Jimenez, Francisco; Camargo, Antonio. Effect of frying oils on the postprandial endoplasmic reticulum stress in obese people. *Molecular Nutrition & Food Research*. 2014; 58(11):2239-2242
IF:4,909

Caballero-Diaz, E.; Guzman-Ruiz, R.; Malagon, M. M.; Simonet, B. M.; Valcarcel, M. Effects of the interaction of single-walled carbon nanotubes with 4-nonylphenol on their in vitro toxicity. *Journal of Hazardous Materials*. 2014; 275:107-115
IF:4,331

Gahete, Manuel D.; Duran-Prado, Mario; Delgado-Niebla, Elena; Garrido, Juan J.; Rhodes, Simon J.; Garcia-Navarro, Socorro; Gracia-Navarro, Francisco; Malagon, Maria M.; Luque, Raul M.; Castaño, Justo P. Porcine sst1 can physically interact with other somatostatin receptors, and its expression is regulated by metabolic/inflammatory sensors. *American Journal of Physiology-Endocrinology and Metabolism*. 2014; 306(5):E483-E493
IF:4,088

Camargo A, Peña-Orihuela P, Rangel-Zuniga OA, Pérez-Martinez P, Delgado-Lista J, Cruz-Teno C, Marin C, Tinahones F, Malagón MM, Roche HM, Pérez-Jiménez F, López-Miranda J. Peripheral blood mononuclear cells as in vivo model for dietary intervention induced

systemic oxidative stress. *Food and Chemical Toxicology*. 2014; 72:178-186
IF:2,61

Imbernon, Monica; Whyte, Lauren; Diaz-Arteaga, Adenis; Russell, Wendy R.; Moreno, Natalia R.; Vazquez, Maria J.; Gonzalez, Carmen R.; Diaz-Ruiz, Alberto; Lopez, Miguel; Malagon, Maria M.; Ross, Ruth A.; Dieguez, Carlos; Nogueiras, Ruben. Regulation of GPR55 in rat white adipose tissue and serum LPI by nutritional status, gestation, gender and pituitary factors. *Molecular and Cellular Endocrinology*. 2014; 383(1-2):159-169
IF:4,241

Camargo, Antonio; Meneses, Maria E.; Perez-Martinez, Pablo; Delgado-Lista, Javier; Rangel-Zuniga, Oriol A.; Marin, Carmen; Almaden, Yolanda; Yubero-Serrano, Elena M.; Gonzalez-Guardia, Lorena; Fuentes, Francisco; Tinahones, Francisco J.; Roche, Helen M.; Malagon, Maria M.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Dietary fat modifies lipid metabolism in the adipose tissue of metabolic syndrome patients. *Genes and Nutrition*. 2014; 9(4):409
IF:3,419

Camargo A, Meneses ME, Perez-Martinez P, Delgado-Lista J, Jimenez-Gomez Y, Cruz-Teno C, Tinahones FJ, Paniagua JA, Perez-Jimenez F, Roche HM, Malagon MM, Lopez-Miranda J. Dietary fat differentially influences the lipids storage on the adipose tissue in metabolic syndrome patients. *Eur J Nutr*. 2014;53(2):617-26.
IF:3,84

Research Fundings

National

Malagón, MM. Characterization of novel markers regulating adipose tissue function. Funding Agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: BFU2010-17116
Finalized in 2014

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

Lopez Miranda JM (Malagón, MM: Co-PI). Early predictor and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine. Agency: Institute of Health Carlos III (ISCIII) Reference: PIE14/00005
To Begin in 2015

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

Malagón, MM. High-performance proteomic approaches to identify markers of adipose tissue obesity. Alterations in the adipocyte phosphoproteome associated with insulin resistance. Funding Agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P10-CTS-6606

Epidemiological Research in Primary Care

Publications

7

Impact Factor

8,584

Average Impact Factor

1,226

PhD Researchers

Maria Jose Acosta Garcia
 Cristina Aguado Taberne
 Antonio Blanco Hungria
 Miguel Angel Fernández Fernández
 Jose Angel Fernández Garcia
 Jesús Gonzalez Lama
 Jose Antonio Prados Castillejo
 Antonio Ranchal Sanchez
 Juana Redondo Sanchez
 Roger Ruiz Moral
 Joaquin Ruiz De Castroviejo Del Campo
 Antonio Valero Martin
 Fco. Javier Ruiz Moruno
 Manuel Vaquero Abellán

Post-PhD Researchers

Enrique Martin Rioboo
 Manuel Rich Ruiz

Pre-PhD Researchers

Carlos Ortega Millan
 Margarita Criado Larumbe

Researchers

Maria Antonia Alba Dios
 Celia Jimenez Garcia
 Antonio Manuel Jodral Segado
 Inmaculada Olaya Caro
 Juan Manuel Parras Rejano
 Carlos Perula De Torres
 Francisco Jose Varas Fabra
 Juan Ignacio González
 Javier Serrano Merino

Team Leaders

Principal Investigator (PI)

Luis Angel Pérula de Torres
langel.perula.sspa@juntadeandalucia.es
Research Network on preventive actions and health promotion in primary care (RedIAPP)
Responsible Researcher: GIEAP Group
PAIDI CTS-452 Scientific Group



Scientific Activity

Preventive activities, promotion and protection of health in Primary Health Care (PHC). Validation of measuring instruments in PHC. Patient Safety (rational drug use). Communication in healthcare, clinical interviews. Medical education.

Keywords

Epidemiology; Preventive Medicine and Public Health; Primary Health Care.

Scientific Production

Publications

Original

Papers

Blanco Aguilera A, Gonzalez Lopez L, Blanco Aguilera E, De la Hoz Aizpurua JL, Rodriguez Torronteras A, Segura Saint-Gerons R, Blanco Hungria A. Relationship between self-reported sleep bruxism and pain in patients with temporomandibular disorders. *Journal of Oral Rehabilitation*. 2014; 41(8):564-572. IF:1.934

De Torres, LAP; Ortega, LP; de Torres, CP; Lama, JG; Caro, IO; Moral, RR GrpCorp Estudio ATEM-AP. Efficacy of motivational interviewing for reducing medication errors in chronic patients over 65 years with polypharmacy: Results of a cluster randomized trial. *Medicina Clinica*. 2014; 143(8):341-348. IF:1.252

Ruiz Moral R, Peralta Mungia L, Pérula de Torres LA, Carrión MT, Olloqui Mundet J, Martínez Lechuga M. Patient participation in the discussions of options in Spanish primary care consultations. *Health Expect* 2014;17:683-95. FI: 2.852

In Collaborations

Papers

Palenzuela Paniagua, S. M.; Perez Milena, A.; Perula de Torres, L. A.; Fernandez Garcia, J. A.; Maldonado Alconada, J. Food consumption patterns among adolescents. *Anales del Sistema Sanitario de Navarra*. 2014; 37(1):47-58. IF:0.557

Blanco-Aguilera A, Blanco-Hungria A, Biedma-Velázquez L, Serrano-Del-Rosal R, González-López L, Blanco-Aguilera E, Segura-Saint-Gerons R. Application of an oral health-related quality of life questionnaire in primary care patients with orofacial pain and temporomandibular disorders. *Med Oral Patol Oral Cir Bucal*. 2014 Mar 1;19(2):e127-35. IF: 1.095

Galán, A.M., Cuixart, C.B., Álvarez, F.V., Rioboó, E.M., Banegas, J.R.B., Pérez, J.N., Sánchez, J.J.A., Lobos-Bejarano, J.M., Sánchez-Pinilla, R.O., Orozco-Beltrán, D., Guillén, V.G. Recommendations on prevention of cardiovascular disease. *Atención Primaria*. 2014;46(4):3-15. IF: 0.894

Pérez Bonilla M, Palenzuela Paniagua SM, Pérula de Torres LA, Ruiz Moral R, Pérula de Torres C, Jiménez García C. Salud autopercibida por los jóvenes y factores sociodemográficos y conductuales asociados. *Med fam And*. 2014;1:11-37. *No JCR FI.

Research Fundings

National

Pérula de Torres, LA. Preferences of physicians and patients concerning their participation in the decision-making process and coherence of their actions in real clinical scenarios. Funding Agency: Institute Carlos III Health (ISCIII). Reference:PI11-00771.

Regional

Pérula de Torres, LA. Effectiveness of opportunistic detection of atrial fibrillation in people aged 65 years or more in primary care. Dofa-AP. Project. Funding Agency: Andalusian Progress and Health Foundation (FPS). Reference:PI-0117-2011

Aguado C, Puentes C, Pérula LA. Acceptability and feasibility of opportunistic screening of HIV patients in the primary care setting in the Spanish national health system. Funding agency: semFYC. Reference: Ref.118/14

Leiva F, Fernández JA, Pérula LA. Skills, attitudes and practices of primary care professionals towards preventive interventions addressed at alcohol abusers: ALCO-AP trial. Funding agency: semFYC. Reference: Ref. 122/12

Publications

13

Impact
Factor

43,608

Average
Impact Factor

3,354

PhD Researchers

Escolastico Aguilera Tejero
Antonio L.Canalejo Raya;
(Collaborator)
Ignacio López Villalba

Post-PhD Researchers

Carmen Herencia Bellido
Addy Montes De OcaGonzalez
Juan Rafael Muñoz Castañeda
M^a Encarnación Rodríguez Ortiz
Carmen María Pineda Martos

Pre-PhD Researchers

Julio Manuel Martínez Moreno
Juan Miguel Díaz Tocados
Noemi Vergara Segura
Rafael Ríos Varo

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

Andrés José Martínez Morales
(Technician)

Team Leader

Principal Investigator (PI)

Mariano Rodríguez Portillo
juanm.rodriguez.sspa@juntadeandalucia.es



Scientific Activity

This group is focused on different aspects of calcium metabolism and vascular calcification. Our primary area of research is centred on the study of the pathogenetic mechanisms of secondary hyperparathyroidism associated with renal failure. In this sense, this group investigates the parathyroid function, both at cellular and molecular level (PTH synthesis and secretion and cell proliferation) of normal and hyperplastic parathyroid glands.

More recently, this group has incorporated into its research activity both in vivo (experimental models with rats) and in vitro studies (vascular smooth muscle cells) of the mechanisms underlying the development of vascular calcification in chronic kidney disease. Thus, in the context of vascular calcification this group is centred on analyzing the role of different diets (with different contents of phosphorus, calcitriol, micronutrients such as magnesium or calcium, calorie diets...) in FGF23 regulation and in cardiovascular disease progression.

This group has opened a new line of research centred on the study of the involvement of bone marrow mesenchymal stem cells in vascular calcification. Basing on a stem cell-based approach, this group analyses the signalling pathways by which vascular calcification progresses. Mesenchymal stem cells are also used to investigate how the chronic kidney disease or its treatments may affect bone regarding the formation of new osteoblasts. From this line also derives the study of the regulation of bone production of FGF23. The lines of research group listed above involve the study of gene expression of vitamin D, calcium or FGF23 receptors, and the analysis of different intracellular signaling pathways as Wnt/b-catenin, Noct, Erk, epigenetic modifications, measuring of parameters indicative of osteogenic transdifferentiation, inflammation.

Research derived from each of these lines can lead to the proposal and use of new therapeutic targets for preventing and reversing vascular calcification and associated complications.

Keywords

Calcium; phosphorus; metabolism; parathyroid; calcification; uremia; Mineral metabolism; parathyroid hormone; HPTH2^o; vascular calcification; renal failure VDR; CaR. Mesenchymal stem cells; Wnt / beta-catenin.

Scientific Production

Publications

Original

Papers

Montes de Oca, Addy; Guerrero, Fatima; Martinez-Moreno, Julio M; Madueno, Juan A; Herencia, Carmen; Peralta, Alan; Almaden, Yolanda; Lopez, Ignacio; Aguilera-Tejero, Escolastico; Gundlach, Kristina; Buchel, Janine; Peter, Mirjam E; Passlick-Deetjen, Jutta; Rodriguez, Mariano; Munoz-Castaneda, Juan R. MagnesiuminhibitsWnt/beta-cateninactivity and reverses theosteogenictransformation of vascular smoothmusclecells. *PlosOne*. 2014; 9(2):E89525
IF:3.534

Guerrero, F; Herencia, C; Almaden, Y; Martinez-Moreno, JM; de Oca, AM; Rodriguez-Ortiz, ME; Diaz-Tocados, JM; Canalejo, A; Florio, M; Lopez, I; Richards, WG; Rodriguez, M; Aguilera-Tejero, E; Munoz-Castaneda, JR. TGF-beta Prevents Phosphate-Induced Osteogenesis through Inhibition of BMP and Wnt/beta-Catenin Pathways. *PlosOne*. 2014; 9(2):e89179
IF:3.534

Rodriguez-Ortiz, Maria E; Canalejo, Antonio; Herencia, Carmen; Martinez-Moreno, Julio M; Peralta-Ramirez, Alan; Perez-Martinez, Pablo; Navarro-Gonzalez, Juan F; Rodriguez, Mariano; Peter, Mirjam; Gundlach, Kristina; Steppan, Sonja; Passlick-Deetjen, Jutta; Munoz-Castaneda, Juan R; Almaden, Yolanda. Magnesium modulates parathyroid hormone secretion and upregulates parathyroid receptor expression at moderately low calcium concentration. *NephrologyDialysisTransplantation*. 2014; 29(2):282-289
IF:3.488

Peralta-Ramirez, A; Montes de Oca, A; Raya, A. I; Pineda, C; Lopez, I; Guerrero, F; Diez, E; Munoz-Castaneda, J. R; Martinez, J; Almaden, Y; Rodriguez, M; Aguilera-Tejero, E. Vitamin E protection of obesity-enhanced vascular calcification in uremicrats. *American Journal of Physiology-Renal Physiology*. 2014; 306(4):F422-F429
IF:3.3

Rodriguez, Mariano; Munoz-Castaneda, Juan R; Almaden, Yolanda. Therapeutic use of calcitriol. *Current Vascular Pharmacology*. 2014; 12(2):294-299
IF:2.908

Letter

de Francisco, Angel L. M; Rodriguez, Mariano. Does mild hypermagnesemia increase risk of PTH oversuppression?. *Kidney International*. 2014; 86(1):212-212
IF:8.52

In Collaborations

Papers

Soriano, Sagrario; Carmona, Andres; Trivino, Francisco; Rodriguez, Mariano; Alvarez-Benito, Marina; Martin-Malo, Alejandro; Alvarez-Lara, Maria-Antonia; Ramirez, Rafael; Aljama, Pedro; Carracedo, Julia. Endothelial damage and vascular calcification in patients with chronic kidney disease. *American Journal Of Physiology-Renal Physiology*. 2014.307-11:F1302-F1311
IF:3.3

Bozic M, Panizo S, Sevilla MA, Riera M, Soler MJ, Pascual J, Lopez I, Freixenet M, Fernandez E, Valdivielso JM. High phosphate diet increases

arterial blood pressure via a parathyroid hormone mediated increase of renin. *Journal of Hypertension*. 2014; 32(9):1822-1832
IF:4.222

Lopez-Sanchez, Laura M; Jimenez, Carla; Valverde, Araceli; Hernandez, Vanessa; Pendarando, Jon; Martinez, Antonio; Lopez-Pedrera, Chary; Munoz-Castaneda, Juan R; De la Haba-Rodriguez, Juan R; Aranda, Enrique; Rodriguez-Ariza, Antonio. CoCl2, a Mimic of Hypoxia, Induces Formation of Polyploid Giant Cells with Stem Characteristics in Colon Cancer. *PlosOne*. 2014; 9(6):e99143
IF:3.534

Luisa Gonzalez-Casaus, M; Gonzalez-Parra, Emilio; Sanchez-Gonzalez, Carmen; Albalade, Marta; de La Piedra-Gordo, Concepcion; Fernandez, Elvira; Torregrosa, Vicente; Rodriguez, Mariano; Lorenzo, Victor. A lower proportion of circulating active parathyroid hormone in peritoneal dialysis does not allow the pth inter-method adjustment proposed for haemodialysis. *Nefrologia*. 2014; 34(3):330-340
IF:1.442

Gorostidi, Manuel; Santamaria, Rafael; Alcazar, Roberto; Fernandez-Fresnedo, Gema; Galceran, Josep M; Goicoechea, Marian; Oliveras, Anna; Portoles, Jose; Rubio, Esther; Segura, Julian; Aranda, Pedro; de Francisco, Angel L. M; Dolores del Pino, M; Fernandez-Vega, Francisco; Gorriz, Jose L; Luno, Jose; Marin, Rafael; Martinez, Isabel; Martinez-Castelao, Alberto; Orte, Luis M; Querada, Carlos; Rodriguez-Perez, Jose C; Rodriguez, Mariano; Ruilope, Luis M. Spanish Society of Nephrology document on KDIGO guidelines for the assessment and treatment of chronic kidney disease. *Nefrologia*. 2014; 34(3):302-316
IF:1.442

Review

Evenepoel, Pieter; Rodriguez, Mariano; Keteler, Markus. Laboratory Abnormalities in CKD-MBD: Markers, Predictors, or Mediators of Disease?. *Seminars in Nephrology*. 2014; 34(2):151-163
IF:2.942

Levine, BS; Rodriguez, M; Felsenfeld, AJ. Serum calcium and bone: effect of PTH, phosphate, vitamin D and uremia. *Nefrologia*. 2014; 34(5):658-669
IF:1.442

Research Fundings

National

Aguilera Tejero, E. Vascular calcification, epigenetics and oxidative stress. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI11/00098

Rodríguez Portillo, JM. Vascular calcification, Regulation of osteogenic gene expression in vascular smooth muscle cells and smooth muscle mesenchymal progenitor cells via Wnt / Beta-Catenin and SMAD. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI11-02055

Muñoz Castañeda JR; Rodríguez Portillo J. Influence of urinary phosphorous excretion on the renal injury progression. Mechanisms and clinical studies. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI14/00638
To begin in 2015

International

Rodríguez Portillo, JM. (SYSKID). Systems biology towards novel chronic kidney disease diagnosis and treatment. Funding agency: European Commission Reference: FP7-241544

Regional

Rodríguez Portillo, JM. Role of adult stem cells and vascular smooth muscle in damage induced by vascular calcification. Relationship between phosphorus wnt / beta-catenin and osteogenesis. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P09-CTS-5205

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

Contracts with Companies

Rodríguez Portillo, JM. Research support services. Funding agency: University of Cordoba. Reference: PSS.0009

Rodríguez Portillo, JM. Effect of paricalcitol on vascular smooth muscle cells. Funding agency: AbbVie Farmaceutica S.L.U. Reference: PSS.0015

Rodríguez Portillo, JM. Research Program Agreement for measuring AMG 416 activity against isolated rat PTG. Funding agency: Amgen Inc. S.A. Reference: PSS.0020

Rodríguez Portillo, JM. New therapeutic strategies for treatment and prevention of secondary hyperparathyroidism and vascular calcifications (calcimimetics, interleukin antagonists and cell cycle inhibitors) (Extend). Funding agency: Amgen Inc. S.A. Reference: CCB.UC00001

Rodríguez Portillo, JM. Research Collaboration, License and Option Agreement with Amgen, para la ejecución de investigación para el consorcio SYSKID (Extend). Funding agency: Amgen Inc. S.A. Reference: CCB.UC00008

Clinical Trials

0348/12: A multicenter, randomized, placebo-controlled, double-blind phase III study to assess the efficacy and safety of AMG 416 in the treatment of secondary hyperparathyroidism in patients with chronic renal failure undergoing hemodialysis.
PI: Dr/a Rodríguez Portillo, J. Mariano

0002/13: A multicenter, extension, one-arm study to assess the long-term efficacy and safety of AMG 416 in the treatment of secondary hyperparathyroidism in patients with chronic renal failure undergoing hemodialysis.
PI: Dr/a Rodríguez Portillo, J. Mariano

0114/13: A multicenter, multiple-dose, two-arm, active-controlled, double-blind, double-masked study to assess the efficacy and safety of oral cinacalcet HCl doses vs. intravenous AMG 416 doses.
PI: Dr/a Rodríguez Portillo, J. Mariano

0010/14: A multicenter, single-arm, extension study to assess long-term safety of AMG 416 (Velcalcetide) for secondary hyperparathyroidism in patients with chronic renal failure undergoing hemodialysis.
PI: Dr/a Rodríguez Portillo, J. Mariano

PhD Researchers

M^a Sagrario Cañadillas Lopez
Jose Garcia-Revillo Garcia

Post-PhD Researchers

Rosario JimenezMoreno
Vanessa MartinPalanco

Pre-PhD Researchers

Maria Dolores Carmona Luque
Maria Muñoz Calero
Luis Miguel Paco Meza
Laura López Galvez
Maria Alzira do Carmo Aragao

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

Maria Luisa Castilla Rodriguez
Rosario Gutierrez Fernández
Maria Luque Zafra
Teresa Muñoz Liñan
Sonia Noguerras Martin

Team Leader

Principal Investigator (PI)

Inmaculada C. Herrera Arroyo
inmaculada.herrera.sspa@juntadeandalucia.es



Scientific Activity

The Cell Therapy Unit centres its main activity on clinical research in this area by carrying out different clinical trials. This Unit is currently conducting clinical trials with adult stem cells in autologous bone marrow in acute myocardial infarction, chronic ischemic heart disease, idiopathic dilated cardiomyopathy and chronic critical ischemia of the lower limbs. From 2011, we will be in a position to produce mesenchyme cells in GMP conditions for the initiation of new clinical trials with these cells.

At the same time, we are carrying out several translational studies both in vitro and with animal models, particularly in therapeutic angiogenesis of mononuclear bone marrow cells.

Keywords

Stem cells; cell therapy; regenerative medicine; myocardial regeneration; chronic ischemia; therapeutic angiogenesis.

Research Fundings

National

Herrera Arroyo, Inmaculada C. Cell preservation system project. Sponsored by: University of Córdoba. Reference: CCB.031PM

Cañadillas López, M^a Sagrario. Effect of hypoxia on the regenerative potential of Adipose Derived Mesenchymal Cells (ASCs). Study in diabetic nephropathy rat model. Estudio en un modelo experimental de Nefropatía Diabética en ratas. Funding Agency: Institute Carlos III Health (ISCIII). Reference: PI14/00087 To Begin in 2015

Regional

Cañadillas López, MS. Combination therapy with mesenchymal stem cells and erythropoietin in the treatment of chronic renal failure in an experimental study in rats. Sponsored by: Andalusian Progress and Health Foundation(-SAS). Reference: PI-0141-2011

Martín Palanco, V. Genomic and functional analysis of mo-mscs and mo-mscs-derived exosomes in diabetic patients with peripheral arterial ischemia. Implications for cell therapy.

Implications for cellular therapy. Sponsored by: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0551-2012

Participation in other researchs projects from IMIBIC Groups*

*Pan Álvarez-Ossorio, M. Revascularization and Myocardial regeneration in Patients with Chronic Coronary Occlusion and Ventricular Dysfunction. Sponsored by: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0315-2012

Contract 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 with Eusa Pharma (Professional Training) Funding agency: Eusa Pharma Iberia S.L. Reference: PSS.0068

Herrera Arroyo, Inmaculada C. Conference sponsored by Pfizer Funding agency: Pfizer. Reference: CCB.0078

Clinical Trials

Participation in other researchs projects from IMIBIC Groups*

*0063/13: An open, single-center, randomized, controlled, phase III clinical trial of intra-arterial infusion of autologous bone marrow mononuclear cells in patients with previously revascularized chronic coronary occlusion and ventricular dysfunction.

PI: Dr/a Pan Álvarez-Ossorio, Manuel

*0150/13: A multicenter, randomized, double-blind, placebo-controlled, phase III trial to assess the efficacy of intra-arterial infusion of adult unexpanded autologous bone marrow mononuclear cells on the functional recovery of patients with dilated cardiomyopathy and heart failure.

PI: Dr/a Suárez de Lezo Cruz-Conde, José M^a

GC15

Invasive cardiology and cell therapy

HIGHLIGHTS

Publications

13

Impact
Factor

45,461

Average
Impact Factor

3,497

PhD Researchers

Francisco Mazuelos Bellido
Soledad Ojeda Pineda
Manuel Pan Alvarez-Ossorio
Djordje Pavlovic Djurovic
Miguel Ángel Romero Moreno
Jose M^a Segura Saint-Gerons
Javier Suarez de Lezo Herreros De Tejada

Team Leader

Principal Investigator (PI)

José Suárez de Lezo Cruz-Conde
jose.suarezlezo.sspa@juntadeandalucia



Scientific Activity

Our group studies the effect of cell therapy in myocardial regeneration. We mainly deal with patients with 2 types of heart pathologies: those with ventricular dysfunction secondary to myocardial infarction, both in acute and in chronic phases, and those with dilated cardiomyopathy of non-ischemic origin.

There are two well-defined lines of study: first, the recovery of ventricular function and its clinical impact: here, we study global and regional contractility, potentiation, diastolic function and coronary reserve. The other line looks at the influence of biological parameters (cell lines, migration, distribution, nesting capabilities, etc.) in functional improvement. All the patients enrolled in the various studies are followed up periodically from the clinical, ultrasonic, ergometric and angiographic viewpoints.

Keywords

Ventricular dysfunction; cell therapy; stem cells; acute myocardial infarction and dilated cardiomyopathy.

Scientific Production

Publications

Original

Papers

Ojeda, S; Pan, M; Martin, P; Mazuelos, F; Suarez de Lezo, J; Romero, M; Segura, J; Pavlovic, Djordje; Medina, A; Suarez de Lezo, J. Immediate Results and Long-Term Clinical Outcome of Patients With Unprotected Distal Left Main Restenosis The CORPAL Registry (Cordoba and Las Palmas). Jacc-Cardiovascular Interventions. 2014; 7-2:212-221
IF:7,44

Pan, M; Medina, A; Romero, M; Ojeda, S; Martin, P; de Lezo, JS; Segura, J; Mazuelos, F; Novoa, J; de Lezo, JS. Assessment of side branch predilation before a provisional T-stent strategy for bifurcation lesions A randomized trial. American Heart Journal. 2014; 168-3:374-380
IF:4,555

Gamez-Lopez, Antonio L; Bonilla-Palomas, Juan L; Anguita-Sanchez, Manuel; Moreno-Conde, Mirian; Lopez-Ibanez, Cristina; Alhambra-Exposito, Rosa; Castillo-Dominguez, Juan C; Villar-Raez, Antonia; Suarez de Lezo, Jose. Rationale and Design of PICNIC Study: Nutritional Intervention Program in Hospitalized Patients With Heart Failure Who Are Malnourished. Revista Española de Cardiología. 2014; 67-4:277-282
IF:3,342

Pan, Manuel; Burzotta, Francesco; Trani, Carlo; Medina, Alfonso; Suarez de Lezo, Jose; Niccoli, Giampaolo; Romero, M; Porto, Italo; Mazuelos, Francisco; Leone, Antonio Maria; Martin, Pedro; Coluccia, Valentina; Suarez de Lezo, Javier; Ojeda, Soledad; Three-year follow-up of patients with bifurcation lesions treated with sirolimus- or everolimus-eluting stents: SEA-side and CORpal cooperative study. Revista Española de Cardiología. 2014; 67-10:797-803
IF:3,342

Carrasco-Chinchilla, F; Arzamendi, D; Romero, M; de Carlos, FG; Alonso-Briales, JH; Li, CH; Mesa, MD; Arnold, R; Frutos, AMS; Pan, M; Roig, E; Rodriguez-Bailon, I; Galan, LD; Hernandez, JM; Serra, A; de Lezo, JS. Initial Experience of Percutaneous Treatment of Mitral Regurgitation With MitraClip (R) Therapy in Spain. Revista

Española de Cardiología. 2014; 67-12:1007-1012
IF:3,342

Toledano Delgado, Francisco Javier; Alvarez-Ossorio, Manuel Pan; de Lezo Cruz-Conde, Jose Suarez; Bellido, Francisco Mazuelos; Romero Moreno, Miguel Angel; Fernandez-Acaytuno, Alfonso Medina; de Lezo Herreros de Tejada, Javier Suarez; Pineda, Soledad Ojeda. Optical coherence tomography evaluation of late strut coverage patterns between first-generation drug-eluting stents and everolimus-eluting stent. Catheterization And Cardiovascular Interventions : Official Journal of The Society For Cardiac Angiography & Interventions. 2014; 84-5:720-726
IF:2,396

Rodriguez-Esteban, Marcos; Anguita, Manuel; Miranda-Montero, Sara; Carlos Castillo, Juan; Alvarez-Acosta, Luis; Castillo, Francisco; Llorens-Leon, Rafael; Suarez-de Lezo, Jose. Infective endocarditis in two Spanish university hospitals in different geographical locations with and without a cardiac surgery department. Enfermedades Infecciosas y Microbiología Clínica. 2014; 32-5:297-301
IF:1,881

Lopez-Aguilera, Jose; Mesa-Rubio, Dolores; Ruiz-Ortiz, Martin; Delgado-Ortega, Monica; Villanueva-Fernandez, Elena; Romo-Pena, Elias; Pan Alvarez-Ossorio, Manuel; Suarez de Lezo, Jose. Mitral regurgitation during transcatheter aortic valve implantation: the same complication with a different mechanism. Journal of Invasive Cardiology. 2014; 26-11:603-608
IF:0,824

Editorial Material

Alfonso, F; Pan, M. Do We Know How to Treat Bifurcation Coronary Lesions?. Revista Española de Cardiología. 2014; 67-10:790-793
IF:3,342

Pan, M; de Lezo, JS. Next-generation transcatheter aortic valves An opportunity to expand therapeutic indications? Revista Española de Cardiología. 2014; 67(11): 878-880
IF:3,342

Letter

Martin, Monica; Mesa, Dolores; Carrasco, Francisco; Ruiz, Martin; Delgado, Monica; Suarez de

Lezo, Jose. Mitral Regurgitation After MitraClip: Impact of Mitral Regurgitant Orifice Morphology Evaluated by Three-dimensional Echocardiography. Revista Española de Cardiología. 2014; 67-7:581-582
IF:3,342

In Collaborations

Papers

Lassen, JF; Holm, NR; Stankovic, G; Lefevre, T; Chieffo, A; Hildick-Smith, D; Pan, M; Darremont, O; Albiero, R; Ferenc, M; Louvard, Y. Percutaneous coronary intervention for coronary bifurcation disease: consensus from the first 10 years of the European Bifurcation Club Meetings. Eurointervention. 2014; 10-5:545-560
IF:3,758

Research Fundings

National

Pan Álvarez-Ossorio, M. Use of the "jailed guidewire" technique in the percutaneous treatment of coronary bifurcation stenting: A randomized study of stereoscopic microcopy. Funding agency: Institute Carlos III Health (ISCIII). Reference: PI12/00440

Regional

Rodriguez Pan Álvarez-Ossorio, M. Revascularization and Myocardial regeneration in Patients with Chronic Coronary Occlusion and Ventricular Dysfunction. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0315-2012

Contract with Companies

Suárez de Lezo Cruz-Conde J. Agreement with Medtronic. Start up Study "MARE". Reference: MARE. Funding Agency: Medtronic CareLink Network.

Clinical Trials

0170/09: A clinical trial of the feasibility, safety and efficacy of cardiac resynchronization therapy and mononuclear bone marrow stem cell intracoronary transplantation in patients

with acute myocardial infarction.
PI: Dr/a Suárez de Lezo Cruz-Conde, José Ma

0287/09: A phase II clinical trial on the effect of intracoronary infusion of bone marrow mononuclear cells on functional recovery in patients with previous chronic myocardial and severely depressed left ventricular function
PI: Dr/a Romero Moreno, Miguel Angel

0063/13: An open, single-center, randomized, controlled, phase III clinical trial of intra-arterial infusion of autologous bone marrow mononu-

clear cells in patients with chronic coronary occlusion and ventricular dysfunction.
PI: Dr/a Pan Álvarez-Ossorio, Manuel

0150/13: A multicenter, randomized, double-blind, placebo-controlled, phase III trial to assess the efficacy of intra-arterial infusion of adult unexpanded autologous bone marrow mononuclear cells on the functional recovery of patients with dilated cardiomyopathy and heart failure.
PI: Dr/a Suárez de Lezo Cruz-Conde, José M^a

1309: Post-commercialization surveillance study of VPT Melody™.
PI: Dr/a Suárez de Lezo Cruz-Conde, José M^a

1681: European study of coronary bifurcations: a randomized study to compare the provisional stenting strategy vs the systematic implantation of two stents in true bifurcation lesions located in large vessels.
PI: Dr/a Pan Álvarez-Ossorio, Manuel

Cell biology in hematology. Hypercoagulability

Publications

8

Impact
Factor

27,938

Average
Impact Factor

3,492

PhD Researchers

Carmen Martin Calvo
Jose R Molina Hurtado
Rafael Rojas Contreras
Josefina Serrano Lopez
Juana Serrano Lopez

Researchers

Miguel A. Alvarez Rivas
Pedro Gomez Garcia
Victor Arqueros Martinez
(Collaborator)
Javier Casaño Sánchez (Collaborator)
Estefania Garcia Torres
(Collaborator)

Team Leader

Principal Investigator (PI)

Joaquín Sánchez García
Joaquin.sanchez.garcia.sspa@juntadeandalucia.es
*Spanish Myelodysplastic Syndrome Registry (Res-
md) (Collaborator)*

Co-Principal Investigator (CO-PI)

Francisco Velasco Gimena
*Observational Immune Tolerance Induction
research program (ObsITI) (Collaborator)*
PAIDI CTS-620 Scientific Group



Scientific Activity

Our cell biology group in Hematology works in two areas:

1. The immunological mechanisms of the phenomena of graft versus host disease and graft versus leukemia occurring after hematopoietic transplantation for hematologic malignancies. This study covers antigen presenting cells, lymphocyte effectors and regulatory populations in quantitative and functional studies.
2. In addition, the group studies the mechanisms of leukemogenesis through the study of normal and leukemic primitive quiescent precursors (GO, Side population). The main methods used are cell culture, multiparameter flow cytometry with cell sorting and complete Western blot proteomics for intracellular signalling proteins.

The group also studies the mechanisms of hypercoagulability associated with oncohematologic processes. Its members participate in groups of the region (GASMD, GALA, GNL), of the country (PETHEMA, SEHOP, GETH, RESMD) and in the international group focused on transplantation (EBMT) for the study and treatment of hemopathies in children and adults.

Keywords

Immunology of hematopoietic transplantation; Cell biology of acute leukemias.

Scientific Production

Publications

Original

Papers

Sanchez-Garcia, Joaquin; del Canizo, Consuelo; Lorenzo, Ignacio; Nomdedeu, Benet; Luno, Elisa; de Paz, Raquel; Xicoy, Blanca; Valcarcel, David; Brunet, Salut; Marco-Betes, Victor; Garcia-Pintos, Marta; Osorio, Santiago; Tormo, Mar; Bailen, Alicia; Cervero, Carlos; Ramos, Fernando; Diez-Campelo, Maria; Such, Esperanza; Arrizabalaga, Beatriz; Azaceta, Gemma; Bargay, Joan; Arilla, Maria J.; Falantes, Jose; Serrano-Lopez, Josefina; Sanz, Guillermo F. Spanish Grp Myelodysplastic. Multivariate time-dependent comparison of the impact of lenalidomide in lower-risk myelodysplastic syndromes with chromosome 5q deletion. *British Journal of Haematology*. 2014; 166(2):189-201 IF:4.959

In Collaborations

Papers

Luis Pinana, Jose; Sanz, Jaime; Picardi, Alesandra; Ferra, Christelle; Martino, Rodrigo; Barba, Pere; Gonzalez-Vicent, Marta; Jesus Pascual, Maria; Martin, Carmen; Verdeguer, Amparo; Diaz de Heredia, Cristina; Montesinos, Pau; Ribera, Jose-Maria; Sanz, Miguel; Arcese, William; Sanz, Guillermo GETH Grp; GITMO Grp. Umbilical cord blood transplantation from unrelated donors in patients with Philadelphia chromosome-positive acute lymphoblastic leukemia. *Haematologica*. 2014; 99(2):378-384 IF:5.868

Bennett, Teresa A.; Montesinos, Pau; Moscardo, Federico; Martinez-Cuadron, David; Martinez, Joaquin; Sierra, Jorge; Garcia, Raimundo; Perez De Oteyza, Jaime; Fernandez, Pascual; Serrano, Josefina; Fernandez, Angeles; Herrera, Pilar; Gonzalez, Ataulfo; Bethancourt, Concepcion; Rodriguez-Macias, Gabriela; Alonso, Arancha; Vera, Juan A.; Navas, Begona; Lavilla, Esperanza; Lopez, Juan A.; Jimenez, Santiago; Simiele, Adriana; Vidiales, Belen; Gonzalez, Bernardo J.; Burgaleta, Carmen; Rivas, Jose A.; Hernandez, Mascunano, Raul Cordoba; Bautista, Guiomar; Perez Simon, Jose A.; de la Fuente,

Adolfo; Rayon, Consolacion; Troconiz, Inaki F.; Janda, Alvaro; Bosanquet, Andrew G.; Hernandez-Campo, Pilar; Primo, Daniel; Lopez, Rocio; Liebana, Belen; Rojas, Jose L.; Gorrochategui, Julian; Sanz, Miguel A.; Ballesterosi, Joan. Pharmacological Profiles of Acute Myeloid Leukemia Treatments in Patient Samples by Automated Flow Cytometry: A Bridge to Individualized Medicine. *Clinical Lymphoma Myeloma & Leukemia*. 2014; 14(4):305-318 IF:1.929

García-Delgado R, de Miguel D, Bailén A, González JR, Bargay J, Falantes JF, Andreu R, Ramos F, Tormo M, Brunet S, Figueredo A, Casaño J, Medina A, Badiella L, Jurado AF, Sanz G. Effectiveness and safety of different azacitidine dosage regimens in patients with myelodysplastic syndromes or acute myeloid leukemia. *Leuk Res*. 2014 Jul;38(7):744-50 IF: 2.692

Sánchez-Guiu I, Antón AI, Padilla J, Velasco F, Lucia JF, Lozano M, Cid AR, Sevivas T, Lopez-Fernandez MF, Vicente V, González-Manchón C, Rivera J, Lozano ML. Functional and molecular characterization of inherited platelet disorders in the Iberian Peninsula: results from a collaborative study. *Orphanet J Rare Dis*. 2014 Dec 24;9:213 IF: 3.96

Do chronic myeloid leukemia patients with late "warning" responses benefit from "watch and wait" or switching therapy to a second generation tyrosine kinase inhibitor? Garcia-Gutiérrez V, Puerta JM, Maestro B, Casado Montero LF, Muriel A, Molina Hurtado JR, Perez-Encinas M, Moreno Romero MV, Suñol PB, Sola Garcia R, De Paz R, Ramirez Sanchez MJ, Osorio S, Mata Vazquez MI, Martinez López J, Sastre JL, Portero Mde L, Bautista G, Duran Nieto MS, Giraldo P, Jimenez Jambriana M, Burgaleta C, Ruiz Aredondo J, Peñarrubia MJ, Requena MJ, Fernández Valle Mdel C, Calle C, Paz Coll A, Hernández-Rivas JA, Franco Osorio R, Cano P, Tallón Pérez D, Fernández de la Mata M, Garrido PL, Steegmann JL. *Am J Hematol*. 2014 Nov;89(11):E206-11. IF: 3.477

Review

Sanchez-Guiu, I; Torregrosa, JM; Velasco, F; Anton, AI; Lozano, ML; Vicente, V; Rivera, J. Her-

mansky-Pudlak syndrome Overview of clinical and molecular features and case report of a new HPS-1 variant. *Hamostaseologie*. 2014; 34(4):301-309 IF:1.589

Letter

Jimenez, M-J; Ferra, C; Garcia, O; de Arriba, F; Jimenez, S; Insunza, A; Calabuig, M; Mantecon, A; Sanchez, J; Torres, M; Balsalobre, P; Linio, J; Jimenez, A; Feliu, E; Ribera, J-M. The commitment and evaluation of the quality management plan by professionals from accredited stem cell transplant centers in Spain. *Bone Marrow Transplantation*. 2014; 49(7):990-992 IF:3.466

Contracts with Companies

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

Clinical Trials

0290/09: A multicenter, randomized, double-blind, placebo-controlled, phase III study of panobinostat in combination with bortezomib and dexamethasone in patients with relapsed multiple myeloma. Pl: Dr/a Álvarez Rivas, Miguel Ángel

0167/09: A multicenter, randomized, double-blind, phase III study of Revlimid (lenalidomida) versus placebo in patients with low-risk myelodysplastic syndrome (low and intermediate-1 IPSS) with impaired 5q-and anemia without transfusion requirements. Pl: Dr/a Sánchez García, Joaquin

0112/10: A multicenter, randomized, open-label, phase II study of Vidaza (Azacitidine) versus supportive therapy in patients with low-risk MDS (low and intermediate-1IPSS) without

5q-deletion and anemia requiring transfusion.
PI: Dr/a Sánchez García, Joaquín

0299/10: Maintenance treatment with 5-Azacytidine in patients with acute myelogenous leukemia ineligible for intensive treatment with partial or complete response to induction chemotherapy.
PI: Dr/a Serrano López, Josefina

0070/11: A multicenter, prospective, open-label, single-arm, phase I-II clinical trial to analyze the induction treatment with a combination of fludarabine, idarubicin, cytarabine, G-CSF and plerixafor for the treatment of young patients with recurrent or resistant LM.
PI: Dr/a Serrano López, Josefina

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/a 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/a Martín Calvo, Ma Carmen

0293/12: A randomized, double-blind, placebo-controlled, phase 3 study of the efficacy and safety of oral azacytidine plus the best supportive treatment vs. the best supportive treatments maintenance therapy in patients with acute myelogenous leukemia i complete remission.
PI: Dr/a Serrano López, Josefina

0008/13: An open, randomized, prospective, two-arm, phase III study to assess the treatment-free remission rate in patients with Ph-positive chronic myeloid leukemia (CML) after two treatments of different durations.
PI: Dr/a Molina Hurtado, José Ramón

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/a 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/a Molina Hurtado José Ramón

0165/13: An open, phase IIIb 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/a 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/a Sánchez García, Joaquín

0041/14: Clinical trial, phase III, case series on the reversal of the anticoagulant effect of dabigatran, by intravenous administration of 5.0 g of idarucizumab (BI 655 075) in patients treated with dabigatran etexilate.
PI Dr/a Velasco Gimena, Francisco

0112/14: A Phase III, randomized, placebo-controlled, double-blind maintenance treatment with oral citrate ixazomib (MLN9708) in patients with multiple myeloma after autologous stem cell transplantation.
PI Dr/a Álvarez Rivas, Miguel Ángel

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/a Serrano López, Josefina

0171/14: A Phase II, randomized, double-blind, placebo-controlled study of azacytidine with or without birinapant with an open run-in phase one group in patients with myelodysplastic syndrome or highest risk chronic myelomonocytic leukemia.
PI Dr/a Sánchez García, Joaquín

0181/14: A Phase Ib / II trial to evaluate the safety and efficacy of PF 04449913, oral inhibitor of the Hedgehog pathway, in combination with intensive chemotherapy, low dose ara-C or decitabine, given to patients with acute myeloid leukemia or syndrome
PI Dr/a Serrano López, Josefina

1657: Effectiveness and safety of liposomal amphotericin B in combination with voriconazole in the treatment of invasive fungal infection caused by filamentous fungi in immunocompromised paediatric patients.
PI: Dr/a Gómez García, Pedro

1790: Study of the correlation between ex vivo response to anticancer drugs and their effectiveness in treating acute myeloid leukemia.
PI: Dr/a Serrano López, Josefina

1959: Hematopoietic stem cell transplantation from haploidentical donors with in vitro selective depletion of allo-reactive lymphocytes in patients with high-risk hematological malignancies.
PI: Dr/a Martín Calvo, Ma Carmen

1949: An observational, multicenter study of the guidelines for recombinant factor IX treatment in patients with hemophilia B in Spain. Observation period: 1 year
PI: Dr/a Velasco Gimena, Francisco

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/a Sánchez García, Joaquín

2224: A multicenter, retrospective study to describe the effectiveness and safety of clofarabine as compassionate use treatment in adult patients with relapsed/refractory acute leukemia prior to hematopoietic stem cell transplantation.
PI: Dr/a Serrano López, Josefina

2277: Modelling treatment and disease burden of chronic lymphocytic leukemia to determine the treatment of choice in the United Kingdom, Italy and Spain.
PI: Dr/a Molina Hurtado, José Ramón

2257: A study to validate an ex vivo individualized test for acute lymphoblastic leukemia.
PI: Dr/a Serrano López, Josefina

2365: A retrospective study to evaluate the subcutaneous administration of bortezomib in the first-line treatment of patients with multiple myeloma (MM) who are not candidates for autologous hematopoietic stem cell transplantation (VERSA STUDY).
PI: Dr/a Álvarez Rivas, Miguel Ángel

2512: Proyecto para actualizar el estudio de hemofilia congénita en España (PUCHS). Estudio multicéntrico, no intervencionista y retrospectivo de la prevalencia de la hemofilia en España.
PI: Dr/a Velasco Gimena, Francisco

2570: Estudio observacional prospectivo para identificar los aspectos clínicos que conducen a la toma de decisiones terapéuticas en pacientes con mielofibrosis.
PI: Dr/a Molina Hurtado, José Ramón

2634: Estudio de caracterización farmacológica ex vivo de tratamientos en hemopatías malignas, mediante uso de la plataforma automatizada de citometría de flujo ExviTch.
PI: Dr/a Sánchez García, Joaquín

2641: Registro posautorización no intervencionista de pacientes con mieloma múltiple recidivante y refractorio tratados con pomalidomida, que han recibido al menos dos tratamientos previos, incluyendo lenalidomida y bortezomib, y que hayan experimentado una proautologous hematopoietic stem cell transplantation (VERSA STUDY).
PI: Dr/a Álvarez Rivas, Miguel Ángel

Pathophysiology of the endocrine system of vitamin D. Biotechnology and aging

Publications

2

Impact
Factor

6,28

Average
Impact Factor

3,14

PhD Researchers

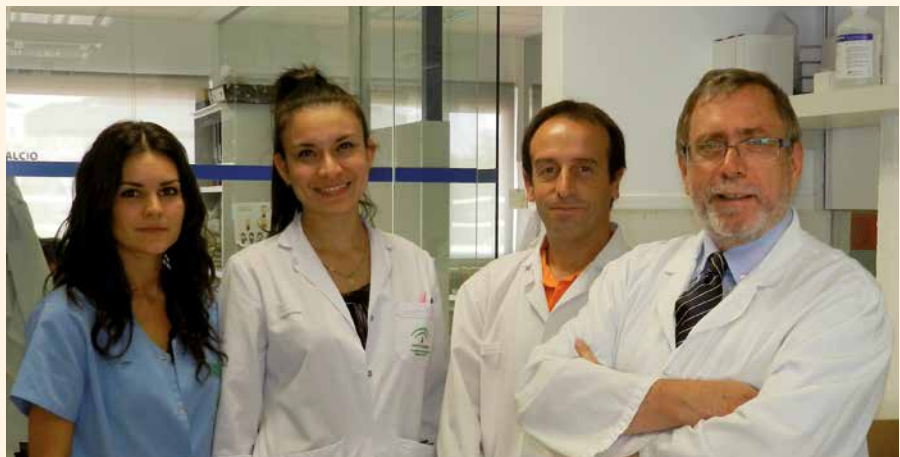
Antonio Casado Diaz
Rafael Cuenca Acevedo
Jose Maria Mata Granados
Raquel Santiago Mora
Ignacio Serrano Alferez

Team Leader**Principal Investigator (PI)**

José Manuel Quesada Gómez
md1qugoj@uco.es

*Thematic Network of Research Partnerships on
Aging-Frailty (RETICEF).*

PAIDI CTS-413 Scientific Group



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 sociated 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 (MSCh) of adult adipocytes; osteoblasts; polyphenols; gene expression; proteomics; nutrigenetics; and nutrigenomics.

Scientific Production

Publications

Original

Papers

Casado-Díaz, Antonio; Ferreiro-Vera, Carlos; Priego-Capote, Feliciano; Dorado, Gabriel; Dolores Luque-de-Castro, María; Manuel Quesada-Gomez, Jose. Effects of arachidonic acid on the concentration of hydroxyeicosatetraenoic acids in culture media of mesenchymal stromal cells differentiating into adipocytes or osteoblasts. *Genes and Nutrition*. 2014; 9(1):375
IF:3,419
Q:1 D:3

In Collaborations

Papers

Saavedra Santana, Pedro; Quesada Gomez, Jose-Manuel; Jodar Gimeno, Esteban; Sosa Henriquez, Manuel. Prevalence of osteoporosis, vertebral fractures and hypovitaminosis D in postmenopausal women living in a rural environment. *Maturitas*. 2014; 77(3):282-286
IF:2,861
Q:1 D:2

Research Fundings

National

Quesada Gómez, JM. Evaluation of the healing effect in an in vivo model. Funding agency: Carlos III Health Institute (ISCIII). Reference: PI12/02315

Quesada Gómez, JM. RETICEF. Funding agency: Carlos III Health Institute (ISCIII). Reference: RD12/0043/0028

Regional

Quesada Gómez, JM. Study of the effect of Oleuropein on fibroblasts. Implications in the treatment of diabetic foot. Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0335-2012

Contract with Companies

Quesada Gómez JM. Collaboration agreements with Lilly SA (Formation). Funding Agency: LILLY, S.A. Reference: CCB.0079

Translational research in surgery of solid organ transplants

HIGHLIGHTS

Publications

15

Impact
Factor

43,287

Average
Impact Factor

2,885

PhD Researchers

Rében Ciria Bru
Manuel LevaVallejo
Pedro López Cillero
Francisco Cristobal Muñoz Casares
Juan Carlos Pozo Laderas
Juan Carlos Regueiro Lopez
Juan Carlos Robles Ariza
Sebastián Rufián Peña
Juan Ruiz Rabelo

Others Researchers

Alvaro Arjona Sanchez
Jesús Jimenez Gomez
César Díaz Lopez

Post-PhD Researchers

Maria Pleguezuelo Navarro

Team Leader

Principal Investigator (PI)

Francisco Javier Briceño Delgado
javibriceno@hotmail.com



Scientific Activity

Our group studies aspects related to the increase in the donor pool and technical innovations in solid organ transplants. It also aims 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

Original

Papers

Briceño, Javier; Cruz-Ramirez, Manuel; Prieto, Martín; Navasa, Miguel; Ortiz de Urbina, Jorge; Orti, Rafael; Gomez-Bravo, Miguel-Angel; Otero, Alejandra; Varo, Evaristo; Tome, Santiago; Clemente, Gerardo; Banares, Rafael; Barcena, Rafael; Cuervas-Mons, Va. Use of artificial intelligence as an innovative donor-recipient matching model for liver transplantation: Results from a multicenter Spanish study. *Journal Of Hepatology*.2014.61-5:1020-1028
IF:10,401
Q:1 D:1

Navarro-Rodriguez, E; Gomez-Luque, I; Diaz-Jimenez, N; Rioja-Torres, P; Bascunana-Estudillo, G; Ruiz-Rabelo, JF; Ciria-Bru, R; Alvarez-Benito, M; Rufian-Pena, S; Briceño-Delgado, J. Effectiveness of an absorbable fibrin sealant patch to reduce lymphoceles formation after axillary lymphadenectomy for breast cancer: a matched-pair analysis. *American Journal Of Surgery*.2014.208-5:824-830
IF:2,406
Q:1 D:3

Arjona-Sanchez, A; Munoz-Casares, C; Ortega-Salas, R; Casado-Adam, A; Sanchez-Hidalgo, JM; Rufian-Pena, S. Long-term survival with peritoneal mucinous carcinomatosis from intraductal mucinous papillary pancreatic carcinoma treated with complete cytoreduction and hyperthermic intraperitoneal chemotherapy. *International Journal Of Hyperthermia*.2014.30-6:408-411
IF:2,769
Q:1 D:3

Teran, DA; Beltran, OG; Bru, RC; Gonzalez, EM; Rosa, MJP; Molina, AL; Cillero, PL; Delgado, JB. Efficacy of neoadjuvant therapy and surgical rescue for locally advanced hepatoblastomas: 10 year single-center experience and literature review. *World Journal Of Gastroenterology*.2014.20-29:10137-10143
IF:2,433
Q:2

Fernandez-Peralbo, M. A.; Priego-Capote, F.; Luque de Castro, M. D.; Casado-Adam, A.; Arjona-Sanchez, A.; Munoz-Casares, F. C.LC-MS/MS quantitative analysis of paclitaxel and its major metabolites in serum, plasma and tissue from women with ovarian: cancer after intraperitoneal chemotherapy. *Journal Of Pharmaceutical And Biomedical Analysis*.2014.91-1:131-137
IF:2,829
Q:2

Briceño, J; Ciria, R. Limits for Adult Liver Donation in Spain. *Transplantation Proceedings*.2014.46-9:3079-3081
IF:0,984
Q:3

Arjona-Sanchez, A; Sanchez-Hidalgo, JM; Ciria-Bru, R; Munoz-Casares, FC; Ruiz-Rabelo, JF; Gallardo, A; Orti, R; Luque, A; Rufian-Pena, S; Lopez-Cillero, P; de la Mata, M; Briceño-Delgado, FJ. Prediction Model to Discard A Priori Liver Allografts. *Transplantation Proceedings*.2014.46-9:3076-3078
IF:0,984
Q:3

Alonso-Gomez, Jaime; Teresa Caro-Cuenca, Maria; Membrives-Obrero, Antonio; Ortega-Salas, Rosa; Maria Gallardo-Valverde, Jose; Orti-Rodriguez, Rafael; Rufian Pena, Sebastian. Perianal alveolar soft-part sarcoma: a rare case. *Central European Journal Of Medicine*.2014.9-2:246-249
IF:0,209
Q:4

Editorial Material

Medina, FJ; Ciria, R; Caro, MT; Rufian, S; Briceño, J. Bright red line along the small bowel: a finding of eosinophilic gastroenteritis. *Anz Journal Of Surgery*.2014.84-9:684-685
IF:1,118
Q:3

Medina Fernandez, Francisco Javier; Espinosa Jimenez, Dionisio; Luque Molina, Antonio; Lopez Gillero, Pedro; Rufian Pena, Sebastian. Transdiaphragmatic approach for hepatopulmonary metastasis: cases that support its reliability and safety. *Cirugia Espanola*.92-1:60-62
IF:0,89
Q:3

Letter

Medina Fernandez, Francisco Javier; Munoz-Casares, Francisco Cristobal; Arjona-Sanchez, Alvaro; Casado-Adam, Angela; Rufian Pena, Sebastian. Peritoneal glistosis: role of cytoreductive surgery and perioperative intraperitoneal chemotherapy. *Cirugia Espanola*.2014.92-4:289-90
IF:0,89
Q:3

Ayllon-Teran, MD; Valverde-Martinez, A; Diaz-Nieto, R; Ciria-Bru, R; Luque-Molina, A; Lopez-Cillero, P; Briceño-Delgado, J. Carcinoid tumor of the common bile duct. *Rev Esp Enferm Dig*. 2014 Dec;106(8):560-1.
IF:1,317
Q4

In Collaborations

Papers

Sapisochin, G; Rodriguez de Lope, C; Gastaca, M; Ortiz de Urbina, J; Lopez-Andujar, R; Palacios, F; Ramos, E; Fabregat, J; Castroagudin, J. F.; Varo, E; Pons, J. A.; Parrilla, P.; Gonzalez-Dieguez, M. L.; Rodriguez, M.; Otero, A.; Vazquez, M. A.; Zozaya, G.; Herrero, J. I.; Sanchez Antolin, G.; Perez, B.; Ciria, R.; Rufian, S.; Fundora, Y.; Ferron, J. A.; Guiberteau, A.; Blanco, G.; Varona, M. A.; Barrera, M. A.; Suarez, M. A.; Santoyo, J.; Bruix, J.; Charco, R. Intrahepatic Cholangiocarcinoma or Mixed Hepatocellular-Cholangiocarcinoma in Patients Undergoing Liver Transplantation. *Annals Of Surgery*.2014.259-5:944-952
IF:7,188
Q:1 D:1

Sapisochin, G; Rodriguez de Lope, C; Gastaca, M; Ortiz de Urbina, J; Suarez, M. A.; Santoyo, J.; Castroagudin, J. F.; Varo, E.; Lopez-Andujar, R; Palacios, F.; Sanchez Antolin, G.; Perez, B.; Guiberteau, A.; Blanco, G.; Gonzalez-Dieguez, M. L.; Rodriguez, M.; Varona, M. A.; Barrera, M. A.; Fundora, Y.; Ferron, J. A.; Ramos, E.; Fabregat, J.; Ciria, R.; Rufian, S.; Otero, A.; Vazquez, M. A.; Pons, J. A.; Parrilla, P.; Zozaya, G.; Herrero, J. I.; Charco, R.; Bruix, J. Very Early Intrahepatic Cholangiocarcinoma in Cirrhotic Patients: Should Liver Transplantation Be Reconsidered in These Patients? *American Journal Of Transplantation*.2014.14-3:660-667
IF:6,19
Q:1 D:1

Perez-Ortiz, M.; Cruz-Ramirez, M.; Ayllon-Teran, M. D.; Heaton, N.; Ciria, R.; Hervás-Martínez, C. An organ allocation system for liver transplantation based on ordinal regression. *Applied Soft Computing*.2014.14-88-98
IF:2,679
Q:1 D:2

Research Fundings

National

Ciria Bru, R. Condition mechanisms discarded teatotic liver grafts after cold storage by normo or subnormo thermic machine perfusion. Funding Agency: Institute Carlos III Health (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

Regional

Ciria Bru, R. The biliary tract in liver transplantation: A global study measuring O2 tissue micro-voltage, microflowmetry and histology of the

factors involved in its viability.Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Referenc: PI-0543-2012

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

Ruiz Rabelo, JF.Sequential preclinical study to improve and validate a standard port for single-incision laparoscopic and thoracoscopic surgery.Funding agency: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0327-2013

Contracts with Companies

Briceño Delgado, FJ. Stand in course on advanced liver surgery. Funding agency: Covidien-Spain, S.L. Reference: PSS.0041

Clinical Trials

0195/09: Ensayo clínico multicéntrico prospectivo controlado y aleatorizado de no inferioridad del tratamiento del cáncer de recto T2 - T3s (superficial) No. Mo mediante quimioterapia preoperatoria y microcirugía endoscópica transanal (TEM) versus excisión total del mesorrecto (ETM). PI: Dr/a Díaz López César

0286/09: An open, multicenter, randomized, phase III trial on the therapeutic use of intraportal infusion of autologous bone marrow mononuclear cells as liver regeneration enhancer prior to liver resection. PI: Dr/a Rufián Peña, Sebastián

0239/11: Role of intraoperative intraperitoneal paclitaxel chemotherapy in radical surgical treatment of ovarian-origin peritoneal carcinomatosis: hyperthermia versus normotemia. PI: Dr/a Rufián Peña, Sebastián

0218/14: Efficacy and safety of early postoperative intraperitoneal chemotherapy (EPIC) with

paclitaxel in the radical surgical treatment of ovarian peritoneal carcinomatosis. PI: Dr/a Muñoz Casares, Francisco C.

1707: A study to assess the feasibility, validity and reliability of the three-day voiding diary in women attending functional urology and urodynamics units. DM. 3D Study PI: Dr/a Leva Vallejo, Manuel

Applications of Artificial Vision

HIGHLIGHTS

Publications

10

Impact Factor

17,98

Average Impact Factor

1,798

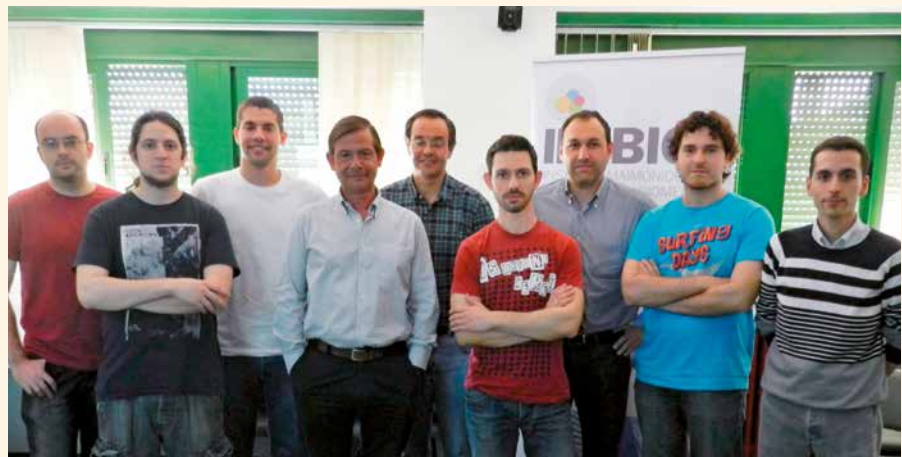
PhD Researchers

Angel Carmona Poyato
 Nicolás Luis Fernández Garcia
 Juan Luis Garrido Castro
 Francisco Jose Madrid Cuevas
 Manuel Jesús Marín Jimenez
 Rafael Muñoz Salinas
 Enrique Yeguas Bolivar

Team Leader

Principal Investigator (PI)

Rafael Medina Carnicer
rmedina@uco.es
PAIDI TIC-161 Scientific Group



Scientific Activity

The main line of research of this group is focused on fundamental problems in artificial vision, which supports all the technology developed in the lines applied.

The activity of this group is centred on some basic topics and results in the publication of papers in impact reviews. The topics are as follows: Unsupervised segmentation of scenes, Tracking, unsupervised recognition of objects in a scene, Volumetric Reconstruction, Augmented Reality, Virtual Reality.

This group develops practical lines of research related to 2D and 3D Vision Systems Design for specific applications in biomedical or industrial environments. The latest activities of the Group were centred on unsupervised evaluation of human mobility, automatic calculation of the geometry of irregular objects for an optimal waste storage, fall risk prediction in the elderly and the development of automated X-ray analysis systems supporting the diagnosis of any type disease.

Keywords

Unsupervised Segmentation; Edge detection; Tracking; Object Recognition 3D-Vision; Augmented Reality; Gesture Recognition.

Scientific Production

Publications

Original

Papers

Marín-Jiménez MJ, Zisserman, A, Eichner, M, Ferrari, V. Detecting people looking at each other in videos. *International Journal of Computer Vision*. 2014;106, (3); 282-296
IF:3.533

Yeguas E, Luzon MV, Pavon R, Laza R, Arroyo G, Diaz F. Automatic parameter tuning for Evolutionary Algorithms using a Bayesian Case-Based Reasoning system. *Applied Soft Computing*. 2014; 18:185-195
IF:2.679

Yeguas-Bolivar E, Munoz-Salinas R, Medina-Carnicer R, Carmona-Poyato A. Comparing evolutionary algorithms and particle filters for Markerless Human Motion Capture. *Applied Soft Computing*. 2014; 17:153-166
IF:2.679

Garrido Jurado, S, Muñoz Salinas, R, Madrid Cuevas, F, Marín Jimenez M.J. Automatic generation and detection of highly reliable fiducial markers under occlusion. *Pattern Recognition*. 2014. 47, (6); 2280-2292.
IF: 2.584

Marín-Jiménez, M.J., de la Pérez Blanca, N., Mendoza, M.Á. Human action recognition from

simple feature pooling. *Pattern Analysis and Applications*. 2014. 17 (1); 17-36.
IF:1.361

Garrido-Castro JL, Escudero A, Medina-Carnicer R, Galisteo AM, Gonzalez-Navas Cristina, Carmona L, Collantes-Estevez E. Validation of a new objective index to measure spinal mobility: the University of Cordoba Ankylosing Spondylitis Metrology Index (UCOASMI). *Rheumatology International*. 2014; 34(3):401-406
IF:1.627

Aguilera-Aguilera, E.J., Carmona-Poyato, A., Madrid-Cuevas, F.J., Medina-Carnicer, R. The computation of polygonal approximations for 2D contours based on a concavity tree. *Journal of Visual Communication and Image Representation*. 2014. 25 (8); 1905-1917.
IF: 1.361

Marín - Jiménez MJ, Muñoz - Salinas, R, Yeguas - Bolivar, E de la Pérez Blanca N, Mendoza M. Human interaction categorization by using audio-visual cues. *Machine Vision and Applications*. 2014; 25(1):71-84
IF:1.444

Yeguas E, Marín-Jimenez MJ, Muñoz-Salinas R, Medina-Carnicer R. Conflict-based pruning of a solution space within a constructive geometric constraint solver. *Applied Intelligence*. 2014; 41(3):897-922
IF:1.021 (2012)

López-Fernández, D., Madrid-Cuevas, F.J., Carmona-Poyato, Á., Marín-Jiménez, M.J., Muñoz-Salinas, R. The ava multi-view dataset for gait recognition. *Lecture Notes in Comput-*

er Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 2014. 8703:26-39.
IF(NO-JCR):0.31

Research Fundings

National

Medina Carnicer, R. Svsmem: 3D Vision system without markers for unsupervised assessment of mobility. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2012-32952

Participation in other researchs projects from IMIBIC Groups

Medina Carnicer, R (Co-IP). Collaboration in the development of the "BROCA" project (development of a surgical robot with 3D vision). Requena Tapia, MJ (IP). BROCA Project. Funding agency: Collaboration Agreements between MINECO (FEDER) and the Univeristy of Cordoba for the implementation of a biomedical research project. Reference: CCB.O29PM

Contracts with Companies

Medina Carnicer, R. Implementing a 3D vision system (SVCS) for determining irregular object geometries in CN. Jose Cabrera. Funding agency: Enresa

Genetics and behavioural diseases

HIGHLIGHTS

Publications

6

Impact Factor

16,438

Average Impact Factor

2,739

PhD Researchers

Encarna Alejandro Duran
Francisco José Alós Civico
Rafael Burgos Marín
Francisco Garcia-Torres
Juan Antonio Moriana Elvira
M^a Araceli SanchezRaya
M^a Salud Jiménez Romero

Post-PhD Researchers

M Del Mar Gamez Del Estal

Pre-PhD Researchers

Jaime Osuna Luque

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

Teresa Guijarro Granados
Pilar Martin Borreguero
Ma Auxiliadora Romero Balsera
Sara Gomez Melero

Team Leader

Principal Investigator (PI)

Manuel Ruiz Rubio
ge1rurum@uco.es
PAIDI BIO-272 Scientific Group



Scientific Activity

Significant progress is being made nowadays in our understanding of the genetic basis of autism. Many of the genes involved encode proteins which are involved in synaptic function. *Caenorhabditis elegans* is an organism which constitutes an ideal model for studying synapse interactions because it only has about 300 neurons, and these are well characterized. In *C. elegans* there are genes which are orthologous to the human genes involved in autism, which encode proteins involved in the synapse. We have characterized mutants in some of these genes by observing changes in behaviour, as well as in response to chemical compounds that interfere with neurotransmitters, such as gamma-aminobutyric acid (GABA) or acetylcholine. The use of *C. elegans* as a model organism allows us to create an experimental setting that facilitates the genetic study of synaptic components. With the results obtained, our long term aim is to extrapolate them to humans and be able to explain the neurobiological mechanisms involved in the etiology of autism and other developmental diseases.

On the other hand, the members of the Unit for Child and Adolescent Mental Health (USMI-J) are conducting a detailed phenotypic analysis of a sample of patients diagnosed with autism in order to establish distinctive features and to determine whether autism can be associated in the future with specific genetic or environmental alterations.

Keywords

Autism; pervasive developmental disorders; neuronal synapses; postsynaptic density; *C. elegans* as a model organism in synaptic function.

Scientific Production

Publications

Original

Papers

Gamez-Del-Estal, MM; Contreras, I; Prieto-Perez, R; Ruiz-Rubio, M. Epigenetic effect of testosterone in the behavior of *C. elegans*. A clue to explain androgen-dependent autistic traits?. *Frontiers in Cellular Neuroscience* 2014;8:69.
IF: 4,175
Q:2

García-Torres F, Alós FJ. Anxiety in common situations of everyday life in breast cancer survivors. *Psycho-Oncology* 2014; 23(8): 953-55
IF: 4,044

García-Torres F, Alós FJ. Eysenck personality questionnaire psychoticism predicts motivational somatic symptoms of depression in breast cancer survivors. *Psycho-Oncology* 2014; 23(3): 350-2.
IF: 4,044

García-Torres F, Alós, F. J. The somatic-motivational symptoms of depression, anxiety and psychoticism in everyday situations: New avenues for understanding classical problems in breast cancer survivors. *Psicooncología* 2014; 11(2-3): 421-22
IF SJR = 0,172

Jiménez, M.S. Impact of cochlear implants on auditory integration: Results and predictive factors in a group of 116 deaf Spanish children. *Revista de Logopedia, Foniatria y Audiología*. 2014;34: 4-16.
IF:0

Research Fundings

Moriana, J.A. 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
To Begin in 2015

Contracts with Companies

Ruiz Rubio, M. *Caenorhabditis elegans* as models of neurological diseases. Funding agency: Canvax Biotech S.L. Reference: INTER.0002

Sánchez-Raya, A., Luque, B. y Moriana, J.A. Agreement with the Consejería de Igualdad, Salud y Políticas Sociales for the creation of the Early Child Care Center (Centro de Atención Infantil Temprana) of the University of Córdoba.

Metabolomics. Identification of bioactive components

Publications

15

Impact
Factor

53,078

Average
Impact Factor

3,538

PhD Researchers

Carlos Ferreiro Vera
Maria Isabel Orozco Solano

Post-PhD Researchers

Monica Calderon Santiago
Veronica Sanchez De Medina Baena

Pre-PhD Researchers

Maria Pilar Delgado De La Torre
M^a del Mar Delgado Povedano
Maria Auxiliadora Fernández Peralbo
Antonio Mena Bravo
María Molina Calle
Asunción López Bascón
Carlos Augusto Ledesma Escobar
Angela Peralbo Molina

Team Leader

Principal Investigator (PI)

M^a Dolores Luque de Castro
qaillucam@uco.es

PAIDI FQM-227 Scientific Group

Emerging Researcher (ER)

Feliciano Priego Capote



Scientific Activity

Our scientific activity is focused on the study of the mechanisms involved in maintaining genome and epigenome stability. Our group has found genetic and biochemical evidence for the existence of a mechanism for active demethylation of DNA in plants. We have identified a family of proteins, whose prototype is ROS1 and DME, which exhibit methyl-C5-DNA glycosylase activity, and initiate the deletion of 5-mec by a mechanism analogous to the Base Excision Repair (BER). Using genetic and molecular approaches, we have characterized in detail the biochemical activity of this new family of enzymes. In addition we have identified other proteins involved in this mechanism of epigenetic reprogramming. We are currently investigating the relevance of the base repair system in the maintenance and control of genetic and epigenetic information. In addition, we intend to analyze the relationship between this new route for demethylation of DNA and different modifications in the structure of chromatin. Finally, we are exploring the feasibility of using ROS1 and DME to initiate a controlled demethylation of DNA in human cells.

Keywords

Genetics; Epigenetics; Mutagenesis; DNA repair; DNA methylation; gene regulation.

Scientific Production

Publications

Original

Article

Calderon-Santiago, Monica; Priego-Capote, Feliciano; Luque de Castro, Maria D. Enhanced Detection and Identification in Metabolomics by Use of LC-MS/MS Untargeted Analysis in Combination with Gas-Phase Fractionation. *Analytical Chemistry*. 86-15:7558-7565
IF:5,825

Priego-Capote, Feliciano; Ramirez-Boo, Maria; Finamore, Francesco; Gluck, Florent; Sanchez, Jean-Charles. Quantitative Analysis of Glycated Proteins. *Journal of Proteome Research*. 13-2:336-347
IF:5,001

Calderon-Santiago, M.; Priego-Capote, F.; Jurado-Gomez, B.; Luque de Castro, M. D. Optimization study for metabolomics analysis of human sweat by liquid chromatography-tandem mass spectrometry in high resolution mode. *Journal Of Chromatography A*. 1333-70-78
IF:4,258

Calderon-Santiago, M.; Priego-Capote, F.; Galache-Osuna JG, de Castro MDL. Analysis of serum phospholipid profiles by liquid chromatography-tandem mass spectrometry in high resolution mode for evaluation of atherosclerotic patients. *Journal of Chromatography A*. 1333-70-78
IF:4,258

Priego-Capote, F.; Orozco-Solano, M. I.; Calderon-Santiago, M.; Luque de Castro, M. D. Quantitative determination and confirmatory analysis of N-acetylneuraminic and N-glycolylneuraminic acids in serum and urine by solid-phase extraction on-line coupled to liquid chromatography-tandem mass spectrometry. *Journal of Chromatography A*. 1346-88-96
IF:4,258

Fernandez-Peralbo, M. A.; Vera, C.; Ferreiro; Priego-Capote, E.; Luque de Castro, M. D. Stable isotopic internal standard correction for quantitative analysis of hydroxyeicosatetraenoic acids (HETEs) in serum by on-line SPE-

LC-MS/MS in selected reaction monitoring mode. *Talanta*. 126-:170-176
IF:3,511

Delgado de la Torre, M. Pilar; Priego-Capote, Feliciano; Dolores Luque de Castro, M. Comparative profiling analysis of woody flavouring from vine-shoots and oak chips. *Journal of The Science of Food And Agriculture*. 94-3:504-514
IF:1,879

Sanchez de Medina, Veronica; Calderon-Santiago, Monica; El Riachy, Milad; Priego-Capote, Feliciano; Luque Luque de Castro, MD. High-resolution mass spectrometry to evaluate the influence of cross-breeding segregating populations on the phenolic profile of virgin olive oils. *Journal of Food And Agriculture*. 94-15:3100-3109
IF:1,879

Fernandez-Peralbo, M. A.; Priego-Capote, F.; Luque de Castro, M. D.; Casado-Adam, A.; Arjona-Sanchez, A.; Munoz-Casares, F. C. LC-MS/MS quantitative analysis of paclitaxel and its major metabolites in serum, plasma and tissue from women with ovarian cancer after intraperitoneal chemotherapy. *Journal of Pharmaceutical And Biomedical Analysis*. 91-:131-137
IF:2,829

Luque de Castro, Maria Dolores. Towards a comprehensive exploitation of agrofood residues: Olive tree - olive oil as example. *Comptes Rendus Chimie*. 17-3:252-260
IF:1,483

Review

Ledesma-Escobar, CA; Luque de Castro, MD. Towards a comprehensive exploitation of citrus. *Trends In Food Science & Technology*. 39-1:63-75
IF:4,651

Luque de Castro, MD; Delgado-Povedano, M. M. Ultrasound: A subexploited tool for sample preparation in metabolomics. *Analytica Chimica Acta*. 806-:74-84
IF:4,517

Mena-Bravo, A.; Luque de Castro, MD. Sweat: A sample with limited present applications and promising future in metabolomics. *Journal of*

Pharmaceutical and Biomedical Analysis. 90-:139-147
IF:2,829

In Collaborations

Papers

Casado-Diaz, Antonio; Ferreiro-Vera, Carlos; Priego-Capote, Feliciano; Dorado, Gabriel; Dolores Luque-de-Castro, Maria; Manuel Quesada-Gomez, Jose. Effects of arachidonic acid on the concentration of hydroxyeicosatetraenoic acids in culture media of mesenchymal stromal cells differentiating into adipocytes or osteoblasts. *Genes And Nutrition*. 9-1-:1-10
IF:3,419

Anter, J.; Tasset, I.; Demyda-Peyras, S.; Ranchal, I.; Moreno-Millan, M.; Romero-Jimenez, M.; Muntane, J.; Luque de Castro, MD.; Munoz-Serrano, A.; Alonso-Moraga, A. Evaluation of potential antigenotoxic, cytotoxic and proapoptotic effects of the olive oil by-product "alperujo", hydroxytyrosol, tyrosol and verbascoside. *Mutation Research-Genetic Toxicology and Environmental Mutagenesis*. 772-:25-33
IF:2,481

Research Fundings

National

Luque de Castro MD. Study of the relevance of ultrasound frequency in improving sample preparation stages in proteomics, metabolomics and degradation processes. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: CTQ2012-37428

Lopez Miranda JM (Priego Capote, F. Co-PI). Early predictor and causes of loss of phenotypic flexibility as individual risk factor of metabolic disease: towards a personalized medicine. Funding Agency: Institute of Health Carlos III (ISCIII). Reference: PIE14/00005 To Begin in 2015

Regional

Priego Capote, F. Development of analytical platforms for the identification of biomarkers

of glycosylated proteins: Application to diabetic patients. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: P10-FQM-6420

Luque de Castro, MD. Optimizing and applying metabolomic platforms for non-invasive analysis of biofluids to determine markers for early diagnosis of lung cancer. Funding agency: Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Reference: FQM1602-2012

Contract with Companies

Luque de Castro, MD. Completing the development of active plant compound extraction

methods for their identification and quantification. Funding agency: PhytoPlant Research, S. L.

Luque de Castro, MD. 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. Identification by LC-QTIF, measurement by triple quadrupole LC-MS/MS and ionization by APCI of compounds in vegetable extracts. Funding Agency: PhytoPlant Research, S. L.

Luque de Castro, MD. Measuring vitamin D and its metabolites in serum samples from women with osteoporosis. Funding Agency: Institute of Health Carlos III (ISCIII)

Luque de Castro, MD. A thorough analytical study of the composition and characteristics of plants of the stevia genus by mass spectrometry. Funding agency: Consorcio Campus de Excelencia Internacional en Agroalimentación (ceiA3)

Publications

1

Impact Factor

6,815

Average Impact Factor

6,815

PhD Researchers

Rafael Rodriguez Ariza

Post-PhD Researcher

M^a Dolores Cordoba Cañero

M^a Teresa Morales Ruiz

M^a Victoria García Ortiz

Pre-PhD Researchers

Jara Teresa Parrilla Doblaz

Iván Devesa Guerra

Casimiro Barbado García-Gil

Team Leader

Principal Investigator (PI)

Teresa Roldán Arjona

ge2roarm@uco.es



Scientific Activity

Our scientific activity is focused on the study of the mechanisms involved in maintaining genome and epigenome stability. Our group has found genetic and biochemical evidence for the existence of a mechanism for active demethylation of DNA in plants. We have identified a family of proteins, whose prototype is ROS1 and DME, which exhibit methyl-C5-DNA glycosylase activity, and initiate the deletion of 5-mec by a mechanism analogous to the Base Excision Repair (BER). Using genetic and molecular approaches, we have characterized in detail the biochemical activity of this new family of enzymes. In addition we have identified other proteins involved in this mechanism of epigenetic reprogramming. We are currently investigating the relevance of the base repair system in the maintenance and control of genetic and epigenetic information. In addition, we intend to analyze the relationship between this new route for demethylation of DNA and different modifications in the structure of chromatin. Finally, we are exploring the feasibility of using ROS1 and DME to initiate a controlled demethylation of DNA in human cells.

Keywords

Genetics; Epigenetics; Mutagenesis; DNA repair; DNA methylation; gene regulation.

Scientific Production

Publications

Original

Papers

Cordoba-Canero, D; Roldan-Arjona, T; Ariza, RR. Arabidopsis ZDP DNA 3'-phosphatase and ARP endonuclease function in 8-oxoG repair initiated by FPG and OGG1 DNA glycosylases. *Plant Journal*.79-5:824-834
IF:6.815

Research Fundings

National

Roldán Arjona, Ma T. DNA demethylation: basic molecular mechanisms and their relevance to the reversal of epigenetic silencing. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO).Reference: BFU2013-43269-P

Roldán Arjona, Ma T. Actions to regenerate "Researcher Europe" Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO).Reference: 201460000027968

International

Roldán Arjona, Ma T. Epigenetic Chemical Biology (EPICHEM). Funding agency: European Commission. Reference:CMST COST Action CM1406

http://www.cost.eu/COST_Actions/cmst/Actions/CM1406?management

Regional

Roldán Arjona, Ma 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

Contract with Companies

Roldán Arjona, Ma T. Services provided for Canvax. Funding agency: Canvax Biotech S.L. Reference:PSS.0032

Publications

13

Impact
Factor

27,412

Average
Impact Factor

2,108

PhD Researchers

Montserrat Anton Gamero
M^a Jose De La Torre Aguilar
Jose Fernando Fernández Gutierrez
Ignacio Ibarra De La Rosa
Eduardo López Laso
Maria Elena Mateos Gonzalez
Juan Luis Perez Navero
Maria Esther Ulloa Santamaria
Maria Jose Velasco Jabalquinto

Post-PhD Researchers

Catherine Ubina Flores Rojas

Others Researchers

Maria Jose Arroyo Marin
Susana Jaraba Caballero

Team Leader

Principal Investigator (PI)

Mercedes Gil Campos

h02gicam@uco.es

*Research Network on Maternal and Child
Health (RedSAMID) and associated Centre for
Biomedical Network on Rare Diseases (CIBERER)
PAIDI CTS-639 Scientific Group*



Scientific Activity

Our group studies infectious diseases from two approaches:

Our group has initiated work in various sub-areas within Pediatrics to form a research group. Previously with other groups, and now with the group we have created, the research is based on understanding the role of metabolism in various pediatric diseases. Basically, this group works on nutritional aspects, as well as in the study of hormonal factors, inflammation and oxidative stress. In recent years we have focused on the study of childhood obesity and the metabolic syndrome currently associated with other pediatric illnesses too, such as prematurity or intra and extra-uterine growth retardation. In addition, the group also carries out research into the genetics of obesity. In future research, we expect to address neuropaediatrics, and particular, the inborn errors of metabolism.

Keywords

Obesity; metabolic syndrome; arteriosclerosis; inflammation; oxidative stress; gene expression; proteomics; nutrigenetics; nutrigenomics.

Scientific Production

Publications

Original

Papers

Ortiz-Espejo, M.; Gil-Campos, M.; Mesa, M. D.; Garcia-Rodriguez, C. E.; Munoz-Villanueva, M. C.; Perez-Navero, J. L. Alterations in the antioxidant defense system in prepubertal children with a history of extrauterine growth restriction. *European Journal of Nutrition*. 2014; 53(2):607-615
IF:3.84

Mendiola de la Osa, Agustin; Garcia-Fernandez, Javier; Llorente-Cantarero, Francisco J.; Gil-Campos, Mercedes; Munoz-Villanueva, Maria C.; De la Torre Aguilar, Maria J.; Ibarra de la Rosa, Ignacio; Perez-Navero, Juan L. Lung recruitment manoeuvres do not cause haemodynamic instability or oxidative stress but improve oxygenation and lung mechanics in a newborn animal model An observational study. *European Journal of Anaesthesiology*. 2014;1(9):457-465
IF:3.011

Ortiz-Espejo, Maria; Luis Perez-Navero, Juan; Olza-Meneses, Josune; Carmen Munoz-Villanueva, Maria; Maria Aguilera-Garcia, Concepcion; Gil-Campos, Mercedes. Prepubertal children with a history of extra-uterine growth restriction exhibit low-grade inflammation. *British Journal of Nutrition*. 2014; 112(3):338-346
IF:3.342

Lopez-Laso, Eduardo; Roncero-Sanchez-Cano, Ines; Arce-Portillo, Elena; Ley-Martos, Myriam; Aguirre-Rodriguez, Javier; Garcia-Ron, Adrian; Mora-Navarro, David; Mendez-Garcia, Mario; Camino-Leon, Rafael. Infant botulism in Andalusia (Southern Spain). *European Journal of Paediatric Neurology*. 2014;18(3):321-326
IF:1.934

Mateos-Gonzalez ME, Lopez-Laso E, Vicente-Rueda J, Camino-Leon R, Fernandez-Ramos JA, Baena-Gomez MA, Pena-Rosa MJ. Response to everolimus in patients with giant cell astrocytoma associated to tuberous sclerosis complex. *Revista de Neurologia*. 2014; 59(11):497-502
IF:0.926

Martos-Moreno GÁ, Gil-Campos M, Bueno G, Bahillo P, Bernal S, Feliu A, Lechuga-Sancho

AM, Palomo E, Ruiz R, Vela A SEEP. Obesity associated metabolic impairment is evident at early ages: spanish collaborative study. *Nutricion Hospitalaria*. 2014; 30(4):787-793
IF:1.25

Editorial Material

Pena Rosa, M. J.; Mateos Gonzalez, M. E.; Alcobá Conde, A. A.; Yebenes Cano, S.; Gonzalez Pena, A. Radiographic evidence of the action of bisphosphonates. *Anales de Pediatría*. 2014; 80(1):56-57
IF:0.722

Letter

Rodriguez-Benitez, V; Arranz, J A; Mata, C; Perez-Navero, J L; Gil-Campos, M. A new mutation in the GLDC gene in non-ketotic hyperglycinaemia. *Anales de Pediatría*. 2014; 80(1):e7-8
IF:0.722

In Collaborations

Papers

Olza J, Aguilera CM, Gil-Campos M, Leis R, Bueno G, Valle M, Cañete R, Tojo R, Moreno LA, Gil A . Waist-to-height ratio, inflammation and CVD risk in obese children. *Public Health Nutrition*. 2014; 17(10):2378-2385
IF:2.483

Ulate-Campos A, Fons C, Campistol J, Martorell L, Cancho-Candela R, Eiris J, López-Laso E, Pineda M, Sans A, Velázquez R. Alternating hemiplegia of childhood: ATP1A3 gene analysis in 16 patients. *Medicina Clinica*. 2014; 143(1):25-28
IF:1.252

Azahara I, Rupérez, Josune Olza, Mercedes Gil-Campos, Rosaura Leis, María Dolores Mesa, Rafael Tojo, Ramón Cañete, Ángel Gil, Concepción M. Aguilera. Association of Genetic Polymorphisms for Glutathione Peroxidase Genes with Obesity in Spanish Children. *J Nutrigenet Nutrigenomics* 2014;7:130-142
IF: 2,581

Letters

Estevez, OA.; Ortega, C; Fernandez, : Aguado, R; Rumbao, J; Perez-Navero, J; Santamaria,

M.A Novel IL2RG Mutation Presenting With Atypical T-B+NK+ Phenotype: Rapid Elucidation of NK Cell Origin. *Pediatric blood & cancer*. 2014.61(1).178-179
IF:2.562

Reviews

Rovira À, Ruiz-Falcó ML, García-Esparza E, López-Laso E, Macaya A, Málaga I, Vázquez E, Vicente J. Recommendations for the radiological diagnosis and follow-up of neuropathological abnormalities associated with tuberous sclerosis complex. *J Neurooncol*. 2014 Jun;118(2):205-23.
IF:2.787

Research Fundings

National

Mateos González, ME. An integral comprehensive proteomic study of liver cancer in children: identification of diagnostic and prognostic factors, key signaling pathways and new therapeutic targets. Sponsored body: Institute Carlos III Health (ISCIII). Reference: PI10/O2082

Gil Campos, M. Search for cardiovascular risk biomarkers and antioxidant defense system in prepubertal children with a history of extrauterine growth retardation (biorica). Sponsored body: Institute Carlos III Health (ISCIII). Reference: PI13/O1245

Regional

Gil Campos, M. Search for cardiovascular risk biomarkers and antioxidant defense system in prepubertal children with a history of extrauterine growth retardation (biorica). Sponsored body: Regional Ministry of Equality, Health and Social Policies (CISPS). Reference: PI-0480-2012

Clinical Trials

0018/09: A randomized, open, multicenter, phase III trial to assess the efficacy of sodium thiosulfate in reducing ototoxicity in patients receiving chemotherapy with cisplatin for standard risk hepatoblastoma.
PI: Dr/a Mateos Gonzalez, Maria Elena

0010/10: Efficacy and safety of levosimendan in critically ill children with severe acute heart failure
PI: Dr/a Ulloa Santamaria, María Esther

0061/11: European Neuroblastoma Treatment Protocol for low or intermediate risk / European Low and Intermediate Risk Neuroblastoma
PI: Dr/a Mateos Gonzalez, Maria Elena

0106/12: A prospective, multicenter, randomized, double-blind, placebo-controlled phase 3 study to assess the pharmacokinetics, safety and efficacy of paricalcitol capsules in reducing intact Parathyroid hormone levels in serum in children and adolescents aged 10 to 16 years with chronic moderate-to-severe nephropathy.
PI: Dr/a Anton Gamero, Montserrat

0334/12: Multicenter, double-blind, randomized, placebo-controlled, parallel-group in which the efficacy and safety of repeated treatment with Lamazym in patients with alpha-mannosidosis is studied.
PI: Dr/a Gil Campos, Maria Mercedes

1783: Register of patients with type C Niemann-Pick.
PI: Dr/a López Laso, Eduardo

1929: LIFE study of prebiotic oligosaccharides and fermented formula. A randomized, controlled, double-blind to investigate the effect of a new infant formula on the incidence of gastrointestinal symptoms in healthy term infants
PI: Dr/a Pérez Navero, Juan Luis

2060: An international registry which collects data on disease manifestations, interventions

and outcomes in patients with tuberous sclerosis complex
PI: Dr/a López Laso, Eduardo

2270: Nutritional intervention study, randomized, double-blind, parallel group to evaluate the effect of Lactobacillus fermentum CECT5716 consumption on the incidence of mastitis
PI: Dr/a Gil Campos, Maria Mercedes

2414: Nutritional intervention study, multicenter, randomized, blinded, parallel group to evaluate the effect of the consumption of Lactobacillus fermentum CECT5716 on the duration of acute diarrhea in children.
PI: Dr/a Gil Campos, Maria Mercedes

Publications

5

Impact
Factor

13,991

Average
Impact Factor

2,798

PhD Researchers

Félix Gascón Luna
Eduardo Agüera Morales
Evelio Luque Carabot
Jose Peña Amaro
Ma Concepción Ruiz Villen

Post-PhD Researchers

Fernando Sánchez López

Pre-PhD Researchers

Ma Carmen Bahamonde Román
Cristina Conde Gavilán
Antonio Cruz Guerrero
Ignacio Jimena Medina

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

Ana Isabel Giraldo Polo

Team Leader

Principal Investigator (PI)

Isaac Túnez Fiñana
fm2tufii@uco.es
PAIDI CTS-624 Scientific Group



Scientific Activity

Our group studies the effect of different antioxidant agents, as well as transcranial magnetic stimulation on neuroplasticity (neurogenesis and synaptogenesis), cell death, oxidative stress and behavioural phenotype in models of neurodegeneration induced by neurotoxins and neuropsychiatric models induced by olfactory bulbectomy. Through these models, we analyze the role played by reactive oxygen and nitrogen species in the abovementioned phenomena, as well as the possibility of using the properties of the different agents used as new therapeutic strategies. Recently, the scope of the study has covered the analysis of transcription factors and vitagenes involved in the antioxidant response.

Additionally, the group is currently studying the role of nitrate and oxidative status, as well as and inflammation in vitagene activation in patients with different neurodegenerative diseases. Finally, the group is involved in intense horizontal research in partnership with other groups in the assessment, analysis and interpretation of oxidative status in different study models and processes.

Keywords

Oxidative stress; inflammation; mitochondria; cell death; neuroplasticity; antioxidant systems; vitagenes; Nrf2.

Scientific Production

Publications

Original

Papers

Escribano BM, Moreno A, Tasset I, Túnez I. Impact of Light/Dark Cycle Patterns on Oxidative Stress in an Adriamycin-Induced Nephropathy Model in Rats. *Plos One*. 2014; 9(5):e97713. IF:3.534

Bahamonde, Carmen; Conde, Cristina; Agueera, Eduardo; Lillo, Rafael; Luque, Evelio; Gascon, Felix; Feijoo, Montserrat; Cruz, Antonio H.; Sanchez-Lopez, Fernando; Tunes, Isaac. Elevated melatonin levels in natalizumab-treated female patients with relapsing-remitting multiple sclerosis: Relationship to oxidative stress. *European Journal of Pharmacology*. 2014; 730:26-30. IF:2.684

Escribano, BM; Colin-Gonzalez, AL; Santamaria, A; Tunes, I. The Role of Melatonin in Multiple Sclerosis, Huntington's Disease and Cerebral Ischemia. *CNS & Neurological Disorders-Drug Targets*. 2014; 13(6):1096-1119. IF:2.702

Escribano, B; Quero, I; Feijoo, M; Tasset, I; Montilla, P; Tunes, I. Role of noise and music as anxiety modulators: Relationship with ovarian hormones in the rat. *Applied Animal Behaviour Science*. 2014;152:73-82. IF:1.626

In Collaborations

Papers

Romina Meza-Miranda, Eliana; Camargo, Antonio; Alberto Rangel-Zuniga, Oriol; Delgado-Lista, Javier; Garcia-Rios, Antonio; Perez-Martinez, Pablo; Tasset-Cuevas, Inma; Tunes, Isaac; Tinahones, Francisco J.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Postprandial oxidative stress is modulated by dietary fat in adipose tissue from elderly people. *Age*. 2014; 36(2):507-517. IF:3.445

Contract with Companies

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

Sánchez López, F. Collaboration agreement with the Sociedad Española de Neurología. Funding agency Sociedad Andaluza de Neurología (Spanish Association of Neurology). Reference: CCB.0005

Clinical Trials

0132/09: A multicenter, randomized, double-blind, parallel-group, placebo-controlled study to evaluate the efficacy and safety of pegylated interferon beta-1a (biib017) in subjects with relapsing multiple sclerosis. PI: Dr/a Sánchez López, Fernando

0133/09A 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 Sánchez López, Fernando

0056/10: A multicenter, double-blind, randomized, parallel-grup, active-controlled, monotherapy study to determine the effectiveness an safety of daclizumab obtained through a high performance process (DAC HYP) versus Avonex. PI: Dr/a Sánchez López, Fernando

0103/11: An open, multicenter, non-randomized, parallel-group study evaluating the efficacy of fingolimod in de novo patients vs. fingolimod in patients previously treated with interferon or glatiramer acetate as assessed by measuring the number of bouts 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 Sánchez López, Fernando

0145/11: A multicenter, extension, dose-blind frequency study to determine the safety and

efficacy of long-term pegylated interferon beta-1a (BIB017) therapy in patients with relapsing multiple sclerosis. PI: Dr/a Sánchez López, Fernando

0196/11: A randomized, double-blind, placebo-controlled, parallel group study to investigate on MRI scans the efficacy and safety of atumumab administered for a period of six months to patients with relapsing-MS. PI: Dr/a Sánchez López, Fernando

0295/11: A multicenter, randomized, placebo-controlled, triple-blind phase I / II clinical trial to assess the safety, feasibility and effectiveness of intravenous therapy with three doses of autologous mesenchymal cells of adipose tissue in patients with moderate to severe Amyotrophic Lateral Sclerosis. PI: Dr/a Agüera Morales, Eduardo

0221/12: A multicenter, double-blind, parallel-group, placebo-controlled study to assess the efficacy, safety, tolerability and pharmacokinetics of BIIB033 in patients with a first episode of acute optic neuritis. PI: Dr/a Sánchez López, Fernando

0362/12: A randomized, double-blind, parallel-group, placebo-controlled, 12-week trial of leuco methylthionium bis (hydromethanesulfonate) in patients with mild-to-moderate Alzheimer's disease. PI: Dr/a Agüera Morales, Eduardo

0031/13: An open, multicenter, extension study to assess the long-term efficacy and safety of BIIB019. Daclizumab obtained using a high-yield process (DAC HYP) in monotherapy in patients with multiple sclerosis who have completed the 205MS301 study. PI: Dr/a Sánchez López, Fernando

92/13: A randomized, double-blind, placebo-controlled, parallel group, dose-finding study to assess the efficacy, safety, tolerability and pharmacokinetics of biib033 in patients with relapsing multiple sclerosis when used in combination with avonex. PI: Dr/a Sánchez López, Fernando

0243/13: A multicenter, randomized, parallel-group, observer-blind, phase II study to assess the efficacy, safety and tolerability of plovamer acetate 0.5, 3, 10 and 20 mg vs

Copaxone in patients with relapsing-remitting multiple sclerosis.

PI: Dr/a Sánchez López, Fernando

0227/13: A prospective, single-arm study in a clinical setting to assess the efficacy, tolerability and convenience of teriflunomide according to patient reported outcomes (PRO) in patients with multiple sclerosis.

PI: Dr/a Sánchez López, Fernando

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 Sánchez López, Fernando

0012/14: An open, phase III extension study of ECU-NMO-301 to assess the efficacy and safety of eculizumab in patients with recurrent optic neuromyelitis (NMO).

PI: Dr/a Sánchez López, Fernando

0082/14: An open, multicenter study to assess the efficacy of oral Tecfidera™ (dimethyl fumarate) in EM activity and in patient reported outcomes in patients with relapsing-remitting

multiple sclerosis in real practice (PROTEC).

PI: Dr/a Sánchez López, Fernando

1011: A global, observational study to assess adherence to disease-modifying drugs in patients with relapsing-remitting multiple sclerosis.

PI: Dr/a Sánchez López, Fernando

1634: An epidemiological study to assess the diagnosis and follow-up of patients with a first demyelinating episode suggestive of multiple sclerosis.

PI: Dr/a Agüera Morales, Eduardo

1738: A validation study of questionnaires used to predict and assess adherence to treatments for neurological syndrome and multiple sclerosis in Spain (SAVE)

PI: Dr/a Agüera Morales, Eduardo

1816: Evaluation of functionality of patients with multiple sclerosis in Spain and its impact on their quality of life

PI: Dr/a Sánchez López, Fernando

1873: Validating the Spanish version of the Relevant Outcome Scale for Alzheimer's disease (ROSA).

PI: Dr/a Agüera Morales, Eduardo

1969: A study of biomarkers in CSF for the diagnosis of prodromal Alzheimer's disease in patients with mild cognitive impairment.

PI: Dr/a Agüera Morales, Eduardo

1989: Long-term effectiveness of Copaxone in regular clinical practice. Observational study (XPERIENCIA-5)

PI: Dr/a Agüera Morales, Eduardo

2085: A prospective, observational study to assess the influence of anti-JC antibodies test on risk perception in treatments with natalizumab (Tysabri®) in patients with multiple sclerosis and their attending neurologists.

PI: Dr/a Sánchez López, Fernando

2238: An observational, retrospective, cross-over study to assess suboptimal treatment adherence in patients with relapsing-remitting multiple sclerosis with a bout after treatment.

PI: Dr/a Sánchez López, Fernando

2487: An observational, multicenter, multinational paragraph gather information on security and document the pharmaceutical use of Fampyra When are US in Medical Practice .

PI: Dr/a Agüera Morales, Eduardo

2660: A retrospective, observational, multicenter, national study to assess the use of fingolimod Gilenya in patients with relapsing-remitting multiple sclerosis in clinical practice. Estudio NEXT

PI: Dr/a Agüera Morales, Eduardo

Publications

11

Impact Factor

27,118

Average Impact Factor

2,121

PhD Researchers

Carlos García Martínez
Eva Lucrecia Gibaja Galindo
María Luque Rodríguez
José Raúl Romero Salguero
Amelia Zafra Gómez

Team Leader

Principal Investigator (PI)

Sebastián Ventura Soto
sventura@uco.es

Post-Phd Researchers

Alberto Cano Rojas
José María Luna Ariza

Pre-Phd Researchers

Marco Antonio Barrón Ortiz
Oscar Gabriel Reyes Pupo
Alain Guerrero Enamorado
Aurora Ramírez Quesada
Hermes Robles Berumen



Scientific Activity

In the KDIS research group, our interests mainly focus on the development of knowledge discovery methods, and its application to different real problems.

We are devoted to the development of algorithms for solving classification problems in different types of problems:

- Conventional data problems.
- Multi-label data problems.
- Multi-instance problems.

From the applications perspective, we are interested in applying our algorithms to several real problems, focusing on aspects such as scalability or interpretability of the obtained results. Our wider expertise has been in the field of educational data, although in the last years we have also work in several health problems, like predicting diabetes from clinical data and the analysis of clinical histories to develop automatic diagnosis methods.

Keywords

Data Mining; Big Data Mining; Machine Learning; Classification; Clustering; Association; Educational Data Mining; Clinical Data Mining; Health Informatics.

Scientific Production

Publications

Original

Papers

Reyes, O; Morell, C; Ventura, S. Evolutionary feature weighting to improve the performance of multi-label lazy algorithms. *Integrated Computer-Aided Engineering*. 2014. 21(4):339-354
IF: 4.667

Luna, JM; Romero, JR; Romero, C; Ventura, S. Reducing gaps in quantitative association rules: A genetic programming free-parameter algorithm. *Integrated Computer-Aided Engineering*. 2014. 21(4):321-337
IF: 4.667

Cano, A. Zafra A., Ventura S. Parallel evaluation of Pittsburgh rule-based classifiers on GPUs. *Neurocomputing*, 126, 45-57, 2014.
IF: 2.005

Luna, JM; Romero, JR; Ventura, S. On the adaptability of G3PARAM to the extraction of rare association rules. *Knowledge and Information Systems*, 2014. 35(2):391-418.
IF: 2.639

Luna, JM; Romero, JR; Romero C.; Ventura S. On the Use of Genetic Programming for Mining Comprehensible Rules in Subgroup Discovery. *IEEE Trans. on Cybernetics*, 44(12), 2329-2341, 2014.
IF: 3.781

Review

Gibaja, E; Ventura, S. Multi-label learning: a review of the state of the art and ongoing research. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*. 2014. 4(6):411-444
IF: 1.358

Olmo, JL; Romero, JR; Ventura, S. Swarm-based metaheuristics in automatic programming: a survey. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*. 2014. 4(6):445-469
IF: 1.358

Editorial Material

Corchado, E; Abraham, A; Gutierrez, PA; Benitez, JM; Ventura, S. Special issue: Advances in learning schemes for function approximation. *Neurocomputing*. 2014. 135():1-2
IF: 2.005

Ventura, S; Romero, C; Abraham, A. Foreword: Intelligent Data Analysis. *Journal of Computer and System Sciences*. 2014. 80(1):1-2
IF: 1.091

In Collaborations

Papers

Cano, A; Ventura, S; Cios, K. J. Scalable CAIM discretization on multiple GPUs using concurrent kernels. *Journal Of Supercomputing*. 2014. 69(1):273-292
IF: 0.841

Strack, B., DeShazo, J., Gennings, C., Olmo, J. L., Ventura, S., Cios, K. Impact of HbA1c measurement on hospital readmission rates: an analysis of 70000 clinical database patient records. *BioMed Research International*, Volume 2014 (2014), Article ID 781670.
IF: 2.706

Research Fundings

National

Ventura-Soto, S. New Problems in Knowledge Discovery: A Genetic Programming Approach. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2011-22408

Ventura-Soto, S. Data Mining with More Flexible Representations. Funding agency: Spanish Ministry of Economy and Competitiveness (MINECO). Reference: TIN2014-55252-P

Contract with Companies

Ventura S. Incorporating educational processes data mining to various e-learning applications Santillana Group : Analysis and preparation of the information.. Funding Agency: Santillana Group. Reference: Contrato Art. 83. To Begin in 2015

GE3

Inflammatory immune-mediated cutaneous diseases

HIGHLIGHTS

Publications

4

Impact Factor

9,397

Average Impact Factor

2,349

PhD Researchers

Antonio Vélez García-Nieto

Researchers

Rafael Jiménez Puya

Post-Phd Researchers

Marcelino González Padilla

Pre-Phd Researchers

Pedro Jesús Carmona Fernández

Francisco Gómez García

Ana Ma Rodríguez Martín

Team Leader

Principal Investigator (PI)

Juan A. Ruano Ruiz

juanruanoruz@mac.com



Scientific Activity

Our research group is focused on prevalent or severe inflammatory skin diseases such as psoriasis. Psoriasis is a chronic inflammatory disease that is genetically complex and primarily affects skin and other organs such as joints. It is estimated that psoriasis affects 2-3% of the population and it is one of the most prevalent types of immunological diseases worldwide.

Our research group has developed a strategic plan including several lines of action.

1. Several research projects have been developed to identify the clinical, sociodemographic and molecular factors that influence variability in response to biological drugs in patients with psoriasis. To such purpose, we have created the largest collection of biological samples donated by patients with moderate to severe psoriasis that are currently stored at the Reina Sofía University Hospital of Córdoba, Spain, which belongs to the Spanish National Biobank Network (Red Nacional de Biobancos). In the coming years, we are determining the role of some genetic polymorphisms, as well as of some patterns of CpG methylation of CpG sites in different genes, plasma concentrations of certain interleukins, or the profile of circulating miRNA.
2. We are interested in the development of new drugs for psoriasis. In 2015, we established a collaboration agreement with Canvax Biotech S.L within the framework of a project funded by public entities to carry out pre-clinical and clinical phase I trials to assess the efficacy and safety of the new compound CVX-785 for the treatment of psoriasis.
3. Being aware that translational medicine involves a multidimensional, multidisciplinary approach, we have integrated experts from different areas such as Immunology, Pharmacy, Genetics or Health Economics in diverse research groups through collaboration with the Department of Applied Economics of the University of Granada, the Laboratory of Investigative Dermatology, The Rockefeller University, New York (EEUU) or the Pharmacogenomics Laboratory, College of Pharmacy, Pharmacotherapy Education and Research Center (PERC), and the University of Texas Health Science Center at San Antonio (UTHSCSA), (TX, EEUU).
4. Finally, it is worth mentioning our commitment to innovation materialized in the form of collaboration agreements with the IT industry, namely, Canvax Biotech S.L. and Lynhce Diagnostics S.L. A spin-off company called info4CURE S.L has been set up to exploit patent licenses or the potential utility models resulting from such patents.

Keywords

Psoriasis; biobanking; genetic polymorphisms; predictors of therapeutic response; cost-efficiency; monoclonal antibodies; immune response.

Scientific Production

Publications

Original

Papers

Letter

Ruano, J.; Velez, A.; Casas, E.; Rodriguez-Martin, A.; Salido, R.; Isla-Tejera, B.; Espejo-Alvarez, J.; Gomez, F.; Jimenez-Puya, R.; Moreno-Gimenez, J. C. Factors influencing seasonal patterns of relapse in anti-TNF psoriatic responders after temporary drug discontinuation. *Journal of the European Academy of Dermatology and Venereology*. 2014; 28(4):516-518
IF:3.105
Q:1 D:2

In Collaboration

Papers

Carrascosa, J. M.; Vilavella, M.; Garcia-Doval, I.; Carretero, G.; Vanaclocha, F.; Dauden, E.; Gomez-Garcia, F. J.; Herrera-Ceballos, E.; De la Cueva Dobao, P.; Belinchon, I.; Sanchez-Carazo,

J. L.; Alsina, M.; Lopez-Estebarez, J. L.; Ferran, M.; Peral, F.; Torrado, R.; Rivera, R.; Jimenez-Puya, R.; Mendiola, M. V.; Ferrandiz, C. BIOBADA-DERM Study Grp. Body mass index in patients with moderate-to-severe psoriasis in Spain and its impact as an independent risk factor for therapy withdrawal: results of the Biobadaderm Registry. *Journal of the European Academy of Dermatology and Venereology*. 2014; 28(7):907-914
IF:3.105
Q:1 D:2

Salido-Vallejo R, Ruano J, Garnacho-Saucedo G, Godoy-Gijón E, Llorca D, Gómez-Fernández C, Moreno-Giménez JC. Facial Angiofibroma Severity Index (FASI): reliability assessment of a new tool developed to measure severity and responsiveness to therapy in tuberous sclerosis-associated facial angiofibroma. *Clinical and Experimental Dermatology*. 2014; 39(8):888-893
IF:1.234
Q:3 D:7

Letter

Herrera-Acosta, E.; Suarez-Perez, JA; Aguilera, J.; Gomez-Garcia, F.; Jimenez-Puya, R.; Guimera, F.; Mendiola, MV; Herrera-Ceballos, E. Survival rate of etanercept for psoriasis in real life: a mul-

ticentre observational study. *Eur J Dermatol*. 2014 Sep-Oct;24(5):619-20.
IF: 1.953

Research Fundings

National

Ruano Ruiz, J. Multicenter randomized clinical trial to evaluate in terms of cost-efficiency a predictive model of response to anti-TNF drugs in patients with moderate-severe psoriasis. Funding agency: Institute Carlos III Health (ISCIII). Reference: ICI1400136
To Begin in 2015

Contract with Companies

Ruano Ruiz, J. Collaboration Agreement with Canvax. Funding Agency: Canvax Biotech SL. Reference: PSS.0065

Jimenez Puya, R. Collaboration Agreement with PFIZER. Funding Agency: Pfizer, SLU. Reference: PSS.0060

Ruano Ruiz, J. Sponsored Conference of Research PSORIASIS. Funding Agency: Janssen-Cilag, SA. Reference: PSS.0072

Ruano Ruiz, J. Agreement with Pfizer. Funding Agency: Pfizer, SLU. Reference: CCB.0048

Clinical Trials

0140/12: A phase III study to assess the efficacy and safety of induction and maintenance treatment with brodalumab versus placebo and ustekinumab in patients with moderate to severe plaque psoriasis. AMAGINE-2
PI: Dr/a Ruano Ruiz, Juan Alberto

0273/13: A multicenter, randomized, double-blind, 52-week follow-up study of subcutaneous secukinumab to prove its efficacy by assessing the index of severity and area affected by psoriasis at 16 weeks of treatment versus ustekinumab and
PI: Dr/a Jimenez Puya, Rafael

2016: An epidemiological, observational study to assess retention in treatment of patients with moderate to severe psoriasis in clinical practice.
PI: Dr/a Jimenez Puya, Rafael

2032: Effect of the immunogenicity of anti-RNF therapies on the therapeutic response in patients with moderate to severe plaque psoriasis.
PI: Dr/a Jimenez Puya, Rafael

2095: Cardiovascular risk factors in a population of Spanish patients with moderate to severe plaque psoriasis vulgaris with or without associated arthritis treated with anti-TNFalfa in real clinical practice conditions. Analysing the influence of the syndrome.
PI: Dr/a Ruano Ruiz, Juan Alberto

2401: Influence of genetic polymorphisms associated with cardiovascular immunity and disease in relation to the effectiveness of anti-TNF-a drugs in moderate to severe psoriasis and the presence of cardiovascular risk factors.
PI: Dr/a Ruano Ruiz, Juan Alberto

2550: An observational study to assess relapse in patients with moderate to severe psoriasis treated with biological drugs according to clinical practice in Spain.
PI: Dr/a Vélez Garcia-Nieto, Antonio

2635: Survival of Etanercept among the elderly.
PI: Dr/a Jimenez Puya, Rafael

GAI1

Lung transplantation. Thoracic malignancies

HIGHLIGHTS

Publications

7

Impact
Factor

20,419

Average
Impact Factor

2,917

Researchers

José Ayala Montoro

Team Leader

Associated Researcher

Ángel Salvatierra Velázquez
angel.salvatierra.sspa@juntadeandalucia.es



Scientific 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

Original

Papers

Moreno, Paula; Vaquero, JM; Baamonde, C; Redel, J; Cerezo, F; Algar, FJ; Salvatierra, A. Extended recipients but not extended donors are associated with poor outcomes following lung transplantation. *European Journal of Cardio-Thoracic Surgery*. 2014; 45(6):1040-1047
IF:2,814

Arango Tomas, Elisabet; Cerezo Madueno, Francisco; Algar Algar, Francisco Javier; Salvatierra Velazquez, Angel. Is lung surgery a good option for octogenarians?. 2014; 92(9):615-618
IF:0,89

Editorial Material

Cerezo Madueno, F; Arango Tomas, E; Algar Algar, FJ; Salvatierra Velazquez, A. Periareolar Approach for Thoracoscopic Lobectomy. *Annals Of Thoracic Surgery*. 2014; 97(4):1427-1429
IF:3,631

In Collaborations

Papers

Cañizares, M. A.; Matilla, J. M.; Cueto, A.; Algar, J.; Muguruza, I.; Moreno-Mata, N.; Moreno-Balsalobre, R.; Guijarro, R.; Arrabal, R.; Garcia-Fontan, E.; Gonzalez-Pineiro, A.; Garcia-Yuste, M. EMETNE-SEPAR. Atypical carcinoid tumours of the lung: prognostic factors and patterns of recurrence. *Thorax*. 2014; 69(7):648-653
IF:8,562

Villena Garrido, V; Cases Viedma, E; Fernández Villar, A; de Pablo Gafas, A; Perez Rodriguez, E; Porcel Perez, JM; Rodriguez Panadero, F; Ruiz Martínez, C; Salvatierra Velazquez, A; Valdés Cuadrado, L. Recommendations of diagnosis and treatment of pleural effusion Update. *Archivos de Bronconeumología*. 2014; 50(6):235-249
IF:1,816

Editorial Material

Medina Fernández, FJ; Espinosa Jimenez, D; Luque Molina, A; Lopez Gillero, P; Rufián Peña, S. Transdiaphragmatic approach for hepatopulmonary metastasis: cases that support its reliability and safety. *Cirugia Española*. 2014; 92(1):60-62
IF:0,89

Research Fundings

Regional

Álvarez Kindelán, A. Beca Neumosur Nº 3/2010. Funding agency: Asociación de neumología y cirugía torácica del sur. Reference: Proyecto Neumosur

Álvarez Kindelán, A. Beca Neumosur 20/2011. Funding agency: Asociación de neumología y cirugía torácica del sur. Reference: Proyecto Neumosur 4

Contracts with Companies

Salvatierra Velazquez, A. 20 años de funcionamiento del programa de trasplante pulmonar de Andalucía. Funding agency: Novartis farmaceutica, S.A. Reference: PSS.003

Comprehensive nursing care. Multidisciplinary perspective

Publications

3

Impact
Factor

1,13

Average
Impact Factor

0,376

PhD Researchers

Rosane Gonçalves Nitschke
Africa Ruiz Gándara

Post- PhD Researchers

Dolores Guerra Martin
Pedro Hidalgo Lopezosa
Clara Inés Flórez Almonacid

Pre- PhD Researchers

Juan Manuel Carmona Torres
Caridad Dios Guerra
Rosa Miñarro Del Moral
Pablo Jesús López Soto

Team Leader

Associated Researcher

M^a Aurora Rodríguez Borrego
en1robom@uco.es
PAIDI CTS-666 Scientific Group



Scientific Activity

The scientific activity of this research group 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.To promote research activity among nursing professionals to foster evidence-based nursing care practice. This Group is a vehicle for nursing professionals interested in research.
- 2.To promote the professional development of nursing professionals by generating knowledge that serves as a guideline for nursing care practice.
- 3.To make a commitment to provide scientific training for future nursing professionals
- 4.To adopt 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

Original

Papers

Liébana-Presa C, Fernández-Martínez ME, Gándara AR, Muñoz-Villanueva MC, Vázquez-Casares AM, Rodríguez-Borrego MA. Psychological distress in health sciences college students and its relationship with academic engagement. *Revista da Escola de Enfermagem da Usp*. 2014; 48(4):715-722. IF:0.497

Rodríguez-Borrego, Maria-Aurora; GonçalvesNitschke, Rosane; Lenise do Prado, Marta; Gue Martini, Jussara; Guerra-Martin, Maria-Dolores; Gonzalez-Galan, Carmen. The-

oretical assumptions of Maffesoli's sensitivity and Problem-Based Learning in Nursing Education. *Revista Latino-Americana de Enfermagem*. 2014; 22(3):504-510. IF:0.633

Rich-Ruiz Manuel; Martins María-Manuela; Rodríguez-Borrego, M^a Aurora. Technology and Communication in Hospital Care for Chronically ill Patients from the Habermasian Perspective. *Text Context Nursing*. 2014; 23(3): 704-11. IF:0

Research Fundings

National

Rodríguez Borrego, M^a A. Violence in couples formed by health professionals working at the Spanish National Health System. Funding

agency: Institute Carlos III Health (ISCIII). Reference: PI13/01253

Local

Rodríguez Borrego, M^a A. Multiculturalism and multilingualism: Two challenges for Nursing Care Education: English in the Classroom. University of Cordoba (Proyectos de Mejora Docente. 2nd Call: Plan de Innovación y Mejora Educativa).

International

Rodríguez Borrego, Ma A. The chronobiological pattern as a causative factor of falls in the population older than 65 years. MAPFRE FOUNDATION - 2014 Ignacio Hernando de Larramendi research funds.

Publications

8

Impact
Factor

26,854

Average
Impact Factor

3,356

PhD Researchers

Marisol Arenas de Larriva
 Antonio Pablo Arenas Vacas
 Laura Caballeros Ballesteros
 Luis M Entrenas Costa
 Luis Muñoz Cabrera
 Francisco Santos Luna

Team Leader**Associated Researcher**

Bernabé Jurado Gámez
 bjg01co@hotmail.com

Pre- PhD Researchers

Inmaculada Garcia Porcuna
 Montserrat Castillo Jurado

Researchers

Nuria Feu Collado
 Rafael Lama Martínez
 Francisco Luis Gil García
 Natalia Pascual Martínez



Scientific Activity

Our line of research is focused on three key points, the effect of hypoxemia on metabolism and lung cancer, early diagnosis of lung cancer and the effect of new drugs and respiratory therapies basing on new technologies (TICs).

Objectives:

1. The effect of hypoxemia, chronic or intermittent on metabolism and vascular impact.
2. Search for markers basing on new technologies (metabolomics, proteomics, epigenetics) for early diagnosis of lung cancer.
3. Application of metabolomics in the development of new drugs in chronic respiratory diseases (COPD, asthma, HPP, FQ).
4. Application of TICs in the diagnosis and control of respiratory disease.

In addition, our research team collaborates in the investigation on the effect of intermittent hypoxemia with the research group of Dr. José López Miranda (Internal Medicine) in patients with vascular risk factors to determine the impact of hypoxemia on the effect of Mediterranean diet and vascular risk.

With the research group of Dr. Teresa Roldán Arjona (epigenetics), Dr. Antonio Rodríguez Ariza (oncology, Coordinator of the Oncover group) and Dr. Ma Dolores Luque de Castro (metabolomics and proteomics) in the identification and quantification of compounds useful in the diagnosis of lung cancer in exhaled breath condensate. In this line, this group also collaborates with the research group of Dr M. Dolores Luque de Castro in the performance of metabolomic studies for the identification of clinical phenotypes in exhaled breath condensate, and in the search for new lung cancer markers in different biological fluids.

Keywords

Cancer; hypoxemia; cell damage; chronic respiratory disease; epigenetics; metabolomics; proteomics; telecare; telemedicine; respiratory therapies.

Scientific Production

Publications

Original

Papers

Vaquero Barrios, Jose Manuel; Redel Montero, Javier; Santos Luna, Francisco. Comorbidities impacting on prognosis after lung transplant. *Archivos de Bronconeumologia*. 2014; 50(1):25-33
IF:1.816

Letter

del Sol Arenas-de Larriva, Maria; Cosano-Povedano, Javier; Cosano-Povedano, Andres. Inflammatory tracheal pseudomembrane. *Archivos de Bronconeumologia*. 2014; 50(7):307-308
IF:1.816

Jurado Gamez, Bernabe. Reply to the letter "Care Mechanisms to Avoid Readmission of Patients With Chronic Obstructive Pulmonary Disease". *Archivos de Bronconeumologia*. 2014; 50(3):124-124
IF:1.816

In Collaborations

Papers

de Torres, Juan P.; Marin, Jose M.; Martinez-Gonzalez, Cristina; de Lucas-Ramos, Pilar; Mir-Viladrich, Isabel; Cosio, Borja; Peces-Barba, German; Calle-Rubio, Miryam; Solanes-Garcia, Ingrid; Balbin, Ramon; Agüero, de Diego-Damia,

Alfredo; Feu-Collado, Nuria; Michavila, Inmaculada; Alfageme, Irigaray, Rosa; Balcells, Eva; Casanovas, Antnia; Lunell, Iturri, Juan; Bautista Galdiz, Royo, Margarita; Marin, Soler-Cataluna, Juan J.; Lopez-Campos, Jose Luis; Soriano, Joan B.; Casanova, Ciro. COPD HistAssessmentSpain Cohort. Clinical Application of the COPD Assessment Test Longitudinal Data From the COPD History Assessment in Spain (CHAIN) Cohort. *Chest*. 2014; 146(1):111-122
IF:7.132

Calderon-Santiago, M.; Priego-Capote, F.; Jurado-Gamez, B.; Luque de Castro, MD. Optimization study for metabolomics analysis of human sweat by liquid chromatography-tandem mass spectrometry in high resolution mode. *Journal of Chromatography A*. 2014; 1333:70-78
IF:4.258

Garcia-Rio, F.; Soriano, JB; Miravittles, M.; Munoz, L.; Duran-Tauleria, E.; Sanchez, G.; Sobradillo, V.; Ancochea, J. Impact of Obesity on the Clinical Profile of a Population-Based Sample with Chronic Obstructive Pulmonary Disease. *Plos One*. 2014;9(8):e105220
IF:3.534

Guglielmi, O.; Jurado-Gamez, B.; Gude, F.; Buela-Casal, G. Job stress, burnout, and job satisfaction in sleep apnea patients. *Sleep Medicine*. 2014; 15(9):1025-1030
IF:3.1

Casanova, Ciro; Marin, Jose M.; Martinez-Gonzalez, Cristina; de Lucas-Ramos, Pilar; Mir-Viladrich, Isabel; Cosio, Borja; Peces-Barba, German; Calle-Rubio, Miryam; Solanes-Garcia, Ingrid; Agüero, Ramn; de Diego-Damia, Alfredo; Feu-Collado, Nuria; Alfageme, Inmaculada; Irigaray, Rosa; Balcells, Eva; Lunell, Antonia; Bautista Galdiz, Juan; Marin, Margarita; Jose

Soler-Cataluna, Juan; Luis Lopez-Campos, Jose; Soriano, Joan B.; de-Torres, Juan P. COPD HistAssessmentSpain CHAIN C. New GOLD classification: longitudinal data on group assignment. *Respiratory Research*. 2014; 15:3 doi: 10.1186/1465-9921-15-3
IF:3.382

Research Fundings

Regional

Jurado Gámez, B. 12/2011 Neumosur Grant. Funding agency: Asociación de Neumología y cirugía torácica del sur (Spanish Pneumology Association). Reference: Project Neumosur 3

Arenas de Larriva, MS. 03/2011 Neumosur Grant. Funding agency: Asociación de Neumología y cirugía torácica del sur (Spanish Pneumology Association). Reference: Project Neumosur 5

Muñoz Cabrera, L. Neumosur Grant: Contribution of metabolomics to the study of exhaled breath condensate for the differentiation and establishment of physiopathological bases in obstructive chronic lung disease phenotypes. Funding agency: Asociación de Neumología y cirugía torácica del sur (Spanish Pneumology Association). Reference: 12/2013.

Jurado Gámez, B. Neumosur Grant: Relationship between the 6-minute walk test and desaturation during regular physical activity in patients with chronic obstructive lung disease. Funding agency: Asociación de Neumología y cirugía torácica del sur (Spanish Pneumology Association). Reference: 2/2013.

GA4

Endocrinology and Nutrition. Insulin resistance, diabetes and metabolism

HIGHLIGHTS

Publications

5

Impact
Factor

10,19

Average
Impact Factor

2,038

PhD Researchers

F^o José Berral de la Rosa
Alfonso Calañas Continente
M^a Ángeles Gálvez Moreno
Remedios Vígara Madueño

Post- PhD Researchers

Magdalena Romero Jimenez

Pre- PhD Researchers

Juan Manuel Escandell Morales
Zahira Noemi Fernández Bedmar

Researchers

Enrique Bellido Muñoz
M^a Sierra Corpas Jiménez
Carmen Gutiérrez Alcántara
M^a Jose Molina Puertas
Rafael Palomares Ortega

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

Ma Rosario Torres Roldán

Team Leader

Associated Researcher

Juan Antonio Paniagua González.
japaniguag@yahoo.es
PAIDI CTS-651 Scientific Group



Scientific Activity

This research group investigates the effect of different nutrients on insulin resistance and body fat distribution in patients with metabolic syndrome from two points of view:

1.- Line of research of Endocrinology and Nutrition, on which several groups work:

Along with Dr. Justo Castaño Fuentes' group, we investigate the expression of different hormone receptors and intracellular mediators in the onset and development of pituitary tumors. In line with transactional research principles, this group applies the findings of its 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.

Also, this group collaborates with Dr. Quesada Gómez's group in the investigation of osteoporosis, particularly, vitamin D and bone stem cells.

This group also collaborates with 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. This group also collaborates with Dr. Caballero in the study of bone metabolism in pregnant women with diabetes.

2.- Line of research: insuline resistance, diabetes and metabolism. This group studies the effect of diet components and pharmacologic interventions on the insuline resistance syndrome and the risk of developing diabetes in patients with "prediabetes". For such purpose, this group characterizes the specific effect of macronutrients on the release of digestive tract incretins and the subsequent signalling. In addition, this group also investigates the effect of diets with different macronutrient contents on body composition and body fat redistribution, and its relationship with insulin sensitivity and secretion. This group studies the role of adipose tissue expansion as a pathogenic factor of insulin resistance, beta-cell failure and diabetes. Finally, this group examines the transcription of metabolic, inflammatory and adipokine pathways in peripheral adipose tissue into diet models, macronutrients and different pharmacologic agents.

Keywords

Insulin resistance; β -pancreatic dysfunction; prediabetes; metabolic syndrome; and adipotoxicidad adipose tissue; inflammation, oxidative stress; gene expression; metabolomics; Pituitary Adenoma; Somatostatin receptors; Vitamin D; Metabolic Sindome Prevalence of Diabetes Mellitus Type 2; Diabetes Mellitus and Pregnancy.

Scientific Production

Publications

Original

Papers

Paniagua, J. A.; Escandell-Morales, J. M.; Gil-Contreras, D.; Berral de la Rosa, F. J.; Romero-Jimenez, M.; Gomez-Urbano, A.; Sanchez-Lopez, A.; Bellido, E.; Poyato, A.; Calatayud, B.; Vidal-Puig, A. J. Central obesity and altered peripheral adipose tissue gene expression characterize the NAFLD patient with insulin resistance: Role of nutrition and insulin challenge. *Nutrition*. 2014;30(2):177-185
IF:3,046

Prior-Sanchez I, Herrera-Martinez AD, Jimenez CT, Puerta MJM, Continente AC, Garcia GM, Moreno MAG. Percutaneous endoscopic gastrostomy in amyotrophic lateral sclerosis. Experience in a district general hospital. *Nutrition Hospitalaria*. 2014; 30(6):1289-1294
IF:125

Alhambra Exposito, Maria Rosa; Tenorio Jimenez, Carmen; Molina Puerta, Maria Jose; Manzano Garcia, Gregorio; Prior Sanchez, Inmaculada; Munoz Jimenez, Concepcion; Galvez Moreno, Maria Angeles. Screening for Cushing's Syndrome in Obese Patients: Is it really necessary?. *Nutricion Hospitalaria*. 2014; 29(5):1020-1023
IF:125

Letter

Corpas Jimenez, Maria Sierra; Ortega Salas, Rosa; Tenorio Jimenez, Carmen; Molina Puerta, Maria Jose. Myelolipoma associated with adrenocortical adenoma: an unusual cause of Cushing's syndrome. *Endocrinologia y Nutricion: Organo de la Sociedad Española de Endocrinologia y Nutricion*. 2014; 61(1):e7-9
IF:0

In Collaborations

Papers

Diaz-Rodriguez, E; Garcia-Rendueles, AR; Ibanez-Costa, A; Gutierrez-Pascual, E; Garcia-Lavandeira, M; Leal, A; Japon, MA; Soto, A; Venegas, E; Tinahones, FJ; Garcia-Arnes, JA; Benito, P; Galvez, MA; Jimenez-Reina, L; Bernabeu, I; Dieguez, C; Luque, RM; Castano, JP; Alvarez, CV. Somatotropinomas, But Not Non-functioning Pituitary Adenomas, Maintain a Functional Apoptotic RET/Pit1/ARF/p53 Pathway That Is Blocked by Excess GDNF. *Endocrinology*. 2014;155(11):4329-4340
IF:4,644

Clinical Trials

0151/11: An open, multicenter, expanded access study of pasireotide s.c. in patients with Cushing disease (Seascape)
PI: Dr/a Gálvez Moreno, M^a Ángeles

0235/11: A comparative study of LY2605541 versus insulin glargine as basal treatment in combination with insulin oral agents in insulin-naive patients with type 2 diabetes mellitus: A double-blind, randomized study.
PI: Dr/a Paniagua González, Juan Antonio

2170: A retrospective, observational study to determine the time elapsed until normal hormone levels are reached by dosis and administration intervals of Somatuline Autogel administered in regular clinical practice to treat acromegaly patients.
PI: Dr/a Gálvez Moreno, M^a Ángeles

2138: A retrospective study to assess changes in metabolic control and weight in obese patients with diabetes mellitus type 2 after receiving treatment with GLP-1 receptor antagonists (e-DM-14)
PI: Dr/a Gálvez Moreno, M^a Ángeles

2520: Assessing the effectiveness of telemedicine in achieving metabolic control in patients with type 1 mellitus diabetes taking multiple insulin doses in Andalusia.
PI: Dr/a Palomares Ortega, Rafael

GA5

Study of growth. Endocrinology and Child Nutrition

HIGHLIGHTS

Publications

5

Impact
Factor

10,899

Average
Impact Factor

2,179

PhD Researchers

M^a Dolores Cañete Vázquez
Olga Diaz Morales
Juana M^a Guzman Cabañas
Luis Jimenez Reina
Rosario Martos Estepa
Cristina Mata Rodriguez
M^a José Párraga Quiles
M^a Dolores Ruiz Gonzalez
Inés Tofe Valera
Javier Torres Borrego
Miguel Valle Jimenez
Fernando Vázquez Rueda

Team Leader

Associated Researcher

Ramón Cañete Estrada
emlcaesr@uco.es



Scientific Activity

Among other lines of research, this group studies obesity in prepubertal children, focusing on children with metabolic syndrome, inflammatory factors, vascular risk biomarkers and adipose tissue gene expression, diet effects on these factors, study of steatohepatitis and physical activity.

Another line of research is centered on aspects related to nutrition in children with extrauterine growth retardation, especially in those that might later develop metabolic syndrome.

This group also carries out comparative cord blood proteomic analyses of healthy term neonates and neonates with IUGR to identify potential differences that might be associated with IUGR and the likelihood of adverse nutritional effects.

This group also investigates growth-hormone producing cells and morphological, structural and production modifications in animals.

Finally, this group is developing one line of research centered on food allergies, and second line based on the possible health impact on workers in solar thermal plants daily exposed to polycyclic aromatic hydrocarbons.

Keywords

Child obesity; metabolic syndrome in children; diet; endothelium; inflammation; cardiovascular biomarkers; gene expression; proteomics; neonates with intrauterine growth retardation (IUGR); metabolic syndrome in IUGR; basic research on growth producing cells with different external stimuli; food allergy.

Scientific Production

Publications

Original

Editorial Material

Torres-Borrego, J. Omalizumab: Just what we needed. *AllergologiaeImmunopathologia*. 2014; 42(1):1-2
IF:1.58

In Collaborations

Papers

Van Donkelaar EL, Vaessen KR, Pawluski JL, Sierksma AS, Blokland A, Cañete R, Steinbusch HW. Long-Term Corticosterone Exposure Decreases Insulin Sensitivity and Induces Depressive-Like Behaviour in the C57BL/6NCRl Mouse. *Plos One*. 2014; 9(10):e106960
IF:3.534

Olza J, Aguilera CM, Gil-Campos M, Leis R, Bueno G, Valle M, Cañete R, Tojo R, Moreno LA, Gil A. Waist-to-height ratio, inflammation and CVD risk in obese children. *Public Health Nutrition*. 2014; 17(10):2378-2385
IF:2.483

Ruperez, AI; Olza, J; Gil-Campos, M; Leis, R; Mesa, MD; Tojo, R; Canete, R; Gil, A; Aguilera, CM. Association of Genetic Polymorphisms for

Glutathione Peroxidase Genes with Obesity in Spanish Children. *J NutrigenetNutrigenomics*. 2014;7(3):130-42.
IF:2.581

Arnao, MDR; Sanchez, AR; Garcia-Rey, C; Diez, FJA; Estrada, RC; Cuartero, BG; Merillas, MA; Lopez-Siguero, JP. The DATAC study: a new growth database Description of the epidemiology, diagnosis and therapeutic attitude in a group of Spanish children with short stature. *Journal of Pediatric Endocrinology & Metabolism*. 2014; 27(11-12):1201-1208
IF:0.711

Research Fundings

Cañete Estrada, R. Clinical trial on the effect of metformin on pediatric obesity: effects on body mass, profile of inflammatory biomarkers and cardiovascular risk, and impact on factors related to the metabolic syndrome. *Metabolic. Fungin Agency: Ministry of Health, Social Services and Equality*. Reference: EC10-243

Contracts with Companies

Cañete Estrada, R. HEALTHCARE - Occupational exposure and polycyclic aromatic hydrocarbons in thermal plants: early analysis of their potential impact on health. *Funding agency: Pfizer, S.A*. Reference: CCB.UC00050

Cañete Estrada, R. Protein expression of pre-pubertal children with GH deficit. *Funding agency: Pfizer, S.A*. Reference: CCB.UC00051

Clinical Trials

0090/11: A randomized, phase III, double-blind, prospective, comparative study of rhBSSL vs. placebo added to the infant formula or to breast milk for four weeks of treatment administered to preterm infants born before a gestational age of 32 weeks.
PI: Dr/a Guzman Cabañas, Juana Maria

0291/11: A randomized, multicenter, blind trial with topiramato vs. placebo for the treatment of newborns with perinatal asphyxia treated with moderate whole-body hypothermia.
PI: Dr/a Guzman Cabañas, Juana Maria

0180/12: A multicenter, randomized, observer-blind, active-controlled study to evaluate the safety, tolerability, pharmacokinetics and efficacy of ceftaroline versus ceftriaxone in pediatric patients with bacterial pneumonia requiring hospitalization
PI: Dr/a Torres Borrego, Javier

2343: Tolerance to two highly hydrolysed formulas based on rice protein and casein in infants allergic to cow's milk proteins.
PI: Dr/a Torres Borrego, Javier

GA6

Clinical Analysis

HIGHLIGHTS

Publications

3

Impact Factor

9,902

Average Impact Factor

3,300

PhD Researchers

Javier Caballero Villarraso
Antonio Martínez Peinado
Rafael Molero Payan

Team Leader

Associated Researcher

Fernando Rodriguez Cantalejo
fernando.rodriguez.c.sspa@juntadeandalucia.es



Scientific Activity

Our group is currently developing two lines of research related to the assessment of the diagnostic accuracy of new technologies. On the one hand, we are assessing the diagnostic efficacy of the methodologies used for prenatal diagnosis of aneuploidy such as chorionic villus sampling in screening for aneuploidy in the first trimester and the karyotype study in the first and second trimester of pregnancy. On the other hand, we are assessing new point-of-care testing (POCT) methodologies as gas, blood metabolite and ion determination; diagnosis and evolution of celiac disease, and use of POCT methods in coagulometry for to the follow-up of anticoagulated patients.

Keywords

New methodologies; chorionic villus sampling; prenatal screening; karyotype; POCT.

Scientific Production

Publications

In Collaborations

Papers

Alcalá-Díaz, JF; Delgado-Lista, J; Perez-Martínez, Pablo; García-Ríos, A; Marín, C; Quintana-Navarro, GM.; Gomez-Luna, P; Camargo, A; Almaden, Y; Caballero, J; Tinahones, FJ.; Ordovas, JM.; Perez-Jimenez, F; Lopez-Miranda, J. Hypertriglyceridemia Influences the Degree of Postprandial Lipemic Response in Patients with Metabolic Syndrome and Coronary Artery Disease: From the Cordioprev Study. PlosOne. 2014; 9(5):e96297
IF:3.534

Perez-Martínez, P; Alcalá-Díaz, JF; Delgado-Lista, J; García-Ríos, A; Gomez-Delgado, Francisco; Marín-Hinojosa, C; Rodríguez-Cantalejo, F; Delgado-Casado, N; Perez-Caballero, A; Fuentes-Jimenez, Francisco J; Camargo, A; Tinahones, FJ; Ordovas, JM; Perez-Jimenez, F; Lopez-Miranda, J. Metabolic phenotypes of obesity influence triglyceride and inflammation homeostasis. European Journal Of Clinical Investigation. 2014; 44(11):1053-1064
IF:2.834

Lopez-Sanchez, Laura M.; Jimenez, Carla; Valverde, Araceli; Hernandez, Vanessa; Penarando, Jon; Martinez, Antonio; Lopez-Pedraza, Chary; Muñoz-Castañeda, Juan R.; De la Haba-Rodriguez, Juan R.; Aranda, Enrique; Rodriguez-Ariza, Antonio. CoCl₂, a Mimic of Hypoxia, Induces Formation of Polyploid Giant Cells with Stem Characteristics in Colon Cancer. 2014. Plos One. 2014 Jun 16;9(6):e99143.
IF:3.534

body mass, profile of inflammatory biomarkers and cardiovascular risk, and impact on factors related to the metabolic syndrome. Metabolic. Funding Agency: Ministry of Health, Social Services and Equality. Reference: EC10-243

Research Findings

National

Caballero Villarraso, J. HEALTHCARE - Occupational exposure and polycyclic aromatic hydrocarbons in thermal plants: early analysis of their potential impact on health. Funding agency: Corporación Tecnológica de Andalucía (CTA), an initiative promoted by the Regional Ministry of Economy, Innovation, Science and Employment (CEICE). Acting in a consortium with MAGTEL INGENIERÍA S.L.U.

Participation in other researchs projects from IMIBIC Groups

Cañete Estrada, R. Clinical trial on the effect of metformin on pediatric obesity: effects on

Publications

9

Impact
Factor

17,158

Average
Impact Factor

1,906

Researcher

Francisco Anglada Jurado

Post-PhD Researchers

Ana M^a Blanca Pedregosa

Julia Carrasco Valiente

Pre-PhD Researchers

Juan P Campos Hernández

Daniel Gil Contreras

Enrique Gómez Gómez

Javier Márquez López

Jesús Ruiz García

Team Leader

Associated Researcher

M^a Jose Requena Tapiajosefa.requena.sspa@juntadeandalucia.es

Other Associated Researcher

Rafael Prieto Castro



Scientific Activity

This Group is centered on the study of urologic tumors from a new epidemiological approach and the search for diagnostic / prognostic markers. Additionally, this Group is involved in research on renal transplantation and developing new strategies to improve prognosis after organ transplantation.

In the field of sexual medicine, our group has focused its efforts on the study of erectile dysfunction (ED), especially on secondary ED, which is associated with radical prostatectomy. At present, we are looking for new invasive pharmacological therapeutic lines.

Keywords

Bladder cancer; prostate cancer; lower urinary tract symptomatology; renal cancer; renal transplant; erectile dysfunction; kidney stone.

Scientific Production

Publications

Original

Papers

Carrasco, Julia; Anglada, Francisco J.; Campos, Juan P.; Muntane, Jordi; Requena, Maria J.; Padillo, Javier. The protective role of coenzyme Q10 in renal injury associated with extracorporeal shock wave lithotripsy: a randomised, placebo-controlled clinical trial. *BJU International*. 2014; 113(6):942-950
IF:3,13

Carrasco-Valiente, J; Campos-Hernandez, JP; Ruiz-Garcia, J; Marquez-Lopez, FJ ; Requena-Tapia, MJ ; Prieto-Castro, R. Importance of early rehabilitation of the corpus cavernosum after radical prostatectomy. *Revista Internacional de Andrología*. 2014; 12(1):4-9
IF:0,22

Prieto-Castro, Rafael; Bonilla-Parrilla, Ramon; Julve-Villalta, Emilio; Soler-Martinez, Jorge; Martin-Morales, Antonio. Prevalence of the testosterone deficiency syndrome in males with sexual dysfunction: From suspicion to reality A descriptive transversal study. *Revista Internacional de Andrología*. 2014; 12(2):55-63
IF:0,22

GomezGomez, Enrique; Pablo Campos-Hernandez, Juan; Luis Carazo-Carazo, Jose; Prieto-Castro, Rafael; Jose Requena-Tapia, Maria. Intrascrotal cavernous hemangioma: An uncommon disease. *Revista Internacional de Andrología*. 2014; 12(1):32-36
IF:0,22

In Collaborations

Papers

Miñana B, Cózar JM, Palou J, Unda Urzaiz M, Medina-Lopez RA, Subirá Ríos J, de la Rosa-Kehrmann F, Chantada-Abal V, Lozano F, Ribal MJ, Rodríguez Fernández E, Castiñeiras Fernández J, Concepción Masip T, Requena-Tapia MJ, Moreno-Sierra J, Hevia M, Gómez Rodríguez A, Martínez-Ballesteros C, Ramos M, Amón Sesmero JH, Pizá Reus P, Bohorquez Barrientos A, Rioja Sanz C, Gomez-Pascual JA, Hidalgo Zabalá E, Parra Escobar JL, Serrano O. Bladder Cancer in Spain 2011: Population Based Study. *Journal of Urology*. 2014; 191(2):323-328
IF:3,753

Paniagua, J. A.; Escandell-Morales, J. M.; Gil-Contreras, D.; Berral de la Rosa, F. J.; Romero-Jimenez, M.; Gomez-Urbano, A.; Sanchez-Lopez, A.; Bellido, E.; Poyato, A.; Calatayud, B.; Vidal-Puig, A. J. Central obesity and altered peripheral adipose tissue gene expression characterize the NAFLD patient with insulin resistance: Role of nutrition and insulin challenge. *Nutrition*. 2014; 30(2):177-185

Lopez Beltrán, Antonio; Cheng, Liang; Montironi, Rodolfo; Blanca, Ana; Leva, Manuel; Roupret, Morgan; Fonseca, Jorge; Vidal, Alfredo; Menendez, Carmen L.; Pallares, Judit; BOLLITO, Enrico; Reymundo, Carlos; Luque, Rafael J.; Comperat, Eva. Clinicopathological characteristics and outcome of nested carcinoma of the urinary bladder. *Virchows Archiv*. 2014; 465(2):199-205
IF:2,56

Review

Sánchez-Borrego R, Molero F, Castaño R, Castelo-Branco C, Honrado M, Jurado AR, Laforet E, Prieto R, Cabello F, Larrazabal M, Sánchez F, Florido J, Mendoza N. Spanish Consensus on Sexual Health in Men and Women over 50. *Maturitas*. 2014 June; 78(2): 146-150
IF:2,861

Arrabal-Martin, M.; Anglada-Curado, F.; Cozar-Olmo, J. M.; Soler-Martinez, J.; Moreno-Jimenez, J.; Castineiras-Fernandez, J.; Ledo-Cepero, M. J.; Beardo-Villar, P.; Requena-Tapia, M. J.; Zutuaga-Gomez, A. Grp AA y EU. Pre-chemotherapy Abiraterone Acetate A Proposal of a Treatment Algorithm in Castration Resistant Prostate Cancer. *Actas Urológicas Españolas*. 2014; 38(5):327-333
IF:1,148

Research Fundings

National

Requena Tapia, MJ. BROCA Project. Funding agency: Collaboration Agreements between MINECO (FEDER) and the University of Cordoba for the implementation of a biomedical research project. Reference: CCB.029PM

Requena Tapia, MJ. Estudio de los niveles de expresión de las proteínas de la ruta de señalización PI3CA/AKT y su papel diagnóstico y pronóstico/predictivo en cáncer de vejiga urinaria. Funding agency: Asociación Española De Urología. Reference: FIU14/002

Participation in other researchs projects from IMIBIC Groups

*Rodríguez Ariza, A. ONCOVER: Detection system of volatile compounds for early diagnosis of lung and colon cancer. Funding agency: Collaboration Agreements between entre el MINECO (FEDER) and the University of Cordoba for the implementation of a biomedical research project. Reference: CCB.030PM

Contracts with Companies

Requena Tapia, M^aJ. Collaboration with Gsk. Introduction to the Bayesian inference. Funding agency: GlaxoSmithKline, S.A. Reference: CCB.0040

Requena Tapia, M^a J. Collaboration with GSK. Bayesian Inference. Funding agency: GlaxoSmithKline, S.A. Reference: CCB.0062

Clinical Trials

0216/10: Comparative efficacy of DUODART (r) and lifestyle patterns versus watchful waiting and lifestyle patterns with or without escalation to tamsulosin in the management of treatment of naive patients with moderate symptoms of prostatic hyperplasia and prostate growth.
PI: Dr/a 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-naïve prostate cancer (mHNPc).
PI: Dr/a Requena Tapia, María José

1658: Epidemiological study estimating the incidence of prostate cancer in Spain 2010.
PI: Dr/a Requena Tapia, María José

1735: A study to assess the impact of androgen deprivation therapy in the incidence of metabolic abnormalities in patients with prostate cancer.
PI: Dr/a Anglada Curado, Francisco José

1809: A study to assess overactive bladder and detrusor overactivity in men with lower urinary tract filling symptoms (LUTS) attending functional urology and urodynamics units.
PI: Dr/a Ruiz García, Jesús Manuel

1856: An epidemiological, observational study of disease progression and therapeutic approach in patients with prostate cancer.
PI: Dr/a Requena Tapia, María José

2363: A study on regular practice in patients with Bladder Pain Syndrome (BPS) in Funcional Urology and Urodynamics units.
PI: Dr/a Ruiz García, Jesús Manuel

2446: Elaboration of a predictive model of Cystoscopy, based on BTA-stat test for monitoring patients with low grade non-muscle invasive bladder carcinoma. (Estudio PreCis BTA)

PI: Dr/a Requena Tapia, María José

Publications

5

Impact
Factor

10,28

Average
Impact Factor

2,056

PhD Researchers

Alberto Benito Ysamat
 Antonio Cano Sánchez
 Miguel Canis López
 María Cara García
 Fernando Delgado Acosta
 María José García Ortega
 José García-Revilla García
 Lucía Nuria Izquierdo Palomares
 Rafaela Muñoz Carrasco
 Elisa Roldán Romero
 Ana Luz Santos Romero
 Roser Ysamat Marfa

Team Leader**Associated Researcher**

Marina Álvarez Benito
marinaalvarezbenito@telefonica.net

Other Associated Researcher

Daniel López Ruiz



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, reumatologic diseases, demyelinating diseases of the central nervous system or inflammatory diseases of the digestive tract. In other cases, this Unit has helped our researchers to quantify the prevalence of certain complications associated to different therapies such as corticosteroids-based therapies.

Appart from strictly diagnostic scans, the Diagnostic Radiology Unit also performs innovative interventional procedures. Among them, it is worth mentioning the intraarterial 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

Original

Review

Rovira, Alex; Luz Ruiz-Falco, Maria; Garcia-Esparza, Elena; Lopez-Laso, Eduardo; Macaya, Alfons; Malaga, Ignacio; Vazquez, Elida; Vicente, Josefina. Recommendations for the radiological diagnosis and follow-up of neuropathological abnormalities associated with tuberous sclerosis complex. *Revista de Neurología*. 2014; 118(2):205-223
IF:2.787

In Collaborations

Papers

Soriano, Sagrario; Carmona, Andres; Trivino, Francisco; Rodriguez, Mariano; Alvarez-Benito, Marina; Martin-Malo, Alejandro; Alvarez-Lara, Maria-Antonia; Ramirez, Rafael; Aljama, Pedro; Carracedo, Julia. Endothelial damage and vascular calcification in patients with chronic kidney disease. *American Journal Of Physiology-Renal Physiology*. 2014; 307(11):F1302-F1311
IF:3.3

Navarro-Rodriguez, E; Gomez-Luque, I; Diaz-Jimenez, N; Rioja-Torres, P; Bascunana-Estudillo, G; Ruiz-Rabelo, JF; Ciria-Bru, R; Alvarez-Benito, M; Rufian-Pena, S; Briceno-Delgado, J. Effectiveness of an absorbable fibrin sealant patch to reduce lymphocele formation after axillary lymphadenectomy for breast cancer: a matched-pair analysis. *American Journal of Surgery*. 2014; 208(5):824-830
IF:2.406

Minano, J. A.; Canis, M.; Roldan, J. M.; Sarsa, A. Patient radiation doses in uterine artery embolisation using monte carlo simulation. *Radiation Protection Dosimetry*. 2014; 158(2):162-169
IF:0.861

Mateos-González ME, López-Laso EI, Vicente-Rueda J, Camino-León R, Fernández-Ramos JA, Baena-Gómez MA, Peña-Rosa MJ. Response to everolimus in patients with giant cell astrocytoma associated to tuberous sclerosis complex. *Revista de Neurología*. 2014; Unprotected carotid artery stenting in sym59(11):497-502
IF: 0.926

Resercher Fundings

National

Participation in other researchs projects from 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: Carlos III Health Institute (ISCIII). Reference: PI13/00553

Contracts with Companies

Alvarez Benito, M. Preoperative breast mri in clinical practice: multiple international prospective meta-analysis of individual woman data (the MIPA study). Funding agency: EIBIR Gemeinnützige GMBH. Reference: PSS.0030

Clinical Trials

0019/10: An open label, multi-center, phase 3 study with corresponding blinded image reading to determine the efficacy and safety of a single intravenous injection of 0.1 mmol/kg body weight of gadobutrol 1.0 molar (Gadovist®) in patients with newly diagnosed breast cancer referred for contrast-enhanced breast MR.
PI: Dr/a Alvarez Benito, Marina

1892: Study to evaluate the safety and tolerability of de Gadovist® for patients who need una magnetic resonance realized for contrast.
PI: Dr/a Alvarez Benito, Marina

In collaborations with others IMIBIC Groups:

0145/11: A multicenter, extension, dose-blind frequency study to determine the safety and efficacy of long-term pegylated interferon beta-1a (BIB017) therapy in patients with relapsing multiple sclerosis
PI: Dr/a Sánchez López, Fernando

0230/13: A randomized, double-blind, placebo-controlled, phase III study of adjuvant regorafenib vs. placebo in patients with IV stage colorectal cancer after curative treatment of liver metastasis.
PI: Dr/a Aranda Aguilar, Enrique

0106/13: Multicenter, randomized, double-blind study comparing the efficacy and safety of continuing versus withdrawing adalimumab therapy in mantaining remission in patients with non-radiographic axial spondyloarthritis.
PI: Dr/a Collantes Estevez, Eduardo

0300/13: Randomized, double-blind, placebo-controlled phase III study to evaluate the efficacy, safety and effect on radiographic progression of brodalumab in patients with psoriatic arthritis.
PI: Dr / Montilla Lopez, Maria Dolores

0267/14: multicenter phase II study to analyze the predictive value of response to Enzalutamideof fusion TMPRSS2-ETS gene in patients with metastatic CRPC previously untreated with chemotherapy.
PI: Dr / Mendez Vidal, M° José

PhD Researcher

Pedro Jose Alados Arboledas
 Maria Del Valle Blázquez Ruiz
 Antonio Chacón Quevedo
 Jose Garcia-Revilla Garcia
 Federico Zurita Martínez

Researchers

Jaime Guillermo Casares Mediavilla
 Maria Teresa Conejero Jurado
 Agustina Jimenez Castilla
 Pasquale Maiorano Iuliano
 Carlos Manuel Merino Cejas
 Javier Moya Gonzalez

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

Rafael Canales Ruiz
 Manuel Recio Rufián
 Raquel Riballo Cortes
 Noelia Romero Mata
 MaDel Carmen Romero Morales

Team Leader

Associated Researcher

Ignacio Muñoz Carvajal
ignacio.munoz.carvajal.sspa@juntadeandalucia.es
 PAIDI TEP-226 PRINIA Scientific Group
 (Project Engineering and Automation) (Collaborator)

Scientific Production

Publications

Original

Papers

Escribano BM, Moreno A, Tasset I, Túnez I. Impact of Light/Dark Cycle Patterns on Oxidative Stress in an Adriamycin-Induced Nephropathy Model in Rats. *Plos One*. 2014; 9(5):e97713 IF:3.534

Bahamonde, Carmen; Conde, Cristina; Agueera, Eduardo; Lillo, Rafael; Luque, Evelio; Gascon, Felix; Feijoo, Montserrat; Cruz, Antonio H.; Sanchez-Lopez, Fernando; Túnnez, Isaac. Elevated melatonin levels in natalizumab-treated female patients with relapsing-remitting multiple sclerosis: Relationship to oxidative stress. *European Journal of Pharmacology*. 2014; 730:26-30 IF:2.684

Escribano, BM; Colin-Gonzalez, AL; Santamaria, A; Túnnez, I. The Role of Melatonin in Multiple Sclerosis, Huntington's Disease and Cerebral Ischemia. *CNS & Neurological Disorders-Drug Targets*. 2014; 13(6):1096-1119 IF:2.702

Escribano, B; Quero, I; Feijoo, M; Tasset, I; Montilla, P; Túnnez, I. Role of noise and music as anxiety modulators: Relationship with ovarian hormones in the rat. *Applied Animal Behaviour Science*. 2014; 152:73-82 IF:1.626

In Collaborations

Papers

Romina Meza-Miranda, Eliana; Camargo, Antonio; Alberto Rangel-Zuniga, Oriol; Delgado-Lista, Javier; Garcia-Rios, Antonio; Perez-Martinez, Pablo; Tasset-Cuevas, Inma; Túnnez, Isaac; Tinahones, Francisco J.; Perez-Jimenez, Francisco; Lopez-Miranda, Jose. Postprandial ox-

idative stress is modulated by dietary fat in adipose tissue from elderly people. *Age*. 2014; 36(2):507-517 IF:3.445

Contract with Companies

Túnnez 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

Sánchez López, F. Collaboration agreement with the Sociedad Española de Neurología. Funding agency Sociedad Andaluza de Neurología (Spanish Association of Neurology). Reference: CCB.0005

Clinical Trials

0132/09: A multicenter, randomized, double-blind, parallel-group, placebo-controlled study to evaluate the efficacy and safety of

- pegylated interferon beta-1 a (biib017) in subjects with relapsing multiple sclerosis
PI: Dr/a Sánchez López, Fernando
-
- 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 Sánchez López, Fernando
-
- 0056/10: A multicenter, double-blind, randomized, parallel-group, active-controlled, monotherapy study to determine the effectiveness and safety of daclizumab obtained through a high performance process (DAC HYP) versus Avonex.
PI: Dr/a Sánchez López, Fernando
-
- 0103/11: An open, multicenter, non-randomized, parallel-group study evaluating the efficacy of fingolimod in de novo patients vs. fingolimod in patients previously treated with interferon or glatiramer acetate as assessed by measuring the number of bouts 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 Sánchez López, Fernando
-
- 0145/11: A multicenter, extension, dose-blind frequency study to determine the safety and efficacy of long-term pegylated interferon beta-1a (BIB017) therapy in patients with relapsing multiple sclerosis
PI: Dr/a Sánchez López, Fernando
-
- 0196/11: A randomized, double-blind, placebo-controlled, parallel group study to investigate on MRI scans the efficacy and safety of atumumab administered for a period of six months to patients with relapsing-MS
PI: Dr/a Sánchez López, Fernando
-
- 0295/11: A multicenter, randomized, placebo-controlled, triple-blind phase I / II clinical trial to assess the safety, feasibility and effectiveness of intravenous therapy with three doses of autologous mesenchymal cells of adipose tissue in patients with moderate to severe Amyotrophic Lateral Sclerosis.
PI: Dr/a Agüera Morales, Eduardo
-
- 0221/12: A multicenter, double-blind, parallel-group, placebo-controlled study to assess the efficacy, safety, tolerability and pharmacokinetics of BIIB033 in patients with a first episode of acute optic neuritis.
PI: Dr/a Sánchez López, Fernando
-
- 0362/12: A randomized, double-blind, parallel-group, placebo-controlled, 12-week trial of leuco methylthioninium bis (hydromethanesulfonate) in patients with mild-to-moderate Alzheimer's disease.
PI: Dr/a Agüera Morales, Eduardo
-
- 0031/13: An open, multicenter, extension study to assess the long-term efficacy and safety of BIIB019, Daclizumab obtained using a high-yield process (DAC HYP) in monotherapy in patients with multiple sclerosis who have completed the 205MS301 study.
PI: Dr/a Sánchez López, Fernando
-
- 92/13: A randomized, double-blind, placebo-controlled, parallel group, dose-finding study to assess the efficacy, safety, tolerability and pharmacokinetics of biib033 in patients with relapsing multiple sclerosis when used in combination with avonex.
PI: Dr/a Sánchez López, Fernando
-
- 0243/13: A multicenter, randomized, parallel-group, observer-blind, phase II study to assess the efficacy, safety and tolerability of plovamer acetate 0.5, 3, 10 and 20 mg vs Copaxone in patients with relapsing-remitting multiple sclerosis.
PI: Dr/a Sánchez López, Fernando
-
- 0227/13: A prospective, single-arm study in a clinical setting to assess the efficacy, tolerability and convenience of teriflunomide according to patient reported outcomes (PRO) in patients with multiple sclerosis.
PI: Dr/a Sánchez López, Fernando
-
- 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 Sánchez López, Fernando
-
- 0012/14: An open, phase III extension study of ECU-NMO-301 to assess the efficacy and safety of eculizumab in patients with recurrent optic neuromyelitis (NMO).
PI: Dr/a Sánchez López, Fernando
-
- 0082/14: An open, multicenter study to assess the efficacy of oral Tecfidera™ (dimethyl fumarate) in EM activity and in patient reported outcomes in patients with relapsing-remitting multiple sclerosis in real practice (PROTEC).
PI: Dr/a Sánchez López, Fernando
-
- 1011: A global, observational study to assess adherence to disease-modifying drugs in patients with relapsing-remitting multiple sclerosis.
PI: Dr/a Sánchez López, Fernando
-
- 1634: An epidemiological study to assess the diagnosis and follow-up of patients with a first demyelinating episode suggestive of multiple sclerosis.
PI: Dr/a Agüera Morales, Eduardo
-
- 1738: A validation study of questionnaires used to predict and assess adherence to treatments for neurological syndrome and multiple sclerosis in Spain (SAVE)
PI: Dr/a Agüera Morales, Eduardo
-
- 1816: Evaluation of functionality of patients with multiple sclerosis in Spain and its impact on their quality of life
PI: Dr/a Sánchez López, Fernando
-
- 1873: Validating the Spanish version of the Relevant Outcome Scale for Alzheimer's disease (ROSA).
PI: Dr/a Agüera Morales, Eduardo
-
- 1969: A study of biomarkers in CSF for the diagnosis of prodromal Alzheimer's disease in patients with mild cognitive impairment.
PI: Dr/a Agüera Morales, Eduardo
-
- 1989: Long-term effectiveness of Copaxone in regular clinical practice. Observational study (XPERIENCIA-5)
PI: Dr/a Agüera Morales, Eduardo
-
- 2085: A prospective, observational study to assess the influence of anti-JC antibodies test on risk perception in treatments with natalizumab (Tysabri®) in patients with multiple sclerosis and their attending neurologists.
PI: Dr/a Sánchez López, Fernando
-
- 2238: An observational, retrospective, cross-over study to assess suboptimal treatment adherence in patients with relapsing-remitting multiple sclerosis with a bout after treatment.
PI: Dr/a Sánchez López, Fernando
-
- 2487: An observational, multicenter, multinational paragraph gather information on security and document the pharmaceutical use of Fampyra When are US in Medical Practice .
PI: Dr/a Agüera Morales, Eduardo
-
- 2660: A retrospective, observational, multicenter, national study to assess the use of fingolimod Gilenya in patients with relapsing-remitting multiple sclerosis in clinical practice. Estudio NEXT
PI: Dr/a Agüera Morales, Eduardo

Publications

2

Impact
Factor

4,781

Average
Impact Factor

2,390

PhD Researchers

Elvira Carmona
Fo Roberto Maza Muret
Luisa Mena Bares
Estefanía Moreno Ortega
Ma Victoria Guiote Moreno

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

Antonio Martin Ruiz
Anahi Rojas Arroyo
Consuelo Albarrán Martín
Concepción Martínez Pérez
Natividad Illescas Jurado

Team Leader

Associated Researcher

Juan Antonio Vallejo Casas
jantonio.vallejo.sspa@juntadeandalucia.es



Scientific Activity

The Group work now in the development of new treatment lines for Differentiated Thyroid carcinoma, as active part of SEMNIM Group, and also, participating in International meetings.

Also, we continue with the Clinical Trials activity, and specifically in the use of new radioisotopic treatment for Prostate Cancer and Lymphoma.

We was initiated this year the collaboration with others groups for the implementation of PET/CT in clinicals situation, specially in the evaluation of therapeutic response.

Scientific Production

Publications

In Collaborations

Papers

Bartenstein, Peter; Caballero Calabuig, Elisa; Maini, Carlo Ludovico; Mazzarotto, Renzo; Augustias Muros de Fuentes, M.; Petrich, Thorsten; Cravo Rodrigues, Fernando Jose; Vallejo Casas, Juan Antonio; Vianello, Federica; Basso, Michela; Gomez Balaguer, Marcelino; Haug, Alexander; Monari, Fabio; Sanchez Vano, Raquel; Sciuto, Rosa; Magner, James. High-Risk Patients with Differentiated Thyroid Cancer T4 Primary Tumors Achieve Remnant Ablation Equally Well Using rhTSH or Thyroid Hormone Withdrawal. *Thyroid*. 2014; 24(3):480-487
IF:3.843

Editorial Material

Castrejon, AMS; Rivera, EP; Farto, JCA; Casas, JAV; Gasen, AR; Perego, JS; Lostao, JA. Nuclear medicine in Spain: High technology 2013. *Revista Española de Medicina Nuclear e Imagen Molecular*. 2014; 33(6):378-381
IF:0.938

Clinical Trials

1930: A retrospective, non-interventional comparative study involving patients with T4 comparing te outcomes of ablation of thyroid remnants after the administration of Thyrogen and I31 vs. withdrawal of thyroid hormone therapy followed by the administration of I31. PI: Dr. Vallejo Casas, Juan Antonio

Learning and Artificial Neural Networks-AYRNA

HIGHLIGHTS

Publications

16

Impact Factor

39,176

Average Impact Factor

2,448

PhD Researchers

David Becerra Alonso
 Mariano Carbonero Ruz
 Adiel Castaño Méndez (Collaborator)
 Juan Carlos Fernández Caballero
 Carlos García Alonso
 Pedro Antonio Gutiérrez
 Alfonso Carlos Martínez Estudillo
 Francisco José Martínez Estudillo
 Sancho Salcedo Sanz (Collaborator)
 Mercedes Torres Jiménez
 Manuel Cruz Ramírez
 Francisco Fernández Navarro
 María Pérez Ortiz
 Mónica de la Paz Marín
 Javier Sánchez Monedero

Team Leader

Associated Researcher

César Hervás Martínez
chervas@uco.es
PAIDI TIC-148 Scientific Group

Pre- PhD Researchers

Manuel Dorado Moren
 Antonio M Durán Rosal
 Natalia Gómez



Scientific Activity

The Learning and Artificial Neural Networks AYRNA research group (code TIC-148 - Junta de Andalucía) was founded mainly focused in the field of Artificial Neural Networks (ANNs). In the last years, the group has diversified its interest areas working on the resolution of different problems through soft computing techniques (artificial neural networks, evolutionary algorithms and other pattern recognition algorithms). Regarding the biomedical field, we work on artificial neural networks in donor-recipient matching in liver and lung transplants.

Keywords

Data science; multiobjective evolutionary algorithms; machine learning; ordinal classification; teaching innovation; time series segmentation; time series prediction; new basis functions for artificial neural networks; evolutionary artificial neural networks; distributed systems;

Scientific Production

Publications

Original

Papers

Perez-Ortiz, M.; Gutierrez, PA; Hervas-Martinez, C. Projection-Based Ensemble Learning for Ordinal Regression. *IEEE Transactions On Cybernetics*. 2014; 44(5):681-694
IF:3.781

Perez-Ortiz, M.; de la Paz-Marin, M.; Gutierrez, PA; Hervas-Martinez, C. Classification of EU countries' progress towards sustainable development based on ordinal regression techniques. *Knowledge-Based Systems*. 2014; 66:178-189
IF:3.058

Perez-Ortiz, M.; Cruz-Ramirez, M.; Ayllon-Teran, M. D.; Heaton, N.; Ciria, R.; Hervas-Martinez, C. An organ allocation system for liver transplantation based on ordinal regression. *Applied Soft Computing*. 2014; 14:88-98
IF:2.679

Sanchez-Monedero, J.; Campoy-Munoz, P.; Gutierrez, PA; Hervas-Martinez, C. A guided data projection technique for classification of sovereign ratings: The case of European Union 27. *Applied Soft Computing*. 2014; 22:339-350
IF:2.679

Gutierrez, PA; Tino, P.; Hervas-Martinez, C. Ordinal regression neural networks based on concentric hyperspheres. *Neural Networks*. 2014; 59:51-60
IF:2.076

Garcia-Hernandez, L.; Perez-Ortiz, M.; Arauzo-Azofra, A.; Salas-Morera, L.; Hervas-Martinez, C. An evolutionary neural system for incorporating expert knowledge into the UA-FLP. *Neurocomputing*. 2014; 135:69-78
IF:2.005

Cruz-Ramirez, M.; Hervas-Martinez, C.; Sanchez-Monedero, J.; Gutierrez, PA. Metrics to guide a multi-objective evolutionary algorithm for ordinal classification. *Neurocomputing*. 2014; 135:21-31
IF:2.005

Campoy-Munoz, P.; Gutierrez, PA; Hervas-Martinez, C. Addressing remitting behavior using an ordinal classification approach. *Expert Systems With Applications*. 2014; 41(10):4752-4761
IF:1.965

Sanchez-Monedero, J.; Salcedo-Sanz, S.; Gutierrez, PA; Casanova-Mateo, C.; Hervas-Martinez, C. Simultaneous modelling of rainfall occurrence and amount using a hierarchical nominal-ordinal support vector classifier. *Engineering Applications of Artificial Intelligence*. 2014; 34:199-207
IF:1.962

Sianes, A.; Dorado-Moreno, M.; Hervas-Martinez, C. Rating the Rich: An Ordinal Classification to Determine Which Rich Countries are Helping Poorer Ones the Most. *Social Indicators Research*. 2014; 116(1):47-65
IF:1.452

García-Alonso, C.; Pérez-Naranjo, LM; Fernandez-Caballero, JC. evolutionary algorithms to identify highly autocorrelated areas: the case of spatial distribution in financially compromised farms. *Annals of Operations Research*. 2014; 219(1):187-202
IF:1.103

In collaborations

Papers

Briceño J., Cruz-Ramírez M., Prieto M., Navasa M., Ortiz de Urbina J., Orti R., Gómez-Bravo MA., Otero A., Varo E., Tomé S., Clemente G., Bañares R., Bárcena R.O, Cuervas-Mons V.I, Solórzano G.2, Vinaixa C., Rubín A., Colmenero J., Valdivieso A., Hervás-Martínez C., de la Mata M. Use of artificial intelligence as an innovative donor-recipient matching model for liver transplantation: Results from a multicenter Spanish study. *NETHERLANDS*. 2014; 61(5):1020-1028
IF:10.401

Peña, JM; Gutierrez, PA; Hervas-Martinez, C; Six, J; Plant, RE; Lopez-Granados, F. Object-Based Image Classification of Summer Crops with Machine Learning Methods. *Neurocomputing*. 2014; 6(6):5019-5041
IF:2.005

A. Riccardi, Fernández-Navarro, F., and S. Carloni. Cost-sensitive adaboost algorithm for ordinal regression based on extreme learning machine. *IEEE Transactions on Cybernetics*. 44(10):1898-1909, 2014.
IF:0

Fernández-Navarro, F., A. Riccardi, and S. Carloni. Ordinal neural networks without iterative tuning. *IEEE Transactions on Neural Networks and Learning Systems*. 25(11):2075-2085, 2014.
IF:0

Editorial Material

Corchado, E.; Abraham, A.; Gutierrez, PA; Benitez, JM; Ventura, S. Special issue: Advances in learning schemes for function approximation. *NEUROCOMPUTING*. 135:1-2
IF:2.005

Research Fundings

National

Hervás-Martínez, C. NemoTech: Neuro-modeling techniques using hybrid learning algorithms. Applications in biomedicine, agronomy and predictive microbiology Agency: Ministry of Economy and Competitiveness (MINECO). Reference: TIN2011-22794

Regional

Hervás-Martínez, C. Neuro Advanced Modeling for Nominal and Ordinal Classification by hybrid learning algorithms. Applications in remote sensing, agriculture and biomedicine. (NEMO-AVACO). Funding Agency: Junta de Andalucía. Reference: P2011-TIC-7508

International

Hervás Martínez C, Gutiérrez Peña, P.A. Climate tipping points: Detection and analysis of patterns using an ordinal regression approach. Proyecto Ariadna. Funding Agency: European Space Agency (ESA) Empresa de Innovación Europea. Direction: European Space Research and Technology Centre (ESTEC)



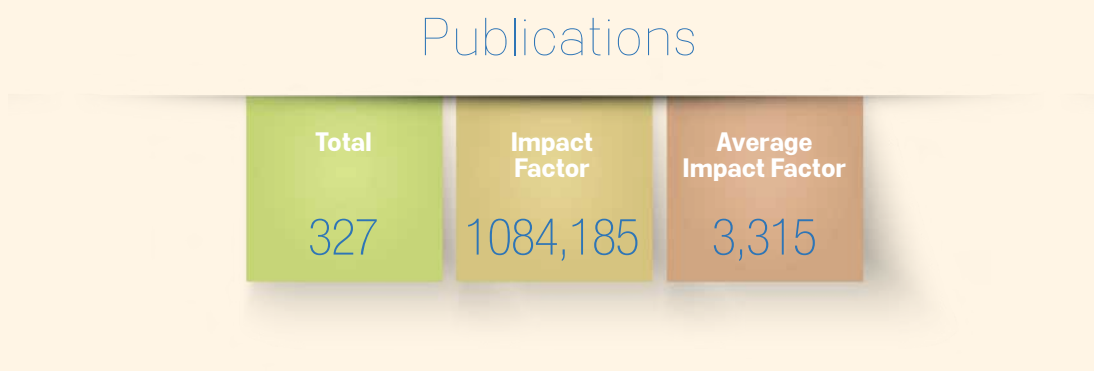
10

Scientific
Production
at a glance

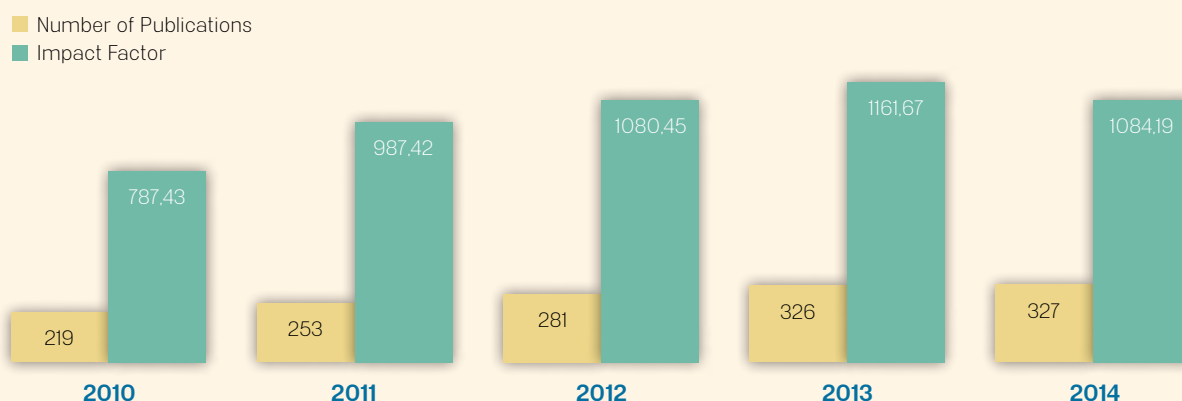
10. Scientific Production at a glance

10.1 Summary of Publications

The scientific activities carried out by researchers in their respective groups have led to the following global production:



The following graphic shows the evolution of IF over the past five years

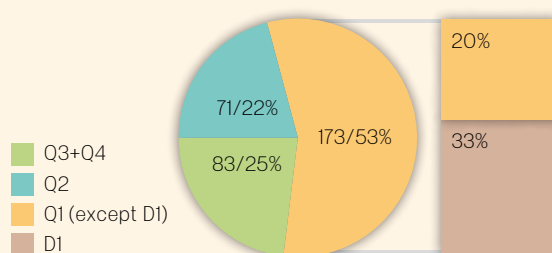


In turn, these publications mainly appear in journals in the first two quartiles, which speaks volumes for the scientific quality of the published papers.

Regarding the authorship of the works, 58,72% of the published articles have an IMIBIC researcher as the first/last author and corresponding author. The remaining 41,28% were published as co-authors.

Distribution of Publications per Quartiles and first Deciles

Total IF	Publications/Percentile
391,783	111/Q1
402,28	62/D1
195,143	71/Q2
94,979	83/Q3+Q4
1084,185	327



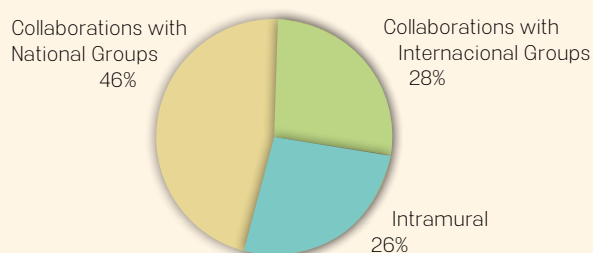
Distribution of International and National Journals

	Total IF	No. of publications	%
International journals	999,364	269	88%
National journals	84,821	58	12%
Total	1084,185	327	100%

Regarding the affiliation of the authors, the papers published in collaboration with groups from other research centers are shown in the pie chart below:

Distribution of the affiliation of the Authors

	Total IF	No. of publications	%
Collaborations with Internacional Groups	374,445	91	28%
Intramural	218,725	86	26%
Collaborations with National Groups	491,015	150	46%
Total	1084,185	327	



10.2 List of Journals

Scientific Journals	Quartile	Decil 1	International/National
Aids	1	D1	International
American Journal of Transplantation	1	D1	International
Analytica Chimica Acta	1	D1	International
Analytical Chemistry	1	D1	International
Annals of Surgery	1	D1	International
Annals of the Rheumatic Diseases	1	D1	International
Annals Of Thoracic Surgery	1	D1	International
Biomaterials	1	D1	International
Cancer And Metastasis Reviews	1	D1	International
Cell Metabolism	1	D1	International
Chest	1	D1	International
Clinical Infectious Diseases	1	D1	International
Clinical Journal Of The American Society Of Nephrology	1	D1	International
Clinical Microbiology And Infection	1	D1	International
Current Opinion In Immunology	1	D1	International
Embo Journal	1	D1	International
European Journal Of Heart Failure	1	D1	International
Fertility and Sterility	1	D1	International
Food Chemistry	1	D1	International
Frontiers in Neuroendocrinology	1	D1	International
Fuel	1	D1	International
Haematologica	1	D1	International
Human Molecular Genetics	1	D1	International
Human Reproduction	1	D1	International
Integrated Computer-Aided Engineering	1	D1	International

International Journal Of Cardiology	1	D1	International
International Journal Of Computer Vision	1	D1	International
International Journal Of Obesity	1	D1	International
Jacc-Cardiovascular Interventions	1	D1	International
Journal of Hepatology	1	D1	International
Journal Of Antimicrobial Chemotherapy	1	D1	International
Journal Of Chromatography A	1	D1	International
Journal of Clinical Endocrinology & Metabolism	1	D1	International
Journal Of Hazardous Materials	1	D1	International
Journal of Invertebrate Pathology	1	D1	International
Journal Of Medicinal Chemistry	1	D1	International
Journals Of Gerontology Series A-Biological Sciences And Medical Sciences	1	D1	International
Kidney International	1	D1	International
Lancet Infectious Diseases	1	D1	International
Mass Spectrometry Reviews	1	D1	International
Medicine	1	D1	International
Molecular & Cellular Proteomics	1	D1	International
Molecular Biology And Evolution	1	D1	International
Molecular Nutrition & Food Research	1	D1	International
Plant Journal	1	D1	International
Scientific Reports	1	D1	International
Thorax	1	D1	International
Thrombosis And Haemostasis	1	D1	International
Trends In Food Science & Technology	1	D1	International
Bju International	1		International
Journal Of Urology	1		International
Maturitas	1		International
Age	1		International
American Heart Journal	1		International
American Journal Of Physiology-Endocrinology And Metabolism	1		International
American Journal Of Physiology-Renal Physiology	1		International
American Journal Of Surgery	1		International
Applied Animal Behaviour Science	1		International
Applied Soft Computing	1		International
Arteriosclerosis Thrombosis And Vascular Biology	1		International
Biochimica Et Biophysica Acta-Molecular Cell Research	1		International
British Journal Of Cancer	1		International
British Journal Of Haematology	1		International
Carcinogenesis	1		International
Chronobiology International	1		International
Current Medical Research And Opinion	1		International
Current Molecular Medicine	1		International
Current Pharmaceutical Design	1		International
Endocrinology	1		International
Engineering Applications Of Artificial Intelligence	1		International
European Journal Of Anaesthesiology	1		International
European Journal Of Cardio-Thoracic Surgery	1		International
European Journal Of Clinical Investigation	1		International
European Journal Of Nutrition	1		International
Experimental Gerontology	1		International

Expert Systems With Applications	1	International
Food And Chemical Toxicology	1	International
Genes And Nutrition	1	International
Health Expectations	1	International
Hormones And Behavior	1	International
Ieee Transactions On Cybernetics	1	International
International Journal Of Antimicrobial Agents	1	International
International Journal Of Hyperthermia	1	International
Journal Of Biological Chemistry	1	International
Journal Of Hypertension	1	International
Journal Of Infection	1	International
Journal Of Proteome Research	1	International
Journal Of Proteomics	1	International
Journal Of The European Academy Of Dermatology And Venereology	1	International
Journal Of The International Aids Society	1	International
Journal Of The Science Of Food And Agriculture	1	International
Knowledge And Information Systems	1	International
Knowledge-Based Systems	1	International
Liver International	1	International
Maturitas	1	International
Molecular And Cellular Endocrinology	1	International
Nephrology Dialysis Transplantation	1	International
Neural Networks	1	International
Neurocomputing	1	International
Neuroendocrinology	1	International
Nutrition Metabolism And Cardiovascular Diseases	1	International
Orphanet Journal Of Rare Diseases	1	International
Pattern Recognition	1	International
Pediatric Blood & Cancer	1	International
Plos One	1	International
Proteomics	1	International
Psycho-Oncology	1	International
Qjm-An International Journal Of Medicine	1	International
Rheumatology	1	International
Seminars In Nephrology	1	International
Social Indicators Research	1	International
Talanta	1	International
Transplant International	1	International



11



Knowledge Transfer

11. Knowledge Transfer

One of the main issues which science and technology still has to address in our country is innovation. For instance, the data presented in the 2013 COTEC Report show that while Spain ranks tenth in the generation of knowledge, it lags behind in 30th position in terms of innovation ranking.

IMIBIC has been aware of this situation for some time and has worked hard on innovating through its Innovation Department, setting challenging targets for 2014 and accomplishing them. Innovation Department has grown and it is being able to reach to a greater number of healthcare professionals and so, fostering innovation within the organization.

The key for success in innovation in healthcare, from IMIBIC perspective, is to develop the right processes so that our know-how is translated efficiently into new resources (new products, services, procedures...).

In this context, the Innovation Department has carried out the following activities during 2014:

1. IMIBIC became part of ITEMAS platform (Innovation in Medical and Health Technologies), that seeks to promote innovation in health technology as a key tool to provide sustainability to the National Health System during 2013. As part of ITEMAS platform during 2014, the Innovation Management Area has become part of two of the Work Groups established on this platform: Entrepreneurship and Innovative Public Procurement and it is collaborating actively on their activities.
2. In the scope of the Innovation Department activities, more than 90 meetings with healthcare professionals and researchers took place. During these meetings, basics of innovation and technology transfer process were explained to them. Innovation culture was disseminated through those meetings, and easier the process to detect ideas, innovations and research results that could potentially be protected through Intellectual property.
3. With the purpose of creation an innovation culture, several presentations took place in different Medical Services, to different healthcare professionals (medical doctors, nurses...) in the scope of the hospital, allowing us to reach a huge number of professionals
4. Annual trade fairs, meetings and conferences were attended, with the purpose of networking with company representatives and with other research centers allowing to stablish links with them and enabling future collaborations between entities:
 - a. Asamblea ITEMAS 2014, 7th February (Madrid).
 - b. Foro Transfiere, 13th-14th February (Málaga), where several meetings took place in order to identify potential licensees for our technologies.
 - c. Robotic Surgery Day, 26th March (Córdoba). In the framework of the Public Innovative Procurement project developed by the University of Córdoba in collaboration with IMIBIC, stakeholders involved in the field of robotic surgery were invited to join to the Robotic Surgery Day.
 - d. Mission for Growth 2 de Abril (Sevilla): Meetings were held with companies from different areas (ICT, Biotech...).
 - e. Biospain 2014, 24th – 26th September, Santiago de Compostela, where more than meetings with companies took place in order to identify potential licensees for our technologies and to enable potential research projects collaborations.
 - f. 'Innovation and Technology Transfer. From University to Society' ('Innovación y transferencia. De la Universidad a la Sociedad'), where companies interested in technology transfer were present and that allowed the Innovation Management area to get in contact with some companies.
 - g. Coordination meeting of regional partners from ITEMAS platform, 23rd October (Sevilla).
5. Participation in two European projects, in the modality of Coordination Support Actions (CSA), for the preparation of Pre Commercial Procurement tenders on the fields of e-health solutions and emergency services.
6. Creation of a Technology Innovation area. From the Innovation Management area the need of a more technological area was detected, as several of our innovations are related to ICTs. Since its creation, the Technology Innovation area has taken part in several research projects where application of technologies was needed.
7. Participation in new FIPSE call, aimed to fund viability studies on healthcare innovation projects. Two projects were presented to this call and one of them got funding to valorize the following technology *Polymorphisms of the angiotensin converting enzyme (ACE) to predict or prognose the response to antiangiogenics treatment for cancer.*

As a result of all the activities described, the results shown in the table below were obtained:

Evolution of Results	2007	2008	2009	2010	2011	2012	2013	2014
Patents	0	1	1	6	8	6	13	11
PCTs	0	0	1	1	4	4	3	4
Licenses	0	0	0	0	1	4	4	2
Spin-offs	0	0	0	0	1	2	2	1

Industrial and intellectual property patents

During 2014, a total of 15 industrial/intellectual property patents were applied for:

Title	Registry type
High-speed actioning tourniquete for emergencies	Utility Model
Method to obtain useful data for diagnosis of hepatocarcinoma on alcoholic patients suffering from hepatitis C.	National Patent
Composition for prevention, improvement and/or treatment of metastatic and resilient cancers	National Patent
Mesenchymal cells composition for musculoskeletal injuries	National Patent
Method for useful data acquisition for lung cancer patients screening.	National Patent
Circulating miRNAs as biomarkers of therapy effectiveness in Rheumatoid Arthritis patients treated with anti-TNFalpha	European Patent
Procedure to obtain useful data for angiogenesis detection on inferior limbs.	National Patent
Quality Control device for ionising radiations emitter equipment	National Patent
Endotraqueal tube fixation	Utility Model
Consumable blade laryngoscope	Utility Model
Polymorphisms of the angiotensin converting enzyme (ACE) to predict or prognose the response to antiangiogenics treatment for cancer.	Patent Cooperation Treaty
Compositions for liver damage treatment.	Patent Cooperation Treaty
Method for classification, diagnosis and follow-up of subjects with risk of suffering lung cancer via sweat analysis.	Patent Cooperation Treaty
Device to cause ischemia on limbs	Patent Cooperation Treaty
Laparoscopic port	National Phase



12

Goals for
2015

12. Goals for 2015

1

To evaluate our Strategic Plan for 2010-2014, develop our strategic plan for 2015-2018 and submit it for approval by the Governing Council.

2

To move our research groups to the new experimental research building.

3

To develop our Biomedical Research Support Units, especially the isotopes, animal testing, microscopy, cytometry and proteomics units.

4

To start up and promote the area of clinical research by increasing the development of independent research activities.

5

To develop new strategies to promote IMIBIC's image, affiliations and acknowledgement, and disseminate the scientific results obtained by its research groups.

6

To promote new strategies to increase fundraising through EU and national calls -including project and HR calls.

7

To promote new strategies to seek funds through sponsorship and fundraising from the private sector.

8

To enhance the involvement of Clinical Management Units in IMIBIC activities.

9

To continue the development of new strategies for the integration of new clinical and university research groups into the IMIBIC.

10

To develop new strategies for UCAIB units to improve the quality of their research projects.

11

To develop strategies to promote projects aimed at the acquisition of innovative products by public entities and foster involvement in new projects.

12

To increase IMIBIC's autonomous management of resources.



IMIBIC

MAIMONIDES BIOMEDICAL
RESEARCH INSTITUTE OF
CORDOBA

<http://www.imibic.org/>



UNIVERSIDAD DE CÓRDOBA



JUNTA DE ANDALUCIA