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introduction
It is our pleasure to present this year’s INCLIVA Annual Scientific Report, an appraisal of the scientific activity carried out in 2021 by research groups at the Hospital Clínico Universitario de Valencia and its Department of Health, as well as the groups of scientific excellence at the Faculty of Medicine and Dentistry of the University of Valencia and the INCLIVA-affiliated IGENOMIX Foundation. The following pages show the result of the joint effort of our professionals, which have consolidated INCLIVA as among the foremost health research institutes in Spain in 2021, with great international prestige and exceptional scientific output. The main milestones reached this year are summarized below.

First and foremost, INCLIVA has obtained a five-year renewed accreditation from the Carlos III Health Institute (ISCIII) as a health research institute after meeting the biomedical health research institute accreditation requirements and evaluation criteria set out in articles 4 and 11, respectively, of Royal Decree 279/2016, June 24. The members of the Evaluation Committee considered that INCLIVA “demonstrates consolidated governance processes and sustained progress in scientific activity and translation indicators”. The board members concur that INCLIVA “is a clinical and translational research centre with a solid track record, on good course to adapt to the requirements of the new accreditation guide, especially in the areas of impact, transfer and citizen participation” and highlight “the work being carried out promoting leadership transition via incorporation of young researchers”.

As a second notable milestone, INCLIVA Board of Trustees has approved the renewal of the Conselleria de Sanidad Universal y Salud Pública (Universal Healthcare and Public Health) agreement for research management at the Clinical Hospital and Department of Health. The first collaboration framework agreement between INCLIVA and the Ministry of Health establishing the rules of collaboration between the entities to support, promote, manage and facilitate research activity at the Clinical Hospital Department of Health was formalized in November 2000. New agreements have subsequently been signed, the latest in 2013 which was extended in 2017 until 2021. In light of the success of this collaboration, both entities have signed a new framework agreement.

Throughout its history, INCLIVA has been committed to quality of life in people with rare diseases; indeed, we are the first Health Research Institute in Spain to create a rare diseases research area, and have promoted the creation of the Alliance for Translational Research in Rare Diseases, an initiative awarded by the Spanish Federation of Rare Diseases (FEDER). This firm commitment to rare diseases research has led to the incorporation of FEDER to the INCLIVA Board of Trustees to intensify its line of transversal research into these pathologies. This addition also strengthens INCLIVA’s competitive advantage in terms of links with civil society and patients, due to the translational nature of our research.

Regarding scientific output, our research staff published 834 articles in 2021, with a cumulative impact factor of over 6,000 points. The quality of our scientific output should also be highlighted: around 80% of published articles are in the first and second quartiles, 20% in the first decile and 21% with an impact factor higher than 7. In addition, 46% of scientific output has involved international collaboration. A total of 85 doctoral theses were defended in 2021, 12 of them with European mention.
INCLIVA continues to consolidate its reputation for high quality, competitive projects, confirming the upward trajectory of recent years by obtaining nearly five million euros in funding for 20 new national and regional projects.

Our researchers have also achieved great success in European Commission competitive calls for proposals, obtaining nearly 6.4 million euros in accumulated funds for projects in the areas of oncology, women’s health, microbiology, big data and artificial intelligence, personalized medicine, aging and fragility. In other standout activity, we have participated in international networks such as the Big Data Value Association (BDVA/DAIRO), the European infrastructure for translational medicine (EATRIS), the European high-capacity screening network (EU-OPENSCREEN) and Worldwide innovative networking (WIN) in personalized cancer medicine.

Turning to calls for staff funded by the Carlos III Health Institute, in total, Incliva staff were awarded two Joan Rodés grants, two Río Hortega grants, a new Miguel Servet grant, the confirmation of a Miguel Servet type II grants, and two predoctoral grants in health research. In addition, two national predoctoral grants were obtained (Ministry of Science, Innovation and Universities and Ministry of Universities). Likewise, ten grants were awarded from the Department of Innovation, Universities, Science and Digital Society of the Autonomous Public Health Department, and two grants from the Valencian Innovation Agency.

Another key achievement in 2021 has been formal recognition of a new emerging group working within the priority research lines of cardiovascular, metabolism and organ damage and reproductive medicine.

Regarding clinical trials, our Drug Research Ethics Committee (CEIm) at the Hospital Clínico Universitario de Valencia, the first to receive this certification in the Valencian Community and among the first at a national level, has been a reference committee in 70 of 84 studies since the new legislation was approved in 2016, and throughout 2021 it has started 206 of 269 new clinical studies, and is involved in 579 of a total of 596 active studies this year.

In December 2021, the INCLIVA Innovation Unit (UAI) obtained renewed certification to the UNE166002 standard. Another of the Unit’s successes this year has been two newly licensed patents: “Maxillo-mandibular prosthesis and manufacturing method” (number ES2525506) in July, and “Mass spectrometry-based methods for the detection of circulating histones H3 and H2B in plasma from sepsis or septic shock (ss) patients” (number EP16382509) in September. In addition, the Agència Valenciana de la Innovació has approved two innovation agents for the INCLIVA Innovation Unit.

Finally, the institute’s quality and excellence strategy this year has resulted in an important milestone for the Quality and Data Protection Unit, which obtained the certificate of compliance with the ISO:9001:2015 quality standard for technical and scientific research support services (bioinformatics, biostatistics and high-efficiency liquid chromatography).
origin & structure

INCLIVA SCIENTIFIC REPORT 2021
2. INCLIVA origin and structure
   2.1 History
   2.2 Organizational structure
      2.2.1. Government structure
         2.2.1.1 Board of Trustees
         2.2.1.2 Board of Governors
         2.2.1.3 General and Scientific Director
         2.2.1.4 External Scientific Committee
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            Innovation Commission
         2.2.1.6 Ethics Committee for Investigation
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   2.3 Core facilities
2.1. History

The Hospital Clínico Universitario of Valencia Research Foundation was constituted in the year 2000 as the first Valencian research foundation affiliated to a public hospital. Ten years later, various centers of excellence in biomedical research from the University of Valencia and IGENOMIX joined the Foundation through the establishment of specific agreements, and thus INCLIVA Health Research Institute was created.

INCLIVA’s main aims are to manage the biomedical research carried out by the Hospital Clínico Universitario de Valencia and its Health Department, and to encourage teaching and scientific activities, thus improving patient treatment and knowledge sharing.

In 2011 INCLIVA was accredited as a Health Research Institute by the Ministry of Science and Innovation thus obtaining preferential treatment from the Carlos III Health Institute, in recognition of its excellence in research.

During 2021 INCLIVA received the official notification of renewal of its accreditation as Health Research Institute for the next five years.
2.2. Organizational structure

2.2.1. Government structure

The highest government body in the Foundation, the Board of Trustees is headed by the Regional Minister for Health of the Valencian Government. This body appoints a Board of Governors – headed by the Chief Executive Officer of the Health Department – the General Director, the Scientific Director and the Financial Director. These are guided by two Research Committees: the External Scientific Committee and the Internal Scientific Committee.

2.2.1.1 Board of Trustees

**President**, Ms. Ana Barceló Chico, Regional Minister for Health of the Valencian Government

**Vice-president**, Mr. Álvaro Bonet, Chief Executive Officer of the Hospital Clínico Universitario of Valencia and of the Valencia Clínico – Malvarrosa Health Department

**Board members**

- Mrs. María Vicenta Mestre, Distinguished Dean of the University of Valencia
- Mrs. Concha Andrés Sanchis, Autonomous Secretary of Efficiency and Health Technology of the Conselleria de Sanidad Universal y Salud Pública [Autonomous Public Health Department] of the Valencian Government
- Mr. Javier Burgos Muñoz, General Director of Research and High Sanitary Inspection of the Conselleria de Sanidad Universal y Salud Pública [Autonomous Public Health Department] of the Valencian Government
- Mrs. Emilia Adán García, President of the Social Council of the University of Valencia
- Mr. Carlos Simón, Scientific Director of the IGENOMIX Foundation
- Mr. Francisco Javier Chorro, Distinguished Dean of the Faculty of Medicine of the University of Valencia
- Mr. José Bernardo Noblejas Pérez, Valencia Chamber of Commerce
- Mrs. María Ángela Nieto Toledano, Instituto de Neurociencias de Alicante CSIC
- Mr. Rafael Alcón Traver, President of Bancaja Foundation
- Mr. Joaquín Santo, Valencian Council of Culture
- Mr. Juan López-Trigo Pichó, Cañada Blanch Foundation
- Mr. Andrés Cervantes Ruipérez, INCLIVA General Director
- Mr. Rubén Ventura, Fero Foundation
- Mrs. Bárbara Congost Mirón, FEDER representative, Federación Española de Enfermedades Raras

**Board members under own name**

- Mr. Carlos Pascual
- Mr. Joaquín Ortega Serrano
- Mrs. Ana Lluch Hernández
- Mr. Tomás Trénor Puig
- Mr. Manuel Delgado Rodríguez, Board of Trustees Secretary

2.2.1.2 Board of Governors

- Mr. Álvaro Bonet Pla, Chief Executive Officer of the Hospital Clínico Universitario of Valencia and of the Valencia Clínico – Malvarrosa Health Department
- Mr. Francisco Javier Chorro, Distinguished Dean of the Faculty of Medicine of University of Valencia
- Mr. Andrés Cervantes Ruipérez, INCLIVA General Director
- Mr. Vicente de Juan Martín, Financial-Administrative Director
- Mrs. Ana Sanmartín Almenar, Primary Care Director of the Hospital Clínico Universitario of Valencia and of the Valencia Clínico – Malvarrosa Health Department
INCLIVA origin and structure

2.2.1.3 General and Scientific Director

Professor Andrés Cervantes Ruipérez is Full Professor of Medicine at the University of Valencia, Head of the Oncology Service of the Hospital Clínico Universitario de Valencia and Director of the Cancer Area at the INCLIVA Health Research Institute.

His training as a resident medical intern took place at the Hospital Clínico Universitario de Valencia. After completing this residency, he obtained a predoctoral fellowship at the Free University Hospital in Amsterdam, where he obtained his Doctorate in the laboratory of cellular pharmacology, with work on multidrug resistance.

His areas of interest and research are gastrointestinal and gynecological cancer, as well as phase I trials and new drugs development.

As a clinical researcher in rectal cancer, he has published several papers on the quality of multidisciplinary work as well as on evaluating the quality of mesorectal surgery, how to optimize initial therapy choices and especially, how to treat cancer of the upper third of the rectum.

He is the President of the European Society of Medical Oncology (ESMO) since July 2019.

2.2.1.4 External Scientific Committee

- Mr. Javier Díez. Professor of Medicine, University of Navarra. Director of the Cardiovascular Sciences Area, Center for Applied Medical Research (CIMA). University of Navarra
- Mr. Antonio Vidal-Puig. Professor of Molecular Nutrition and Metabolism, University of Cambridge. Honorary consultant in metabolic medicine. Metabolic research laboratories. Addenbrooke’s Hospital, Cambridge, United Kingdom
- Mr. Josep Tabernero. Head of the Medical Oncology Service. Vall d’Hebrón Hospital.
- Mr. Juan Carlos Lacal Sanjuán. Research Professor at the CSIC. Institute of Biomedical Research, Madrid
- Mr. Manuel Tena Sempere. Professor of University. Department of Cell Biology, Physiology and Immunology. University of Cordoba
- Mr. M Roser Torra Balcells. Nephrologist. Fundació Puigvert. Research line in the study of Hereditary Kidney Diseases
- Mrs. Laura Saucek. Group leader at VHIO (Oncology Institute of the Vall d’Hebron Hospital). Head of Modeling of Antitumor Therapies in mice. Founder executive director (CEO) at Peptomycs SL
2.2.1.5 Internal Scientific Committee

- Mr. Andrés Cervantes Ruipérez, INCLIVA General Director
- Mrs. Ana Sanmartín Almenar, Primary Care Director of the Hospital Clínico Universitario de Valencia and of the Valencia Clínico - Malvarrosa Health Department
- Mr. Jorge Navarro Pérez, Medical Director of Hospital Clínico Universitario of Valencia and of the Valencia Clínico – Malvarrosa Health Department
- Mr. Julio Núñez, Associate Professor of the Department of Medicine of the University of Valencia, attached to the Scientific Direction
- Mr. Vicente Bodi, Full Professor of the Department of Medicine of the University of Valencia
- Mr. Josep Redón, INCLIVA Emeritus Researcher
- Mr. Federico Pallardó, Full Professor of the Department of Physiology of the University of Valencia
- Mrs. María Jesús Sanz Fernando, Full Professor of the Department of Pharmacology at the University of Valencia
- Mrs. Ana Lluch Hernández, Emeritus Professor of the Department of Medicine of the University of Valencia
- Mrs. María del Mar Tormo García, Oncologist at the Hospital Clínico Universitario of Valencia and of the Valencia Clínico - Malvarrosa Health Department Hematology Service

RESEARCH COMMISSION

President: Mr. Luis Sabater Orti, Section Head of the General Surgery
Vicepresident: Mr. Julio Núñez Villota, Cardiology Associate Physician
Vocals:
- Mrs. Marta Peiró Signes, Scientific Subdirector at INCLIVA
- Mr. Jaime Signes-Costa, Neumology Service Head
- Mrs. Rosa Zaragozá Colom, researcher at INCLIVA
- Mr. Vicente José Bodi Peris, Professor of the Department of Medicine of the University of Valencia
- Mrs. Mª José Terol Castera, Hematology and Hemothrapy Associated Physician
- Mrs. Gema Miñana Escrivá, Cardiology Associate Physician
- Mr. Felipe Vilella Mitjana, researcher at INCLIVA
- Mrs. Isabel Gabaldón Sánchez, Valencia Clínico - Malvarrosa Health Department
- Mr. David Moro Valdezate, General Sugery Associate Physician
- Mrs. María del Mar Tormo Díaz, Hematology and Hemothrapy Associated Physician
- Mrs. Laura Piñeras Ruiz, researcher at INCLIVA
- Mrs. Patricia Roselló, Pediatrics Associated Physician
- Mr. Sergio Martínez Hervás, Endocrinology and Nutrition Associated Physician
- Mrs. Herminia González Navarro, researcher at INCLIVA
- Mrs. Pilar Eroles Asensio, researcher at INCLIVA
- Mrs. Mª Cruz González Villaescusa, Neumology Associate Physician
- Mrs. Carmina Montoliú Félix, researcher at INCLIVA
- Mr. José Real Collado, Head of the Endocrinology and Nutrition Service
- Mr. Raúl Gómez Gallego, researcher at INCLIVA
- Mr. F. Javier Chaves Martínez, researcher at INCLIVA
- Mr. Daniel Monleón Salvadó, researcher at INCLIVA
- Mrs. Desamparados Roda Pérez, Oncology Associate Physician
- Mr. Carlos Tornero Tornero, Head of the Anesthesia/Reanimation Service
- Mrs. Nuria Cabedo Escrig, researcher at INCLIVA
- Mrs. Pilar Rentero Garrido, coordinator of Precision Medicine Unit
- Mrs. Ana Belén Paes, researcher at INCLIVA
- Mr. José Luis Górriz Teruel, Head of the Nephrology Service
- Mr. Antonio Martínez Sabater, general supervisor at the Hospital Clínico Universitario de Valencia
- Mr. César Ríos Navarro, researcher at INCLIVA
- Mrs. Lorena Peiró Chova, researcher at Biobank

Commission Management Unit: Mrs. Sofia Galant
INNOVATION COMMISSION

**President:** Andrés Cervantes Ruipérez, INCLIVA General Director

**Commission Management:** Mrs. Marta del Olmo Zurriaga, Head of UAI

- Mr. Vicente de Juan Martín, Financial-Administrative Director
- Mr. Jorge Navarro Pérez, Medical Director of Hospital Clínico Universitario de Valencia and of the Valencia Clínico – Malvarrosa Health Department
- Mrs. Marta Peiró Signes, Scientific Subdirector at INCLIVA
- Mrs. Maite Sáenz González, Secretary General at INCLIVA
- Mr. Josep Redón, INCLIVA Emeritus Researcher
- Mr. Enrique Rodríguez Borja, Clinical researcher with experience in the field of innovation
- Mr. Miguel Puche Torres, Clinical researcher with experience in the field of innovation
- Mr. Federico Pallardó Calatayud, Basic researcher with experience in the field of innovation
- Mr. Rubén Artero Allepuz, Basic researcher with experience in the field of innovation
- Mrs. Consuelo Borrás Blasco, Basic researcher with experience in the field of innovation
- Mr. Felip Vilella Mitjana, Basic researcher with experience in the field of innovation
- Mrs. Carolina Mir Sánchez, Clinical researcher with experience in the field of innovation
- Mrs. Maite Sánchez, Clinical researcher with experience in the field of innovation

**2.2.1.6. Ethics Committee for Investigation with Medicinal Products**

**President:** Mrs. Marina Soro Domingo, Head of Section of the Anesthesiology and Reanimation Unit

**Vice-president:** Mr. Esteban Morcillo Sánchez, Clinical pharmacologist

**Technical Secretary:** Mr. Julio Palmero Da Cruz, Head of Radiodiagnosis Service

**Members:**
- Mr. Manuel Alós Almiñana, Head of the Pharmacy Department
- Mr. Diego V. Cano Blanquer, Hospital Pharmacist
- Mr. José Luis Trillo Mata, Primary Care Pharmacist
- Mrs. Mª José Tarín Blasco, Law Degree
- Mr. David Juan López Ortega, Law Degree
- Mrs. Carmen Celda Ortega, Nurse
- Mr. Luis González Luján, Primary Attention doctor
- Mr. Joaquín Ortega Serrano, Head of the General Surgery Service
- Mrs. Patricia Roselló Millet, Specialist of the Pediatrics Department
- Mr. Ricardo Ruiz Granell, Head of Section of Cardiostimulation of Cardiology Department
- Mrs. Mª Jesús Puchades Montesa, Specialist of the Nephrology Department
- Mr. José Alejandro Pérez Fidalgo, Specialist of the Oncology Department
- Mrs. Tania Fleitas Kanonnikoff, Specialist of the Oncology Department
- Mrs. Mª Luisa Calabuig Muñoz, Specialist of the Hematology Department
- Mr. Antonio Peláez Hernández, Allergy Specialist
- Mr. Francisco Dasi Fernández, Stabilized Miguel Servet Researcher
- Mr. Luis Miguel Bayo Calaforra, “Amics de la Gent Major” Foundation
- Mr. Rafael Barajas Cenobio, Responsible for Quality and Data Protection INCLIVA

**Administrative Secretary:** Mrs. Sofia Galant, Mr. Carlos Ballesteros

**Administrative:** Mrs. Maialen Llopis
2.2.2. Management structure

The organizational chart, approved at the Board of Trustees, is comprised of two sub-directorates, economical and scientific.

The first sub-directorate is in charge of the administrative area, which deals with the financial and administrative matters as well as with human resource management.

The second is in the charge of scientific activity management and innovation. It is responsible for integral scientific management that includes controlling and monitoring clinical trials and research projects, organizing courses, conferences and seminars, and several tasks related to general administration. Furthermore, it acts as an administrative support to the different affiliated scientific committees and to the Medical Research Central Unit. It comprises the innovation area in charge of quality and planning, innovation management, international programs and scientific and innovative culture promotion (UCCI).
ADMINISTRATIVE AREA:
- Financial Director: Vicente de Juan
- Budget Control and Economic Management: Consuelo López
- Human Resources and Equality Unit: Ruth Cano, Anabel Gil, Lucia Toledo
- Invoicing and Project Justify: Vera Marín, Karen Iglesias, Mª Pilar Boix
- Accounting: Mª José Rosalén
- Records Unit: Alicia Belenguer
- Purchasing Unit: Isabel Gomis
- General Services Unit: Cristina Garcia
- Receptionists: Inmaculada Montalt, Alicia Gumiel

SCIENTIFIC MANAGEMENT AREA:
- Scientific Subdirector and Project Management: Marta Peiró
- Scientific Culture Unit: Mercedes Navarro
- International projects Unit: Ana Ferrer, Ana Duarte, Eugenia Flores
- Innovation Management Unit: Marta de Olmo, Carlos Guerrero
- Clinical Trials Management Unit: Dolores Iglesias, Laura Silla
- Clinical Trials Platform: Dolores Iglesias, Ana Portolés, Mercedes Peris, Mireya Ferrandis, Carlos Peris
- Training and Events Unit: Cristina Garcia, Mercedes Navarro, Clara Soriano
- CEIm Administrative Management: Sofía Galant, Maialen Llopis, Carlos Ballesteros
- Data Quality and Protection: Rafael Barajas, María Domínguez
- Scientific Production Unit: Patricia Mañas
- Communication: Alexandra Muñoz

COMPUTING UNIT:
- Head of Information Systems and High Performance Computing: Miguel Herreros
- IT system administrator and programmer: Enrique Herreras
- Computer technician: Joan Josep Bruno Ramírez

SECRETARY GENERAL
- Head: Maite Saenz
- Technician: Lorena Munuera

2.3. Core facilities

RESEARCH SUPPORT PLATFORMS
- Cell Culture Unit
- Flow Cytometric Unit
- Multigenic Analysis Unit
- Confocal Microscopy Unit
- Sequenom Platform
- Laboratory of Molecular Imaging and Metabolomics
- Animal Housing and Experimental Operating Theaters Unit
- Proteomics Unit
- Small Animals PET/CT Camera and Laboratory for Radioactive Isotopes
- Personal Autonomy, Dependence and Severe Mental Disorders Assessment Unit

INCLIVA PLATFORMS
- Biobank
- Bioinformatics Unit
- Precission Medicine Unit
- Cytogenetics Laboratory
global analysis
3. Global analysis

3.1 Scientific production global analysis
3.2 Financial resources
3.3 Cooperative research networks
3.4 Knowledge transfer activities
   3.4.1 Knowledge transfer to the National Health System
   3.4.2 Innovation and Knowledge transfer
      3.4.2.1 Intellectual Assets
      3.4.2.2 Competitive innovation
      3.4.2.3 Entrepreneurship
3.5 Gender perspective
3.1 Scientific production global analysis

As in previous years, INCLIVA continued in 2021 with the upward trend in the quality of scientific production. The number of publications this year is 834, with a cumulative impact factor of 6.028,392 which translates into an average impact factor 7,228.

The following figures depict the number and quality of the published manuscripts expressed in terms of total and average impact factor.
The distribution by quartiles within their thematic categories is shown below. In 2021, about 80% of the papers that were published in indexed journals belong to the first and second quartiles of their corresponding thematic categories:

Quartile distribution

- Q1: 9%
- Q2: 12%
- Q3: 20%
- Q4: 59%

The number and percentage of scientific publications according to category are:

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articles</td>
<td>691</td>
</tr>
<tr>
<td>Case reports</td>
<td>7</td>
</tr>
<tr>
<td>Corrections</td>
<td>7</td>
</tr>
<tr>
<td>Editorials</td>
<td>43</td>
</tr>
<tr>
<td>Letters</td>
<td>39</td>
</tr>
<tr>
<td>Reviews</td>
<td>54</td>
</tr>
</tbody>
</table>

The percentage of originals in first decile and first quartile publications in 2021 are:
One of the main success factors for a biomedical research institution has to do with its potential to establish high level scientific collaborations. The percentage of national and international collaborations which led to scientific output in 2021 is listed below.

Another key performance indicator is the leadership role in scientific publications. The chart below shows the number of published articles in which INCLIVA researchers sign as corresponding author, first and last author.
### 3.2. Financial resources

INCLIVA’s funding during 2021 totaled €14,930,802. The funds raised from competitive sources were still higher than the average of recent years.

Funding source in the indicated period is shown below.

The remaining income corresponds to private sources of funding, clinical trial revenues and grants among others. The graph below shows this distribution of the year 2021.
The analysis of the income obtained by the Foundation in its last fiscal year (2021) is shown in the table.

<table>
<thead>
<tr>
<th>INCOME</th>
<th>AMOUNT</th>
<th>OVERHEADS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TURNOVER</td>
<td>5,599,768,99</td>
<td>1,169,961,81</td>
<td>6,769,730,80</td>
</tr>
<tr>
<td>DONATIONS</td>
<td>232,963,98</td>
<td>44,515,41</td>
<td>277,479,39</td>
</tr>
<tr>
<td>GRANTS</td>
<td>6,027,004,40</td>
<td>605,345,44</td>
<td>6,632,349,84</td>
</tr>
<tr>
<td>CAPITAL GRANTS</td>
<td>1,236,982,27</td>
<td></td>
<td>1,236,982,27</td>
</tr>
<tr>
<td>FINANCIAL</td>
<td>48,56</td>
<td></td>
<td>48,56</td>
</tr>
<tr>
<td>EXTRAORDINARY</td>
<td>14,210,84</td>
<td></td>
<td>14,210,84</td>
</tr>
<tr>
<td>TOTAL INCOME</td>
<td>13,110,979,04</td>
<td>1,819,822,66</td>
<td>14,930,801,70</td>
</tr>
</tbody>
</table>

Also used as a source of information the Annual Accounts of 2021 approved by the Board of Trustees of the Foundation and audited by the General Intervention of the Generalitat Valenciana (through the audit firm Fides Auditores) the information of the expenses executed is provided, with the explanation of the use of the corresponding indirect costs.

<table>
<thead>
<tr>
<th>EXPENSES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH FUNDING</td>
<td>92,334,78</td>
</tr>
<tr>
<td>SUPPLIES</td>
<td>1,747,409,47</td>
</tr>
<tr>
<td>OTHER FUNCIONAL EXPENSES (ACTIVITY)</td>
<td>2,118,040,25</td>
</tr>
<tr>
<td>STAFF COSTS</td>
<td>6,506,567,54</td>
</tr>
<tr>
<td>OTHER FUNCIONAL EXPENSES (STRUCTURAL)</td>
<td>389,718,04</td>
</tr>
<tr>
<td>EXTRAORDINARY EXPENSES</td>
<td>27,927,92</td>
</tr>
<tr>
<td>INVENTORY ITEM DONATION EXPENSES</td>
<td>54,454,56</td>
</tr>
<tr>
<td>AMORTIZATION OF FIXED ASSETS</td>
<td>1,452,750,11</td>
</tr>
<tr>
<td>TOTAL EXPENSES</td>
<td>12,389,202,67</td>
</tr>
</tbody>
</table>
Finally, this is the balance sheet of the foundation in official format, extracted from the Annual Accounts of 2021:

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>FISCAL YEAR</th>
<th>FISCAL YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
</tr>
<tr>
<td>A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Intangible assets</td>
<td>2,453,753,52</td>
</tr>
<tr>
<td>2.</td>
<td>Concessions</td>
<td>2,443,818,38</td>
</tr>
<tr>
<td>3.</td>
<td>Patents, licences, trademarks and similar rights</td>
<td>6,057,50</td>
</tr>
<tr>
<td>5.</td>
<td>Computer Software</td>
<td>3,877,64</td>
</tr>
<tr>
<td>II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III)</td>
<td>Investment property</td>
<td>6,946,953,82</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Technical facilities and other tangible fixed assets</td>
<td>6,946,953,82</td>
</tr>
<tr>
<td>VI)</td>
<td>Deferred tax assets</td>
<td>7,170,620,58</td>
</tr>
<tr>
<td>1.</td>
<td>Other government loans</td>
<td>4,242,885,23</td>
</tr>
<tr>
<td>2.</td>
<td>Other loans from private entities</td>
<td>786,533,37</td>
</tr>
<tr>
<td>3.</td>
<td>Other European Union loans</td>
<td>2,141,201,98</td>
</tr>
<tr>
<td>B)</td>
<td>CURRENT ASSETS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26,406,646,77</td>
<td>22,201,492,96</td>
</tr>
<tr>
<td>III)</td>
<td>Trade and other receivables</td>
<td>5,341,276,58</td>
</tr>
<tr>
<td>IV)</td>
<td>Current Investments in group companies and associates</td>
<td>7,121,236,16</td>
</tr>
<tr>
<td>6.</td>
<td>Other government loans</td>
<td>7,121,236,16</td>
</tr>
<tr>
<td>VI)</td>
<td>Prepayments for current assets</td>
<td>2,416,00</td>
</tr>
<tr>
<td>5.</td>
<td>Other financial assets</td>
<td>2,416,00</td>
</tr>
<tr>
<td>VIII)</td>
<td>Cash and cash equivalents</td>
<td>13,941,718,03</td>
</tr>
<tr>
<td>1.</td>
<td>Cash</td>
<td>13,941,718,03</td>
</tr>
<tr>
<td>TOTAL ASSETS (A + B)</td>
<td>42,977,974,69</td>
<td>38,362,424,20</td>
</tr>
</tbody>
</table>
### EQUITY AND LIABILITIES

<table>
<thead>
<tr>
<th></th>
<th>FISCAL YEAR 2021</th>
<th>FISCAL YEAR 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A) EQUITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Endowments</td>
<td>617.482,67</td>
<td>617.482,67</td>
</tr>
<tr>
<td>II Reserves</td>
<td>8.954.504,50</td>
<td>6.205.402,21</td>
</tr>
<tr>
<td>2. Other reserves</td>
<td></td>
<td>6.205.402,21</td>
</tr>
<tr>
<td>IV. Profit/[loss] for the period</td>
<td>2.541.599,03</td>
<td>2.749.102,29</td>
</tr>
<tr>
<td>A-3) Grants, donations or gifts and legacies received</td>
<td>6.876.051,14</td>
<td>7.708.275,84</td>
</tr>
<tr>
<td><strong>B) NON-CURRENT LIABILITIES</strong></td>
<td>6.151.112,04</td>
<td>5.663.916,99</td>
</tr>
<tr>
<td>II. Non-current payables</td>
<td>6.151.112,04</td>
<td>5.663.916,99</td>
</tr>
<tr>
<td>5. Other financial liabilities</td>
<td>6.151.112,04</td>
<td>5.663.916,99</td>
</tr>
<tr>
<td><strong>C) CURRENT LIABILITIES</strong></td>
<td>17.837.225,31</td>
<td>15.418.244,20</td>
</tr>
<tr>
<td>II. Current provisions</td>
<td>403.165,16</td>
<td>321.709,00</td>
</tr>
<tr>
<td>III. Current payables</td>
<td>11.170.599,37</td>
<td>10.692.015,95</td>
</tr>
<tr>
<td>5. Other financial liabilities</td>
<td>11.170.599,37</td>
<td>10.692.015,95</td>
</tr>
<tr>
<td>V. Beneficiaries-Creditors</td>
<td>1.330.461,39</td>
<td>496.560,76</td>
</tr>
<tr>
<td>VI. Trade creditors and other accounts payable</td>
<td>4.865.913,38</td>
<td>3.864.247,50</td>
</tr>
<tr>
<td>1. Suppliers</td>
<td>169.342,41</td>
<td>80.828,77</td>
</tr>
<tr>
<td>3. Other payables</td>
<td>145.589,02</td>
<td>174.449,32</td>
</tr>
<tr>
<td>4. Personnel [salaries payable]</td>
<td>-0,80</td>
<td>737,12</td>
</tr>
<tr>
<td>6. Public entities, other</td>
<td>4.550.982,75</td>
<td>3.608.232,29</td>
</tr>
<tr>
<td>7. Advances from customers</td>
<td>67.086,01</td>
<td>43.710,99</td>
</tr>
<tr>
<td><strong>TOTAL NET WORTH AND LIABILITIES (A + B + C)</strong></td>
<td>42.977.974,69</td>
<td>38.362.424,20</td>
</tr>
</tbody>
</table>
3.3 Cooperative research networks

The Carlos III Health Institute develops – through the General Subdirection of Networks and Centers for the Cooperative Research – the creation of stable research network structures such as CIBER [Network of Centres for Biomedical Research]. INCLIVA participates in this research structure through its associated groups.

The following table shows the participation in scientific networks according to the prioritized research area, the center and its principal investigator.

<table>
<thead>
<tr>
<th>Research Area</th>
<th>INCLIVA PI</th>
<th>Scientific Network</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>Mr. José Tomás Real Collado</td>
<td>CIBERdem</td>
<td>CB07/08/0018</td>
</tr>
<tr>
<td></td>
<td>Mrs. Empar Lurbe i Ferrer</td>
<td>CIBERobn</td>
<td>CB06/03/0039</td>
</tr>
<tr>
<td></td>
<td>Mr. Francisco Javier Chorro Gascó</td>
<td>CIBERcv</td>
<td>CB16/11/0046</td>
</tr>
<tr>
<td></td>
<td>Mr. Juan Sanchis Forés</td>
<td>CIBERcv</td>
<td>CB16/11/0042</td>
</tr>
<tr>
<td>Metabolism and Organ Damage</td>
<td>Mr. Esteban Morcillo Sánchez</td>
<td>CIBERres</td>
<td>CB06/06/0027</td>
</tr>
<tr>
<td></td>
<td>Mr. Federico V. Pallardó Calatayud</td>
<td>CIBERrer</td>
<td>CB06/07/0073</td>
</tr>
<tr>
<td></td>
<td>Mr. Julio Sanjuán Arias</td>
<td>CIBERSam</td>
<td>CB07/09/006</td>
</tr>
<tr>
<td></td>
<td>Mr. Rafael Tabarés Seisdedos</td>
<td>CIBERSam</td>
<td>CB07/09/0021</td>
</tr>
<tr>
<td></td>
<td>Mr. José Viña Ribes</td>
<td>CIBERfes</td>
<td>CB16/10/0043</td>
</tr>
<tr>
<td>Oncology</td>
<td>Mr. Andrés Cervantes Ruipérez</td>
<td>CIBERonc</td>
<td>CB16/12/0047</td>
</tr>
<tr>
<td></td>
<td>Mrs. Rosa Noguera Salvá</td>
<td>CIBERonc</td>
<td>CB16/12/0048</td>
</tr>
</tbody>
</table>
3.4 Knowledge transfer activities

INCLIVA Health Research Institute is fully committed to transfer the knowledge created both to the National Health System and to the industrial sector in order to fulfil its organizational mission.

3.4.1 Knowledge transfer to the National Health System

Clinical guidelines and consensus documents are one of the best indicators of knowledge transfer from research to clinical practice. The following table shows the guidelines published in indexed journals in which authors affiliated with INCLIVA have participated. Of these clinical practice guidelines, 4 have been implemented in the IIS health centers.

<table>
<thead>
<tr>
<th>Clinical guidelines</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>86,496</td>
</tr>
</tbody>
</table>


---

Intitutional Documents

<table>
<thead>
<tr>
<th>Intitutional Documents</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6,54</td>
</tr>
</tbody>
</table>

Position statements

<table>
<thead>
<tr>
<th>Position statements</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7,722</td>
</tr>
</tbody>
</table>

---


3.4.2. Innovation and Knowledge transfer

One of the main objectives of INCLIVA is the development of translational research, that is, research that transports scientific knowledge into clinical practice. To achieve this objective, multidisciplinary collaboration between basic and clinical researchers is necessary, so that the discoveries generated can be taken as products or processes capable of effectively improving the diagnosis, treatment and, in conclusion, the quality of life of the patient.

The Innovation Unit of INCLIVA gives support in this translational process, detecting ideas, evaluating them and facilitating their access to the market. This process that goes from the identification of a wide range of ideas to the market launch of those selected products or services through different phases is known as an innovation funnel.

The breakdown of the INCLIVA innovation funnel in 2021 is the following:

<table>
<thead>
<tr>
<th>Innovation Funnel</th>
<th>ITC Health</th>
<th>Device</th>
<th>Pharma</th>
<th>Bio</th>
<th>Imaging</th>
<th>Organizational</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Assessment</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Development</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Transfer</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Market</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

![Innovation Funnel Diagram](image-url)
3.4.2.1 Intellectual Assets

The protection of knowledge is the first step to move scientific findings and ideas from researchers to the industry and the most common way to protect technologies that are new, inventive and have industrial application are patents. Research institutions can exploit the patents they hold by licensing them to companies.

A large part of the results derived from the research activity, generated by the research staff in the field of their teaching and research functions, are capable of being protected by means of some of the forms of protection of industrial or intellectual property.

INCLIVA counts on 13 active patents applications in 2021. During this year INCLIVA has obtained the license of two patents. The next plot summarizes the current status of these protected inventions.

During 2021, 4 patents have been applied. The following graph summarizes the status of patent applications by territory.
The following family patents were active on 2021:

<table>
<thead>
<tr>
<th>Invention</th>
<th>Priority number</th>
<th>IP/% INCLIVA</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>the characteristic myopathy of type 1 myotonic dystrophy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021. Antitumor agent based on Ruthenium (III)</td>
<td>P202130624</td>
<td>40%</td>
<td>ES</td>
</tr>
<tr>
<td>2021. APC protein for the detection and prediction of septic shock</td>
<td>EP21382173</td>
<td>10%</td>
<td>EP</td>
</tr>
<tr>
<td>cutaneous melanocytic tumors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019. Moxifloxacin for use in the treatment of spinal muscular atrophy</td>
<td>ES201930436</td>
<td>23%</td>
<td>PCT</td>
</tr>
<tr>
<td>2019. Oropharyngeal obturation device</td>
<td>ES20190003</td>
<td>100%</td>
<td>PCT</td>
</tr>
<tr>
<td>2018. Injectable material for the regeneration of the articular cartilage</td>
<td>ES201830730</td>
<td>29%</td>
<td>PCT</td>
</tr>
<tr>
<td>2018. In vitro method for the prediction of response to chemotherapy in</td>
<td>EP18382390.5</td>
<td>58.3%</td>
<td>EP</td>
</tr>
<tr>
<td>triple negative breast cancer patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017. Prenylated benzopyranes as PPAR agonists</td>
<td>P201731470</td>
<td>40%</td>
<td>PCT</td>
</tr>
<tr>
<td>2016. Mass spectrometry-based methods for the detection of circulating</td>
<td>EP16382509.4</td>
<td>6%</td>
<td>EU, USA, JP,</td>
</tr>
<tr>
<td>histones h3 and h2b in plasma from sepsis or septic shock (ss) patients</td>
<td></td>
<td></td>
<td>CN, CA (Licensed)</td>
</tr>
<tr>
<td>2016. Intramedullary fixation device</td>
<td>P201631220</td>
<td>2.5%</td>
<td>EU, EEUU, Brasil (Licensed)</td>
</tr>
<tr>
<td>2016. Device for the exo-prosthetisation of limbs and other percutaneous</td>
<td>P201631218</td>
<td>2.5%</td>
<td>EU, EEUU (Licensed)</td>
</tr>
<tr>
<td>applications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013. Maxillomandibular prosthesis and production method</td>
<td>ES20130030734</td>
<td>33.33%</td>
<td>Licensed</td>
</tr>
</tbody>
</table>
### 3.4.2.2 Competitive innovation

In order to develop the innovation ideas, INCLIVA submit proposals to autonomic, national and international founding calls. During 2021, 10 projects were granted for a total of €1,029,373.57.

<table>
<thead>
<tr>
<th>INNOVATION COMPETITIVE PROJECTS OF 2021</th>
<th>TOTAL (€) OF 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valorización e internacionalización de HistShock, un test IVD para el diagnóstico y pronóstico de la sepsis y el shock séptico (FIPSE)</td>
<td>€ 30,000</td>
</tr>
<tr>
<td>Uso de moduladores de microRNAs como terapias experimentales en distrofia miótónica de tipo 1 (GVA-APOTIP)</td>
<td>€ 36,000</td>
</tr>
<tr>
<td>Mejora del diagnóstico del cáncer colorrectal (QUIBIM) (GVA-APOTIP)</td>
<td>€ 8,600</td>
</tr>
<tr>
<td>Desarrollo preclínico de gapmers contra una nueva diana terapéutica en Distrofia Miotónica tipo 1 (DM1) (DTIS-ISCIII)</td>
<td>€ 127,600</td>
</tr>
<tr>
<td>Validación de test basados en péptidos marcados isotópicamente y espectrometría de masas para la cuantificación de histonas circulantes y proteína APC (DTIS-ISCIII)</td>
<td>€ 122,100</td>
</tr>
<tr>
<td>Preservación de órganos de trasplante (riñón y corazón). Proyecto de CPI (CDTI-AINIA)</td>
<td>€ 169,491.70</td>
</tr>
<tr>
<td>2 Agentes de innovación (AVI-Promoción Talento)</td>
<td>€ 250,677.62</td>
</tr>
<tr>
<td>Sistema de visión Artificial aumentada para la caracterización molecular y morfológica del Cáncer de piel (SAMUEL) (AVI-Estratégico)</td>
<td>€ 176,999.4</td>
</tr>
<tr>
<td>Sistema inteligente de apoyo a la toma de decisiones clínicas en medicina de precisión (OGMICS) (AVI-Estratégico)</td>
<td>€ 107,904.85</td>
</tr>
</tbody>
</table>

**Total** | **€ 1,029,373.57**
3.4.2.3 Entrepreneurship

When the knowledge generated in INCLIVA is disruptive and the researchers willing to exploit it by themselves, the knowledge transfer is direct, thanks to the creation of a new venture [also known as a spin-off or start-up] based on such knowledge with the support of INCLIVA.

INCLIVA counts with the following companies officially recognized as spin-offs:

**Epidesase S.L.**
Company created in 2014 as a result of a project led by researchers from INCLIVA and the Center for Research in Biomedicine Network (CIBER) in the area of Rare Diseases to transfer knowledge in the field of epigenetics and biomedical sciences at the service of society.

**Founding year:** 2014
**INCLIVA entrepreneurial team:** Mr. José Luis García Giménez and Mr. Federico Pallardó
http://www.epidisease.com/

**Sequencing Multiplex S.L.**
Company created in 2013, which was born from the idea of generating solutions for research and clinical applications, using as a basis the introduction of new techniques and advanced genetic platforms, mainly next-generation sequencing (NGS).

**Founding year:** 2013
**INCLIVA entrepreneurial team:** Mr. Javier Chaves
https://www.seqplexing.com/es

**Nela BioDynamics S.L.**
The company arises from the results of a Final Master Thesis in Biomedical Engineering, which lead to the obtaining of two patents on a novel intramedullary fixation system for joint endoprostheses, nails for fractures and exoprostheses; and a percutaneous ostomy collar. Both patents are currently licensed to the spin-off itself.

**Founding year:** 2020
**INCLIVA entrepreneurial team:** Mr. José Expósito Ollero
http://www.nelabiodynamics.com/

**ArtHex Biotech S.L.**
Company created in 2020 at the University of Valencia that develops advanced RNA treatments against genetic diseases. ARTHEx Biotech’s mission is to find effective treatments for unmet medical needs. The first objective of the company will be to investigate anti-microRNAs for the treatment of myotonic dystrophy type 1 (DM1).

**Founding year:** 2020
**INCLIVA entrepreneurial team:** Mr. Rubén Artero
http://www.arthexbiotech.com/

**ITEMAS PLATFORM**

INCLIVA has the status of Adhered Center of the ITEMAS Platform of the IDIBELL Node. INCLIVA is part of the Alliance for Health Innovation and Industrialization of the Mediterranean Axis (AIISEM) coordinated by the IDIBELL Foundation and created by the following institutions: IIS La Fe, FISABIO, IDIBELL, ISABIAL, IIISPV, IdISBa, IDIAP and IMIB. AIISEM nodes meet once a month, both the Technical Commission and the Strategic Commission. The Alliance has a 3-year Action or Work Plan divided into 5 key objectives.
3.5 Gender perspective

As part of its commitment to contribute towards guaranteeing real equality between women and men, INCLIVA’s Board of Trustees has approved the II INCLIVA Equality Plan (2020-2024) following approval by the Equality Committee. Through INCLIVA’s II Equality Plan, the different planned actions will be implemented throughout its four-year duration following the timeline established for each one.

Currently, 73.37% of INCLIVA employees are women. The data corresponding to activity in 2021 is as follows:

<table>
<thead>
<tr>
<th>Total cost of INCLIVA staff</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>€1,732,501.38</td>
</tr>
<tr>
<td>Women</td>
<td>€4,774,066.16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>€6,506,567.54</td>
</tr>
</tbody>
</table>

A total of 148 employees joined INCLIVA in 2021, of whom 75.68% are women. The percentage of women hired has increased every year for the last three years.

The following graphs differentiate between personnel hired for administration tasks and research staff:

- Women comprise 88.57% of staff contracted to carry out administration tasks and 69.89% of those who carry out research tasks
- Within the administrative area, 84.62% of Managerial/Technician positions are women and 100% of Auxiliary and Nursing staff contracts are for women
- In research, 96.30% of those hired as Nursing staff, 75% of Administrative staff and 64.03% of Research staff are women.
global analysis

Distribution by contract type

The breakdown of contracts granted to women is shown in the following graphs:

- 87.50% of permanent contracts for administration tasks and 58.33% of permanent contracts for research tasks are for women.
- 88.89% of temporary contracts for research tasks and 70.69% of temporary contracts for research tasks are for women.
- In administration: 77.42% of contracts for women are temporary contracts. Of these, 68.18% are contracts to carry out Managerial/Technician tasks and 100% for Auxiliary and Subordinate staff jobs. Fixed contracts for women within the administration are 100% for positions such as Managerial/Technician.
- In research: 94.62% of contracts awarded to women are temporary contracts. Of these, 96.63% of temporary contracts for research tasks, 96.15% of temporary contracts for nursing tasks and 80% for research administration tasks are for women.

![Administrative Staff - women](image)

Shared parental leave

Maternity/paternity leave was requested by only 9 employees throughout 2021: 3 by men, 6 by women.

Organizational structure

Unlike within our staff structure, women are clearly underrepresented in governing bodies and scientific committees. The distribution of each is summarized below:

<table>
<thead>
<tr>
<th>Group</th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of Trustees</td>
<td>14</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Board of Governors</td>
<td>10</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>External Scientific Committee</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Internal Scientific Committee</td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Research Committee</td>
<td>15</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Innovation Committee</td>
<td>10</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Ethical Committee in Clinical Research</td>
<td>15</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Research areas</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Scientific translational programs</td>
<td>11</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Research Groups</td>
<td>34</td>
<td>16</td>
<td>50</td>
</tr>
</tbody>
</table>
Breakdown of Research Group staff

A total of 636 researchers belong to consolidated, emerging and associated research groups, and whose EURAXESS profile distribution is as follows. Distribution by group of research staff in 2021:

![Distribution by group of research staff hired with public funding in 2021](image)

Research projects

Throughout 2021, competitive tendering began for 20 new public projects, making a total of 129 currently active public projects under competitive tender. The Principal Investigators are distributed as shown in the table. In total, 33.33% of regional projects are led by women, compared with 36.67% of national projects and 7.69% of international projects.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomous Regions</td>
<td>17</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>National</td>
<td>57</td>
<td>33</td>
<td>90</td>
</tr>
<tr>
<td>International/European</td>
<td>12</td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>

Clinical studies and trials

A total of 396 new studies and 207 new clinical trials have been conducted throughout 2021. The tables below indicate the distribution of Principal Investigators, and number of male and female evaluators.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies presented</td>
<td>217</td>
<td>179</td>
<td>396</td>
</tr>
<tr>
<td>Submitted Essays</td>
<td>106</td>
<td>101</td>
<td>207</td>
</tr>
<tr>
<td>Evaluators</td>
<td>14</td>
<td>8</td>
<td>22</td>
</tr>
</tbody>
</table>
Transfer to the Productive Sector

Calls for proposals, innovation awards and patent portfolios during 2021 are distributed by gender as shown in the table:

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>External calls for innovation proposals requested in 2021</td>
<td>12</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Patents in portfolio (IPs that have co-ownership of a patent)</td>
<td>11</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Vlc-Bioclínic Applications 2021</td>
<td>14</td>
<td>16</td>
<td>30</td>
</tr>
<tr>
<td>Vlc-Bioclínic Concessions 2021</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Applicants for Innovation Awards 2021</td>
<td>11</td>
<td>19</td>
<td>30</td>
</tr>
</tbody>
</table>

Bibliometric analysis: Biomedical Research Institute (IIS) corresponding author, first and last author

Of the 834 INCLIVA publications in 2021, the distribution of men to women according to the relevant position of signature [first, last or corresponding author] is 13.39% for female researchers and 34.14% for male researchers.

Training Activities

In total, 1,703 people participated in training activities carried out during 2021. According to registration questionnaires, 73% of participation was female (1,250) and 24% male (411), the question being left blank in the remaining 3%. In 79% of activities, participation was mainly female.

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Scope</th>
<th>Activity Type</th>
<th>Modality</th>
<th>Hours</th>
<th>Participants</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Research on Pain with a Gender Perspective</td>
<td>03/08/2021</td>
<td>Regional</td>
<td>INCLIVA Seminar</td>
<td>Online</td>
<td>1</td>
<td>21</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>With equality you always win (1st session)</td>
<td>03/10/2021</td>
<td>Local</td>
<td>Training Day</td>
<td>Online</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Colloquium on Valencian Researchers’ Vision of Science</td>
<td>09/24/2021</td>
<td>Local</td>
<td>Informative Open Day</td>
<td>Mixed, face-to-face/online</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>With Equality You Always Win (2nd session)</td>
<td>10/20/2021</td>
<td>Local</td>
<td>Training Day</td>
<td>Online</td>
<td>2</td>
<td>17</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

1. Colloquium on Valencian Researchers’ Vision of Science

The Mediterranean Researchers’ Night (MEDNIGHT 2021) is a project conceived under the umbrella of European Researchers’ Night. The objective is to show the public the importance of science and research developed in Mediterranean countries -emphasizing the role of women in this area- and seeking to address the issues shared by Mediterranean society.
The MEDNIGHT project brings together a consortium of 13 institutions from Greece, Cyprus, the Valencian Community and the Murcia Region and is funded by the European Commission as part of the Marie Skłodowska-Curie actions programme [grant agreement no. 101036107].

YouTube link: https://youtu.be/9OJk-ugCJX4

Participant Profile: of the 9 responses received, 75% were from women (6 responses) and 25% from men (2 responses). The professional profile comprised 25% technical research staff, 12.5% IP from consolidated groups, 12.5% predoctoral research staff, 12.5% postdoctoral research staff, 12.5% management, administration and service staff, 25% others.

**2. With equality you always win [2 sessions]**

The goals of this information day were to:

- Include the gender perspective in INCLIVA research projects.
- Disseminate key concepts on equality adapted to the work area.
- Make resources available to disaggregate data and statistics by sex.
- Provide resources and practical strategies to apply inclusive language in writing.
- Set guidelines and recommendations to contribute to real equality in research.

Training material was provided.

Participant profile in 1st session: of the 10 responses received, 80% were from women (8 responses) and 20% from men (2 responses). The professional profile comprised 40% PI from Emerging Groups, 20% management staff, 10% emerging research staff, 10% management, administrative and services staff, 10% nursing staff, 10% others.

Participant profile in 2nd session: of the 17 responses received, 82.4% were from women (14 responses) and 17.6% from men (3 responses). The professional profile comprised 35.3% management, administrative and services staff, 23.5% predoctoral research staff, 11.8% technical research staff, 5.9% PI Consolidated Group, 5.9% nursing staff, 5.9% principal research staff, 11.8% others.

**3. Biomedical Research on Pain with a Gender Perspective**

Seminar given by Dr. Ana Peiró, Professor of Pharmacology at the Miguel Hernández University of Elche and researcher at the ISABIAL Institute.

YouTube link: https://youtu.be/-MAaVHQ8j2B

Participant Profile: of the 21 responses received, 81% were from women (17 responses) and 19% from men (4 responses). The professional profile comprised 28.6% administrative and services staff, 19% medical staff, 14.3% research staff, 33% others.

**External stays**

Of a total of 9 external stays, 3 were granted to women, while of the 17 external stays funded by INCLIVA, 9 were women. In total, 48% of stays were completed by women.
**Internal Stays**

Of a total of 5 internal stays, 3 were granted to women, entailing 60% of total internal stays.

**Training placements**

The classification and distribution by gender of training placements in 2021 is shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary school and vocational training placements</td>
<td>3</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Bachelor’s placements</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Master’s placements</td>
<td>1</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Bachelor’s final project [TFG] agreements (including INCLIVA Calls)</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Master’s final project [TFM] agreements (including INCLIVA Calls)</td>
<td>2</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>21</td>
<td>88</td>
<td>109</td>
</tr>
</tbody>
</table>

**Doctoral theses**

Below is a breakdown by gender of the 65 doctoral theses defended or supervised by INCLIVA research staff. 70.83% of predoctoral researchers who defended their thesis in 2021 were women, and 32.22% of those supervising the theses defended in 2021 were women.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCLIVA Doctoral students</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>INCLIVA Doctoral Supervisors</td>
<td>61</td>
<td>29</td>
<td>90</td>
</tr>
</tbody>
</table>
4. Scientific activity
   4.1 Scientific structure
   4.2 Scientific translational programs
      4.2.1 Overweight and cardiovascular and renal risk
      4.2.2 Detection and control of ventricular dysfunction
      4.2.3 Rare Diseases
      4.2.4 Neurological Decline
      4.2.5 Translational Oncology
      4.2.6 Reproductive Medicine
      4.2.7 Ageing and associated diseases
   4.3. Research areas
      4.3.1 Cardiovascular Area
      4.3.2 Oncology Area
      4.3.3 Metabolism Area
      4.3.4 Reproductive Medicine Area
   4.4. Hospital divisions research areas
   4.5 Other scientific contributions from scientific platforms
      4.5.1 Biobank
      4.5.2 Oncology Phase I Oncology Clinical Trials unit
      4.5.3 Innovation Platform ITEMAS
      4.5.4 Spanish Clinical Research Network (SCReN),
           Clinical Research and Clinical Trials of the Clinical
           Trials Platform (UICEC INCLIVA)
      4.5.5 Precision Medicine Unit
      4.5.6 Bioinformatic and Biostatistics Unit
4.1 Scientific structure

INCLIVA articulates its research in 4 areas of research, 7 scientific programs, 4 platforms and one associated clinical group.

**Areas of research constitute the basis on which to articulate the scientific work of the groups:**
- Research area in cardiovascular
- Research area in oncology
- Research area in metabolism and organ damage
- Research area in reproductive medicine
- Associated clinical group

**Scientific programs are aimed at specific diseases from a translational perspective:**
- Program in Overweight and cardiovascular and renal risk
- Program in Detection and control of ventricular dysfunction
- Program in Rare Diseases
- Program in Neurological Decline
- Program in Translational Oncology
- Program in Reproductive Medicine
- Program in Aging and associated diseases

**Platforms are based on the provision of research services to the whole institute:**
- Central Unit for Medical Research (UCIM)
- Biobank
- Precision Medicine Unit
- Bioinformatics and Biostatistics Unit
Obesity and overweight is a field in which new strategies are developed both for prevention and treatment with the use of traditional resources and the new technologies. The present program is focused on the study of pathology on the first stages of obesity [overweight with or without metabolic syndrome] integrating different clinical and experimental research studies.

**Objectives:**

- To deepen in the early alterations, mechanisms and biomarkers that contribute to the development of obesity, vascular and renal alterations as a complication, from its fetal, biological, genetic and environmental origins
- To know potential signaling pathways susceptible to be therapeutic targets
- Early application of new technologies for the prevention and treatment of obesity and vascular and renal alterations in overweight subjects

**Research lines:**

- To identify early vascular and renal changes in overweight subjects and in animal models
- To study the state, mechanisms of vascular inflammation and endothelial injury in overweight and animal models
- To analyze the relationship of “omic” markers (genomic, epigenetic and metabolomic) with obesity and vascular and renal alterations in overweight and animal models
- Interaction of biomarkers (biological, genomic and metabolic) and intervention in progression to obesity and vascular and renal complications

**Clinical groups:**

- Research Group on the Study of Cardiometabolic and Renal Risk (Dr. Josep Redón i Mas)
- Cardiometabolic Research Group on Primary Care (Dr. Jorge Navarro Pérez)
- Research Group on the Study of Cardiovascular Risk in Children and Adolescents (Dr. Empar Lurbe i Ferrer)
- Research Group on Oxidative Pathology (Dr. Guillermo Sáez Tormo)
- Research Group on Cardiometabolic Risk (Dr. José Tomás Real Collado)

**Experimental groups:**

- Research Group on Endothelial Cells (LINCE) (Dr. Carlos Hermenegildo Caudevilla, Dr. Susana Novella del Campo)
- Research Group on Molecular Imaging and Metabolomics (Dr. Daniel Monleón Salvadó)
- Research Group on Inflammation (Dr. Esteban Morcillo Sánchez, Dr. Mª Jesús Sanz Ferrando)
- Research Group on Genetics of Osteoporosis (Dr. Miguel Ángel García Pérez)
- Genomics and Diabetes Unit (Dr. Felipe Javier Chaves Martinez)
- Molecular biology of renal and vascular dysfunction (Dr. Raquel Cortés Vergaz)
# OVERWEIGHT AND CARDIOVASCULAR AND RENAL RISK

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>ACTIONS</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metabolic, vascular and renal evaluation of overweight patients (children and adults)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Characterization of the relationship between overweight and vascular inflammation / endothelial function</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Identification of molecular markers that relate overweight with its associated diseases</td>
<td>• Metabolomic measurements (80 spectral features) of 3 cohorts (4500 subjects) for associations between obesity, associated diseases and morbidities and early alterations of metabolism. Focus on the metabolic interaction between host and gut microbiota. Cohorts: Río Hortega [general population], AWHS [working population] and PIANCAVALLO [obese and morbid obese]</td>
<td>X</td>
</tr>
<tr>
<td>Identification of metabolomic markers that relate overweight with its associated morbidities</td>
<td>• Metabolomic measurements (80 spectral features) of 3 cohorts (4500 subjects) for associations between obesity, associated diseases and morbidities and early alterations of metabolism. Focus on the metabolic interaction between host and gut microbiota. Cohorts: Río Hortega [general population], AWHS [working population] and PIANCAVALLO [obese and morbid obese]</td>
<td>X</td>
</tr>
<tr>
<td>Development of new early detection systems for obesity and its associated complications</td>
<td>• Metabolomic measurements (80 spectral features) of 3 cohorts (4500 subjects) for associations between obesity, associated diseases and morbidities and early alterations of metabolism. Focus on the metabolic interaction between host and gut microbiota. Cohorts: Río Hortega [general population], AWHS [working population] and PIANCAVALLO [obese and morbid obese]</td>
<td>X</td>
</tr>
<tr>
<td>Identification of molecular targets of obesity and its associated complications and development of new therapies</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
4.2.2 Detection and control of ventricular dysfunction

The program focuses on the study of the pathophysiological mechanisms involved in myocardial ischemic damage, on its structural, functional and electrophysiological repercussions on the evaluation of diagnostic tools and markers and prognoses and on the study of new therapeutic approaches that may help to prevent their adverse consequences.

It is a truly and translational research program that capitalizes the synergies between clinical and experimental research groups and also includes specialists in cardiac imaging techniques and technological development experts. The multidisciplinary approach extends the possibilities of collaboration between groups, strengthens those already existing and incorporates other groups into the activities of the program. Innovation through the development of analytical tools (imaging techniques such as cardiac magnetic resonance, cardiac electrical signals or cartographic techniques), allows the generalize of patents in the field of technological development.

**Coordinators:** Dr. Francisco J. Chorro Gascó, Dr. Vicente Bodí Peris and Dr. Juan Sanchis Forés

**Objectives:**

- Electrical remodeling: experimental studies on the protective effect against the arrhythmic vulnerability of modifications of the signaling pathways
- Ventricular remodeling: evaluation of the role of microvascular damage, prediction of postinfarction clinical evolution
- Biomarkers: clinical studies aimed at the validation of biomarkers related to the degradation of components of the extracellular matrix

**Research lines:**

- Characterization of the direct electrophysiological effects of the active metabolite of sacubitril
- Study of the modifications of the electrophysiological effects of overload sharp mechanics
- Analysis of the protective effects produced by chronic treatment with inhibitors
- Mechanisms involved in the deterioration of systolic function, fibrosis and the inducibility of arrhythmias
- Development of useful working instruments in the study of cardiac electrophysiology
- Basic research related to ischemia and myocardial infarction
- Prospective and multicenter registry (Hospital Clínico Universitario de Valencia and Hospital Clínic de Barcelona and Hospital Vall d’Hebrón de Barcelona) of patients
- Prognostic value of geriatric conditions in older patients admitted for acute coronary syndrome

**Clinical groups:**

- Research Group on Clinical Cardiology (Dr. Juan Sanchis Forés)
- Research Group on Cardiac Experimental Electrophysiology (Dr. Francisco Javier Chorro Gascó)
- Research Group on Heart Failure (Dr. Julio Núñez Villota)
- Group on Translational Research in Ischemic Heart Disease (Dr. Vicente Bodí Peris)
- Cardiometabolic Research Group on Primary Care (Dr. Jorge Navarro Pérez)
- Research Group in Care. INVESTENF-INCLIVA (Dr. Mª José Gastaldo Zaragoza)

**Experimental groups:**

- Research Group on Endothelial Cells (LINCE) (Dr. Carlos Hermenegildo Caudevilla, Dr. Susana Novella del Campo)
- Research Group on Molecular Imaging and Metabolomics (Dr. Daniel Monleón Salvadó)
- Research Group on Inflammation (Dr. Esteban Morcillo Sánchez, Dr. Mª Jesús Sanz Ferrando)
- Research Group on Nuclear Receptors in Cardiometabolic Pathology (Dr. Laura Piqueras Ruiz)
# MYOCARDIAL ISCHAEMIA INJURY DETECTION AND CONTROL OF VENTRICULAR DYSFUNCTION

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>ACTIONS</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Achieve</td>
</tr>
<tr>
<td>Study of the basic mechanisms involved in myocardial damage</td>
<td>• Oxidative stress during reperfusion in acute myocardial infarction</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Neoangiogenesis, the appearance of microvascular obstruction and impaired function systolic</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Deregulation of the immune system in acute myocardial infarction</td>
<td></td>
</tr>
<tr>
<td>Diagnosis through new RM tools</td>
<td>• RM micro-image for the development of combinations of RM sequences without contrast</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Analysis of myocardial textures</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Offline evaluation of myocardial tension</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• CMR for risk stratification and decision making in STEMI</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Stress CMR for risk stratification and decision making in chronic coronary syndromes</td>
<td>X</td>
</tr>
<tr>
<td>Prediction through new biomarkers</td>
<td>• Definition of new serological indicators with NMR-S to predict DR and fibrosis</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Serum CA125, galectin-1 and galectin-3 markers</td>
<td>X</td>
</tr>
<tr>
<td>Prevention</td>
<td>• DR prevention through multiple antioxidant treatment</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>• Prevention of deterioration of systolic function, fibrosis and arrhythmias</td>
<td>X</td>
</tr>
</tbody>
</table>
4.2.3 Rare Diseases

The program’s main objectives are to improve the diagnosis and current treatments of rare diseases (RDs). To this end, we will proceed to identify and validate rare disease biomarkers for which we do not have effective diagnostic and/or prognostic indicators. On the other hand, new therapeutic strategies will be developed to treat these diseases. Human and animal model samples will be used to understand the molecular basis of disease, evaluate the activity of candidate drugs, and discover new biomarkers.

The program seeks to fill the gap between basic research and commercial development of diagnostic systems and treatments, so it aims to transfer this knowledge to companies to transform biomedical knowledge into products and services that improve human health. With these objectives, contacts with biotechnology and pharmaceutical companies have been established. On the other hand, the program aims to disseminate its findings to society to get feedback about actual patients’ needs.

**Coordinators:** Dr. Francisco Dasí Fernández and Dr. Federico Pallardó Calatayud

**Objectives:**

- Development of cell models derived from cells of patients diagnosed with the RDs being studied obtained either through the genetic manipulation of healthy cells to mimic the mutations associated with these diseases or from animal models in order to improve the knowledge of the pathophysiology of each disease
- Discover new therapeutic targets and propose new pharmacological strategies for the treatment of these pathologies
- Promote collaboration with services of the Clinical Hospital involved in the treatment of these RDs, emphasizing primary care to improve its diagnostic potential
- Development of new diagnostic and prognostic methods
- Development of “omics” technologies to advance research in RRDD

**Research lines:**

- Study of the physiopathology of rare neuromuscular diseases
- Epigenetic regulation of neonatal sepsis
- Pathophysiology of telomeres
- Pathophysiology of alpha-1 antitrypsin deficiency, primary ciliary dyskinesia, childhood interstitial diseases and Prader-Willi syndrome
- Genetic and epigenetic modifiers in Friedreich’s ataxia
- Gene therapy for the treatment of rare respiratory diseases
- Design and testing of new biomarkers for rare diseases
- Characterization of the cellular and molecular mechanisms associated with the pathology of neuromuscular diseases like Myotonic Dystrophy and Friedreich’s ataxia and identification of molecular targets for the development of new therapies

**Clinical groups:**

- Research Group on Respiratory Diseases [Dr. Jaime Signes-Costa Miñana]

**Experimental groups:**

- Research Group on Translational Genomics [Dr. Rubén D Artero Allepuz]
- Research Group on Rare Respiratory Diseases [RRD] [Dr. Francisco Dasí Fernández]
- Research Group on Cellular and Organic Physiopathology of Oxidative Stress [Dr. Federico V. Pallardó Calatayud]
- Research Group on Molecular Imaging and Metabolomics [Dr. Daniel Monleón Salvadó]

**Clinical Services Associated to the Program:**

- Department of Pediatrics
- Department of Pneumology
- Department of Traumatology and Orthopedic Surgery
<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>STATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carry out teaching and outreach activities</td>
<td>X</td>
<td>• Subject “Enfermedades Raras”: Medicine degree [UV]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Master course in Biomedical Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Master “Enfermedades raras”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 2nd edition of the on-line course “Introducción a las EE.RR: investigación y atención clínica”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Introduction to rare diseases, Program of the University of Valencia La Nau Gran</td>
</tr>
<tr>
<td>Alliance for translational research in rare diseases</td>
<td>X</td>
<td>Feder Funding</td>
</tr>
</tbody>
</table>
4.2.4 Neurological Decline

Inflammation, which is associated with many chronic diseases (diabetes, liver cirrhosis, etc.), aging or major surgeries, leads to neu- roinflammation and brain alterations that eventually lead to cognitive and functional impairment. This deterioration reduces the quality of life and increases the risk of accidents, falls, fractures and adverse consequences, which implies an increase in hospitalizations and the use of public resources.

Cognitive and functional impairment associated with aging and many chronic diseases is one of the most important challenges in order to improve the quality of life of the population and secure the sustainability of health systems. Early detection and treatment and prevention of cognitive and functional impairment would improve the quality of life of the elderly or with chronic diseases and reduce the demand for resources to the health system, improving its sustainability. Therefore, it is necessary to design new approaches to address these challenges, based on advances in knowledge on mechanisms, early diagnosis, prevention and treatment of cognitive and functional impairment.

**Coordinators:** Dr. Carmina Montoliu Félix and Dr. Vicente Felipo Orts

**Objectives:**

- Characterize the alterations in inflammation, neuroinflammation, neurotransmission, function and brain structure associated with the appearance of cognitive and functional impairment
- Characterize cognitive and functional disturbances in detail
- Identify biomarkers for the early detection of cognitive and functional impairment
- Identify the mechanisms by which:
  - peripheral inflammation leads to neuroinflammation
  - neuroinflammation leads to functional, structural and neurotransmission alterations in the brain
  - brain disorders lead to cognitive and functional impairment
- Identify therapeutic targets to reverse or prevent cognitive and functional impairment
- Design and test new therapeutic procedures to reverse or prevent cognitive and functional impairment

**Research lines:**

- Develop new early diagnostic procedures for cognitive and functional impairment
- Try to transfer the new diagnostic procedures developed to clinical practice
- Evaluate in patients the efficacy and usefulness of new therapeutic procedures to prevent or reverse cognitive and functional impairment that has been effective in animal models
- Transfer to clinical practice the new validated therapeutic procedures

**Clinical groups:**

- Research Group on the Study of Cardiometabolic and Renal Risk (Dr. Josep Redón i Mas)
- Research Group on Anesthesiology and Reanimation (Dr. Marina Soro Domingo, Dr. Ernesto Pastor Martínez, Dr. Rafael Badenes Quiles)
- Research Group on Cardiometabolic Risk (Dr. José Real Tomás)

**Experimental groups:**

- Research Group on Neurological Impairment (Dr. Carmina Montoliu Félix)
- Research Group on Personal Autonomy, Dependence and Severe Mental Disorders [TMAP] (Dr. Rafael Tabanés Seisdedos, Dr. Gabriel Selva Vera)
- Research Group on Aging and Physical Activity (Dr. José Viña Ribes, Dr. Ana Lloret Alcañiz)
- Research Group on Inflammation (Dr. Esteban Morcillo Sánchez, Dr. Mª Jesús Sanz Ferrando)

**Clinical Services Associated to the Program:**

- Department of Digestive Medicine (Dr. Miguel Mínguez Pérez, Dr. Amparo Escudero García)
- Department of Neurophysiology (Dr. Paula Cases Bergón)

**University Department Associated with the Program:**

- Biology Unit. Department of Pathology (Dr. Concepción López Ginés)
<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>STATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Characterize the alterations in inflammation, neuroinflammation, neurotransmission, function and brain structure associated with the appearance of cognitive and functional impairment</td>
<td>X</td>
<td>We analysed the presence of neuroinflammation in post-mortem samples of the cerebellum from patients died with different grades of liver disease, from mild steatohepatitis to cirrhosis. We are analysing alterations in neural connectivity by functional magnetic resonance imaging.</td>
</tr>
<tr>
<td>2. Characterize cognitive and functional disturbances in detail</td>
<td>X</td>
<td>Gait, balance, hand strength and motor speed performance were evaluated in cirrhotic patients. Evaluation and characterization of sensory thresholds was also performed by quantitative sensory testing using a CASE IV. We are characterizing cognitive and functional disturbances in patients with other pathologies: NASH [non-alcoholic steatohepatitis], diabetes mellitus, schizophrenia, bipolar disorder, and post-surgery patients. We are better characterizing executive functions in cirrhotic patients by computerized tests.</td>
</tr>
<tr>
<td>3. Identify biomarkers for the early detection of cognitive and functional impairment</td>
<td>X</td>
<td>We are studying the altered genes in peripheral blood cells and the involved pathways associated with the appearance of cognitive impairment; we are characterizing the changes in inflammation and metabolites associated to cognitive impairment. We are performing an integrated multiomics analysis to identify biomarkers of cognitive and functional impairment. We are characterizing eye movements in patients with different pathologies: cirrhosis, NASH, and diabetes mellitus.</td>
</tr>
</tbody>
</table>
### 4. Identify the mechanisms by which:

a) peripheral inflammation leads to neuroinflammation

b) neuroinflammation leads to functional, structural and neurotransmission alterations in the brain

c) brain disorders lead to cognitive and functional impairment

<p>| | | |</p>
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<tbody>
<tr>
<td>4.</td>
<td>Identify the mechanisms by which:</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>a) peripheral inflammation leads to neuroinflammation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) neuroinflammation leads to functional, structural and neurotransmission alterations in the brain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) brain disorders lead to cognitive and functional impairment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We have identified alterations of the immune system associated with the appearance of neurological alterations in cirrhotic patients with MHE.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We have identified, in animal models, mechanisms by which peripheral inflammation induces neuroinflammation, and how this alters neurotransmission and cognitive and motor function.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We have shown that there is a dysregulation in the urea cycle in non-alcoholic fatty liver disease.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We are analyzing the role of exosomes as mediators of neuroinflammation and of alterations in neurotransmission and cognitive and motor function in animal models of MHE.</td>
<td></td>
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<tbody>
<tr>
<td>5.</td>
<td>Identify therapeutic targets to reverse or prevent cognitive and functional impairment</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>We have identified several therapeutic targets in animal models of MHE.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
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<thead>
<tr>
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<tbody>
<tr>
<td>6.</td>
<td>Design and test new therapeutic procedures to reverse or prevent cognitive and functional impairment</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>We are testing the effect of treatments on cognitive impairment and immunophenotype in patients to reverse or prevent cognitive and functional impairment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We have designed several treatments that improve cognitive and motor function in animal models.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>7.</td>
<td>Programme activity: Seminars of the Neurological Impairment Program</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Seminars are scheduled for the third Thursday of each month. Time: 13:30h</td>
<td></td>
</tr>
</tbody>
</table>
4.2.5 Translational Oncology

The translational oncology program called "Identification of oncogenic biomarkers: mechanisms and clinical implications, detection in non-invasive samples, omics analysis" tries to apply to the clinical practice the genomic screening in patients tumors.

Its main objective is to evaluate the dynamics of the disease through non-invasive biopsies in order to detect minimal residual disease, early onset of markers after surgery and patient response to different treatments.

The high heterogeneity of cancer results in inefficiency of treatments, even when they are directed against specific molecular targets. The low availability of tumor specimens makes genomic studies difficult.

In this sense, the use of liquid biopsies would facilitate the serial collection of samples to carry out molecular analysis and would guarantee a minimum risk for the patient. Thus improving the follow-up and allowing a dynamic understanding of the evolution of the genomic parameters of the patient.

This point of view benefits the National Health System as a whole since it allows the application of more specific treatments to patients, thus avoiding those that would have been less effective, reducing hospitalization and improving life expectancy and quality thereof. It could also prevent generalized treatments, secondary toxicities and rapid treatment adequacy responses.

Finally, it would improve the inclusion of patients in clinical trials which are stratified by molecular mutations.

Coordinator: Dr. Andrés Cervantes Ruipérez

Objectives:

• Identification of diagnostic biomarkers that help the early identification of patients
• Identification of biomarkers of resistance to treatment or relapses
• Development of functional models mimetic to the characteristics of the patient
• Development of decision support systems through data analysis

Research lines:

• Liquid biopsy as a diagnostic tool
• Functional models of organoids, murine and 3D bioprinted for the study of resistance and drug screening
• Integration of molecular and image data for the development of decision support systems
• Promote the development and implementation of programs in advanced therapies, particularly, CAR-T cells cell therapy and other models
• Continuous improvement of the inclusion of patients in clinical trials, in coordination with primary care

Clinical Groups:

• Research Group of Innovative Diagnostic and Therapeutical Developments in Solid Tumors - InDeST (Dr. Andrés Cervantes Ruipérez)
• Research Group on Hematopoietic Transplantation (Dr. Carlos Solano Vercet)
• Research Group on Myeloid Neoplasms (Dr. Mar Tormo Díaz)
• Research Group on Lymphoproliferative Disorders (Dr. Mª José Terol Casterá)
• Translational Research Group on Pediatric Solid Tumors (Dr. Samuel Navarro Fos, Dr. Rosa Noguera Salvá)

Clinical Services Associated to the Program

• Department of Radiology
• Department of Pathological Anatomy
• Central Laboratory
• Department of Pharmacy
• Department of Urology

Associated program platforms:

• Biobank
• Precission Medicine Unit
• Bioinformatics and Biostatistics Unit
<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>ACTIONS</th>
<th>STATE</th>
</tr>
</thead>
</table>
| Identify biomarkers | • Clinical recruitment-characterization and storage Biobank-Data Management  
• Subclassify tumours according to their profile  
• Identify biomarkers of inflammation / angiogenesis; miRs-detox from oxidative stress  
• Perform comprehensive omics data analysis with search of altered routes using Biology of systems | X  
X  
X  
X |
| Validate promising biomarkers / mechanistic analysis | • Proof of concept on commercial cell lines  
• Establishment of cell lines with patient tumours  
• Establishment of tumours in mouse models (xenografts)  
• IHC antibodies in FFPE to validate expression / western blot in cell lines / xenotumours | X  
X  
X |
| Detect biomarkers in liquid biopsies to monitor disease progression (BEAMing PCR) | • Start on biopsies of patients with advanced disease or disease progression  
• Implement technology optimized for initial detection, detection of residual disease, and disease evolution and response to treatment | X  
X |
4.2.6 Reproductive Medicine

This program comprises two main lines:
1. Molecular characterization at single-cell resolution of the human uterus as a basis for both understanding uterus health and disease, and improving diagnosis, monitoring and new therapies.
2. Study of maternal-embryonic communication mechanisms and their impact on reproductive health.

**Coordinators:** Dr. Carlos Simón Vallés and Dr. Felipe Vilella Mitjana

**Objectives:**
- To create comprehensive reference map at single-cell resolution of the human uterus
- To study the origin of fibroids at the single-cell level
- To study the origin of late gestational pathology focuses on decidualization deficiency
- To establish the maternal-fetal communication mechanisms before embryo implantation
- To provide early diagnosis and treatment of endometriosis and endometrial cancer
- To study the molecular mediators in hormone-dependent oncogenesis in endometrium and ovary
- To establish a success strategy in the implementation of physical activity to reduce the risk of chronic disease in women

**Research lines:**
- Study of endometrial receptivity and cell map of the human uterus. Previous research in our laboratory using microarray technology has established a transcriptomic signature of human endometrial receptivity
- Maternal-fetal communication
- Role of the endometrial microbiome in reproduction
- Early diagnosis of preeclampsia and other complications of pregnancy
- Study at the single-cell level of the origin of uterine fibroids
- Early diagnosis and treatment of endometriosis and endometrial cancer
- Molecular factors involved in the initiation and progression of hormone-dependent tumours in the endometrium and ovary
- Implementation of physical activity as a strategy to improve health indicators in women

**Clinical groups:**
- Research Group on Women Health [Dr. Antonio Cano Sánchez]
- Research Group on Endometriosis and Endometrial Cancer Therapies [Dr. Raúl Gómez Gallego]

**Experimental groups:**
- Research Group on Maternal Fetal Communication [Dr. Felipe Vilella Mitjana]
- Research Group on Reproductive Medicine [Dr. Carlos Simón Vallés]
- Emergent researcher [Dr. Aymara Mas Perucho]

**Clinical Services Associated to the Program**
- Department of Gynaecology and Obstetrics
- Department of Microbiology
## ENDOMETRIAL RECEPTIVITY AND EMBRYO VIABILITY

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>STATE</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance in the understanding of the mechanisms that regulate maternal-fetal communication</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing. Results published</td>
</tr>
<tr>
<td>Single cell resolving molecular characterization of the human uterus with its implications for health and disease</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing. Results published</td>
</tr>
<tr>
<td>Single cell study of the origin of fibroids</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing</td>
</tr>
<tr>
<td>Study of resistance to decidualization at the origin of late gestational disease</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing</td>
</tr>
<tr>
<td>Early diagnosis and treatment of endometriosis and endometrial cancer</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing</td>
</tr>
<tr>
<td>Molecular mediators in hormone-dependent oncogenesis in endometrium and ovary</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing</td>
</tr>
<tr>
<td>Success strategy in the implementation of physical activity to reduce the risk of chronic disease in women</td>
<td>Achieve Partially achieved Not achieved</td>
<td>Project is ongoing</td>
</tr>
</tbody>
</table>
4.2.7 Ageing and associated diseases

This program has the priority of improving the quality of life of the elderly and promoting longevity as much as possible. The aging population is a challenge for current health systems since the population over 65 years old contributes, in a very significant percentage, to health expenditure. As life expectancy increases, so do age-associated diseases.

In this context, the concept of “healthspan” [quality of life] has emerged. The program is formed by many researchers and health professionals who consider that efforts to extend life at the expense of causing a severe physical or psychic disability are undesirable and, on the contrary, they should focus on lengthening the part of life during which we are able to maintain autonomy, independence, productivity, and well-being.

A central guiding idea in this program is that people who achieve exceptional longevity (i.e., centenarians) serve as a model of satisfactory aging. On the other hand, it is considered that the most problematic expression of the population aging is the clinical condition of frailty since an important part of the people over 65 and older fulfill several frailty criteria. Approximately one-fourth of people over the age of 85 are estimated to be frail. Frailty is a geriatric syndrome characterized by increased vulnerability to external aggressions as a result of an alteration in the physiological reserves of multiple systems, leading to difficulties in maintaining homeostasis. The program tries to identify specific molecular targets to be able to intervene concretely and rationally to improve the quality of life of the elderly.

For this, INCLIVA has an enormous advantage because of the great integration that exists, by proximity and interests, between the Hospital Clínico Universitario de Valencia and the Faculty of Medicine of the University of Valencia. This framework allows intense collaboration between basic research groups, that analyze possible biomarkers associated with healthy aging, frailty, or age-associated diseases and clinical research groups that provide biological human samples and, on the other hand, can transfer to the patient those studies that have been successfully developed at the bench.

In addition to this, INCLIVA has registered the first and only Spanish Group for the Study of Centenarians, which includes research groups working in this field distributed in different Spanish communities.

**Coordinators:** Dr. José Viña Ribes, Dr. Consuelo Borrás Blasco, Dr. María Carmen Gómez Cabrera

**Objectives:**

- Determination of oxidative stress and inflammation parameters associated with healthy aging, frailty, and age-associated diseases
- Determination of genetic biomarkers [microRNAs, mRNAs, and SNPs] associated with healthy aging, frailty, and age-associated diseases
- Determination of epigenetic biomarkers associated with healthy aging, frailty, and age-associated diseases
- Determination of metabolomic biomarkers associated with healthy aging, frailty, and age-associated diseases
- Protocols of physical exercise and other healthy life interventions for the treatment and prevention of frailty

**Research topics:**

- Biomarkers of aging
- Mechanisms of aging with special attention to exceptional aging: centenarians
- Healthy aging: frailty and prevention of disability
- Intervention for successful aging: physical exercise, nutrition, molecular interventions [extracellular vesicles]
- Age-associated diseases: cardiovascular and neurodegenerative diseases
- Mitochondrial implications in age-associated frailty
- Skeletal muscle repair, exercise, frailty, and sarcopenia
- Regenerative medicine in aging and age-associated diseases
**Clinical research groups:**
- Research Group on the Study of Cardiometabolic and Renal Risk (Dr. Josep Redón i Mas)
- Cardiometabolic Research Group on Primary Care (Dr. Jorge Navarro Pérez)
- Research Group on Clinical Cardiology (Dr. Juan Sanchis Forés)
- Research Group on Oxidative Pathology (Dr. Guillermo Sáez Tormo)
- Research Group on Women Health (Dr. Antonio Cano Sánchez)
- Group on Translational Research in Ischemic Heart Disease (Dr. Vicente Bodi Peris)

**AGING AND AGE-ASSOCIATED DISEASES**

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>ACTIONS</th>
<th>STATE</th>
</tr>
</thead>
</table>
| Determination of parameters of oxidative stress and inflammation associated with aging, healthy, frailty and diseases associated with aging (mainly cardiovascular and neurodegenerative) | • Oxidative signature of cerebrospinal fluid from mild cognitive impairment and Alzheimer disease patients  
• Reductive Stress: A new concept in Alzheimer’s Disease  
• Glucose 6-P dehydrogenase delays the onset of frailty by protecting against muscle damage  
• Frailty Is Associated with Oxidative Stress in Older Patients with Type 2 Diabetes  
• Redox-related biomarkers in physical exercise  
• Project: *CIBER de Fragilidad y envejecimiento* (CIBERfes)  
• Project: Evolution-Age-Gender-Lifestyle-Environment: mitochondrial fitness mapping  
Thesis title: Role of p16ink4a and bmi-1 in oxidative stress-induced premature senescence in human dental pulp stem cells  
Thesis title: Regulation of antioxidant defenses in the prevention of skeletal muscle deconditioning | X     |

**Experimental research groups**
- Research Group on Neurological Impairment (Dr. Carmina Montoliu Felix)
- Research Group on Endothelial Cells (LINCE) (Dr. Carlos Hermenegildo Caudevilla, Dr. Susana Novella del Campo)
- Research Group on Exercise, Nutrition and Healthy Lifestyle (Dr. Mª Carmen Gómez Cabrera)
- Research Group on Healthy Aging (Dr. Consuelo Borrás Blasco)
- Research Group on Aging and Physical Activity (Dr. José Viña Ribes)
- Research Group on Cellular and Organic Physiopathology of Oxidative Stress (Dr. Federico V. Pallardó Calatayud)
- Research Group on Inflammation (Dr. Esteban Morcillo Sánchez, Dr. Mª Jesús Sanz Ferrando)
- Research Group on Genetics of Osteoporosis (Dr. Miguel Ángel García Pérez)
<table>
<thead>
<tr>
<th>Scientific Activity</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Determination of genetic biomarkers** | - In Search of 'Omics'-Based Biomarkers to Predict Risk of Frailty and Its Consequences in Older Individuals: The FRAILOMIC  
- Human exceptional longevity: transcriptome from centenarians is distinct from septuagenarians and reveals a role of Bcl-xL in successful aging. Aging (Albany NY)  
- A translational approach from an animal model identifies CD80 as a candidate gene for the study of bone phenotypes in postmenopausal women  
- Centenarians maintain miRNA biogenesis pathway while it is impaired in octogenarians. Mechanisms of ageing and development.  
**Thesis title:** Transcriptómica en centenarios: un ejemplo de envejecimiento satisfactorio |
| **Determination of epigenetic biomarkers** | - Epigenetic biomarkers for human sepsis and septic shock: insights from immunosuppression  
- Epigenetic regulation in the pathogenesis of Sjögren syndrome and rheumatoid arthritis  
- Exercise training as a modulator of epigenetic events in prostate tumors  
- Implementing precision medicine in human frailty through epigenetic biomarkers  
- Epigenetic biological age in mice models in aging and frailty |
| **Determination of metabolomic biomarkers** | - Sex differences in age-associated Type 2 Diabetes in rats-role of estrogens and oxidative stress |
### Physical exercise protocols for the prevention of frailty

- A multicomponent exercise intervention that reverses frailty and improves cognition, emotion, and social networking in the Community-Dwelling Frail Elderly
- Exercise training as a drug to treat age associated frailty
- Copenhagen consensus statement 2019: physical activity and ageing
- Muscle repair after physiological damage relies on nuclear migration for cellular reconstruction

**Project:** Novel multidomain therapeutic interventions to delay frailty and disability. Identification of molecular mechanisms with translational relevance

**Project:** Personalized physical exercise as an intervention to reverse disability in older adults living in residences (RESIFIT)

**Thesis title:** A multicomponent exercise program to prevent frailty, and for cognitive, emotional, and social improvement in frail elderly people

**Thesis title:** Moderate overexpression of glucose-6-phosphate dehydrogenase improves healthspan in mice. Implications in skeletal muscle regeneration

**Thesis title:** Impact of long-term physical exercise on neuroprotection in middle-aged subjects: study of the molecular mechanisms involved
4.3. Research areas

INCLIVA Health Research Institute has four research areas in order to organize its scientific activity. Despite their independence, they have a common objective: meeting health needs and improving R&D&I system.

Their main aim is to establish a common reference framework to promote collaboration between INCLIVA attached researchers.

Each of the lines counts on the participation of one or several advisers from the External Scientific Committee. These lines are led by the following coordinators:

**Cardiovascular Area**
- **Coordinator:** Dr. Francisco Javier Chorro Gascó
- **Mission:** to contribute to the study of different aspects of cardiovascular disease (CVD) from its origins to its consequences

**Oncology Area**
- **Coordinator:** Dr. Andrés Cervantes Ruipérez
- **Mission:** to contribute to the study of different aspects of oncological diseases, at the stage of diagnosis and molecular characterization and selection of specific molecular targets of therapeutic interest

**Metabolism and Organic Damage Area**
- **Coordinator:** Dr. José Viña Ribes
- **Mission:** to contribute to the study of the etiology, pathophysiology and diagnosis mechanisms or treatment of various metabolic diseases; or those that generate organ damage as a fundamental link of its trigger action

**Reproductive Medicine Area**
- **Coordinator:** Dr. Carlos Simón Vallés
- **Mission:** to advance in knowledge of human reproduction for translational application, improving the efficiency of assisted reproduction treatment and reducing adverse effects

Scientific production analysis by research area

The following charts and figures summarize the main scientific activity indicators of the four areas of research and the other divisions from Hospital Clínico de València.
Since there are some scientific articles which are shared by two or more areas, it is worth mentioning that the sum of publications by area exceeds INCLIVA’s total scientific output. Additionally, the next tables shows scientific publications distribution by area in terms of number of articles and impact factor.
4.3.1 Cardiovascular area

Groups
Research Group on Cardiometabolic Risk
Genomics and Diabetes Unit
Research Group on Cardiac Experimental Electrophysiology
Research Group on Endothelial Cells (LINCE)
Research Group on Clinical Cardiology
Research Group on the Study of Cardiometabolic Risk in Children and Adolescents
Cardiometabolic Research Group on Primary Care
Research Group on the Study of Cardiometabolic and Renal Risk
Research Group on Vascular Function
Research Group on Pediatric Nutrition
Group on Translational Research in Ischemic Heart Disease
Research Group on Heart Failure

Number of articles: 211
IF: 1586.983
Average IF: 7.521
National collaborations: 105
International collaborations: 60
Corresponding author: 83
First author: 63
Last author: 84
Q1: 114
Q2: 53
D1: 35

**scientific activity**

Research Group on Cardiometabolic Risk
Consolidated group

<table>
<thead>
<tr>
<th>Group members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leading Researcher, R4</strong></td>
</tr>
<tr>
<td>José Tomás Real Collado</td>
</tr>
<tr>
<td>Hospital. University</td>
</tr>
<tr>
<td><strong>Established Researchers, R3</strong></td>
</tr>
<tr>
<td>Francisco Javier Ampudia Blasco. Hospital. University</td>
</tr>
<tr>
<td>Juan Francisco Ascaso Gimilio. University</td>
</tr>
<tr>
<td>Miguel Civera Andrés. Hospital. University</td>
</tr>
<tr>
<td><strong>Emerging Researcher, R2</strong></td>
</tr>
<tr>
<td>Sergio Martínez Hervás. University</td>
</tr>
<tr>
<td><strong>Recognised Researcher, R2</strong></td>
</tr>
<tr>
<td>Marta Peiró Signes. INCLIVA. CIBERdem</td>
</tr>
<tr>
<td><strong>First Stage Researchers, R1</strong></td>
</tr>
<tr>
<td>Blanca Alabadí Pardiñas. INCLIVA</td>
</tr>
<tr>
<td>Miriam Moriana Hernández. INCLIVA</td>
</tr>
<tr>
<td><strong>Staff. Collaborating Researchers</strong></td>
</tr>
<tr>
<td>Ana Palanca Palanca. Hospital</td>
</tr>
<tr>
<td>Esther Benito Casado. CIBERdem</td>
</tr>
<tr>
<td><strong>Staff. Nurse</strong></td>
</tr>
<tr>
<td>Pilar Aguilar Santaisabel. Hospital</td>
</tr>
</tbody>
</table>

Researchers by categories

- R1: 2
- R2: 2
- R3: 1
- R4: 1
- STAFF: 3

Researchers financed by competitive public calls or networks

- R1: 1
- R2: 2
- STAFF: 2

Team involved in

![ciberdem](image)

**Strategic aims**

In terms of scientific activity of the research group during 2021, our group is participating in the development of three competitive and multidisciplinary research projects that include the following aims:

- **Project:** Immunopharmacological modulation of the systemic inflammation associated to metabolic disorders. Search for new therapeutic targets and synthesis of novel drugs
- **Project:** Study of new inflammatory and angiogenic mechanisms associated to severe morbid obesity
- **Project:** Role of the inflammatory processes in metabolic diseases and associated complications

**Main lines of research**

- Role of inflammatory axes in the modulation of metabolic and vascular dysfunctions in obesity, insulin resistance and diabetes
- Primary dyslipidemias: molecular mechanisms, insulin resistance and novel therapeutic targets
- Ageing, frailty, sarcopenia and neurodegeneration in people with diabetes
- New diabetes technologies
- Pharmacogenetic-based personalized treatment in diabetes
- Applying Big Data and Artificial Intelligence technologies to analyse cardiovascular risk in dyslipidemia and diabetes
scientific activity

- Adipokines, inflammatory axes, new therapeutic targets and cardiovascular risk in metabolic fatty liver disease
- Body composition analysis
  - effect of body composition analysis, vascular risk and treatment in people with diabetes
  - impact of body composition analysis on prognosis, quality of life and therapeutic response in onco-haematological patients

Emerging Researcher

Sergio Martínez Hervás

The line of research is based lipid metabolism, inflammation, fatty liver, insulin resistance, and diabetes and its associated complications.

Publications

17
Number of articles

IF
83.818
Average IF
4.904
6
National collaborations
4
International collaborations
6
Corresponding author

Selected Publications


Research Projects and Grants for Research

Reference: PI19/00169
Title: Papel de los procesos inflamatorios en las enfermedades metabólicas y en las complicaciones asociadas
Principal Investigator: Herminia González and Sergio Martínez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €159,720

Reference: PI18/00209
Title: Identificación de nuevos mecanismos implicados en la angiogénesis e inflamación en pacientes obesos. Modulación por ligandos de receptores nucleares constitutivos de androstano
Principal Investigator: Laura Piqueras Ruiz and José Tomas Real Collado
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total budget: €173,332.50

Reference: CB07/08/0018
Title: CIBER de Diabetes y Enfermedades Metabólicas Asociadas (CIBERdem)
Principal Investigator: Juan F. Ascaso Gimilio and José Tomas Real Collado
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2008-

Reference: SAF2017-89714-R
Title: Modulación farmacológica del sistema inmune como diana clave en la prevención de la enfermedad cardiovascular asociada a desórdenes metabólicos. Síntesis de fármacos novedosos
Principal Investigator: Mª Jesús Sanz Ferrando and Juan F. Ascaso Gimilio
Funding Body: Ministerio de Economía y Competitividad

Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €205,700

Reference: PROMETEO/2019/032
Title: Una aproximación translacional desde la clínica a la experimentación animal: estudio del papel del eje CCL11/CCR3 y la inflamación eosinofílica en la patología cardiovascular asociada a desórdenes metabólicos
Principal Investigator: Mª Jesús Sanz Ferrando (José Tomás, Sergio Martínez as collaborating researchers)
Funding Body: Conselleria de Educación Cultura y Deporte

Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €211,736
Genomics and Diabetes Unit
Consolidated group

Group members

**Leading Researcher, R4**
Felipe Javier Chaves Martínez
INCLIVA

**Established Researcher, R3**
Jesús Rodríguez Díaz. University

**Recognised Researchers, R2**
Ana Bárbara García García. CIBER
Irene Andrés Blasco. INCLIVA
José Miguel Juanes Tébar. INCLIVA
Roberto Gozalbo Rovira. University

**First Stage Researchers, R1**
Azahara Mª Fuentes Trillo. INCLIVA
Cristina Santiso Bellón. University
Fran Lara Hernández. INCLIVA
Mª Elena Quiroz Rodríguez. INCLIVA
Nazaret Peña Gil. University
Rebeca Melero Valverde. INCLIVA
Soraya García Sorribes. INCLIVA

**Staff. Collaborating Researcher**
Iris Manzano Blasco. INCLIVA

Researchers by categories

Researchers financed by competitive public calls or networks

**Strategic aims**

- Identify genetic and environmental factors involved in the development of type 2 diabetes and related diseases
- Identify alterations of methylation and hydroxymethylation in relation to the development of type 2 diabetes and its potential use as biomarkers
- Identify genetic causes of rare diseases: Abeta, ATA and hereditary forms of hypercholesterolemas not caused by known genes
- Study of environmental factors involved in the development of diseases of high cardiovascular risk, especially type 2 diabetes and associated organic damage
- Development of fast and easy procedures for SARS-CoV2 (COVID19) detection and characterization (including the analysis of the main human genetic variations involved in COVID19)

**Main lines of research**

- Identification of frequent and rare functional variants involved in high cardiovascular risk disease development and their interaction with environmental factors
- Genotyping and/or sequencing of complete rotavirus and norovirus genomes. Human genotype study of FUT2 and FUT3 genes related to viral genotypes and their relationship with intestinal microbiota
- Analysis of methylated and hydroxymethylated regions in the genome in patients with specific phenotypes at baseline compared with phenotypes present five years later, as pertains to type 2 diabetes
scientific activity

- Monitoring and molecular characterization of chronic lymphocytic leukaemia and study of molecular markers
- Identification of relationships between different genes, essential metals and pollutants in relation to type 2 diabetes and related traits

PUBLICATIONS

19 Number of articles
IF 98.304 Average IF 5.173

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

- Reference: COV20/00279
  - Title: Detección y caracterización rápida de COVID-19 y del paciente
  - Principal Investigator: Felipe Javier Chaves Martínez
  - Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
  - Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
  - Duration: 2020-2021
  - Total budget: €175,000

- Reference: PI17/00544
  - Title: Identificación de variantes genéticas protectoras frente al desarrollo de diabetes tipo 2 en octogenarios
  - Principal Investigator: Felipe Javier Chaves Martínez
  - Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
  - Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
  - Duration: 2018-2021
  - Total budget: €196,020
References:

**AGL2017-84165-C2-2-R**

**Title:** Descifrando las interacciones entre la microbiota intestinal/virus entéricos/hospedador: bases para proteger frente a la diarrea viral

**Principal Investigator:** Jesús Rodríguez Díaz

**Funding Body:** Ministerio de Economía y Hacienda

**Beneficiary Institution:** Universidad de Valencia

**Duration:** 2018-2021

**Total budget:** €133,100

**Reference:** AEST/2020/041

**Title:** Desarrollo de un sistema rápido y económico para la detección de patógenos causantes de gastroenteritis infecciosas mediante EOSAL

**Principal Investigator:** Jesús Rodríguez Díaz

**Funding Body:** Conselleria de Educación Cultura y Deporte

**Beneficiary Institution:** Universidad de Valencia

**Duration:** 2020-2021

**Total budget:** €40,000

**THESIS**

**Thesis title:** MgViz: desarrollo e integración de métodos de análisis y visualización de datos genómicos en biomedicina

**Doctoral candidate:** José Miguel Juanes Tebar

**Director(s):** Felipe Javier Chaves Martínez, Pablo Marin García, Vicente Arnau Llombart

**Date of the defense:** 22/03/2021

**Grade:** Sobresaliente “cum laude”


Research Group on Cardiac Experimental Electrophysiology
Consolidated group

Group members

Leading Researcher, R4
Francisco Javier Chorro Gascó
Hospital. University
Antonio M. Alberola Aguilar. University
Luis Such Belenguer. University

Recognised Researchers, R2
Germán Parra Giraldo. University
Irene del Canto Serrano. INCLIVA
Isabel Trapero Gimeno. University
Luis Such Miquel. University
Manuel Zarzoso Muñoz. University

First Stage Researchers, R1
Óscar Julián Arias Mutis. CIBER
Patricia Genovés Martínez. CIBER

Strategic aims

- Publication of the results obtained on using the 1,4-benzothiazepine derivative JTV-519 to modify the proarrhythmogenic manifestations of mechano-electric feedback and continuation of the programmed experimental series to analyze the effects of KN-93, carvedilol and analogues, late Na+ current inhibitors and the Nitric Oxide carrier S-nitrosoglutathione
- Continuation of the analysis of the effects of modifications of the basic electrophysiological properties on the processes involved in the induction and maintenance of ventricular fibrillation
- Analysis of the electrophysiological effects of chronic physical exercise and its protective effect against arrhythmias, the influence of the cardiac nervous system and mitochondrial oxidative stress and the involvement of the IKATP current
- Development of instruments for recording, processing and analyzing cardiac electrophysiological signals obtained with mapping systems
- Progressive development of the experimental series aimed to study the mechanisms involved in the deterioration of the systolic function, fibrosis and the inducibility of arrhythmias in a chronic model of infarction
- Progressive development of an experimental model of metabolic syndrome to analyze the electrophysiological modifications and the inducibility of cardiac arrhythmias

Main lines of research

- Myocardial stretching: analysis of electrophysiological changes induced by mechanical stretching. Autocrine/paracrine influences and study of protective actions by means of drugs
- Clinical and basic research on heart failure: role of calcium homeostasis in arrhythmogenesis. Study on the effects of drugs acting on intracellular Ca2+ dynamics
- Analysis of the effects of modifications in basic electrophysiological properties on the processes involved in induction and maintenance of ventricular fibrillation
• Study of electrophysiological effects of chronic physical activity by: a) analysis of the protection against arrhythmias or scientific activity facilitation of its reversion; b) study of the influence of heart’s nervous system and mitochondrial oxidative stress; and c) analysis of the effects on the electrical instability induced by myocardial ischemia and the implication of IKATP current
• Development and extension of tools for the registration, processing and analysing of cardiac electrophysiological signals based on multielectrodes and optical mapping systems able to analyze voltage and calcium signals
• Study of mechanisms involved in the deterioration of the systolic function, fibrosis and the inducibility of arrhythmias in a chronic model of infarction
• Study of electrophysiological modifications and inducibility of cardiac arrhythmias in an experimental model of metabolic syndrome

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: CB16/11/00486
Title: CIBER Cardiovascular
Principal Investigator: Francisco Javier Chorro Gascó
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-
scientific activity

Reference: P18/01620
Title: Modificación de los efectos pro-arrítmicos inducidos por la sobrecarga mecánica o el remodelado ventricular
Principal Investigator: Francisco Javier Chorro Gascó
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €129,470

Reference: PROMETEO/2018/078
Title: Mecanismos protectores frente a la muerte cardíaca súbita de causa arrítmica
Principal Investigator: Francisco Javier Chorro Gascó
Funding body: Conselleria de Educación Cultura y Deporte
Beneficiary Institution: Fundación Investigación del Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €275,859,02

Title: Resonancia magnética cardíaca de estrés con vasodilatadores para predecir la mortalidad a largo plazo en un amplio registro retrospectivo de pacientes con cardiopatía isquémica conocida o sospechada
Principal Investigator: Vicent Bodí Peris (Francisco J Chorro Gascó as collaborating researcher)
Funding body: Sociedad Española de Cardiología
Beneficiary Institution: Fundación Investigación del Hospital Clínico Universitario de Valencia
Duration: 2021-2022
Total budget: €15,000

THESIS

Thesis title: Estudio de la función miocárdica en la enfermedad renal crónica avanzada y en la terapia de sustitución renal
Doctoral candidate: Joana Melero Lloret
Director(s): Francisco Javier Chorro Gascó, Carlos Joaquín Soriano Navarro
Date of the defense: 26/03/2021
Grade: Sobresaliente "cum laude"

Thesis title: Cambios en la activación electromiográfica de la musculatura de codo en sujetos sanos comparada con la activación muscular en sujetos con tendinopatía y la influencia de la aplicación de punción seca en la misma
Doctoral candidate: Fredy Hanna
Director(s): Yasser Alakhdar Mohmara, Antonio Alberola Aguilar
Date of the defense: 23/04/2021
Grade: Sobresaliente "cum laude"

Thesis title: Efectos de la inhibición de la desacetilación de las histonas en el remodelado arritmogénico
Doctoral candidate: Patricia Genovés Martínez
Director(s): Francisco Javier Chorro Gascó, Luis Such Belenguer, Irene Del Canto Serrano
Date of the defense: 27/04/2021
Grade: Sobresaliente "cum laude"

Thesis title: Efectos electrofisiológicos intrínsecos del ejercicio físico crónico sobre el miocardio ventricular normóxico y tras isquemia regional aguda: implicación del canal KATP. Estudio en corazón aislado de conejo
Doctoral candidate: Nathalia Gallego Rojas
Director(s): Juan Guerrero Martínez, Germán Parra Giraldo, Luis Such Belenguer
Date of the defense: 22/07/2021
Grade: Sobresaliente "cum laude"
Research Group on Endothelial Cells (LINCE)
Consolidated group

Group members

**Leading Researchers, R4**
Carlos Hermenegildo Caudevilla
University
Susana Novella del Campo
University

**Recognised Researchers, R2**
Daniel Bernardo Pérez Cremades. University
Elena Monsalve Villalba. University

Researchers by categories

- R2 2
- R4 2

Researchers financed by competitive public calls or networks

- R2 1

http://www.uv.es/lince/SP/index.html

Strategic aims

- To analyze the levels of selected miRNA of acute myocardial infarction patients included in the studies of PI19/01714
- To analyze the role of estrogen receptors on the regulation of miRNA by estradiol
- To tune the experimental surgical procedure of AMI in the SAMR1/SAMP8 murine senescence model, which will allow us to evaluate the vascular effect of aging and sex and to verify that the change in expression of some miRNA observed in humans with AMI is reproduced
- To incorporate new pre and postdoctoral researchers to our group

Main lines of research

- Sex differences in cardiovascular research
- Vascular effects of sex hormones
- Identification of new sex hormone-regulated signaling pathways in endothelium
- Identification and characterization of estradiol-regulated miRNA in endothelium and acute myocardial infarction murine model
- Interaction of sex hormones with pro-atherogenic factors

PUBLICATIONS

- Number of articles: 4
- IF: 31.635
- Average IF: 7.908
- National collaborations: 0
- International collaborations: 3
- Corresponding author: 1

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: COST Action CA17129
Title: Catalysing transcriptomics research in cardiovascular disease
Principal Investigator: Yvan Devaux (Susana Novella as collaborating researcher)
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021

Reference: PI19/01714
Title: Regulación dependiente de sexo y estrógenos en el síndrome coronario agudo e impacto funcional en células endoteliales humanas. Nuevos biomarcadores para prevención primaria
Principal Investigator: Carlos Hermenegildo y Susana Novella
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total Budget: €159.720
Research Group on Clinical Cardiology
Consolidated group

Group members

**Leading Researcher, R4**
Juan Sanchis Forés  
Hospital. University

**Established Researcher, R3**
Vicente Ruiz Ros. Hospital. University

**Recognised Researchers, R2**
Anna Mollar Fernández. INCLIVA  
Sergio García Blas. Hospital

**First Stage Researchers, R1**
Ernesto Valero Picher. Hospital  
Jessika Ariadnna González D’ Gregorio. Hospital. INCLIVA

**Staff. Collaborating Researcher**
Agustín Fernández Cisnal. Hospital

**Staff. Nurses**
Georgina Zaharia. INCLIVA

Researchers by categories

- **R1:** 2
- **R2:** 2
- **R3:** 1
- **R4:** 1
- **STAFF:** 2

Researchers financed by competitive public calls or networks

- **R1:** 1
- **R2:** 1

Team involved in ciberCV

Strategic aims

- Publication of manuscripts in high IF journals
- CIBER Cardiovascular
- Development of FIS projects

Main lines of research

- Research line in heart failure:
  - Beta blocker treatment withdrawal in patients with heart failure with preserved systolic function and evidence of chronotropic incompetence
  - Short-term effects of dapagliflozin on peak oxygen consumption in type 2 diabetic patients with heart failure with reduced systolic function
- Research line in acute coronary syndrome: randomized comparison between invasive and conservative strategies in frail elderly patients with non-ST-segment elevation myocardial infarction (MOSCA-FRAIL)
- Investigation line in interventional cardiology: effect of changes in antigen carbohydrate 125 levels before percutaneous aortic valve prosthesis implant on prognosis after implantation

PUBLICATIONS

- **46** Number of articles
- **IF 235.466**
- **Average IF 5.118**
- **30** National collaborations
- **7** International collaborations
- **8** Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI18/01138
Title: Efecto de la modificación de los niveles de antígeno carbohidrato 125 antes del implante de prótesis valvular aórtica percutánea sobre el pronóstico tras el implante
Principal Investigator: Juan Sanchis Forés
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total budget: €57,475

Reference: CB16/11/00420
Title: CIBER Cardiovascular
Principal Investigator: Juan Sanchis Forés
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-

Reference: AP-2021-016
Title: BREIC: Identificación de biomarcadores del eje corazón-microbiota-sistema inmune por RMN para la estratificación de pacientes con insuficiencia cardiaca
Principal Investigator: Vannina González Marrachelli and Anna Mollar Fernández
Funding Body: Universidad de Valencia - INCLIVA
Beneficiary Institution: Universidad de Valencia - INCLIVA
Duration: 2021-2022
Research Group on the Study of Cardiovascular Risk in Children and Adolescents
Consolidated group

Group members

**Leading Researcher, R4**
Empar Lurbe i Ferrer
University

**Established Researchers, R3**
Francisco Aguilar Bacallado. University
Isabel Torró Doménech. University

**Recognised Researcher, R2**
Julio Álvarez Pitti. University

**First Stage Researchers, R1**
Ana de Blas Zapata. University
Nuria García Carbonell. University
Rafael Gómez Zafra. University

**Staff. Collaborating Researcher**
Juan José Alcón Sáez. University

**Staff. Technician**
Francisco Ponce Zanón. CIBERobn

**Staff. Administrative assistant**
Christine Deutsch. INCLIVA

Researchers by categories

<table>
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Researchers financed by competitive public calls or networks
STAFF 1

Team involved in

\[ \text{ciberobn} \]

Strategic aims

- The iPEDITEC Unit brings healthcare workers into daily contact with engineers developing software for signal capture through mobile devices. Studying the psychological parameters that facilitate personalized therapy has been a priority aim during 2021, resulting in improved treatment of obese pediatric patients in the Unit.
- The PAIDO Program is focused on personalized medical care extended through initiatives involving family, educators, nutritionists, physical education teachers and other social agents. Treatment goes beyond the hospital setting to include the child’s environment and personal sphere and is supported by state-of-the-art artificial intelligence technologies.
- To improve the knowledge of fetal life and postnatal growth on the development of cardiometabolic risk factors early in life. The KITE cohort is a prospective study starting at birth and assessing the determinants of cardiometabolic risk factors in the first decades of life. Omics data from umbilical cord are available and the analysis of the interaction between clinical data and omics may help to introduce actions in critical periods of life and the potential contribution to reduce cardiometabolic disease later in life. Mrs. Lurbe is the coordinator of the new document of the European Guidelines on Arterial Hypertension in Children and Adolescents.

Main lines of research

- New technologies applied to the detection of congenital heart diseases and sepsis in asymptomatic newborn babies.
- Childhood obesity: new insights in the personalized treatment: study of the cardiorespiratory capacity.
- New technologies applied to the treatment of obesity: physical exercise preventing and treating obesity.
- Arterial hypertension in children and adolescents.
- Cardiovascular and renal risk in diabetes.
scientific activity

- Early origins of cardiometabolic risk factors assessed in a prospective study starting at birth (Cohort KITE)
- HyperChildNET: European Network for Research on Blood Pressure in Children and Adolescents

PUBLICATIONS

11 Number of articles  
IF 48.776  
Average IF 4.434  
2 National collaborations  
9 International collaborations  
5 Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: COST CA19115  
Title: Network for blood pressure research in children and adolescents. HyperChildNET  
Principal Investigator: Empar Lurbe i Ferrer  
Funding Body: European Commission  
Beneficiary Institution: Universidad de Valencia  
Duration: 2020-2024  
Total budget: €700,000

Reference: PI20/00269  
Title: Impacto del peso al nacer y el patrón de crecimiento en los factores de riesgo cardiometabólico en adolescentes postpuberales: aproximación clínica y molecular  
Principal Investigator: Empar Lurbe i Ferrer  
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2021-2023  
Total budget: €174,845

Reference: PI17/01517  
Title: Programación fetal y desarrollo postnatal en hijos de madres obesas: modulación por la alimentación en el primer año de vida  
Principal Investigator: Empar Lurbe i Ferrer  
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2018-2021  
Total budget: €170,005

Reference: CB06/03/0039  
Title: Centro de Investigación Biomédica en Red (CIBER) de Fisiopatología de la Obesidad y Nutrición (CIBERobn)  
Principal Investigator: Empar Lurbe i Ferrer  
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER  
Beneficiary Institution: Consorcio Hospital General Universitario de Valencia  
Duration: 2006-
Cardiometabolic Research Group on Primary Care
Consolidated group

Group members
Leading Researcher, R4
Jorge Navarro Pérez
University. Clínico-Malvarrosa Health Department

Established Researchers, R3
Alvaro Bonet Plà. Clínico-Malvarrosa Health Department
Carolina Mir Sánchez. University. Clínico-Malvarrosa Health Department
Ruth Usó Talamantes. Clínico-Malvarrosa Health Department

Staff. Collaborating Researchers
Carlos Momparler Martínez. Clínico-Malvarrosa Health Department
Carmina Martínez Vernia. Clínico-Malvarrosa Health Department
Enrique Guinot Martínez. Clínico-Malvarrosa Health Department
Irene Marco Moreno. Clínico-Malvarrosa Health Department
Isabel Gabaldón Sánchez. Clínico-Malvarrosa Health Department
José Luis Trillo Mata. Hospital
Mª José Puchades Company. Clínico-Malvarrosa Health Department
Marisa Gómez Arnedo. Clínico-Malvarrosa Health Department
Nidia Ruiz Varea. Clínico-Malvarrosa Health Department
Pablo Sabater Arnaldos. Clínico-Malvarrosa Health Department
Pilar Botija Yagüe. Clínico-Malvarrosa Health Department
Pilar Roca Navarro. University. Clínico-Malvarrosa Health Department
Ruth Urubes Fillol. Clínico-Malvarrosa Health Department
Tomás Sánchez Ruiz. University. Clínico-Malvarrosa Health Department
Vibiana Blanco Alvarado. Clínico-Malvarrosa Health Department
Victoria Gosalbes Soler. Clínico-Malvarrosa Health Department

Researchers by categories

Strategic aims
• Consolidation of various lines of cardiometabolic research
• Consolidation of a network of partners in the area of primary care

Main lines of research
• Cardiovascular population studies [ESCARVAL, Big data studies]
• Studies monitoring cardiovascular risk factors [ADAMPA]

PUBLICATIONS

12
Number of articles
IF 37.918
Average IF 3.159
9
National collaborations
1
International collaborations
2
Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI16/02130
Title: Impacto de la auto-medición y el auto-ajuste de la medicación antihipertensiva en el control de la hipertensión arterial. Un ensayo clínico pragmático: estudio ADAMPA
Principal Investigator: Jorge Navarro Pérez and José Sanfélix-Genovés
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-2021
Total Budget: €86,515

THESIS

Thesis title: Efectividad de una intervención de automanejo de la hipertensión arterial en la mejora de la inercia terapéutica y la adherencia a los medicamentos antihipertensivos. Ensayo clínico pragmático ADAMPA
Doctoral candidate: Irene Marco Moreno
Director(s): Gabriel Sanfélix, Salvador Peiró Moreno, Jose San Félix Genovés
Date of the defense: 28/04/2021
Grade: Sobresaliente "cum laude"

Thesis title: Análisis de los determinantes socioeconómicos y de la morbilidad del Departamento de Salud Valencia Clínico-Malvarrosa. Desarrollo de un índice de privación poblacional integrado
Doctoral candidate: Pilar Botija Yagüe
Director(s): Ruth Usó Talamantes, Jorge Navarro Pérez, Mª de las Mercedes Botija Yagüe
Date of the defense: 30/11/2021
Grade: Sobresaliente "cum laude"
Research Group on the Study of Cardiometabolic and Renal Risk
Consolidated group

Group members

Leading Researcher, R4
Josep Redón i Mas
INCLIVA

Established Researchers, R3
Mª José Forner Giner. Hospital. University
Mª José Galindo Puerto. Hospital. University
Mª José García-Fuster González-Alegre. Hospital

Emerging Researcher, R2
Raquel Cortés Vergaz. INCLIVA

Recognised Researcher, R2
Ana Ortega Gutiérrez. INCLIVA
David Martí Aguado. Hospital

First Stage Researchers, R1
Adrián Ruiz Hernández. Hospital. University
Maria Grau Pérez. INCLIVA
Olga Martínez Arroyo. INCLIVA

Staff. Collaborating Researchers
Elena Solaz Moreno. Hospital
Javier Díaz Carnicero. INCLIVA
José Miguel Calderón Terol. INCLIVA

Emerging Researcher
Raquel Cortés Vergaz

The main objective of this new field of research is to study the molecular mechanisms associated with the development of early kidney damage due to hypertension and diabetes, focusing on the characterization of extracellular vesicles and their roles as intercellular mediators. In addition, a new line of research has been opened in kidney damage associated with systemic lupus erythematosus, autoimmune disease, and the role of extracellular vesicles as diagnostic, prognostic and monitoring biomarkers of disease activity.

Strategic aims

• To start-up the laboratory for the analysis of podocytes (identification, cultivation and phenotyping) and its derivatives: microRNA, exosomes
• To identify a circulating and exosomal non-coding RNA - mRNA interaction networks associated to renal damage progression
• The integration of metabolomics and genomics in the study of factors related to the development of kidney damage
• Development of studies for noninvasive hemodynamic characterization in vascular pathology
• Analysis of morbidity and mortality linked to the presence of hypertension and renal injury
• Development of in vitro studies of platelet and leukocyte adhesion in venous thromboembolism
• Genetic studies related to obesity and overweight and venous thromboembolism
• Development of phase III and IV clinical trials

Researchers by categories

Researchers financed by competitive public calls or networks

Staff. Nurse
Laura Cantero Milán. Hospital

Staff. Technicians
Antonio Fernández Giménez. INCLIVA
Óscar Calaforra Juan. CIBERobn
Noemí Dolz Gilba. INCLIVA

Staff. Administrative assistant
Christine Deutsch. INCLIVA
scientific activity

Main lines of research

- Analysis of podocytes - renal proximal tubular epithelial cell communication as key player in kidney damage progression (miRNAs and exosomes)
- Impact of cardiovascular risk factors and renal function in absolute morbidity and mortality in high-risk population and in the general population
- Inflammation and oxidative stress in the development of cardiovascular disease
- Genomics, proteomics and metabolomics of early cardiometabolic and renal disorders
- Impact of environmental toxins [metals] in cardiometabolic risk
- Identification of polymorphisms and related to the control of BMI and waist circumference and the risk of obesity genes
- Venous thrombosis in young patients: factors associated with its development
- The relationship between risk of venous thromboembolic disease and arteriosclerosis
- Molecular mechanisms associated with activity changes and renal damage development in systemic lupus erythematosus

PUBLICATIONS

### SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: 945097-WELLBASED
Title: WELLBASED. Improving health, wellbeing and equality by evidenced-based urban policies for tackling energy poverty
Principal Investigator: Josep Redón i Mas
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2025
Total budget: €395,250

Reference: 780495 - BigMedilytics
Title: Big Data for Medical Analytics
Principal Investigator: Josep Redón i Mas
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €1,062,136,25

Reference: 785815 - BigData@Heart
Title: Big Data for Better Hearts
Principal Investigator: Josep Redón i Mas
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-2022
Total budget: €386,250 (Contribution EC: 100%)

Reference: PI18/01405
Title: Perfil de microRNAs exosomales y su valor pronóstico a largo plazo en el lupus eritematoso sistémico. Asociación con marcadores establecidos de daño renal
Principal Investigator: Raquel Cortés Vergaz
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €111,320

Reference: PI19/01796
Title: Implicaciones experimentales y clínicas del complejo proteico rabphilin-rab en daño renal en la diabetes mellitus tipo 2
Principal Investigator: Josep Redón i Mas
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €196,020

THESIS

Thesis title: Estudio prospectivo multicéntrico de precisión diagnóstica de los biomarcadores de imagen en las hepatopatías crónicas difusas
Doctoral candidate: David Martí Aguado
Director(s): Luis Martí Bonmati, Miguel Ángel Serra Desfilis
Date of the defense: 29/06/2021
Grade: Sobresaliente “cum laude”
Research Group on Vascular Function
Consolidated group

Group members

**Leading Researcher, R4**
José Mª Vila Salinas
University

**Established Researcher, R3**
Mª Dolores Mauricio Aviñó. University
Martín Aldasoro Celaya. University
Víctor Manuel Víctor González. University

Strategic aims

- Vascular changes associated with different pathologies
- Regulation of blood flow

Main lines of research

- Characterization of alterations in the control of vascular tone and endothelial function induced by aging
- The effects of exercise training on the vascular response
- Vascular and extravascular effects of ranolazine
- Improvement of insulin vascular effects by ranolazine
- Vascular effects of nanoparticles

PUBLICATIONS

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SELECTED PUBLICATIONS


THESIS

Thesis title: Estudio de los mecanismos de estrés oxidativo, activación del inflamasoma NLRP3 y las interacciones leucocito-endotelio en la diabetes: efectos del papel de la empagliflozina

Doctoral candidate: Francesca Iannantuoni

Director(s): Víctor Manuel Víctor González, Milagros Rocha Barajas

Date of the defense: 22/06/2021

Grade: Sobresaliente “cum laude”

Quality recognition/Award: European PhD

Thesis title: Study of mitochondrial dynamics and function and autophagy and their relationship with cardiovascular complications in Type 2

Doctoral candidate: Aránzazu Martínez de Marañón Peris

Director(s): Víctor Manuel Víctor González, Milagros Rocha Barajas, Miguel Martí Cabrera

Date of the defense: 20/12/2021

Grade: Sobresaliente “cum laude”

Quality recognition/Award: European PhD
Research Group on Pediatric Nutrition
Consolidated group

Group members

**Leading Researcher, R4**
Cecilia Martínez Costa
Hospital. University
Javier Buesa Gómez
Hospital. University

**Established Researchers, R3**
Elena Crehuá Gaudiza. Hospital. University
Francisco Núñez Gómez. Hospital. University
Javier Estañ Capell. Hospital. University
Laura Martínez Rodríguez. Hospital

**Recognised Researcher, R2**
Ana Paula Grattarola. INCLIVA

**First Stage Researcher, R1**
Alba Peretó Moll. Hospital
Ana Barrés Fernández. Hospital
Ana Delgado Vicente. Hospital
Ángel Vicente Valls Arévalo. Hospital
Carlos Sáenz de Juano Petit. Hospital
Isidro Robredo García. INCLIVA
Laura Núñez Martínez. Hospital

**Staff. Collaborating Researchers**
Inmaculada Tarazona Casany. Hospital
José Vicente Arcos Machancoses. Hospital

Researchers by categories

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Strategic aims

**Cardiovascular area:**
- Study of metabolome and microbiome in obese children with/without insulin resistance before and after personalized nutritional intervention and physical exercise

**Area of human milk:**
- Characterization of mother-infant microbiome in term and preterm infants. Influence of perinatal variables

**Area of hospital malnutrition and artificial nutrition:**
- Validation of the pediatric screening tools for detecting the risk of malnutrition linked to chronic disease and pediatric hospitalization
Main lines of research

Cardiovascular area:
- Analysis of microbiota in obese children before and after intervention
- Analysis of metabolome in obese children with/without insulin resistance
- Monitoring exercise and energy consumption in obese schoolchildren and teenagers to adjust nutritional intervention

Area of human milk:
- Analysis of nutritional and bioactive components in human milk: influence of genotype FUT2 on oligosaccharides
- Analysis of mother-fetal microbiome in term and preterm infants. Influence of delivery mode, maternal diet and development. Impact on host response and intestinal function

Area of hospital malnutrition and artificial nutrition:
- Validation of the pediatric screening tools for detecting the risk of malnutrition
- Multicenter study of acceptance and quality of life in children treated with home enteral nutrition

PUBLICATIONS

SELECTED PUBLICATIONS


scientific activity

RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: PI19/00354
Titulo: Efectividad de la vacunación antigripal y antineumocócica para prevenir la hospitalización en personas menores de 65 años que presentan condiciones de riesgo
Principal Investigator: Jesús Gimeno Sancho, Javier Estañ Capell
Funding body: Universidad de Valencia - INCLIVA
Beneficiary institution: Universidad de Valencia - INCLIVA
Duration: 2021-2022
Total budget: €4,655

THESIS

Thesis title: Efecto de la intervención nutricional en escolares y adolescentes con obesidad con y sin resistencia a la insulina
Doctoral candidate: Ana Paula Grattarola
Director(s): Francisco Núñez Gómez, Cecilia Martínez Costa
Date of the defense: 11/01/2021
Grade: Sobresaliente "cum laude"
Group on Translational Research in Ischemic Heart Disease
Consolidated group

Group members

**Leading Researcher, R4**
Vicente Bodí Peris
Hospital. University

**Established Researcher, R3**
Amparo Ruiz Saurí. University

**Recognised Researchers, R2**
Clara Bonanad Lozano. Hospital. University. INCLIVA
José Gavara Doñate. INCLIVA

**First Stage Researchers, R1**
César Ríos Navarro. INCLIVA
Elena de Dios Lluch. University
Víctor Marcos Garcés. Hospital

Researchers by categories

- R1: 3
- R2: 2
- R3: 1
- R4: 1
- STAFF: 3

Researchers financed by competitive public calls or networks

- R1: 3
- R2: 1

Strategic aims

- From our research experience from the last years in the clinical and experimental field related to ischemic cardiopathy, our current goal is to focus into a translational approach
- In 2021 we continued elucidating the pathophysiology of microvascular injury in the context of reperfused STEMI as well as therapeutic opportunities to its repair
- We have also developed new tools to study patients with ST-segment elevation myocardial infarction using cardiac magnetic resonance imaging

Main lines of research

- Prospective registry of patients with first ST-segment elevation myocardial infarction studied with cardiac magnetic resonance imaging at acute and chronic phases
- Multicenter registry of patients with chronic coronary syndrome studied with stress cardiac magnetic resonance imaging
- Porcine and mice model of experimental myocardial ischemia and myocardial infarction. To achieve a better understanding of the pathophysiology of ischemia, necrosis, fibrosis, angiogenesis, and reperfusion injury and test new novel therapeutic avenues
- Involvement in several large international multicenter clinical trials in the field of acute coronary syndromes

**PUBLICATIONS**

- Number of articles: 506.045
- Average IF: 10.542
- National collaborations: 25
- International collaborations: 12
- Corresponding author: 16
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI20/00637
Title: Resolución de la obstrucción microvascular tras un infartodemiocardio: evaluación de las consecuencias estructurales y clínicas y búsqueda de nuevas opciones terapéuticas
Principal Investigator: Vicent Bodi Peris and Clara Bonanad Lozano
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total Budget: €129,470

Reference: PROMETEO/2021/008
Title: A multidisciplinary study to advance in the understanding of the basic mechanisms and clinical implications of microvascular obstruction after acute myocardial infarction. Exploration of novel diagnostic and therapeutic opportunities
Principal Investigator: Vicente Bodi Peris
Funding Body: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2024
Total Budget: €435,929

Title: Resonancia magnética cardiaca de estrés con vasodilatadores para predecir la mortalidad a largo plazo en un amplio registro retrospectivo de pacientes con cardiopatía isquémica conocida o sospechada
Principal Investigator: Vicente Bodi Peris
Funding Body: Sociedad Española de Cardiología
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2022
Total Budget: €15,000
Research Group on Heart Failure
Emerging group

Group members

**Leading Researcher, R4**
Julio Núñez Villota
Hospital. University

**Recognised Researchers, R2**
Enrique Santas Olmeda. Hospital
Gemma Miñana Escrivá. Hospital. University
Patricia Palau Sampio. Hospital. University

**First Stage Researchers, R1**
Ana Belén Paes Martí. INCLIVA
Raquel Heredia Cambra. University. CIBER

**Staff. Collaborating Researcher**
Rafael de la Espriella Juan. Hospital
Raquel Heredia Cambra. INCLIVA

**Staff. Nurses**
Alberto Ramírez Sáiz. INCLIVA
Ana Martínez Álvarez. INCLIVA
José Manuel Civera Gómez. INCLIVA

**Staff. Technician**
Adriana Conesa Bona. INCLIVA

Researchers by categories

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Researchers financed by competitive public calls or networks

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**Strategic aims**

- Phenotypic characterization of heart failure syndrome
- Deepen into pathophysiological mechanisms in the different phenotypes of the disease
- Development of tools to improve the diagnostic process of heart failure
- Risk stratification in patients with acute and chronic heart failure
- Evaluation of different therapeutic and monitoring strategies that allow improving the prognosis of heart failure

**Main lines of research**

- Effect on functional capacity of withdrawal of beta-blockers in patients with heart failure and preserved ejection fraction and chronotropic incompetence
- Myocardial effects of iron repletion
- Prevalence and clinical implications of frailty in heart failure
- Usefulness of the carbohydrate antigen 125 marker in the evaluation of congestion and a guide to titrate diuretic treatment
- Effect of dapagliflozin on functional capacity in patients with heart failure and reduced ejection fraction
- Utility of continuous ambulatory peritoneal dialysis in the treatment of patients with heart failure and reduced ejection fraction
- Usefulness of intrarenal Doppler to evaluate intrarenal congestion and its clinical significance
科学活动

出版物

59篇文章
平均影响因子：9.196
30个国内合作
17个国际合作
21个通讯作者

选摘的出版物


研究项目和资助

参考文献：PI20/00392
标题：Congestión renal e insuficiencia cardiaca aguda y sindrome cardiorenal: valoración no invasiva mediante doppler vascular renal
主要研究者：Julio Núñez Villota
资助机构：Instituto de Salud Carlos III - Co-financed FEDER
受益机构：Fundación Investigación Hospital Clínico Universitario de Valencia
持续时间：2021-2023
总预算：€39,834

参考文献：PI17/01426
标题：Retirada del tratamiento betabloqueante en pacientes con insuficiencia cardiaca con función sistólica preservada e incompetencia cronotrópica. Efecto sobre la capacidad funcional
主要研究者：Julio Núñez Villota
资助机构：Instituto de Salud Carlos III - Co-financed FEDER
受益机构：Fundación Investigación Hospital Clínico Universitario de Valencia
持续时间：2018-2021
总预算：€127,050

参考文献：PI17/01736
标题：Comparación aleatoria entre las estrategias invasivas y conservadoras en pacientes ancianos frágiles con infarto de miocardio sin elevación del segmento ST (MOSCA-FRAIL)
主要研究者：Gemma Miñana Escrivá
**Funding Body:** Instituto de Salud Carlos III - Co-financed FEDER  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2018-2022  
**Total budget:** €70,180

**Title:** Resonancia magnética cardíaca de estrés con vasodilatadores para predecir la mortalidad a largo plazo en un amplio registro retrospectivo de pacientes con cardiopatía isquémica conocida o sospechada  
**Principal Investigator:** Vicent Bodí Peris (Julio Núñez Villota as collaborating researcher)  
**Funding Body:** Sociedad Española de Cardiología  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2022  
**Total budget:** €15,000

**Reference:** AP-2021-019  
**Title:** HISTONATTR: Efecto de la activación de TLR por medio de sus ligandos sobre la polarización de macrófagos hacia M1 y su función citocida frente a las células madre de glioblastoma  
**Principal Investigator:** Carlos Romá Mateo and Enrique Santas Olmeda  
**Funding Body:** Universidad de Valencia - INCLIVA  
**Beneficiary Institution:** Universidad de Valencia - INCLIVA  
**Duration:** 2021-2022  
**Total budget:** €4,750

**THESIS**

**Thesis title:** Cambios en el contenido miocárdico de hierro tras la administración de hierro intravenoso [MYOCARDIALIRON]  
**Doctoral candidate:** Ingrid Cardells Beltrán  
**Director[s]:** Julio Núñez Villota, Gema Miñana Escrivá  
**Date of the defense:** 24/09/2021  
**Grade:** Sobresaliente “cum laude”
4.3.2 Oncology area

**Groups**
Research Group on Histopathology and Tissue Engineering
Research Group on Central Nervous System Tumors
Research Group of Innovative Diagnostic and Therapeutical Developments in Solid Tumors - InDeST
Research Group on Breast Cancer Biology
Research Group on Skin Cancer
Translational Research Group on Pediatric Solid Tumors
Research Group on Hematopoietic Transplantation
Research Group on Lymphoproliferative Disorders
Research Group on Myeloid Neoplasms
Research Group on Molecular Imaging and Metabolomics

- Number of articles: 219
- IF: 1811.316
- Average IF: 8.27
- National collaborations: 100
- International collaborations: 85
- Corresponding author: 68
- D1: 50
- Q1: 139
- Q2: 28
- First author: 49
- Last author: 72

**Types of articles**
- Original articles: 176
- Letters: 8
- Editorial: 22
- Review: 11
- Case reports: 22
- Corrections: 8
Research Group on Histopathology and Tissue Engineering
Consolidated group

Group members

**Leading Researcher, R4**
Carmen Carda Batalla. University
Amando Peydró Olaya. University
Antonio Silvestre Muñoz. Hospital. University
Manuel Mata Roig. University

**Established Researchers, R3**
Antonio Fons Font. University
Carlos Tejerina Botella. Hospital. University
Francisco Forriol Brocal. Hospital
Genaro Galán Gil. Hospital. University
José Javier Martín de Llano. University
Mari Fe Minguez Rey. Hospital. University
Maria Sancho-Tello Valls. University
Miguel Puche Torres. Hospital. University
Rosa María Cibirán Ortiz de Anda. University

**Recognised Researcher, R2**
Lara Milián Medina. University
María Oliver Ferrándiz. University
Rubén Salvador Clavell. University

**First Stage Researchers, R1**
Ángel Aguilar Hernández. Hospital
Giovanna Foschini Martínez. Hospital
Irene Monleón Guinot. University
Zakaria Oguir. Hospital

Researchers by categories

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Staff. Collaborating Researcher
Ignacio Peregrín Nevada. Hospital
Javier Alcácer Fernández-Coronado. University
Teresa Sagrado Vives. University

Strategic aims

The group obtained funding to continue working on to the line of Tissue Engineering with new projects:
- Bone regeneration in prosthetic implants. Biological processes conditioned by age and gender. Design of new biomaterials
- Biomimetic microgels for the study of the tumor microenvironment (TME) and the mesenchymal epithelial transition (EMT) in lung cancer
- Cartilage and bone regeneration techniques and their application in pathologies

Main lines of research

Regenerative Medicine:
- Study of articular cartilage regeneration
- Study of bone regeneration. Effect of age and gender on the regeneration process
scientific activity

- Study of the use of dental pulp cells as precursors in regenerative therapies
- Study of regeneration of dental and periodontal tissues
- Study of tumor microenvironment using biomimetic microgels

Histopathology:
- Study of ciliary pathology

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PID2019-106099RB-C42
Title: Microgeles biomiméticos para el estudio del microentorno del tumor (TME) y la transición epitelio mesénquima (EMT) en cáncer de pulmón
Principal Investigator: Manuel Mata Roig and José Javier Martín de Llano
Funding Body: Ministerio de Ciencia e Innovación
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total Budget: €151,250

Title: Cell-free approach for articular cartilage regeneration using autologous and synthetic microspheres as supporting biomaterial (JOINTCART)
Principal Investigator: José Luis Gómez Ribelles [Carmen Carda Batalla, María Sancho-Tello, Manuel Mata Roig, José Javier Martín de Llano, Lara Milián Medina as collaborating researchers]
Funding Body: Ministerio de Economía y Competitividad - CIBER-BBN
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia and Universidad de Valencia
Duration: 2018-2021
Total Budget: €59,241.25

Reference: PROMETEO/2020/069
Title: Regeneración ósea en implantoprótesis. Procesos biológicos condicionados por la edad y el género. Diseño de nuevos biomateriales (ROMEN)
Principal Investigator: Carmen Carda Batalla
Funding Body: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total Budget: €235,145

THESIS

Thesis title: Regeneración de cartílago mediante el uso de células madre de pulpa dental humanas (HDPSCS)
Doctoral candidate: María Oliver Ferrándiz
Director[s]: Manuel Mata Roig, José Javier Martín De Llano
Date of the defense: 04/03/2021
Grade: Sobresaliente “cum laude”

Thesis title: Efectos de la estimulación mecánica sobre células madre aplicado a la regeneración de cartílago
Doctoral candidate: Rubén Salvador Clavell
Director[s]: José Javier Martín De Llano, María del Carmen Carda Batalla, María Sancho-Tello Valls
Date of the defense: 04/03/2021
Grade: Sobresaliente “cum laude”

Thesis title: Comportamiento periodontal de restauraciones de recubrimiento completo sobre preparaciones dentarias sin línea de terminación: estudio clínico prospectivo a 6 años
Doctoral candidate: Blanca Sierra Pastor
Director[s]: Antonio Fons Font, Rubén Agustín Panadero, Mª Fernanda Solà Ruiz
Date of the defense: 23/04/2021
Grade: Sobresaliente “cum laude”
Research Group on Central Nervous System Tumors
Consolidated group

Group members

Leading Researcher, R4
Miguel Cerdá Nicolás
Hospital. University

Established Researchers, R3
Concepción López Ginés. University
Javier Megías Vericat. University
Pedro Roldán Badía. Hospital. University
Teresa San Miguel Díez. University

Recognised Researchers, R2
Lisandra Muñoz Hidalgo. University
Pablo Cerdá Durán. University

Staff. Technician
Lara Navarro Cerveró. University

Researchers by categories

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Strategic aims

Clinical-pathological study of 40 patients affected by primary glioblastoma according to established protocol

- Short-cell cultures and their viability analysis have been performed. Analysis by FISH of EGFR status and freezing of the different passes according to established methodology
- The study of the proteomic analysis of the 40 tumors (frozen samples) by Western Blott according to established methodology has been completed

Experimental study:

- Spheres [neurospheres] have been elaborated from different cell lines and cell cultures of glioblastoma, characterizing and analyzing their behavior
- Analysis of cultures subjected to silencing and overexpression by transfection of miRNAs by the lipofection method
- Analysis of cell cultures in hypoxia situation, analyzing their characteristics and behavior before silencing and overexpression by transfection of selected miRNAs in hypoxia situation and in the different amplification status of the EGFR
- The pilot study of viability and effectiveness of xenotransplantation in nude mice has been completed with the achievement of neoplasias under study

Main lines of research

- Primary GBM. Amplification status of EGFR and angiogenic/infiltrative phenotype. Molecular networks responsible for tumor modulation and reprogramming processes
- Role of microRNA in the regulation of EGFR-dependent signaling pathways in high-grade astrocytic gliomas
- Development of a model for analyzing the modulation of microRNA gene activity in cell cultures of primary GBM and GBM cell lines
- Development of a model of population analysis and spatial distribution of these neoplasms
- Metabolomics and microvascular environment characterization of aggressive human glioma by DCE-MRI and genetic study of biopsies
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: GV/2020/048
Title: Estudio de la angiogénesis en el glioblastoma y su asociación con inflamación y agresividad en tumores humanos y en cultivo in vitro. Introducción a la patología digital e integración con datos ómicos
Principal Investigator: Teresa San Miguel Díez
Funding body: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Beneficiary institution: Universidad de Valencia
Duration: 2020-2021
Total Budget: €12,420

Reference: AP-2021-001
Title: LIGAM1: Efecto de la activación de TLR por medio de sus ligandos sobre la polarización de macrófagos hacia M1 y su función citocida frente a las células madre de glioblastoma
Principal Investigator: Javier Megías Vericat and Andrea Cabrera Pastor
Funding body: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Beneficiary institution: Universidad de Valencia - INCLIVA
Duration: 2021
Total Budget: €4,607.5

THESIS

Thesis title: Biocompatibilidad y bioactividad de nuevos materiales para odontología regenerativa
Doctoral candidate: Francisco Javier Rodríguez Lozano
Director[s]: Leopoldo Forner Lozano, María del Carmen Llena Puy, Concepción López Gines
Date of the defense: 03/12/2021
Grade: Sobresaliente “cum laude”
Group members

**Leading Researcher, R4**
Andrés Cervantes Ruipérez
Hospital. University

**Established Researchers, R3**
Desamparados Roda Pérez. Hospital
Gerardo López Rodas. University

**Emerging researchers, R2**
Noelia Tarazona Llavero. Hospital
Tania Fleitas Kanonnikoff. Hospital

**Recognised Researchers, R2**
Amelia Insa Mollá. Hospital
Francisco Gimeno Valiente. INCLIVA
Jose A. Pérez Fidalgo. Hospital. University
Josefa Castillo Aliaga. University
Maider Ibarrola Villava. INCLIVA
Maria Carolina Martínez Garaguli. Hospital. University
Susana Roselló Keranen. Hospital
Valentina Gambardella. Hospital

**First Stage Researchers, R1**
Federica Papaccio. ESMO
Fernanda Gutiérrez Bravo. INCLIVA
Gema Bruixola Campos. Hospital
Jorge Martín Aranda. INCLIVA
José Francisco González Muñoz. INCLIVA
Lorena Alarcón Molero. University
Manuel Cabeza Segura. INCLIVA
Marisol Huerta Álvaro. Hospital
Paloma Martín Martorell. Hospital
Roberto Tebar Martínez. AECC

**Staff. Collaborating Researcher**
Clara Alfaro Cervello. Hospital. University

**Staff. Technicians**
Alba Viala Monleón. Hospital
América Bueno Gómez. INCLIVA
Ana Ferrer Martínez. INCLIVA
Beatriz López Montero. INCLIVA

Researchers by categories

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Team involved in **ciberonc**

Blanca García Micó. INCLIVA
Carlos Peris Casilda. INCLIVA
Cristina Mongont Sanchis. INCLIVA
Guillermo Monet Peiró. INCLIVA
Helen Manzana Lópe. INCLIVA
Ignacio Castaño López. INCLIVA
Laura Olivares Ordóñez. INCLIVA
Mª Carmen Martínez López. INCLIVA
Mª Elena Duránez Sáez. INCLIVA
Mª Pilar Natividad López. INCLIVA
Sergio Romero Alcaide. INCLIVA
Zahara Garzón Lloria. INCLIVA

**Staff. Nurses**
Ana Ruiz Quilez. INCLIVA
Celia Martínez Ridaura. INCLIVA
Cristina Jordá Guerola. INCLIVA
Estela Contel Martinez. INCLIVA
Gloria Corredor Aguilo. INCLIVA
Inma Blasco Blasco. University
Luna Porta Campos. INCLIVA
Verónica Babiano Suárez. INCLIVA
Verónica García Oliver. INCLIVA
Staff. Administrative assistants

Ana Vercher Grau. INCLIVA
Carla Gil Ferri. INCLIVA
Elena Jiménez Martí. University
Enrique Castelló Moreno. INCLIVA
Gabriela Pérez Garrity. INCLIVA
Mireia Tomàs i Giner. INCLIVA
Paula Petruskevicius Fernández. INCLIVA

Strategic aims

Our group aims to improve the patient’s life through the development of new diagnostic and therapeutic methods. In addition to this main goal, we intend to implement strategies to facilitate the development of precision medicine in solid tumors with innovative therapeutic approaches and provide knowledge on how to approach precision medicine in colorectal and gastric cancer from different points such as molecular classification, the use of predictive biomarkers and new therapeutic approaches.

Main lines of research

• To develop first-in-human Phase I trials of antineoplastic agents with innovative designs
• To develop liquid biopsies (ctDNA, cmicroRNAs) for early diagnosis, monitoring and the prediction of therapeutic effects in patients with gastro-intestinal malignancies
• To use the latest technologies to improve our knowledge of the molecular and genetic causes of cancer
• To implement the use of organoids (3D cell cultures) from patients as functional models, in order to understand the underlying causes of tumorigenesis and to test the appropriateness of the treatments

Emerging Researchers

Noelia Tarazona Llavero

Our scientific interests are based on the use of liquid biopsy with the use of circulating tumor DNA in plasma to detect minimal residual disease and its association with survival, identify mechanisms of progression and resistance to therapy and identify new therapeutic targets. Likewise, the use of circulating tumor cells to characterize minimal residual disease and the establishment of organoids from the tumor and circulating tumor cells of patients with localized colon cancer and the study of new biomarkers

Tania Fleitas Kanonnikoff

Our scientific interests are based on the understanding of the tumor immune microenvironment of Gastric Cancer. Moreover, we are also focused on the study of the clinical-epidemiological-molecular characteristics of patients with young gastric tumors under 50 years of age, the study of the clinical-pathological-molecular characteristics of patients diagnosed with advanced Her2-positive Gastric C resistant to trastuzumab and the observational study of the clinical-epidemiological-molecular characteristics of patients diagnosed with gastric cancer from European and Latin American cohorts

PUBLICATIONS

56 Number of articles
IF 621.677
Average IF 11.101
14 National collaborations
30 International collaborations
16 Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: 825832 – LEGACy
Title: CeLac and European consortium for a personalized medicine approach to Gastric Cancer
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total Budget: €3.577.431.27 (INCLIVA: €638.315)

Reference: ICI20/00009
Title: Investigación Clínica Independiente
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2024
Total Budget: €1.039.970

Reference: PI18/01508
Title: Macrófagos asociados al tumor: angiogénesis tumoral y resistencia a las terapias en Cáncer Gástrico Difuso fenotipo Mesenquimal
Principal Investigator: Tania Carolina Feitas Kanonnikoff and Desamparados Roda Pérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total Budget: €99.220

Reference: PI18/01909
Title: Medicina personalizada en pacientes con cáncer colorrectal localizado: abordaje multiómico de la Enfermedad Mínima Residual en biopsia líquida y modelos de organoides
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total Budget: €141.570

Reference: PT20/00100
Title: Clinical Research Platform
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
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<td>Total budget</td>
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**Reference:** PT17/0017/0003  
**Title:** Clinical Research and Trials Platform  
**Principal Investigator:** Andrés Cervantes Ruipérez  
**Funding Body:** Instituto de Salud Carlos III - Co-financed FEDER  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2018-2021  
**Total budget:** €266,475

**Reference:** CB16/12/00473  
**Title:** Centro de Investigación Biomédica en Red Cáncer (CIBERonc)  
**Principal Investigator:** Andrés Cervantes Ruipérez  
**Funding Body:** Conselleria de Educación Cultura y Deporte  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2017-  
**Total budget:** €16,000

**Reference:** GV/2020/189  
**Title:** Estudio de la carga tumoral ganglionar y el budding tumoral como factores pronósticos el cáncer colorrectal en estadios localizados  
**Principal Investigator:** Mª Carolina Martínez Ciarpaglini  
**Funding Body:** Conselleria de Educación Cultura y Deporte  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total budget:** €992,996

**Reference:** PI-2021-007  
**Title:** DIRUGEN: Diseño e investigación de nuevos compuestos de Universitario de Valencia  
**Principal Investigator:** Tania Carolina Fleitas Kanonnikoff  
**Funding Body:** Sociedad Española de Oncología Médica (SEOM)  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total budget:** €9,096
rutenio (III) basados en biomoléculas como potenciales agentes antitumorales

**Principal Investigator:** Francisco José Martínez Lillo and Tania Fleitas Kanonnikoff
**Funding Body:** Universidad de Valencia - INCLIVA
**Beneficiary Institution:** Universidad de Valencia - INCLIVA
**Duration:** 2021-2022
**Total budget:** €19,000

**Reference:** AP-2021-008
**Title:** PROTORGANOIDE: Medicina personalizada y de precisión a través del análisis proteómico de organoides

**Principal Investigator:** Manuel Martín Sánchez del Pino and Josefa Castillo Aliaga
**Funding Body:** Universidad de Valencia - INCLIVA
**Beneficiary Institution:** Universidad de Valencia - INCLIVA
**Duration:** 2021-2022
**Total budget:** €4,750

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**THESIS**

**Thesis title:** Multi-omic characterization of advanced colorectal cancer patients derived organoids in the context of Precision Medicine
**Doctoral candidate:** Federica Papaccio
**Director[s]:** Andrés Cervantes Ruipérez, Josefa Castillo Aliaga
**Date of the defense:** 23/12/2021
**Grade:** Sobresaliente “cum laude”
**Quality recognition/Award:** European PhD
Research Group on Breast Cancer Biology
Consolidated group

Group members

**Leading Researchers, R4**
Ana Lluch Hernández
University
Pilar Eroles Asensio
INCLIVA

**Established Researchers, R3**
Antonio Millet Serrano. University
Isabel Chirivella González. Hospital. University
Octavio Burgues Gasión. Hospital. University

**Recognised Researchers, R2**
Begoña Bermejo De Las Heras. Hospital. University
Begoña Pineda Merlo. University
Diego Soriano Mena. Hospital
Eduardo Tormo Martín. CIBERONC
Elvira Buch Villa. Hospital
Juan Miguel Cejalvo Andújar. Hospital
María Teresa Martínez Martínez. Hospital

**First Stage Researchers, R1**
Ana Caterina Lameirinhas. AECC
Anna Adam-Artigues. AECC
Cristina Hernando Meliá. Hospital
Iris Garrido Cano. CIBER
Juan José Martínez Pretel. INCLIVA
Sandra Torres Ruiz. INCLIVA

**Staff. Collaborating Researcher**
Esther Jordá Sorolla. Hospital. University

Researchers by categories

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Researchers financed by competitive public calls or networks

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Strategic aims

Resistance to treatments:
- Evaluation of the recent insights into the development of preclinical trastuzumab-resistant HER2+ breast cancer models

Metastatic setting:
- Multicenter phase II study of lurbinectad in BRCA-mutated and unselected metastatic advanced breast cancer and biomarker assessment substudy
- Analysis of postmastectomy radiation therapy in women with T1-T2 tumors and 1 to 3 positive lymph nodes

Staff. Technicians
Elisa Alonso Yuste. INCLIVA
Júlia Soler Flores. INCLIVA

Staff. Nurses
Cristina Tébar Sánchez. INCLIVA
Patricia Martínez Belenguer. INCLIVA
Silvia Coret Sinisterra. INCLIVA
Sara Rodríguez Pestano. INCLIVA

Staff. Administrative assistant
Cristina Parrilla Muñoz. Hospital
Yolanda De La Cruz Robles. INCLIVA
scientific activity

ER+ breast cancer:
• Evaluation of the outcomes of single versus double hormone receptor-positive breast cancer
• Description that the ER+ breast cancers resistant to prolonged neoadjuvant letrozole exhibit an E2F4 transcriptional program sensitive to CDK4/6 inhibitors
• Design of adjuvant endocrine therapy for premenopausal breast cancer

Breast cancer in very young women:
• Identification of miR124-2 as a survival biomarker by methylation deregulation of its promoters
• Review of breast cancer in pregnant patients

Prognostic and prediction:
• Prognostic role for the derived neutrophil-to-lymphocyte ratio in early breast cancer
• Evaluation of the pathologic complete response rate to neoadjuvant chemotherapy in triple negative breast cancer subtypes
• Study of the incidence, characteristics, and prevention of the alopecia following adjuvant docetaxel
• Molecular characterization of oligometastatic breast cancer patients

Main lines of research
• Evaluation of microRNAs and mRNAs differentially expressed after chemotherapy treatment
• Involvement of miRNAs and other epigenetic regulations in breast cancer processes
• Role of tumor heterogeneity and dynamic reprogramming of tumor cell resistance to anti-HER2 therapy
• Evaluation of the involvement of stem cells and epithelial mesenchymal transition in the mechanisms of resistance to treatment in HER2 + breast cancer
• Primary and secondary resistance in HER2 + breast cancer: search for new treatments
• Interaction between estrogen receptors, tumor angiogenesis and breast cancer metabolism
• Molecular and Clinical characterization of breast tumors from very young women
• The role of AXL in trastuzumab-resistant breast cancer

38
Number of articles

475.522
IF

12.513
Average IF

9
National collaborations

22
International collaborations

7
Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: 965231-REBECCA
Title: REsearch on BrEast Cancer induced chronic conditions supported by Causal Analysis of multi-source data
Principal Investigator: Aristotelio Panepistimio Thessalonikis [Cristina Hernando as collaborating researcher]
Funding Body: European Commission
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2025
Total budget: €466.125

Reference: PI18/01219
Title: Caracterización y repercusión terapéutica de la ecología de cáncer de mama HER2 positivo
Principal Investigator: Pilar Eroles Asensio
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €112.530

Reference: PI18/00817
Title: Caracterización molecular del cáncer de mama gestacional
Principal Investigator: Juan de la Haba Rodríguez [Begoña Bermejo as collaborating researcher]
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Biomédica de Córdoba (FIBICO)
Duration: 2019-2021
Total budget: €146.159,53

Reference: PI18/00817
Title: Disección multidisciplinar de los mecanismos de resistencia a quimioterapia en cáncer de mama triple negativo: un paso hacia una mejor atención clínica
Principal Investigator: Juan Miguel Cejalvo Andújar
Funding Body: Asociación Española Contra el Cáncer
Beneficiary institution: CIBERONC/Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total budget: €268.500

Reference: 965231-REBECCA
Title: Análisis del papel de la vía aurora kinasa-p53 como potencial marcador predictivo y dianas terapéuticas en cáncer de mama triple negativo
Principal Investigator: Ángel R Nebreda (Juan Miguel Cejalvo as collaborating researcher)
Funding Body: Instituto de Investigación Biomédica-IRB
Beneficiary institution: CIBERONC/Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2026
Total budget: €268.500

Reference: 965231-REBECCA
Title: Análisis del papel de la vía aurora kinasa-p53 como potencial marcador predictivo y dianas terapéuticas en cáncer de mama triple negativo
Principal Investigator: Begoña Pineda Merlo
Funding Body: Fundación Mutua Madrileña
**Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2018-2021  
**Total budget:** €120,000

**Title:** Diferencias entre el perfil genómico en mujeres jóvenes menores de 35 años con respecto al cáncer de mama de mujeres mayores  
**Principal Investigator:** Mª Teresa Martínez Martínez  
**Funding Body:** Fundación Sandra Ibarra  
**Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total budget:** €10.500

**Title:** Hemopach versus drenaje axilar para un mejor control del seroma post linfadenectomía axilar. Estudio clínico aleatorizado, controlado, multicéntrico  
**Principal Investigator:** Elvira Buch Villa  
**Funding Body:** Asociación Española de Cirujanos  
**Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total budget:** €10.000

**Title:** Factores pronósticos y predictivos en cáncer de mama oligometastásico que identifiquen pacientes en las que el tratamiento local sobre la metástasis aumente su supervivencia: Beneficio del estadio NED (no evidencia de enfermedad)  
**Principal Investigator:** Juan Miguel Cejalvo Andújar  
**Funding Body:** MET APREMIOS 1. Asociación de Cáncer de Mama Metastática  
**Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2022  
**Total budget:** €16.500

**Title:** Dimerización de AXL-HER2 como mecanismo de resistencia adquirida a la terapia anti-HER2 en cáncer de mama HER2+: un paso hacia la medicina de precisión  
**Principal Investigator:** Juan Miguel Cejalvo Andújar  
**Funding Body:** ADAMED  
**Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2022  
**Total budget:** €18.000

**THESIS**

**Thesis title:** Estudio de las alteraciones genéticas asociadas con la resistencia al tratamiento neoadyuvante de deprivación estrogénica en cáncer de mama  
**Doctoral candidate:** Ángel Luis Guerrero Zotano  
**Director[s]:** José Antonio López Guerrero, Vicente Guillem Porta, Ana Lluch Hernández  
**Date of the defense:** 21/01/2021  
**Grade:** Sobresaliente "cum laude"

**Thesis title:** Involvement of EZH2-MYC loop and SALL4 in epithelial-mesenchymal transition (EMT) and trastuzumab resistance process in HER2+ breast cancer  
**Doctoral candidate:** Chaudhuri Birlipta Pattanayak Pattanayak  
**Director[s]:** Pilar Eroles Asensio, Juan Miguel Cejalvo Andújar  
**Date of the defense:** 26/02/2021  
**Grade:** Sobresaliente "cum laude"

**Thesis title:** Role of miR-99a-5p in breast cancer: translating molecular findings into clinical tool  
**Doctoral candidate:** Iris Garrido Cano  
**Director[s]:** Pilar Eroles Asensio, Ramón Martínez Mánnez  
**Date of the defense:** 17/12/2021  
**Grade:** Sobresaliente "cum laude"  
**Quality recognition/Award:** European PhD
Research Group on Skin Cancer
Consolidated group

Group members

Leading Researcher, R4
José Carlos Monteagudo Castro
Hospital. University

Recognised Researchers, R2
Andrea Estébanez Corrales. Hospital
José Mª Martín Hernández. Hospital. University
Liria Terrádez Más. Hospital. University

First Stage Researchers, R1
Anaïs Moscardó Navarro. University
Andrés Mosquera Zamudio. INCLIVA
Esmeralda Silva Díaz. Hospital

Strategic aims

- Transcriptomic identification of miRNA-205 target genes potentially involved in metastasis and survival of cutaneous malignant melanoma
- Search for a genetic and/or epigenetic signature which permit a more precise diagnosis and prediction of the metastatic potential of ambiguous melanocytic lesions, and particularly of spitzoid tumors
- Identification of circulating miRNAs which may serve as prognostic and/or staging biomarkers in patients with primary cutaneous melanoma

Main lines of research

- Prognostic value of intratumoral and circulating microRNAs in melanoma tumor progression and clinical outcome
- Improvement by circulating biomarkers of melanoma staging schedule at the time of diagnosis
- Machine learning in the study of whole slide digitized images of spitzoid melanocytic tumors for diagnosis and prognosis improvement
- Evaluation of long- and short-term morphological changes in melanocytic nevi in a digitized dermoscopic unit

PUBLICATIONS

20
Number of articles

IF 71.524

Average IF 3.576

7 National collaborations

2 International collaborations

6 Corresponding author

SELECTED PUBLICATIONS

1. Monteagudo C, Funez R, Sanchez-Sendra B, Gonzalez-Munoz JF, Nieto G, Alfaro-Cervello C, Murgui A, Barr R. Cutaneous lymphadenoma is a distinct trichoblastoma-like lymphoepithelial tumor with diffuse androgen receptor immunoreactivity, notch1 ligand in reed-sternberg-like cells, and common EGFR somatic mutations. American Journal of Surgical...


**RESEARCH PROJECTS AND GRANTS FOR RESEARCH**

Reference: PI20/00094
Title: Análisis combinado por Inteligencia Artificial de marcadores epigenéticos e imágenes microscópicas digitalizadas de tumores melanocíticos ambiguos para optimizar su clasificación diagnóstica y pronóstica
Principal Investigator: José Carlos Monteagudo Castro
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total Budget: €220,220

Reference: PI17/00540
Title: Estudio del valor del patrón de metilación y variaciones del número de copias del genoma para determinar el grado de malignidad en los tumores melanocíticos de potencial maligno incierto
Principal Investigator: José Carlos Monteagudo Castro
Funding body: Instituto de Salud Carlos III - Cofinanced FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total Budget: €99,220

Reference: PI17/02019
Title: Estudio de factores pronósticos en pacientes con linfomas cutáneos de células T (LCCT)
Principal Investigator: Ángeles Revert (Esmeralda Silva as funded researcher)
Funding body: Janssen-Cilag
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €22,500

Reference: PI17/02019
Title: Estudio de las malformaciones vasculares evaluadas a lo largo de una década en un hospital de referencia con comité multidisciplinario
Principal Investigator: Ángeles Revert (Andrea Estébanez as funded researcher)
Funding body: Janssen-Cilag
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €22,500

Reference: B60627- H2020 - Marie Sklodowska-Curie Innovative Training Networks
Title: Cloud Artificial Intelligence for pathology-CLARIFY
Principal Investigator: José Carlos Monteagudo Castro
Funding body: European Commission
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2023
Total Budget: €252,000
Translational Research Group on Pediatric Solid Tumors
Consolidated group

Group members

Leading Researchers, R4
Samuel Navarro Fos
Hospital. University
Rosa Noguera Salvá
University

Recognised Researchers, R2
Inmaculada Noguera Salvá, University
Mª Amparo López Carrasco, CIBERONC
Rebecca Burgos Panadero, INCLIVA
Sabina Sanegre Sans, CIBERONC

First Stage Researchers, R1
Ezequiel Monferrer Garzarán, AECC
Isaac Vieco Martí, INCLIVA

Strategic aims

• Genomic heterogeneity in neuroblastoma (NB), especially in MYCN amplification
• Xenotransplant models of NB
• Importance of extracellular matrix and vascularization in NB
• Morphological and molecular analysis of neuroblastic and malignant infantile skeletal tumors

Main lines of research

• Genetic analysis in neuroblastoma. At the European level, we participate in the establishment of a uniform nomenclature, and standard practices and quality validation studies, essential to obtain and maintain high quality in genetic results used for therapeutic stratification
• Identification of new genetic factors with prognostic value in neuroblastic and malignant infantile skeletal and soft tissue tumors
• Histopathologic studies of the expression of diagnostic and prognostic markers in solid pediatric tumors
• Tumor microenvironments in low prevalence tumors
• Preclinical models. Obtaining and characterizing cell lines in vivo and in vitro (2D and 3D) from fresh neuroblastic and malignant infantile solid tumor material

PUBLICATIONS

12 Number of articles
IF 114.903
Average IF 9.575
6 National collaborations
6 International collaborations
5 Corresponding author
scientific activity

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI20/01107
Title: Neuroblastoma: estrategias mecanoterapéuticas basadas en modelos 3D y tumores derivados de pacientes con microambiente rico en vitronectina
Principal Investigator: Rosa Noguera Salvá
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total budget: €232,320

Reference: CB16/12/00484
Title: CIBER Oncología
Principal Investigator: Rosa Noguera Salvá
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Universidad de Valencia
Duration: 2017-
Total budget: €250,000

Title: Identification and validation of targeted and immune therapies, preclinical models and markers of therapeutic response in peripheral neuroblastic tumours
Principal Investigator: Rosa Noguera Salvá
Funding body: Asociación de familiares y amigos de pacientes con Neuroblastoma
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-2021
Total budget: €203,000

Title: Identificación de nuevas dianas terapéuticas relacionadas con la matriz extracelular de los sarcomas “Ewing-like”: estudio morfo-molecular
Principal Investigator: Rosa Noguera Salvá and Enrique de Alava
Funding body: Fundación CRIS
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total budget: €80,000
Reference: 12/2019-P2Y01D
Title: Espacio intercelular: Bioimagen microscópica, Fase II
Principal Investigator: Rosa Noguera Salvá
Funding body: Fundación Neuroblastoma
Beneficiary institution: Fundación Investigación Hospital Clínic Universitario de Valencia
Duration: 2019-2021
Total budget: €90,000
Research Group on Hematopoietic Transplantation
Consolidated group

Group members

Leading Researcher, R4
Carlos Solano Vercet
Hospital. University
David Navarro Ortega
Hospital. University

Recognised Researchers, R2
José Luis Piñana Sánchez. Hospital
María José Remigia Pellicer. Hospital
Paula Amat Martínez. Hospital. University
Rafael Hermani Morales. Hospital

Emerging Researcher, R2
Eliseo Alejandro Albert Vicent. Hospital
Estela Giménez Quiles. Hospital

First Stage Researchers, R1
Ariadna Pérez Martínez. Hospital
Ignacio Torres Fink. Hospital

Staff. Collaborating Researchers
Ana Benzanquén Vallejos. Hospital
Rosa Goterris Viciedo. Hospital

Staff. Nurses
Ana Miralles Whitehead. INCLIVA
Elisa Núñez Biota. INCLIVA

Researchers by categories

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Researchers financed by competitive public calls or networks

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Staff. Technicians
Diana Campos Beltrán. INCLIVA
Elena Ferrer Martínez del Peral. INCLIVA
Mª Pilar Ortiz Gavilán. INCLIVA

Strategic aims

- Translational research on biology and treatment of graft-versus-host disease after allogeneic transplantation of hematopoietic progenitor cells
- Infection and immune reconstitution after hematopoietic transplant
- Creation of a Multidisciplinary Unit of Advanced Therapies-CART in Hospital Clínico Universitario de Valencia - INCLIVA
- Design and implementation of an outpatient programme in hematopoietic transplant and cellular therapy

Main lines of research

- Translational research on complications of allogeneic hematopoietic transplantation: graft-versus-host disease
- Infection and immune reconstitution after hematopoietic transplantation
- Translational research of alloreactivity in the context of new modalities of allogeneic transplantation from compatible and incompatible alternative donors [haploidentical transplant]
- Clinical application of gene and cellular therapy using CAR-T and other immune effector cells
- Scientific and logistical implications of the implementation of a transplant programme in the outpatient setting


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: TTVGuideTX
Title: Personalisation of immunosuppression by monitoring viral load post kidney transplantation - a randomised controlled phase II trial
Principal Investigator: David Navarro Ortega
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
### Scientific Activity

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<td><strong>Title:</strong> Inmunobiología de la infusión de linfocitos del donante con depleción ex vivo de linfocitos T CD45RA+ en pacientes con alto riesgo de infección viral tras TPH alogénico</td>
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<td><strong>Principal Investigator:</strong> Carlos Solano Vercet</td>
<td><strong>Funding body:</strong> Instituto de Salud Carlos III - Co-financed FEDER</td>
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| Reference: P118/00127 | **Title:** Virología e inmunología de la infección por el citomegalovirus (CMV) en el paciente con neoplasia hematológicas en la era de las nuevas bioterapias  |
| **Principal Investigator:** David Navarro Ortega | **Funding body:** Instituto de Salud Carlos III - Co-financed FEDER  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia |  |
| **Duration:** 2019-2021 | **Total budget:** €123,420 |

| Reference: P117/01097 | **Title:** Score integrado de factores inmunológicos y genotípicos de predicción del riesgo y evolución de la infección por CMV en pacientes con trasplante renal  |
| **Principal Investigator:** María José Remigia Pellicer | **Funding body:** Instituto de Salud Carlos III - Co-financed FEDER  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia |  |
| **Duration:** 2018-2022 | **Total budget:** €32,670 |

| Reference: IC21/00016 | **Title:** Terapia celular combinada para pacientes COVID-19 de alto riesgo de mortalidad (DECODE-19)  |
| **Principal Investigator:** Bernat Soria Escoms (Carlos Solano as collaborating researcher) | **Funding body:** Instituto de Salud Carlos III - Co-financed FEDER  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia |  |
| **Duration:** 2021-2024 | **Total budget:** €459,800 |

| Reference: GV/2020/188 | **Title:** Anellovirus y Pegivirus un posible marcador del estado neto de inmunosupresión: evaluación en el trasplante alogénico de progenitores hematopoyéticos  |
| **Principal Investigator:** Estela Giménez Quiles | **Funding body:** Conselleria de Educación Cultura y Deporte  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia |  |
| **Duration:** 2020-2021 | **Total budget:** €16,000 |

| Reference: AP178182020 | **Title:** Torquetenovirus en terapia CAR-T: predicción del riesgo de síndrome de liberación de citocinas y diagnóstico diferencial con infección  |
| **Principal Investigator:** Rafael Hernani Morales | **Funding body:** Fundación Española de Hematología y Hemoterapia-Gilead  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia |  |
| **Duration:** 2020-2022 | **Total budget:** €60,000 |

| Reference: IIS21/000016 | **Title:** Estudio de la inmunidad y Creación de un Banco Nacional de Terapia Celular Adoptiva de donantes de linfocitos que han superado COVID-19. Ensayo clínico Fase I multicéntrico para evaluar la seguridad de la infusión de células natural killer como terapia adoptiva en casos pacientes con neumonía y/o linfopenia debido al coronavirus SARS-CoV-2 (RELEASE)  |
| **Principal Investigator:** Cristina Eguizabal (Carlos Solano as collaborating researcher) | **Funding body:** Fundación Mutua Madrileña  |
| **Beneficiary institution:** Fundación Investigación Hospital Clínico Universitario de Valencia, IIS Biocruces Bokaia-CVTTH, Hospital La Paz-IDIPAZ, Centro de Transfusiones de Madrid, Hospital General de Alicante |
scientific activity

Duration: 2020-2021
Total budget: €100.000

Reference: BIO21/C0V/030
Title: Estudio de la inmunidad y Creación de un Banco Nacional de Terapia Celular Adoptiva de donantes de linfocitos que han superado COVID-19. Ensayo clínico Fase I multicéntrico para evaluar la seguridad de la infusión de células natural killer como terapia adoptiva en casos pacientes con neumonía y/o linfopenia debido al coronavirus SARS-CoV-2 (RELEASE)
Principal Investigator: Cristina Eguizabal (Carlos Solano as collaborating researcher)
Funding body: Fundación Vasca de Innovación e Investigación Sanitarias (BIOEFF)
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2022
Total budget: €99.935

Reference: PI-2021-004
Title: TECO: Validación de dos sistemas biosensor para la diagnóstico simultáneo de COVID19 y otros patógenos aéreos
Principal Investigator: David Giménez Romero (Estela Giménez Quiles as collaborating researcher)
Funding body: Universidad de Valencia - INCLIVA
Beneficiary institution: Universidad de Valencia - INCLIVA
Duration: 2021-2022
Total budget: €19.000

THESIS

Thesis title: Parámetros biológicos predictivos de la infección activa precoz por Citomegalovirus en el trasplante alogénico de precursores hematopoyéticos
Doctoral candidate: Alberto Talaya Peñalver
Director[s]: David Navarro Ortega
Date of the defense: 26/05/2021
Grade: Sobresaliente "cum laude"

Thesis title: Estudio de la enfermedad residual mínima en pacientes con mieloma múltiple en muy buena respuesta parcial o completa convencional mediante citometría de flujo de alta sensibilidad y la medición de cadenas mediante la técnica Hevylite
Doctoral candidate: María José Remigia Pellicer
Director[s]: Javier De la Rubia Comos, Amparo Sempere Talens, Carlos Solano Vercet
Date of the defense: 04/06/2021
Grade: Sobresaliente "cum laude"

Thesis title: Factores predictivos de desarrollo y evolución de infección activa por citomegalovirus en el trasplante alogénico de precursores hematopoyéticos
Doctoral candidate: Víctor Vinuesa Velasco
Director[s]: David Navarro Ortega
Date of the defense: 08/09/2021
Grade: Sobresaliente "cum laude"
scientific activity

Research Group on Lymphoproliferative Disorders
Consolidated group

Group members

**Leading Researcher, R4**
Mª José Terol Casterá
Hospital. University

**Established Researcher, R3**
Antonio Ferrández Izquierdo. Hospital. University

**Recognised Researchers, R2**
Ana Isabel Teruel Casaús. Hospital. University
Blanca Ferrer Lores. Hospital

**Staff. Collaborating Researchers**
Alicia Serrano Alcalá. INCLIVA
Edelmira Martí Sáez. Hospital
Raimundo Cervera Vidal. INCLIVA

**Staff. Nurses**
Esther Lozano García. INCLIVA
Juan Ramón de Moya Romero. Hospital. University
Mercedes Bou Moreno. INCLIVA

Researchers by categories

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**Strategic aims**

- During the year 2021, we were able to deepen the knowledge of the role of the NOTCH1/FBXW7/PI3K/PTEN/AKT signaling pathway in the progression of Chronic Lymphocytic Leukemia B (CLL-B) to advanced forms. Thus, in the cell lines and in the patient’s primary cells, we observed a variation in the number of gene copies by both FISH and PCRq in the NOTCH1, FBXW7 and PTEN genes, with an inverse relationship between NOTCH1 and FBXW7/PTEN.
- A second objective has been to analyze the clinical significance of the rearrangements of MYC, BCL-2 and BCL-6 in diffuse large cell lymphoma. We have been able to verify that patients with concomitant C-MYC and BCL-2 protein expression present a worse prognosis in terms of SLP and Sg than the rest.
- Thirdly, during 2021, the study of the mutational status of IgVH in CLL and its prognostic impact in a wide series of patients has been implemented. New molecular markers (mutations TP53, BIRC3, MYD88, NOTCH1 and SF3B1) have also been studied in CLL by new generation sequencing techniques. In addition, we have continued the collaboration in the GENOMA CLL sequencing project, with a clinical-evolutionary update.
- Finally, we have expanded our participation in clinical research projects in CLL, refractory lymphomas and multiple myeloma, both with the incorporation of new drugs and in the design and development of new therapeutic options.

**Main lines of research**

- Analysis of the interactions of CLL cells with their cellular microenvironment: further study of the intracellular mechanisms triggered by VEGF. Analysis of the possible correlation with CXCR4/CCR7 cytokines pathway. Transactivation mechanisms of the aforementioned receptors.
- Role of the NOTCH1/FBXW7/PI3K/PTEN/AKT signaling pathway in the progression of Chronic Lymphocytic Leukemia B (CLL-B) to advanced forms: pathway molecular profile analysis in 100 patients with CLL-B of primary cells obtained at diagnosis and at the time of the progression, analyzing for this, the presence of mutations and number of copies of DNA, gene expression, FISH and (RT-PCR).
• Study of the rearrangements of bcl-2, bcl-6 and MYC in diffuse large cell lymphoma: clinical significance and correlation with immunohistochemical expression using FISH and IHC techniques
• Study of new molecular markers (mutations of IgVH, TP53, BIRC3, MYD88, NOTCH1 and SF3B1) in CLL: conventional versus NGS techniques. Implication in clonal evolution associated with tumor progression
• New therapeutic options for CLL/MM patients who are resistant to chemoimmunotherapy

PUBLICATIONS

SELECTED PUBLICATIONS


scientific activity

Research Group on Myeloid Neoplasms
Consolidated group

Group members

**Leading Researcher, R4**
Mar Tormo Díaz
Hospital. University
Juan Carlos Hernández Boluda
Hospital. University

**Recognised Researchers, R2**
Carlos Carretero Márquez. Hospital
Marisa Calabuig Muñoz. Hospital
Montserrat Gómez Calafaz. Hospital

**First Stage Researcher, R1**
Irene Pastor Galán. Hospital

**Staff. Collaborating Researcher**
Eva Villamón Ribate. INCLIVA
Iván Martín Castillo. INCLIVA

**Staff. Nurse**
Alicia Borrero Abarca. INCLIVA

Researchers by categories

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Strategic aims

- Analyse of the risk factors for thrombosis in myelofibrosis
- Analyse patients diagnosed with myelodysplastic syndromes with 20q deletion and del(20q). Assess the incidence, prognostic value and impact on response to azacitidine of azacitidine
- Analyse in patients diagnosed of acute myeloid leukemias and del(7q) the incidence, prognostic value and potential as a therapeutic target of chromosomal deletions of the EZH2 gene and of genetic mutations alterations and other genetic mutations

Main lines of research

- Study of mechanisms involved in leukemic transformation in myeloproliferative neoplasms
- Study of risk factors for thrombosis in myelofibrosis
- Study of acute myeloid leukemias with 7q deletion
- Study of myelodysplastic syndromes with 20q deletion and del(20q)
- Collaborative studies with the CETLAM group (LMA, SMD), PETHEMA (LLA, LMA), the Spanish Philadelphia-negative chronic myeloproliferative disorders group (GEMFIN), the Spanish LMC group (GELMC) and the Spanish SMD group (GESMD)
PUBLICATIONS

37
Number of articles

283.959
Average IF

19
National collaborations

18
International collaborations

3
Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Inmunobiología de la infusión de linfocitos del donante con depleción ex vivo de linfocitos T CD45RA+ en pacientes con alto riesgo de infección viral tras TPH alogénico

Principal Investigator: Carlos Solano Vercet and Eva Villamón Ribate

Funding body: Janssen - Cilag S.A.

Beneficiary Insitution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2021-2021

Total Budget: €22,500
scientific activity

Research Group on Molecular Imaging and Metabolomics
Consolidated group

Group members

**Leading Researcher, R4**
Daniel Monleón Salvadó. University. INCLIVA

**Recognised Researchers, R2**
Antonio Pellín Carcelén. University
José Manuel Morales Tatay. University
Mercedes Pardo Tendero. University
Vannina González Marrachelli. University

**First Stage Researchers, R1**
Geraldine Rocha Correal. University
María Martín Grau. University
Pilar Casanova Terol. University
Serena Pisoni. University

**Staff. Collaborating Researcher**
Itziar Pérez Terol. INCLIVA

**Staff. Technicians**
Patricia Almudéver Folch. University

Researchers by categories

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Researchers financed by competitive public calls or networks

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Strategic aims

- Identify new metabolomic markers of tumor aggressiveness in brain cancer
- Identify new markers of myocardial infarction
- Identify new metabolomic cardiovascular risk markers based on the microbiota-host interaction

Main lines of research

- Tumor metabolism through metabolic profiles in biopsies, biofluids and cells (brain cancer, glioblastoma multiforme, prostate, bladder)
- Metabolic profiles in the progression of cardiometabolic risk modulated by the microbiota-host interaction
- Metabolic profiles of healthy aging vs frailty
- MRI microimaging study of porcine cardiac tissue samples to develop new detection methods

PUBLICATIONS

- Number of articles: 6
- IF: 30.096
- Average IF: 5.016
- National collaborations: 3
- International collaborations: 1
- Corresponding author: 1
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: AP-2021-016
Title: BREIC: Identificación de biomarcadores del eje corazón-microbiota-sistema inmune por RMN para la estratificación de pacientes con insuficiencia cardíaca
Principal Investigator: Vannina González Marrachelli and Anna Mollar Fernández
Funding Body: Universidad de Valencia - INCLIVA
Beneficiary Institution: Universidad de Valencia - INCLIVA

Duration: 2021-2022
Total Budget: €4,750

Reference: PCIN-2017-117
Title: Obesidad materna y disfunción cognitiva en la descendencia: papel causa-efecto de la microbiota intestinal y prevención dietética temprana
Principal Investigator: Consuelo Borrás Blasco [Daniel Monleon Salvado, Vannina González Marrachelli, José Manuel Morales Tatay as collaborating researchers]
Funding Body: Ministerio de Economía, Industria y Competitividad
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2017-2022
Total Budget: €143,000

Reference: PID2020-113839RB-I00
Title: Efecto del tratamiento con vesículas extracelulares de células madre de grasa de ratones jóvenes sobre parámetros de envejecimiento y fragilidad en ratones de edad avanzada
Principal Investigator: Consuelo Borrás Blasco (Vannina González Marrachelli as collaborating researcher)
Funding Body: Ministerio de Ciencia e Innovación
Beneficiary Institution: Universidad de Valencia

Duration: 2021-2024
Total Budget: €181,500

Reference: PID2019-108973RB-C22
Title: Metabolomic study of mechanisms for Se-related diabetes and insulin resistance
Principal Investigator: Daniel Monleon Salvado
Funding Body: Ministerio de Ciencia e Innovación
Beneficiary Institution: Universidad de Valencia

Duration: 2020-2023
Total Budget: €140,000

THESIS

Thesis title: Estudio metabolómico de la interacción huésped-microbiota intestinal en la enfermedad cardiometabólica. Detección temprana, prevención y tratamiento
Doctoral candidate: Maria Mercedes Pardo Tendero
Director(s): Daniel Monleon Salvado, Vannina González Marrachelli
Date of the defense: 25/06/2021
Grade: Sobresaliente "cum laude"
Quality recognition/Award: European PhD
4.3.3 Metabolism area

Groups
- Research Group on Genetics of Osteoporosis
- Research Group on Neurological Impairment
- Research Group on Inflammation
- Research Group on Oxidative Pathology
- Research Group on Psychiatry and Neurodegenerative Diseases
- Research Group on Respiratory Diseases
- Research Group on Tissular Biochemistry
- Research Group on Aging and Physical Activity
- Research Group on Anesthesiology and Reanimation
- Research Group on Translational Genomics
- Research Group on General and Digestive Surgery
- Research Group on Personal Autonomy, Dependence and Severe Mental Disorders (TMAP)
- Research Group on Cellular and Organic Physiopathology of Oxidative Stress
- Research Group on Inflammation: Metabolism and Organic Damage line
- Research group on Metabolic Diseases
- Research Group on Rare Respiratory Diseases (RRD)
- Research Group on Healthy Aging
- Research Group on Exercise, Nutrition and Healthy Lifestyle
- Research Group on Epigenomics and Translational Epigenetics

Number of articles: 309
IF: 2166.006
Average IF: 7.009
National collaborations: 124
International collaborations: 128
Corresponding author: 105
First author: 74
Last author: 105

D1: 62
Q1: 188
Q2: 75

Types of articles:
- Original articles: 266
- Letters: 8
- Editorial: 9
- Review: 24
- Case reports: 3
- Corrections: 0
Research Group on Genetics of Osteoporosis
Consolidated group

Group members

Leading Researcher, R4
Miguel Ángel García Pérez. University

Established Researcher, R3
Damián Mifsut Miedes. Hospital. University

First Stage Researcher, R1
Clara María Pertusa Viñuales. INCLIVA

Staff. Collaborating Researcher
Rosa María Aliaga Corachán. University

Strategic aims

During 2021 our group has continued its studies on the genetics of osteoporosis, carrying out functional approaches for the identification of candidate genes and conducting allelic association studies to bone phenotypes and also to cardiovascular risk phenotypes such as arterial hypertension.

With respect to the candidate genes studied, our interest has focused on genes related to arginine metabolism and epigenetic mechanisms.

In addition, during this year we have continued the characterization of the fragility fracture by studying its metabolome and certain cytokines and serum miRNAs as possible biomarkers.

Main lines of research

- Identification of genes and polymorphisms associated with bone and cardiovascular phenotypes, mainly related to epigenetic mechanisms, to immune system and to the metabolism of arginine
- Identification of genes and miRNAs differentially expressed in bone fracture due to fragility
- Analysis of metabolome and cytokines in bone fracture and low bone mineral density
- Functional characterization by genetic techniques of polymorphisms associated with bone and cardiovascular phenotypes
- Identification of genetic, biochemical and cytomic biomarkers in patients with the Idic15

PUBLICATIONS

5
Number of articles

IF 18.723

Average IF 3.744

3
National collaborations

0
International collaborations

2
Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: B26640
Title: Evidence-Based Guidance to Scale-up Integrated Care in Europe (VIGOUR)
Principal Investigator: Simon Robinson [Miguel Ángel García Pérez as collaborating researcher]
Funding Body: Consumers, Health, Agriculture and Food Executive Agency
Beneficiary Institution: Universidad de Valencia
Duration: 2019-2021
Total budget: €3,046,024.67

Reference: PI17/01875
Title: Osteoporosis y fractura ósea: identificación de genes asociados y evaluación del papel del metabolismo de la arginina
Principal Investigator: Miguel Ángel García Pérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €99,220
Research Group on Neurological Impairment
Consolidated group

Group members

Leading Researcher, R4
Carmina Montoliu Félix
INCLIVA. University

Established Researchers, R3
Amparo Escudero García. Hospital. University
José Luis León Guijarro. Hospital
Roberto Aliaga Méndez. Hospital

Recognised Researchers, R2
Amparo Uriós Lluch. INCLIVA
Andrea Cabrera Pastor. INCLIVA. University
Cristina Montón Rodríguez. Hospital
Joan Tosca Cuquerella. Hospital
María Pilar Ballester Ferrer. Hospital. INCLIVA
Nicolás Peñaranda Sarmiento. Hospital
Paloma Lluch García. Hospital. University
Paula Cases Bergón. Hospital
Rut Victoria Muñoz. Hospital

First Stage Researchers, R1
Alessandra Fiorillo. INCLIVA
Cristina Ipiens Escuer. INCLIVA

Researchers by categories

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Researchers financed by competitive public calls or networks

Dalia Rega Caballero. INCLIVA
Franc Casanova Ferrer. INCLIVA
Juan José Gallego Roig. INCLIVA

Staff. Collaborating Researchers
Mika Aiko. Hospital

Staff. Nurses
Clara Barberá Fuset. Hospital
María Jesús Campa Santiago. Hospital
Nuria Casasús Maya. Hospital
Pilar Aguilar Santaisabel. Hospital

Staff. Technicians
Alberto Sabio Palomares. INCLIVA
Alejandra Hernández Hernández. University. INCLIVA
Consuelo Miguel Moreno. Hospital
Laura Puchades Lanza. INCLIVA

Strategic aims

- Evaluation of cognitive and motor alterations in patients with liver cirrhosis and minimal hepatic encephalopathy (MHE)
- To characterize the inflammatory processes and create a bioinformatic model of the molecular and cellular events of the immune system associated to the onset of MHE. Assess its utility to predict or diagnose MHE
- To analyse cerebral alterations: visual evoked potentials; neuronal connectivity using functional magnetic resonance
- Analysis of alterations in thermal and mechanical sensitivity and in peripheral nerve conduction velocity
- Assess the utility of the analysis of eye movements for early diagnosis of MHE
- Assess the effects of rifaximin treatment on the alterations analysed in the above objectives
- To identify procedures based on above results, which improve diagnosis of MHE

Main lines of research

Main Line of research: Characterization of neurological and cerebral alterations in patients with minimal hepatic encephalopathy (MHE). Mechanisms: Contribution of inflammation. Diagnostic and therapeutic implications. Sublines:

- Characterization of cognitive, functional and cerebral alterations in patients with minimal hepatic encephalopathy
- Characterize alterations in inflammation, neuroinflammation, brain function and structure associated with the onset of MHE
- Identify biomarkers for the early detection of mild cognitive impairment in MHE
• To assess the effects of rifaximin treatment and new treatments: mechanisms involved
• Identification and modelling of molecular and cellular events of the immune response associated to the appearance of minimal hepatic encephalopathy in cirrhotic patients
• To assess the usefulness of eye movement analysis for the early diagnosis of MHE
• Research on cognitive and motor alterations in patients with non-alcoholic fatty liver disease showing mild cognitive impairment (MCI)

PUBLICATIONS

11 Number of articles

IF 51.209

Average IF 4.655

3 National collaborations

2 International collaborations

2 Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Role of extracellular vesicles, metabolome and altered intercellular communication in the induction of minimal hepatic encephalopathy: mechanisms, therapeutic and diagnostic implications

Principal Investigator: Andrea Cabrera Pastor

Funding body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2021-2024

Total budget: €40.000

Reference: PI18/00150

Title: Caracterización de las alteraciones neurológicas y cerebrales en pacientes con encefalopatía hepática mínima. Contribución de la inflamación. Implicaciones diagnósticas y terapéuticas

Principal Investigator: Carmina Montoliu Félix

Funding body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2019-2021

Total budget: €171.820
null
scientific activity

Research Group on Inflammation
Consolidated group

Group members

Leading Researchers, R4
Esteban Morcillo Sánchez
Hospital. University
María Jesús Sanz Ferrando
University

Established Researcher, R3
Diego Cortés Martínez. University

Emerging Researcher, R2
Nuria Cabedo Escrig. INCLIVA. University

Recognised Researcher, R2
Patrice Gomes Marques. INCLIVA

First Stage Researchers, R1
Carlos Villarroel Vicente. University
Elena Domingo Pérez. University
María León Téllez. INCLIVA

Staff. Technician
Laura Vila Dasí. INCLIVA

Researchers by categories

Researchers financed by
competitive public calls or networks

Team involved in

Strategic aims

• Study of intracellular mucin MUC1 in lung fibrosis
• Study of the anti-inflammatory effects of AZD8999, a novel bifunctional muscarinic acetylcholine receptor antagonist / β2-adrenoceptor agonist (MABA) in COPD patients
• Study of MUC1 deficiency in corticosteroid insensitivity in asthma
• Study of the systemic inflammation associated to Primary Hypercholesterolemia and Metabolic Syndrome
• Study of the CCL11/CCR3 axis in Primary Hypercholesterolemia and atherosclerosis
• Study of the impact of PCSK9 blockade in the systemic inflammation associated to Familial Hypercholesterolemia
• Synthesis of new dual PPARα/γ agonists and pharmacology study in ob/ob mice
• Synthesis of new dual LXR/PPARα/γ agonists and pharmacology study in ob/ob mice

Main lines of research

• Pharmacological modulation of chronic inflammation and remodeling in the context of chronic obstructive pulmonary disease, asthma and idiopathic pulmonary fibrosis
• Study of the vascular inflammation induced by different risk factors of atherosclerosis: metabolic syndrome, primary and familial hypercholesterolemia. Effect of PCSK9 inhibitors in the systemic inflammation associated to familial hypercholesterolemia
• Synthesis of new dual PPARα/γ agonists to be used in the control of cardiometabolic disorders
• Synthesis of new dual LXR/PPARα/γ agonists to be used in the control of cardiometabolic disorders
Emerging Researcher

Nuria Cabedo Escrig

In the field of medicinal chemistry, the research is focused on the development of new synthetic molecules, analogues of natural products, with potential effect to regulate lipid metabolism, glucose homeostasis, dopaminergic pathway and inflammatory processes in order to treat cardiometabolic disorders and neurological diseases. We are working in the hit-to-lead strategy on therapeutic targets such as peroxisome proliferator activating receptors (PPAR), liver X receptors (LXR), dopaminergic receptors, and pro-inflammatory cytokines.

PUBLICATIONS

14
Number of articles

14
IF
95.051

Average IF
6.789

2
National collaborations

4
International collaborations

5
Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Titulo: The William Harvey International Translational Research Academy (WHRI-ACADEMY)
Investigadora principal: Marla Korbonits [Maria Jesus Sanz Ferrando as collaborating researcher]
Entidad financiadora: FP7 Marie Curie Actions
Institución beneficiaria: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2015-
Total Budget: €6,500,000

Reference: PI18/01450
Title: Desarrollo químico y farmacológico de nuevos fármacos "multidiana" en el tratamiento de la diabetes mellitus tipo 2 y la enfermedad cardiovascular asociada
Principal Investigator: Nuria Cabedo Escrig
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total Budget: €61,710
Reference: CB06/06/0027
Title: CIBER Enfermedades Respiratorias (CIBERes)
Principal Investigator: Esteban Morcillo Sánchez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Universidad de Valencia
Duration: 2007-

Reference: PID2020-120336RB-I00
Title: Modulación de la inflamación metabólica en la prevención de la patología cardiovascular: Identificación de nuevas dianas terapéuticas y desarrollo de fármacos novedosos
Principal Investigator: María Jesús Sanz Ferrando
Funding Body: Ministerio de Ciencia, Innovación y Universidades
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2024
Total Budget: €290,400

Reference: SAF2017-89714-R
Title: Modulación farmacológica del sistema inmune como diana clave en la prevención de la enfermedad cardiovascular asociada a desórdenes metabólicos. Síntesis de fármacos novedosos
Principal Investigador: Juan F. Ascaso and María Jesús Sanz Ferrando
Funding body: Ministerio de Economía y Competitividad
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €205,700

Reference: PROMETEO/2019/032
Title: Una aproximación translacional desde la clínica a la experimentación animal: Estudio del papel del eje CCL11/CCR3 y la inflamación eosinofílica en la patología cardiovascular asociada a desórdenes metabólicos
Principal Investigator: María Jesús Sanz Ferrando
Funding body: Conselleria de Educación Cultura y Deporte
Beneficiary institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €211,736
Research Group on Oxidative Pathology
Consolidated group

Group members

**Leading Researcher, R4**
Guillermo Sáez Tormo
University

**Established Researchers, R3**
Antonio Iradi Casal. University
Eulalia Alonso Iglesias. University

**Recognised Researchers, R2**
Leticia Bagán Debón. University
Pedro Gargallo Bayo. University

Researchers by categories

- **R2**: 2
- **R3**: 2
- **R4**: 1

Strategic aims

- To study the role of Mediterranean diet on hemodynamics, endotelial function, abdominal adiposity and gene expression in patients at high cardiovascular risk has been studied.
- To monitor the morbidly obese patients in terms of anthropometric changes, metabolic and oxidative stress markers before and after dietary intervention, exercise and bariatric surgery.
- To analyze in the role of DNA damage and different markers of oxidative stress in order to validate the modified base 8-oxo-dG as a possible tumor marker at high cardiovascular risk.

Main lines of research

- Study of the role of OS as a physiopathological mechanism of cardiometabolic diseases.
- Study of DNA damage and repair signaling routes in patients with cardiovascular evolution pathologies, in order to identify grades of expression in different genes.
- Study of OS role in the pathology of neoplastic diseases, as well as the possible validation of their molecular oxidative products as clinical markers.

PUBLICATIONS

- **11** Number of articles
- **IF 50.691**
- **Average IF 4.608**
- **10 National collaborations**
- **1 International collaborations**
- **1 Corresponding author**
SELECTED PUBLICATIONS


THESIS

Thesis title: Effects of elastic-based exercise interventions on oxidative stress, bone health, body composition, neuromuscular strength and physical function in older women: training intensity and modality as key exercise

Doctoral candidate: Pedro Gargallo Bayo

Director(s): Juan Carlos Colado Sánchez, Guillermo Sáez Tormo

Date of the defense: 15/06/2021

Grade: Sobresaliente "cum laude"

Quality recognition/Award: European PhD

Thesis title: Estudio de la sialometría en un grupo de 103 pacientes con síndrome de Sjögren y su relación con los criterios diagnósticos establecidos en esta enfermedad autoinmune

Doctoral candidate: Carlos Alvariño Martín

Director(s): Jose Vicente Bagán Sebastián, Leticia Bagán Debón

Date of the defense: 29/07/2021

Grade: Sobresaliente "cum laude"

Thesis title: Determinación de los polimorfismos del receptor de la vitamina D en niños asmáticos alérgicos a los ácaros del polvo

Doctoral candidate: Sara Ferrer Suay

Director(s): Miguel Tortajada Girbes, Eulalia Alonso Iglesias, Pilar Codoñer Franch

Date of the defense: 10/12/2021

Grade: Sobresaliente "cum laude"
Research Group on Psychiatry and Neurodegenerative Diseases
Consolidated group

Group members

Leading Researcher, R4
Julio Sanjuán Arias
Hospital. University

Established Researchers, R3
Eduardo Jesús Aguilar García-Iturrospe. Hospital. University
Juan Nacher Roselló. University
María Dolores Moltó Ruiz. University

Recognised Researchers, R2
Carlos Cañete Nicolás. Hospital. University
Esther Lorente Rovira. Hospital
Francisco Olucha Bordonau. University
Gracián García Marti. CIBERSAM
José Carlos González Piqueras. Hospital. University
María José Escartí Fabra. Hospital
Marilyn Gadea Domenech. University
Marta Pérez Rando. University
Miguel Hernández Viadell. Hospital. University
Olga María Rivero Martín. INCLIVA

First Stage Researchers, R1
Lucía Bonet Mora. University
Javier David Luñesma. University
Jon Iñaki Etxeandia Pradera. Hospital
Julia Alcaide Pozo. University

Researchers by categories

Researchers financed by competitive public calls or networks

Team involved in

Staff. Collaborating Researchers
Héctor Carceller Cardà. University
Patrycja Klimczak. University

Staff. Nurse
Blanca Llácer Iborra. CIBERSAM

Staff. Technician
Carlos Casillas Serra. INCLIVA

Staff. Administrative assistant
Julen Santiago Agrediano. INCLIVA
Virginia Gómez Soriano. INCLIVA

Strategic aims

• Elaboration of a mobile application associated to the Clinical Records to improve adherence to the treatment of patients with first episode psychosis
• Publication of Results of Gene-Environmental interaction First Episode Psychosis projects
• Development of new techniques to diagnosis psychosis by fMRI and machine learning approach
• Development of animal models in severe mental disorder and neurodegenerative diseases
• Models of prediction of response in first psychotic episodes
• Identification of genetic and epigenetic modifiers and molecular targets in Friedreich’s Ataxia

Main lines of research

• Identifying risk polymorphisms in psychosis and affective disorders
• Epigenetic studies (functional expression) of candidate genes in psychosis and mental illness
• Study on animal models in serious mental illness
 scientific activity

- Generating Studing models of neurodegenerative diseases (Friedreich Ataxia) on invertebrate animals (Drosophila)
- Study of mutations in monogenic neurodegenerative diseases
- Identifying genetic and environmental risk factors in affective and psychotic disorders
- Identifying abnormal patterns in neuroimaging (morphometry, functional, spectroscopy) in psychotic patients
- Design and coordination of clinical, genetic and neuroimaging data bases oriented to performing multicenter projects
- Development of interactive systems for improving therapeutic adherence
- Study on the efficiency of psycho-social intervention techniques in serious mental illness

SELECTED PUBLICATIONS


Reference: CB07/09/0006
Title: CIBER de Investigación en Salud Mental (CIBERSam)
Principal Investigator: Juan Nacher Roselló
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Universidad de Valencia
Duration: 2008-

Reference: RTI2018-098269-B-I00
Title: La matriz extracelular cerebral en la depresión: de modelos animales a pacientes
Principal Investigator: Juan Salvador Nacher Roselló
Funding body: Ministerio de Ciencia e Innovación
Beneficiary institution: Universidad de Valencia
Duration: 2019-2021
Total budget: €217.800

Reference: PROMETEO/2020/024
Title: Desarrollo de nuevos marcadores biológicos y nuevas estrategias terapéuticas para el diagnóstico y el tratamiento de la psicosis
Principal Investigator: Julio Sanjuán Arias
Funding Body: Conselleria de Educación, Cultura y Deporte
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2023
Total budget: €174.588

THESIS

Thesis title: Estudio de la plasticidad estructural en enfermedades psiquiátricas con modelos animales
Doctoral candidate: Clara Bueno Fernández
Director[s]: Juan Salvador Nacher Rosello, Esther Castillo Gómez
Date of the defense: 09/03/2021
Grade: Sobresaliente "cum laude"

Thesis title: Papel de núcleo incertus en el reconocimiento social a través de sus conexiones en el cerebro de rata
Doctoral candidate: Cristina García Díaz
Director[s]: Francisco Olucha Bordonau
Date of the defense: 29/03/2021
Grade: Sobresaliente "cum laude"

Thesis title: Continuous neuronal integration in the cerebral cortex of rodents and humans
Doctoral candidate: Simona Coviello
Director[s]: Juan Salvador Nacher Rosello, Esther Castillo Gómez
Date of the defense: 30/03/2021
Grade: Sobresaliente "cum laude"
Quality recognition/Award: European PhD

Thesis title: Eficacia de un programa de rehabilitación de las funciones atencionales mediante tareas competitivas multijugador: Estudio clínico, neurofisiológico y neuroanatómico en pacientes con ictus
Doctoral candidate: Mª Dolores Navarro Pérez
Director[s]: Roberto Lloréns Rodríguez, María Engracia Gadea Domènech, Enrique Noe Sebastián
Date of the defense: 25/05/2021
Grade: Sobresaliente "cum laude"

Thesis title: Hospitalización Domiciliaria en Salud Mental: eficacia y viabilidad
Doctoral candidate: Elvira Ferrando Aparicio
Director[s]: Eduardo Jesús Aguilar García Iturrospe, Francisca Silvestre Pascual
Date of the defense: 07/07/2021
Grade: Sobresaliente "cum laude"

Thesis title: Tears as powerful visual communication signals: a sociobiological approach
Doctoral candidate: Alfonso Ignacio Picó Peris
Director[s]: María Engracia Gadea Domènech
Date of the defense: 13/07/2021
Grade: Sobresaliente "cum laude"

Thesis title: REMINDCARE: una aplicación para primeros episodios psicóticos integrada en la práctica clínica diaria
Doctoral candidate: Lucía Bonet Mora
Director[s]: Julio Sanjuan Arias
Date of the defense: 16/07/2021
Grade: Sobresaliente "cum laude"
Research Group on Respiratory Diseases
Consolidated group

Group members

**Leading Researcher, R4**
Jaime Signes-Costa Miñana
Hospital

**Established Researchers, R3**
Jesús Sancho Chinesta. Hospital
José Franco Serrano. Hospital. University
Mª Cruz González Villaescusa. Hospital
Mª Luisa Briones Urtiaga. Hospital

**Recognised Researchers, R2**
Carmen Muñoz Esteban. Hospital
Francisco Carrión Valero. Hospital. University
José Luís Díaz Cordobés. Hospital
Mª Belén Safont Muñoz. Hospital
Pilar Bañuls Polo. Hospital

**First Stage Researchers, R1**
Irene Bocigas Huéscar. Hospital
Nieves Navarro Soriano. Hospital
Paola Liseth Ordóñez Gómez. Hospital
Santos Ferrer Espinosa. Hospital

**Staff. Collaborating Researchers**
Alba Mulet Arabi. Hospital
Alejandro Ochoa Alvarado. Hospital
Ana Ferrer Pons. Hospital
Andrea Ballester Ferriz. Hospital
Antonio Herrera Cuadros. INCLIVA
Antonio Quezada Reynosa. Hospital
Cristina Rosario Martín. Hospital
Elena Jiménez Civera. INCLIVA
Elvira Bondía Real. Hospital
Enric Burés Sales. Hospital
Erick Monclou Garzón. Hospital
Heidi Mora Bastida. Hospital
Julia Tarrasó Castillo. Hospital
Lucia Fernández Presa. Hospital
Manuela Marín González. Hospital
Mariam García Alfaro. Hospital
Natividad Blasco Angulo. INCLIVA
Pablo Royo Simó. University
Strategic aims

- Study of respiratory complications in patients with neuromuscular diseases. Utility of mechanical ventilation and other respiratory supports
- Implication of early diagnosis of obstructive airway diseases in the prognosis and follow-up of patients. Emphysema early detection program. Program for early detection of Alpha 1 Antitrypsin Deficiency
- Early follow-up program for COPD with exacerbator phenotype
- Severe Asthma control program
- Control of respiratory disorders during sleep as prevention of cardiovascular risk factors
- Early diagnosis of idiopathic interstitial respiratory diseases (IPF) and secondary diseases (drug toxicity and post-BMT)

Main lines of research

- Usefulness of non-invasive ventilation in the weaning process of patients with prolonged mechanical ventilation
- Improve the effectiveness of mechanically assisted cough procedures in patients with ALS, as well as the precision of the clinical tools available to evaluate frontotemporal dementia in them
- Study in smokers of the early stages of COPD. GOLD classification paradigm 0
- Identify cardiac morphological changes in patients with sleep-disordered breathing and ischemic heart disease treated with CPAP
- Follow-up of patients admitted for bilateral COVID19 pneumonia: changes in pulmonary function tests for the early diagnosis of pulmonary fibrotic sequelae
- Study of oxidative stress and inflammatory mechanisms underlying acute lung damage caused by SARS-CoV-2

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: COV20/01209
Title: Cambios en los test de función pulmonar en pacientes con neumonía por COVID19
Principal Investigator: Jaime Signes-Costa Miñana
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total Budget: €73,500

Title: Valoración de la demencia frontotemporal y su repercusión en el proceso de toma de decisiones terapéuticas en pacientes con esclerosis lateral amiotrófica. Estudio Longitudinal
Principal Investigator: Jaime Signes-Costa Miñana
Funding body: Sociedad Española de Neumología y Cirugía Torácica (SEPAR)
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total Budget: €9,000

Title: GOLD O-DLCO 1. Una mirada más allá de la obstrucción. ¿Es suficiente la espirometría en el screening de EPOC?
Principal Investigator: Cruz González Villaescusa
Funding body: Sociedad Valenciana de Neumología (SVN)
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total Budget: €12,000

Title: Impacto clínico asistencial de la creación de circuitos de derivación precoz en fibrosis pulmonar idiopática
Principal Investigator: Belén Safont Muñoz
Funding body: Sociedad Valenciana de Neumología (SVN)
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2025
Total Budget: €12,000
Research Group on Tissular Biochemistry
Consolidated group

Group members

**Leading Researcher, R4**
Juan R. Viña Ribes. University
Teresa Barber Ballester. University

**Established Researchers, R3**
Elena Ruiz García-Trevijano. University
Luis Torres Asensí. University
Rosa Zaragozá Colom. University

**Staff. Technicians**
Carmen Picher Latorre. University
Concha García de Mier. University
Sonia Company Hernández. University

Researchers by categories

- R3: 3
- R4: 2
- STAFF: 3

Strategic aims

- Vitamin A deficiency impairs several tissues, including lungs and liver. Alteration in the extracellular matrix is being studied in rats with chronic VAD
- To study the role of nuclear calpains in breast cancer cell lines. CAPN2 modulates P-cofilin levels and impairs cell division
- Calpains also seem to control cellular differentiation, their role in this process is being assessed in adipocytes and osteoblasts differentiation in vitro. To study the role of calpains 1, 2 and 3 as key mediators of hormones and Ca2+ metabolism in osteoblast differentiation and platelet abnormalities in LGMD patients

Main lines of research

- Mammalian tissues metabolism and its regulation
- Role of calpains in proliferation and differentiation processes
- Vitamin A deficiency induces oxidative stress in several tissues including lung and liver
- Epigenetic biomarkers and exome sequencing in limb-girdle muscular dystrophies

PUBLICATIONS

- **Number of articles**: 3
- **IF**: 15.584
- **Average IF**: 5.194
- **National collaborations**: 0
- **International collaborations**: 2
- **Corresponding author**: 1
**SELECTED PUBLICATIONS**


**RESEARCH PROJECTS AND GRANTS FOR RESEARCH**

Reference: PROMETEOII/2018/167

Title: Estudios tridimensionales de ductos mamarios para determinar el papel de las calpainas en la remodelación del tejido mamario. Implicaciones biomédicas

Principal Investigator: Juan Viña Ribes

Funding Body: Conselleria de Educación, Cultura y Deporte

Beneficiary Institution: Universidad de Valencia

Duration: 2018-2021

Total Budget: €201,920.20

Reference: OTR-2019-19499INVES

Title: Molecular mechanisms in the development of scoliosis in limb-girdle muscular dystrophies

Principal Investigator: Juan Viña Ribes

Funding Body: Fundación Ramón Areces

Beneficiary Institution: Universidad de Valencia

Duration: 2019-2021

Total Budget: €121,176
Research Group on Aging and Physical Activity
Consolidated group

Group members

**Leading Researcher, R4**
José Viña Ribes
University

**Established Researchers, R3**
Ana Lloret Alcañiz. University
Consolación García Lucerga. University
Eva Serna García. University

**Recognised Researchers, R2**
José Viña Almunia. University
Paloma Monllor Taltavull. University

**Emerging Researcher, R2**
Ana Lloret Alcañiz. University

**First Stage Researcher, R1**
Ángela García Correas. University

**Staff. Administrative assistant**
Cristina Amézcua García. INCLIVA

Researchers by categories

- **R1**: 1
- **R2**: 2
- **R3**: 1
- **R4**: 1
- **STAFF**: 1

Researchers financed by competitive public calls or networks

- **R1**: 1

Team involved in

**ciberfes**
Age and Exercise Research Group

**Freshage**

Strategic aims

- Regenerative medicine in aging
- Identification of physical training as a drug to treat age-related frailty
- Prove that G6PD protects against oxidative damage and improves lifespan in mice
- Reducing stress: a new concept in disease Alzheimer’s

Main lines of research

- Aging: identification of genes associated with aging, particularly genes that are specific in centenary people. Implication of the estrogens and phytoestrogens in the prevention of age-related damage
- Physical activity: identification of the molecular mechanisms by which physical activity is good for health. Identification of the mechanisms by which physical activity and antioxidant supplements help preventing primary and secondary sarcopenia in both human and animal studies. Identification of the best exercise intervention to delay and to treat frailty in humans
- Physiopathology of the Alzheimer’s disease: identification of the mechanisms by which free radicals, originators of the oxidative stress are used to unleash cell signals that lead to cell death in Alzheimer disease
scientific activity

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: DIABFRAIL-LATAM-825546
Title: Scaling-up of and evidence-based intervention programme in older people with Diabetes and Frailty in LatinAmerica

Principal Investigator: José Viña Ribes and Leocadio Rodríguez Mañas
Funding Body: European Commission
Beneficiary Institution: CIBER (Fundación Investigación Hospital Clínico Universitario de Valencia as Third Party)
Duration: 2019-2024
Total Budget: €273,720

Reference: AC20/00026
Title: Combining vitamin E-functionalized CHOcolate with physical exercise to reduce the risk of protein energy malnutrition in pre-dementia AGEd people. ERA-HDHL Call for Joint Transnational Research Proposals on Development of targeted nutrition for prevention of undernutrition for older adults (PREVNUT)
Principal Investigator: José Viña Ribes
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Universidad de Valencia
Duration: 2021-2023
Total budget: €169,098

Reference: CB16/10/00435
Title: CIBER de Fragilidad y envejecimiento (CIBERfes)
Principal Investigator: José Viña Ribes
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Universidad de Valencia
Duration: 2017-

Reference: PID2019-110906RB-100
Title: Nuevas intervenciones terapéuticas multidominio para retrasar la fragilidad y la discapacidad: Identificación de mecanismos moleculares con relevancia translacional
Principal Investigator: José Viña Ribes and Consuelo Gómez Cabrera
Funding Body: Ministerio de Economía y Competitividad
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €270,000

SELECTED PUBLICATIONS


Reference: PROMETEO/2019/097
Title: Diferencias de fragilidad entre géneros: evaluación de biomarcadores y estrategias de intervención
Principal Investigator: José Viña Ribes
Funding Body: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €189,391

THESIS

Thesis title: Influencia del procesamiento de la leche humana donada sobre la microbiota intestinal, la expresión genómica y el equilibrio oxidativo en recién nacidos pretérmino menores de 32 semanas de edad gestacional
Doctoral candidate: Anna Parra Llorca
Director(s): Máximo Vento, María Carmen Collado Amores, Eva Serna García
Date of the defense: 23/02/2021
Grade: Sobresaliente “cum laude”
Quality recognition/Award: European PhD

Thesis title: Análisis de la anchura de la cortical vestibular en dientes anteriores maxilares y en la planificación virtual de implantes mediante tomografías computarizadas de haz cónico
Doctoral candidate: Julio Rojo Sanchis
Director(s): David Peñarrocha Oltra, Jose Viña Almunia
Date of the defense: 30/04/2021
Grade: Sobresaliente “cum laude”
Research Group on Anesthesiology and Reanimation
Consolidated group

Group members

**Leading Researcher, R4**
Carlos Tornero Tornero
Hospital. University

**Established Researchers, R3**
Armando Maruenda Paulino. University
Gerardo Aguilar Aguilar. Hospital
Marina Soro Domingo. Hospital. University
Rafael Badenes Quiles. Hospital. University

**Recognised Researchers, R2**
Ana Mugarra Llopis. Hospital
Andrea Gutiérrez Valcárcel. Hospital
Benigno Escamilla Cañete. Hospital
Jorge Orduña Valls. Hospital
Mar Garzando Civera. Hospital
Maria Luisa García Pérez. Hospital. University
Rosa Herrera Castro. Hospital

**First Stage Researchers, R1**
Blanca Arocas Chicote. Hospital

**Staff. Collaborating Researchers**
Antonio Guilleñ Bañuelos. Hospital
Cristina Crisán Ovidiu. Hospital
Ernesto Pastor Martínez. Hospital

Researchers by categories

- R1: 1
- R2: 7
- R3: 4
- R4: 1
- STAFF: 14

Web
www.anestesiacionlinevalencia.org

**Strategic aims**

- The effects of advanced monitoring and drugs on hemodynamic management in patients undergoing surgery
- Open Lung Approach for the Acute Respiratory Distress Syndrome
- Study and development of methods of detection of infections
- Development of new strategies and drugs for pain treatment

**Main lines of research**

- Oxidative stress and protection of organs in ischemia-reperfusion surgery
- Ventilatory and pharmacological strategies to decrease organ damage in the lungs associated with mechanical ventilation in healthy and injured lungs
- Development of hemodynamic monitoring and its application in the field of patients undergoing surgery or admitted to critical care units
- Study and development of methods of detection of infections, especially fungal and virological, and how to prevent them
Scientific Activity

- Study and development of therapeutic drug monitoring (TDM) to describe antimicrobials pharmacokinetics (PK) and determination of minimum inhibitory concentration (MIC)
- Development of new strategies and drugs for pain treatment
- Development of new strategies and monitoring for Traumatic Brain Injury
- Neurocritical patients
- Delirium
- Critically ill patients with COVID-19
- Organ donation
- Using PK/PD to optimize antibiotic dosing for critically ill patients
- Sepsis and septic shock management

Publications


Selected Publications


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: COV20/00096
Title: Sedación con sevoflurano en pacientes con Síndrome de distrés respiratorio causado por la infección COVID19
Principal Investigator: Rafael Badenes Quiles
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total budget: €21,500

Reference: PI19/00141
Title: Modelos de estratificación y predicción en pacientes con insuficiencia respiratoria aguda hipoxémica con técnicas de inteligencia artificial y aprendizaje automático
Principal Investigator: Jesús Villar Hernández (Marina Soro as collaborating researcher)
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Doctor Negrín
Duration: 2020-2022
Total budget: €62,920

Reference: PI19/01611
Title: Reducción de complicaciones postoperatorias pulmonares mediante una estrategia ventilatoria preservadora de apertura pulmonar individualizada en pacientes intervenidos de cirugía torácica
Principal Investigator: Carlos María Ferrando Ortolá (Francisco Javier Belda, Marina Soro, José García de la Asunción as collaborating researchers)
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €134,007.50

Title: Ensayo clínico randomizado: hemoabsorción con cytosorb vs práctica clínica habitual para analizar su efecto sobre biomarcadores de daño renal en la donación en asistolia controlada con ECMO
Principal Investigator: Rafael Badenes Quiles
Entidad financiadora: Fundación Mutua Madrileña
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €65,000

Reference: SUBCOVERWD-19
Title: Severity subgroup discovery and classification on COVID-19 real world data through machine learning and data quality assessment
Principal Investigator: Rafael Badenes Quiles
Funding body: CRUE-Banco Santander
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total budget: €15,000

THESIS

Thesis title: Cerebrospinal fluid glucose and lactate concentrations after traumatic brain injury
Doctoral candidate: Angels Lozano Roig
Director[s]: Rafael Badenes Quiles, Armando Maruenda Paulino, Fabio Silvio Taccone
Date of the defense: 30/06/2021
Grade: Sobresaliente "cum laude"

Thesis title: Delirium en pacientes críticos con infección por SARS-CoV-2
Doctoral candidate: Carolina Ferrer Gómez
Director[s]: Rafael Badenes Quiles, José de Andrés Ibáñez
Date of the defense: 19/11/2021
Grade: Sobresaliente "cum laude"
Group members

**Leading Researcher, R4**  
Rubén D. Artero Allepuz. University  
Manuel Pérez Alonso. University

**Established Researcher, R3**  
Arturo López Castel. University

**Recognised Researchers, R2**  
Ariadna Bargiela Schönbrunn. University  
Estefanía Cerro Herreros. University  
Piotr Konieczny. University  
Raquel Pérez Gómez. University

**First Stage Researchers, R1**  
Águeda Blázquez Bernal. University  
Irene González Martínez. University  
Jorge Patricio Espinosa Espinosa. University  
Maria Sabater Arcís. University  
Natalia Mariel Riedel Bistoco. University  
Nerea Moreno Cervera. University  
Sarah Overby. University

**Staff. Technicians**  
Andrea García Rey. INCLIVA  
Iván Gimeno Martínez. INCLIVA

Researchers by categories

<table>
<thead>
<tr>
<th>Category</th>
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Researchers financed by competitive public calls or networks

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Networks

- [http://www.uv.es/gt/](http://www.uv.es/gt/)
- [https://twitter.com/GenomicsLab_UV](https://twitter.com/GenomicsLab_UV)
- [https://vimeo.com/user103005442](https://vimeo.com/user103005442)
- [https://twitter.com/MPAlonso](https://twitter.com/MPAlonso)
- [https://twitter.com/RubenArtero3](https://twitter.com/RubenArtero3)

Strategic aims

During 2021 the group has accomplished the publishing of scientific studies based on the main research strategy of looking for new drug candidates for neuromuscular (DM and SMA) rare diseases, but also on more prevalent diseases as those related with kidney pathologies. At the same time, it has been established a solid relationship with the spin-off Arhtex Biotech S.L. on the basis of several research contracts, on its goal of developing promising molecules with therapeutic potential in DM. The group has been awarded with Prometeo funds as "Excellent Research group" involving researchers also from Biodonostia, Biosensors_IBEC and IGAC-CSIC. Also significant, our PhD student, Sarah Overby, was one of the recipients for the renowned Grants from Myotonic Foundation.

Main lines of research

- Using miRNAs as therapeutic targets in myotonic dystrophy (DM)
- Discovery, development, and repurposing of drugs for the treatment of DM
- Study of the molecular causes of muscle atrophy, heart dysfunction, and CNS degeneration in DM
- Study of the molecular mechanisms associated with spinal muscular atrophy and search for potential therapies
- Understanding human podocyte function through Drosophila nephrocytes
- Drosophila modeling of limb girdle muscular dystrophy subtype 1F (LGMD1F)
scientific activity

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: CA17103 COST-DARTER
Title: COST: European Cooperation in Science and Technology, Delivery of Antisense RNA Therapeutics (DARTER)
Principal Investigator: Virginia Arechavala (Rubén Artero Allepuz as Co-IP)
Funding Body: European Commission

Beneficiary Institution: IIS Biocruces
Duration: 2018-2022
Total Budget: €500.000
Reference: PI19/01796
Title: Implicaciones experimentales y clínicas del complejo proteico Rabphilin-Rab en daño renal en la diabetes mellitus tipo 2
Principal Investigator: Josep Redón i Mas (Arturo López Castel as collaborating researcher)
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €196.020
Reference: DTS19/00128
Title: Desarrollo preclínico de un fármaco innovador para Distrofia Miotónica
Principal Investigator: Rubén Artero Allepuz
Funding Body: Instituto de Salud Carlos III - Cofinanced FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €111.100
Reference: RTI2018-094599-B-I00
Title: Comprensión de las causas moleculares de la atrofia muscular en distrofia miotónica tipo 1
Principal Investigator: Rubén Artero Allepuz
Funding Body: Ministerio de Ciencia, Innovación y Universidades
Beneficiary Institution: Universidad de Valencia
Duration: 2019-2021
Total budget: €185.000
Reference: INNVA1/2021/44
Title: Reposicionamiento de un fármaco para atrofia muscular espinal
Principal Investigator: Rubén Artero Allepuz
**Funding Body:** Agencia Valenciana de la Innovación-AVI Generalitat Valenciana  
**Beneficiary Institution:** Universidad de Valencia  
**Duration:** 2021-2023  
**Total budget:** €487,727  

**Reference:** PROMETEO/2020/081  
**Title:** Uso de moduladores de microRNAs como terapias experimentales en distrofia miotónica de tipo 1  
**Principal Investigator:** Rubén Artero Allepuz  

**Funding Body:** Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital  
**Beneficiary Institution:** Universidad de Valencia  
**Duration:** 2020 - 2023  
**Total budget:** €193,051  

**Reference:** C21-00135  
**Title:** Valorization of the repurposing of two drug candidates for spinal muscular atrophy  
**Principal Investigator:** Rubén Artero Allepuz  
**Funding Body:** Fundació Bancària La Caixa  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2023  
**Total budget:** €100,000  

**Reference:** HR17-00268  
**Title:** TATAMI (TherApeutic TArgeting of MiRNas) therapeutic targeting of MBNL microRNAs as innovative treatments for myotonic dystrophy  
**Principal Investigator:** Rubén Artero Allepuz  
**Funding Body:** Fundació Bancària La Caixa  
**Beneficiary Institution:** Universidad de Valencia  
**Duration:** 2018-2021  
**Total budget:** €997,023  

**Title:** Restoration of MBNL proteins through miRNA blocking as DM1 therapy  
**Principal Investigator:** Rubén Artero Allepuz  
**Funding Body:** Myotonic Distrophy Foundation  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total budget:** €48,000  

**Reference:** PI-2021-008  
**Title:** miR-OA: Inhibidores de miRNAs como terapia en osteoartritis  
**Principal Investigator:** Rubén Artero Allepuz  
**Funding Body:** Universidad de Valencia - INCLIVA  
**Beneficiary Institution:** Universidad de Valencia - INCLIVA  
**Duration:** 2021-2022  
**Total budget:** €19,000  

**Reference:** GV/2021/014  
**Title:** Caracterización de la contribución de MSI2 a la atrofia muscular de DM1 utilizando nuevos modelos celulares y murinos  
**Principal Investigator:** Ariadna Bargiela Schönbrunn  
**Funding Body:** Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021  
**Total budget:** €10,000
scientific activity

Research Group on General and Digestive Surgery
Consolidated group

Group members

Leading Researcher, R4
Joaquín Ortega Serrano
Hospital. University

Established Researchers, R3
Alejandro Espí Macías. Hospital. University
Luis Sabater Ortí. Hospital. University

Recognised Researchers, R2
David Casado Rodrigo. Hospital
David Moro Valdezate. Hospital. University
Dimitri Dorcaratto. Hospital. University
Elena Muñoz Forner. Hospital. University
Estefanía García Botello. Hospital. University
Fernando López Mozos. Hospital. University
José Martín Arévalo. Hospital. University
Julio Calvete Chornet. Hospital. University
Marina Garcés Albir. Hospital. University
Norberto Cassinello Fernández. Hospital. University
Raquel Alfonso Ballester. Hospital
Roberto Martí Obiol. Hospital
Vicente Pla Martín. Hospital

First Stage Researchers, R1
Carlos León Espinoza. Hospital
Gemma Bellver Lobato. Hospital
Isabel Mora Oliver. Hospital
Maria Lapeña Rodríguez. Hospital

Researchers by categories

<table>
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<th>R1</th>
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Group members

Staff. Collaborating Researchers
Elía Martí Cuñat. Hospital
Marcos Adriánzén Vargas. Hospital
Maria Eugenia Barrios Carvajal. Hospital
Rosa Martí Fernández. Hospital
Vicente López Flor. Hospital

Strategic aims

- Research about the incidence of pandemic COVID19 on surgery
- Development of 3D modelling for hepatic and pancreatic tumours
- Research about the influence of postoperative complications on the oncologic outcome of metastatic disease
- Development of a protocol for the outpatient treatment of hyperparathyroidism
- Research about the revisional techniques within the bariatric surgery

Main lines of research

- Coloproctology: quality standards for coloproctology, 3D endorectal ultrasound, sacral neuromodulation and perianal fistula surgery
scientific activity

- Hepato-bilio-pancreatic surgery: acute pancreatitis, gene transfection, pancreatic-duodenectomy
- Endocrine surgery: laparoscopic adrenal tumors, parathyroid adenomas intraoperative localization, ambulatory surgery in hyperparathyroidism
- Bariatric surgery: pathophysiology of postoperative changes after bariatric surgery
- Breast surgery: fibrin sealants in seroma. Selective sentinel node biopsy. Axilla assessment in DCIS
- Gastro-esophageal surgery: mutations in GIST tumors, overexpression of HER2 and HER3 in gastric tumors, perioperative QT in advanced gastric cancer, preoperative gastric arteries embolization in esophageal surgery. PIPAC technique in carcinomatosis surgery

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI19/00250
Title: Anastomosis pancreática tras duodenopancreatectomía cefálica: pancreatogastrostomía versus anastomosis de Blumgart. Estudio prospectivo, aleatorizado y multicéntrico
Principal Investigator: Luis Sabater Orti
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total Budget: €85,910

Reference: PI20/00008
Title: Transección pancreática asistida por radiofrecuencia vs endograperadora. TRANSPAIRE. Ensayo clínico en fase III
Principal Investigator: Patricia Sánchez Velázquez [Dimitri Dorcaratto, Marina Garcés, Elena Muñoz and Luis Sabater as collaborating researchers]
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Instituto Hospital del Mar de Investigaciones Médicas. IMIM
Duration: 2021-2023
Total Budget: €75,020

Title: Utilidad de la biopsia líquida y organoides en el manejo y tratamiento de adenocarcinoma de páncreas: hacia una medicina de precisión
Principal Investigator: Maider Ibarrola Villava (Luis Sabater and Marina Garcés as collaborating researchers)

Funding Body: Fundación Mutua Madrileña
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total Budget: €100,000

Title: Proyecto RENACI
Principal Investigator: Mario Serradilla Martín (Luis Sabater Ortí as collaborating researcher)
Funding Body: Asociación Española de Cirujanos
Beneficiary institution: Hospital Universitario Miguel Servet de Zaragoza
Duration: 2020-2022
Research Group on Personal Autonomy, Dependence and Severe Mental Disorders (TMAP)
Consolidated group

Group members

**Leading Researcher, R4**
Rafael Tabarés Seisdedos. University
Manuel Gómez Beneyto. University

**Established Researchers, R3**
Ferrán Catalá López. INCLIVA
Gabriel Selva Vera. Hospital. University
Immaculada Fuentes Durá. University
José Salazar Fraile. INCLIVA
Manuel Girón Giménez. INCLIVA
Mikel Munarriz Ferrandis. INCLIVA
Inmaculada Fuentes Durá. University
José Salazar Fraile. INCLIVA
Manuel Girón Giménez. INCLIVA
Mikel Munarriz Ferrandis. INCLIVA
Patricia Correa Ghisays. University

**Recognised Researchers, R2**
Constanza San Martín Valenzuela. University
Diego Macías Saint-Geroms. INCLIVA
Jaume Forés Martos. INCLIVA

**First Stage Researchers, R1**
Joan Vicent Sánchez Ortí. INCLIVA

Researchers by categories

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Team involved in

**cibersam**

Strategic aims

- Contribute to the prevention of signs of frailty and cognitive and functional impairment in populations at risk
- Favor the identification of biomarkers and endophenotypes associated with cognitive deficits and functional impairment in people with severe mental disorders and other chronic diseases that occur with deterioration in these areas
- Understand the unexpected associations between apparently different diseases such as Cancer and diseases of the Central Nervous System
- Continue studies of the increased burden of disease due to mental disorders and neurological diseases such as dementia
- Participate in expert groups to reach consensus on nutritional medicine and other clinical practices in modern psychiatry

Main lines of research

- Validation and identification of neurocognitive endophenotypes in severe mental disorder
- Identification of biomarkers in severe mental disorder
- Epidemiology and disability associated with severe mental disorder
- Direct and inverse multimorbidity in patients with complex diseases such as central nervous system disorders, cancer or metabolic diseases
- Global Burden of Disease studies
- Nutritional Psychiatry
- Transdiagnostic cognitive impairment, pre-frailty or frailty, and decreased social functioning in severe mental disorder and other diseases with chronic development
- COVID-19 pandemic and neurocognition, frailty, and social functioning in severe mental disorder and other diseases with chronic development
scientific activity

PUBLICATIONS

25 Number of articles
IF 334.274
Average IF 13.37
20 National collaborations
14 International collaborations
7 Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI20/00066
Title: Adaptación y validación de la batería cognitiva Brief Assessment of Cognition App (BAC App) y del Virtual Reality Assessment of Functional Capacity Tool (VRFCA T) para su uso en España

Principal Investigator: Rosa Ayesa Arriola (Patricia Correa as collaborating researcher)

Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary Institution: Fundación Instituto de Investigación Marqués de Valdecilla (IDIVAL)

Duration: 2021-2023
Total budget: €87,120

Reference: CB07/09/0021
Title: CIBER de Enfermedades Mentales (CIBERSAM)

Principal Investigator: Rafael Tabarés Seisdedos

Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary institution: CIBERSAM

Duration: 2015-

Reference: UV-INV-1554362
Title: Estigma social hacia personas con diagnóstico de esquizofrenia en estudiantes universitarios: PREVAL

Principal Investigator: Rafael Tabarés Seisdedos

Funding Body: Universidad de Valencia

Beneficiary institution: Universidad de Valencia

Duration: 2021-2022
Total budget: €7,510

Reference: UV-INV-19-1199985
Title: Evaluación de un programa de musicoterapia en pacientes con trastorno mental grave

Principal Investigator: Inmaculada Fuentes Durá

Funding Body: Universidad de Valencia

Beneficiary institution: Universidad de Valencia

Duration: 2020-2021
Total budget: €6,930

Reference: 201904DMC
Title: Drug safety and effectiveness network methods and
applications group in indirect comparisons (DSEN MAGIC) Team

**Principal Investigator:** Hutton B, Moher D, Straus SE, Wells G
(Ferrán Catalá as collaborating researcher)

**Funding Body:** Canadian Institutes of Health Research/Drug
Safety and Effectiveness Network

**Beneficiary institution:** CIBERSAM

**Duration:** 2019-2023

**Total budget:** €2.875.010.8

**THESIS**

**Thesis title:** Efectos de un programa de intervención psicoeducativa en la calidad de vida de los/las pacientes durante sus tratamientos de Reproducción Asistida

**Doctoral candidate:** Ruth Elizabeth Abad Villavicencio

**Director(s):** Inmaculada Fuentes Durá, Carmen Dasí Vivo, Mónica Romeu Villarroya

**Date of the defense:** 21/05/2021

**Grade:** Sobresaliente “cum laude”

**Thesis title:** Epidemiological and molecular associations between central nervous system disorders and cancer

**Doctoral candidate:** Jaume Forés Mártos

**Director(s):** Rafael Tabarés Seisdedos, Ferrán Catalá López, Joan Climent Bataller

**Date of the defense:** 21/07/2021

**Grade:** Sobresaliente “cum laude”
scientific activity

Research Group on Cellular and Organic Physiopathology of Oxidative Stress
Consolidated group

Group members

**Leading Researcher, R4**
Federico V. Pallardó Calatayud
University

**Established Researchers, R3**
Carlos Romá Mateo. University
José Manuel Torres Ibáñez. University
Pilar González Cabo. University. CIBER

**Emerging Researcher, R2**
Juan Antonio Navarro Langa. INCLIVA

**Recognised Researchers, R2**
Marta Seco Cervera. CIBER
Noelia Benetó Gandía. CIBER

**First Stage Researchers, R1**
Concepción García Díaz. University
Laura Rodríguez Robles. CIBER
Tamara Lapeña Luzón. University. CIBER
Vicent Beltrán Beltrán. CIBER

Researchers by categories

- **R1**
- **R2**
- **R3**
- **R4**

Researchers financed by competitive public calls or networks

- **R1**
- **R2**
- **R3**

Team involved in

**Strategic aims**

- Remarkable achievements are the extension to PCT phase of the European patent “Mass spectrometry-based methods for the detection of circulating histones H3 and H2B in plasma from sepsis or septic shock [ss] patients” (PCT/EP2017/078362)
- Development of new therapies for the treatment of neuromuscular diseases
- Development of new therapies for the treatment of neurodegenerative diseases

**Main lines of research**

- Pathophysiology of Friedreich’s Ataxia and other neuromuscular diseases
- Development of new therapeutic strategies for Friedreich’s Ataxia
- Development of new biomarkers in both adult and neonatal sepsis
- Epigenetic regulation in the pathophysiology of rare diseases
- Epigenetic regulation of immunosuppression events in patients from Intensive Care Units

**Emerging Researcher**

**Juan Antonio Navarro Langa**

Our scientific interests are focused on deciphering the programmed death mechanism followed by cells in Friedreich’s Ataxia patients using Drosophila melanogaster models. With Filippo Santorelli (University of Pisa), he is establishing a translational platform using Drosophila to model hereditary spastic paraplegia
scientific activity

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI19/01084
Title: Nuevas terapias en Ataxia de Friedreich
Principal Investigator: Federico V. Pallardó Calatayud
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €33.170

Reference: CIB06/07/0073
Title: CIBER de Enfermedades Raras (CIBERer)
Principal Investigator: Federico V. Pallardó Calatayud
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Universidad de Valencia
Duration: 2007-

Reference: ACCC:CIBERER 2019-22
Title: Síndrome de CANVAS: diagnóstico precoz y modelo fisiopatológico mediante iPSC
Principal Investigator: Pilar González Cabo
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: CIBER de Enfermedades Raras (CIBERer)
Duration: 2021-2022
Total budget: €75.020

Reference: ACCC:CIBERER 2018
Title: Edición Génica del Gen FXN mediante el Sistema CRISPR/Cas9 en linfocitos de pacientes con Ataxia de Friedreich
Principal Investigator: Pilar González Cabo
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: CIBER de Enfermedades Raras (CIBERer)
Duration: 2019-2021
Total budget: €39.750

Reference: PID2020-115190RB-I00
Title: Relacionando cofilina, una proteína de unión a actina, con la desregulación del calcio: un enfoque de precisión para el tratamiento de la Ataxia de Friedreich
**Principal Investigator:** Pilar González Cabo  
**Funding Body:** Ministerio de Ciencia e Innovación  
**Beneficiary institution:** CIBER de Enfermedades Raras (CIBERer)  
**Duration:** 2021-2023  
**Total budget:** €196,300

**Reference:** PID2020-119127RA-I00  
**Title:** Citotoxicidad mediada por macromoléculas nucleares: mecanismos moleculares y potencial para el desarrollo de biomarcadores de sepsis y choque séptico

**Principal Investigator:** Carlos Romá Mateo  
**Funding Body:** Ministerio de Ciencia e Innovación  
**Beneficiary Institution:** Universidad de Valencia  
**Duration:** 2021-2024  
**Total budget:** €121,000

**Reference:** RTC2019-006825-1  
**Title:** Potencial de la leriglitazona para el tratamiento de enfermedades asociadas a la acumulación de hierro, distrofias y enfermedades neuromusculares

**Principal Investigator:** Pilar González Cabo  
**Funding Body:** Ministerio de Ciencia e Innovación  
**Beneficiary institution:** CIBER de Enfermedades Raras (CIBERer)  
**Duration:** 2020-2023  
**Total budget:** €505,061

**Reference:** CDEI-04/20C  
**Title:** Drosophila melanogaster as model to study the impact of ferroptosis in Friedreich’s Ataxia

**Principal Investigator:** Juan Antonio Navarro Langa  
**Funding Body:** Conselleria de Sanidad Universal y Salud Pública  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2023  
**Total budget:** €246,500

**Reference:** PROMETEO 2018/135  
**Title:** From genes to therapy in neurodegenerative and neuromuscular disorders

**Principal Investigator:** Federico V. Pallardó Calatayud  
**Funding Body:** Conselleria de Educación, Investigación, Cultura y Deporte  
**Beneficiary Institution:** Universidad de Valencia  
**Duration:** 2018-2021  
**Total Budget:** €310,506

**Reference:** 90/C/2020  
**Title:** Therapeutical strategies for cystinuria  
**Principal Investigator:** Federico V. Pallardó Calatayud  
**Funding Body:** Marató TV3  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2023  
**Total budget:** €35,580

**Reference:** AP-2021-009  
**Title:** NATAX: Nanozimas como aproximación terapéutica para el tratamiento del estrés oxidativo en la Ataxia de Friedreich  
**Principal Investigator:** José Vicente Ros Lis and Federico V. Pallardó Calatayud  
**Funding Body:** Universidad de Valencia - INCLIVA  
**Beneficiary Institution:** Universidad de Valencia - INCLIVA  
**Duration:** 2021-2022  
**Total budget:** €4,750

**Reference:** AP-2021-014  
**Title:** FlyAvatar: Drosophila melanogaster como herramienta de diagnóstico molecular para la Paraparesia Espástica Hereditaria 7 (HSP7)  
**Principal Investigator:** Mª José Martínez Sebastián and Juan Antonio Navarro Langa  
**Funding Body:** Universidad de Valencia - INCLIVA  
**Beneficiary Institution:** Universidad de Valencia - INCLIVA  
**Duration:** 2021-2022  
**Total budget:** €4,750

**Reference:** AP-2021-019  
**Title:** HISTONA TTR: Efecto de la activación de TLR por medio de sus ligandos sobre la polarización de macrófagos hacia M1 y su función citocida frente a las células madre de glioblastoma  
**Principal Investigator:** Carlos Romá Mateo and Enrique Santas Olmeda  
**Funding Body:** Universidad de Valencia - INCLIVA  
**Beneficiary Institution:** Universidad de Valencia - INCLIVA  
**Duration:** 2021-2022  
**Total budget:** €4,750
THESIS

Thesis title: Modelo celular a partir de iPSC de la enfermedad Charcot-Marie-Tooth causada por la ausencia de GDAP1
Doctoral candidate: María Ángeles León Rodríguez
Director(s): José Manuel Torres Ibáñez
Date of the defense: 16/04/2021
Grade: Sobresaliente "cum laude"

Thesis title: Proteínas nucleares y otros mediadores de inflamación en pacientes en shock séptico sometidos a terapias de reemplazo renal
Doctoral candidate: Mónica Crespo Gómez
Director(s): Manuel Cervera Montes, Federico V. Pallardó, Calatayud, Carlos Romá Mateo
Date of the defense: 25/06/2021
Grade: Sobresaliente "cum laude"
Research Group on Inflammation: Metabolism and Organic Damage line
Emerging group

Group members

**Leading Researcher, R4**
Laura Piqueras Ruiz
University. INCLIVA

**First Stage Researchers, R1**
Luisa María Hueso Soler. INCLIVA
Rebeca Ortega Herráiz. INCLIVA

**Staff. Collaborating Researcher**
Mireia López Riera. INCLIVA

Researchers by categories

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<td>Researchers financed by competitive public calls or networks</td>
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Strategic aims

- Identification of new mechanisms involved in angiogenesis and inflammation in obese patients:
  - Study and characterization of the role of the CCR4 receptor and its ligands CCL17/TARCE, CCL22/MDC and CKLF1 in angiogenesis and inflammation associated with obesity and in response to bariatric surgery
  - Characterization of the role of constitutive nuclear receptors for androstane (CAR) in endothelial dysfunction and angiogenesis associated with obesity and in response to bariatric surgery

- Identification of new mechanisms involved in angiogenesis and inflammation in acute myocardial infarction. Role of the antiangiogenic isoform VEGF165b:
  - Determination of VEGF-A165b levels in patients with STEMI and its relationship with microvascular obstruction
  - To study the effects of the neutralization of the VEGF-165b isoform in a mouse model with acute myocardial infarction

- Study of the role of the SGLT2 transporter in the development of abdominal aortic aneurysm:
  - To evaluate the effect of empagliflozin, an SGLT2 inhibitor, in an animal model of abdominal aortic aneurysm and to investigate the possible anti-inflammatory effect of empagliflozin on endothelial dysfunction

Main lines of research

- Identification of new mechanisms involved in angiogenesis and inflammation in obese patients. Role of CCR4 chemokine receptor ligands and constitutive nuclear androstane receptors
- Identification of new mechanisms involved in angiogenesis and inflammation in acute myocardial infarction. Role of the antiangiogenic isoform VEGF165b
- Study of the SGLT2 transporter in the development of abdominal aortic aneurysm

**PUBLICATIONS**

- **8** Number of articles
- **IF 38.299**
- **IF 4.787**
- **1** National collaborations
- **0** International collaborations
- **4** Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI18/00209
Title: Identificación de nuevos mecanismos implicados en la angiogénesis e inflamación en pacientes obesos. Modulación por ligandos de receptores nucleares constitutivos de androstano
Principal Investigator: Laura Piqueras Ruiz and José Tomas Real Collado
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total Budget: €173,332.50

Reference: CDEi-04/20-A
Title: Plan GenT
Principal Investigator: Laura Piqueras Ruiz
Funding body: Conselleria de Sanitat
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2023
Total Budget: €253,000
scientific activity

Research Group on Metabolic Diseases
Emerging group

Group members

Leading Researcher, R4
Herminia González Navarro
INCLIVA. University

Recognised Researcher, R2
Alida Taberner Cortés. INCLIVA

First Stage Researchers, R1
Gema Hurtado Genovés. INCLIVA
María Aguilar Ballester. INCLIVA
Susana Martín Vañó. INCLIVA

Strategic aims

• Identification of new cellular plasticity mechanisms involved in plaque stability
• Identification of new immune populations associated with liver metabolic complications
• Effect of dapagliflozin on the development of atherosclerosis in murine models of insulin resistance

Main lines of research

• Study of the effect of inflammatory mediators of the lymphotoxin family and their receptors on the development of fatty liver associated with insulin resistance
• Study of the cytokine LIGHT in the stability of the plaque during the progression of atherosclerosis through the use of animal models with gain and loss of function
• Characterization of immune populations in human metabolic complications

Researchers by categories

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Researchers financed by competitive public calls or networks

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Staff. Technician
Andrea Herrero Cervera. INCLIVA

PUBLICATIONS

Number of articles 6
Average IF 5.732
National collaborations 4
International collaborations 0
Corresponding author 2

SELECTED PUBLICATIONS


3. Herrero-Cervera A, Espinos-Estevez C, Martin-Vano S,


THESIS

Thesis title: Efecto de la dapagliflozina en la aterosclerosis diabética y caracterización de un modelo murino de EHNA inducido por dieta

Doctoral candidate: Aida Taberner Cortés

Director[s]: Herminia González Navarro

Date of the defense: 11/11/2021

Grade: Sobresaliente "cum laude"
Scientific Activity

Research Group on Rare Respiratory Diseases (RRD)
Emerging group

Group members

Leading Researcher, R4
Francisco Dasi Fernández
INCLIVA. University

Established Researcher, R3
Selene Valero Moreno. University

Recognised Researcher, R2
Silvia Castillo Corullón. Hospital. University

First Stage Researchers, R1
Daniel Pellicer Roig. INCLIVA
Lucía Bañuls Soto. INCLIVA
Maria Magallón Serrano. INCLIVA

Staff. Collaborating Researcher
Mª Mercedes Navarro García. INCLIVA

Researchers by categories

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Researchers financed by competitive public calls or networks

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Team involved in

Strategic aims

- We have shown that NK and lymphocytes B express and secrete alpha-1 antitrypsin
- We have discovered a group of miRNAs that could be used for the diagnosis and prognosis of alpha-1 antitrypsin deficiency.
  We are currently validating these results using an external cohort
- A new method based on oxidative stress markers to identify patients with Primary Ciliary Dyskinesia has been set up
- We have set up the high-speed video method to identify patients with Primary Ciliary Dyskinesia
- We have shown that hypoxia modifies neutrophil degranulation and enhances oxidative damage in alpha-1 antitrypsin deficiency patients

Main lines of research

- The group is currently conducting active basic research on two rare respiratory diseases (RRDs): Alpha-1 Antitrypsin Deficiency (AATD) and primary ciliary dyskinesia (PCD)
- The specific lines of action of the group are:
  - To characterize the molecular mechanisms (especially those aspects related to REDOX regulation) involved in the development of disease in AATD and PCD
  - To evaluate the diagnostic and/or prognostic value of circulating nucleic acids in plasma/serum
  - Development of cellular models from cells of patients with RRD, which allow research in these diseases
  - To develop new therapeutic strategies based on gene therapy
  - To generate social awareness of RRD, through the scientific dissemination of biomedical advances and social and health policies aimed at improving the quality of life of patients
PUBLICATIONS

13 Number of articles

IF 48.893

Average IF 3.761

8 National collaborations

3 International collaborations

5 Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI17/01250

Title: Estudio del efecto de la hipoxia en la degranulación, producción de citocinas y perfil oxidativo de neutrófilos de pacientes con déficit de alfa-1 antitripsina

Principal Investigator: Francisco Dasi Fernández

Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2018-2021

Total budget: €99,220

Title: Estudio de los microRNAs circulantes como biomarcadores pronósticos en pacientes con déficit de alfa-1 antitripsina. Un enfoque funcional

Principal Investigator: Francisco Dasi Fernández

Funding body: Sociedad Valenciana de Neumología

Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2020-2022

Total budget: €6,000

Title: Estudio de la utilidad clínica de los exosomas plasmáticos en la discinesia ciliar primaria

Principal Investigator: Francisco Dasi Fernández

Funding body: Sociedad Valenciana de Neumología

Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2020-2023

Total budget: €12,000
Research Group on Healthy Aging
Emerging group

Group members

**Leading Researcher, R4**
Consuelo Borrás Blasco
University

**Established Researcher, R3**
Juan Gambini Buchón. University

**Recognised Researchers, R2**
Ana Díaz Cuevas. University
Cristina Mas Bargues. University
Mar Dromant Jarque. INCLIVA
Marta Inglés de la Torre. University

First Stage Researchers, R1
Aurora Román Rodríguez. University
Jorge Sanz Ros. University

Researchers by categories

- R1: 2
- R2: 4
- R3: 1
- R4: 1

Researchers financed by competitive public calls or networks

- R1: 1

Strategic aims

- To know the molecular mechanisms involved in aging and frailty processes
- To develop possible methods to evaluate them
- To develop appropriate intervention strategies
- To determine an index of quality of life in experimental animals
- To develop human imaging biomarkers for the diagnosis of frailty
- To study interventions to delay aging and prevent frailty:
  - Therapy with small extracellular vesicles
  - Role of the antiapoptotic gene Bcl-xL

Main lines of research

- Development of a quality of life index [healthy aging] in experimental animals [derived from intervention studies in aging]
- Development of image biomarkers in the diagnosis of frailty:
  - Fragility biomarkers based on ultrasound image analysis (echointensity, fractals, textures)
- Interventions for healthy aging:
  - Stem cell derived extracellular medicine [based on previous studies on stem cells and senescence]
  - Study of Bcl-xL as a longevity gene [based on previous studies in centenarians]

PUBLICATIONS

- Number of articles: 23
- IF: 117.557
- Average IF: 5.111
- National collaborations: 11
- International collaborations: 7
- Corresponding author: 5
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: AC20/00026
Title: Combining vitamin E-functionalized CHOcolate with physical exercise to reduce the risk of protein energy malnutrition in pre-dementia AGEd people. ERA-HDHL Call for Joint Transnational Research Proposals on Development of targeted nutrition for prevention of undernutrition for older adults (PREVNUT)
Principal Investigator: José Viña Ribes (Consuelo Borrás Blasco as collaborating researcher)
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER

Beneficiary Institution: Universidad de Valencia
Duration: 2021-2023
Total Budget: €169,098

Reference: PID2020-113839RB-I00
Title: Efecto del tratamiento con vesículas extracelulares de células madre de grasa de ratones jóvenes sobre parámetros de envejecimiento y fragilidad en ratones de edad avanzada
Principal Investigator: Consuelo Borrás Blasco
Funding Body: Ministerio de Ciencia e Innovación
Beneficiary Institution: Universidad de Valencia
Duration: 2021-2024
Total Budget: €181,500

Reference: PCIN-2017-117
Title: Obesidad materna y disfunción cognitiva en la descendencia: papel causa-efecto de la microbiota intestinal y prevención dietética temprana
Principal Investigator: Consuelo Borrás Blasco
Funding Body: Ministerio de Economía, Industria y Competitividad
Beneficiary Institution: Universidad de Valencia
Duration: 2017-2022
Total Budget: €143,000

THESIS

Thesis title: Eficacia de la terapia manual en pacientes con migraña
Doctoral candidate: Elena Muñoz Gomez
Director[s]: Marta Inglés De La Torre, Gemma Victoria Espi López
Date of the defense: 23/04/2021
Grade: Sobresaliente "cum laude"
Quality recognition/Award: European PhD

Thesis title: Transcriptómica en centenarios: un ejemplo de envejecimiento satisfactorio
Doctoral candidate: Mar Dromant Jarque
Director[s]: Marta Inglés De La Torre, Consuelo Borrás Blasco, José Viña Ribes
Date of the defense: 21/12/2021
Grade: Sobresaliente "cum laude"
scientific activity

Research Group on Exercise, Nutrition and Healthy Lifestyle
Emerging group

Group members

Leading Researcher, R4
Mª Carmen Gómez Cabrera
University

Recognised Researchers, R2
Aitor Carretero Martínez. INCLIVA
Gloria Olaso González. University

First Stage Researchers, R1
Esther García Domínguez. University
Fernando Millán Domingo. University

Researchers by categories

Researchers financed by competitive public calls or networks

Strategic aims

- Role of nicotinamide riboside (NR) and Urolithin A (UroA) as mitotherapeutics for the reversal of energy collapse associated with aging
- Role of β-hydroxybutyrate on the loss of muscle mass associated with aging
- Effect of an intervention with protein and vitamin supplementation in synergy with a multicomponent program of physical exercise in the reversal of frailty
- Effect of glucosamine supplementation on physical performance
- Evaluation of the neuroprotective effect of ketogenic diets [intermittent fasting and carbohydrate-free diet]
- High intensity interval exercise in the prevention and treatment of frailty
- Study of the effect of the activation of glucose 6 phosphate dehydrogenase with different intervention strategies in the prevention of frailty

Main lines of research

Using molecular approaches in animal and human models, this group aims to establish the basic mechanisms modulated by exercise and nutrition to transfer them through clinical trials to the improvement of the quality of life in humans. The research lines of the Exercise, Nutrition and Healthy Lifestyle Research Group include the study of:

- Cell signaling in skeletal muscle during physical exercise
- Oxidative stress associated with physical exercise and the effect of the administration of antioxidants
- The mechanisms involved in muscle atrophy with special attention to the study of the importance of oxidative stress in the loss of muscle mass, both in clinical and preclinical models
- The benefits of physical exercise and nutritional interventions to ensure healthy aging with special attention to the treatment of various pathologies associated with aging, especially Alzheimer’s disease, senile sarcopenia and frailty

PUBLICATIONS

- Number of articles: 13
- IF 127.052
- Average IF 9.773
- National collaborations: 3
- International collaborations: 8
- Corresponding author: 3
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: DIABFRAIL-LATAM-825546
Title: Scaling-up of and evidence-based intervention programme in older people with Diabetes and Frailty in LatinAmerica
Principal Investigator: Leocadio Rodriguez Mañas (Mª Carmen Gómez Cabrera as collaborating researcher)
Funding Body: European Commission
Beneficiary Institution: CIBER (Fundación Investigación Hospital Clínico Universitario de Valencia as Third Party)
Duration: 2019-2024
Total Budget: €273.720

Reference: PID2019-110906RB-100
Title: Nuevas intervenciones terapéuticas multidominio para retrasar la fragilidad y la discapacidad. Identificación de mecanismos moleculares con relevancia translacional
Principal Investigator: José Viña Ribes and Consuelo Gómez Cabrera
Funding Body: Ministerio de Economía y Competitividad
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €270.000

Reference: 45/UPB/20
Title: Redes de Investigación en ciencias del deporte: EXERNET. Red de ejercicio físico y salud
Principal Investigator: José Antonio Casajús (Mª Carmen Gómez-Cabrera as collaborating researcher)
Funding Body: Ministerio de Cultura y Deporte
Beneficiary Institution: Universidad de Valencia
Duration: 2021-2022
Total Budget: €8.000

Reference: PROMETEO/2019/097
Title: Diferencias de fragilidad entre géneros: evaluación de biomarcadores y estrategias de intervención
Principal Investigator: José Viña Ribes (Mª Carmen Gómez-Cabrera as collaborating researcher)
Funding Body: Generalitat Valenciana
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total Budget: €189.391

Reference: 0551_PSL_6_E
Title: Ejercicio físico personalizado como intervención para revertir la discapacidad en adultos mayores que viven en residencias (RESIFIT)
Principal Investigator: Mª Carmen Gómez-Cabrera
Funding Body: Fundación General CSIC
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2021
Total Budget: €24.000
Research Group on Epigenomics and Translational Epigenetics

Associated group

**Group members**

**Leading Researcher, R4**
José Luis García Giménez
University. CIBER

**Established Researchers, R3**
Carmela Aguado Velasco. INCLIVA
Nieves Carbonell Monleón. Hospital
Salvador Mena Mollá. University

**First Stage Researcher, R1**
Jesús Beltrán García. INCLIVA
Rebeca Osca Verdegal. INCLIVA

**Strategic aims**
Deepen the characterization of the epigenetic mechanisms that give phenotypic variability in human diseases, and that can give rise to diagnostic and prognostic biomarkers that can be implemented in precision medicine:

- Identification of epigenetic mechanisms and biomarkers in Rare Diseases
- Identification of epigenetic biomarkers in sepsis and neonatal sepsis
- Comprehension of the mechanisms mediating the heterogeneity and complexity of sepsis by generating new organoid models

**Main lines of research**

- Identification of biomarkers for diagnosis, prognosis and monitoring of therapies in sepsis and septic shock
- Identification of molecular mechanisms related to epigenetic dysregulation and oxidative stress in rare diseases
- Artificial intelligence for improved critical-ill patient management using epigenetic biomarkers
- Organoids as models to evaluate tissue damage mediated by circulating histones

**PUBLICATIONS**

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**SELECTED PUBLICATIONS**


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI19/00994
Title: Biomarcadores epigenéticos en sepsis y su implicación en inmunosupresión y futuras comorbilidades en supervivientes
Principal Investigator: José Luis García Giménez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Universidad de Valencia
Duration: 2020-2022
Total budget: €111.320

Reference: INNVA1/2020/85
Title: Valorización, estrategia de protección y transferencia de un método de diagnóstico y pronóstico de la sepsis y el shock séptico
Principal Investigator: José Luis García Giménez
Funding Body: Agencia Valenciana de Innovación
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total budget: €110.670

Title: Identificación de biomarcadores mediante el uso de las òmicas y la Inteligencia Artificial para el diagnóstico y el pronóstico de la sepsis neonatal
Principal Investigator: José Luis García Giménez
Entidad financiadora: Fundación Mutua Madrileña
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021
Total budget: €4,000

THESIS

Thesis title: Búsqueda de MIARNS en fluido crevicular gingival: expresión diferencial en sujetos con periodontitis crónica avanzada
Doctoral candidate: Pedro José Almiñana Pastor
Director(s): José Luis García Giménez, José Vicente Bagán Sebastián, Andrés López Roldán
Date of the defense: 04/03/2021
Grade: Sobresaliente "cum laude"

Thesis title: Influencia de factores epigenéticos en el desarrollo de la escoliosis idiopática del adolescente
Doctoral candidate: Pedro Antonio Rubio Belmar
Director(s): José Luis García Giménez, Teresa Bas Hermida
Date of the defense: 27/05/2021
Grade: Sobresaliente "cum laude"
4.3.4 Reproductive medicine area

Groups
Research Group on Women Health
Research Group on Reproductive Medicine
Research Group on Therapies Against Endometriosis and Endometrial Cancer
Research Group on Maternal Fetal Communication

- Number of articles: 41
- IF: 240.74
- Average IF: 5.871
- National collaborations: 10
- International collaborations: 20
- Corresponding author: 19
- D1: 17
- Q1: 32
- Q2: 2
- First author: 16
- Last author: 23
- Q1: 2
- Q2: 28
- Original articles: 9
- Letters: 2
- Editorial: 1
- Review: 2
- Corrections: 2
scientific activity

Research Group on Women Health
Consolidated group

Group members

Leading Researcher, R4
Antonio Cano Sánchez. Hospital. University
Juan José Tarín Folgado. University

Recognised Researchers, R2
Ana Martínez Aspas. Hospital. University
Celia Bauset Castelló. Hospital
Ester Ortiz Murillo. Hospital
Gemma Arribas Ferriol. Hospital
Irene Zolfaroli. Hospital
Juan José Hidalgo Mora. Hospital

Staff. Collaborating Researchers
Aitana Monllor Tormos. Hospital
Laura Carbonell López. Hospital
Rocío Belda Montesinos. Hospital

Staff. Nurses
Alicia García Vigara. Hospital

Researchers by categories

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Strategic aims

The group is positioned in the field of healthy ageing, particularly in what relates to frailty, where it has collaborated in the support of INCLIVA in the project ADVANTAGE. We have collaborated to position the reference site of the Valencia Region within EIPAHA, the partnership of the European Commission. Moreover, we have participated in the application to different European projects with groups from different European countries, including an application to the Maire Cune grants.

Main lines of research

• In healthy ageing in the female we are continuing our interest on osteoporosis but also have added frailty and functional decline
• There is a new area of interest on the use of ICT to promote women’s health with regard to endometriosis:
  - To analyze the role of microRNA and vascularization regulators and pain mechanisms. Role of the TNF cytokine family
  - To analyze the initial atherogenesis and selective estrogen receptor modulators

PUBLICATIONS

- 16 Number of articles
- IF 58.487
- Average IF 3.655
- 5 National collaborations
- 6 International collaborations
- 5 Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: AC19/00084
Title: Patrones dietéticos en población europea senescente: acercamiento multidisciplinar para combatir las enfermedades metabólicas ligadas a sobrepeso. Proyecto Eurodiet
Principal Investigator: Antonio Cano Sánchez
Funding body: European Commission
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €27,225
Research Group on Reproductive Medicine
Consolidated group

Group members

Leading Researcher, R4
Carlos Simón Vallés
University. IGENOMIX Foundation

Emerging researcher, R2
Aymara Mas Perucho. INCLIVA

Recognised Researchers, R2
Antonio Diez Juan. IGENOMIX Foundation
Beatriz Rosón Burgos. INCLIVA
Carlos Lozano Asencio. IGENOMIX Foundation
Carmen García Pascual. IGENOMIX Foundation
Carmen Rubio Luessa. IGENOMIX Foundation
David Blesa Jarque. IGENOMIX Foundation
Diana Vaibuena Perilla. IGENOMIX Foundation
Inmaculada Moreno Gimeno. IGENOMIX Foundation
Miguel Milán Sánchez. IGENOMIX Foundation
Nandakumar Venkatesan. University
Tamara Garrido Gómez. IGENOMIX Foundation

First Stage Researchers, R1
Alba Machado López. IGENOMIX Foundation
Bruno Tosón. INCLIVA
Claudia Abellán Orihuela. INCLIVA
Irene Muñoz Blat. INCLIVA
Nerea Castillo Marco. IGENOMIX Foundation
Paula Punzón Jiménez. INCLIVA

Researchers by categories

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Researchers financed by competitive public calls or networks

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Staff. Technicians

Marta Gálvez Diezma. IGENOMIX Foundation
Marta Gonzalez Monfort. IGENOMIX Foundation
Roberto Alonso Valero. IGENOMIX Foundation

Strategic aims

• Our activity predominantly involves research in the field of Reproductive Medicine and women’s health, with a particular focus on factors that cause infertility, and other gynecological and obstetric pathologies
• One of our aims is the characterization at single cell resolution of the human uterus, that will provide unprecedented insight at transcriptomic, genomic and spatial changes of this important female organ not only throughout the menstrual cycle but also across lifespan. The comparison in healthy and diseased conditions are also in the scope

Main lines of research

• Adult stem cells in the human endometrium: we have identified the existence of human endometrial stem cells, and we have demonstrated the therapeutic potential of autologous bone marrow CD133+ stem cells in the treatment of non-curable endometrial pathologies such as Asherman’s syndrome or endometrial atrophy
scientific activity

- The embryo viability: nowadays the selection of embryo is based solely on morphological parameters, which doesn’t guarantee its genetic viability. We aim to develop a non-invasive approach based on molecular techniques to identify euploid embryos
- Study of endometrial receptivity and performe the Cell Atlas of the human uterus: we discovered the transcriptomic signature of human endometrial receptivity. Now, we are part of the International Human Cell Atlas initiative to create the first human cell atlas of the uterus
- The endometrial microbiome in human reproduction: our research group has described the existence of the endometrial microbiome and its clinical implications on the reproductive outcome. We investigate the impact of uterine microbiome dysbiosis and its clinical impact
- The maternal implication in the origin of pre-eclampsia: our research has provided evidence that endometrial decidualization resistance is implicated in the origin of this disease. This finding offers a new perspective based on the maternal contribution to gestation, aiming to develop a tool that will diagnose pre-eclampsia
- Molecular diagnosis of myometrial tumors: our previous work has demonstrated the genomic differential characterization of myomas and leiomyosarcomas. We aim to shift the diagnostic and therapeutic focus of uterine leiomyomas and leiomyosarcomas through genomic characterization

Emerging Researcher

Aymara Mas Pericho

The main objective of this research is focused on understanding those factors that contribute to the pathophysiology of myometrial tumors at the molecular level.

PUBLICATIONS

SELECTED PUBLICATIONS

RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: 874867 - HUTER
Title: Human Uterus Cell Atlas
Principal Investigator: Carlos Simón Vallés
Funding Body: European Commission
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €4,118,942.50

Reference: PI20/00942
Title: Desarrollo de un modelo predictivo para el diagnóstico diferencial temprano de leiomiomas y leiomiosarcomas uterinos
Principal Investigator: Aymara Mas Perucho
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total budget: €99,825

Reference: PI19/01659
Title: Análisis transcriptómico a nivel de célula única y tejido endometrial completo del fallo en decidualización presente en pacientes con preeclampsia severa
Principal Investigator: Tamara Garrido Gómez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €93,170

Reference: RTI2018-094946-B-I00
Title: Contribución maternal en la patogénesis de enfermedades gestacionales tardías como la preeclampsia
Principal Investigator: Carlos Simón Vallés
Funding Body: Ministerio de Ciencia, Innovación y Universidades
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total budget: €254,100

Reference: PROMETEO/2018/161
Title: Medicina regenerativa del útero humano: desde la terapia celular a la creación del órgano mediante bioingeniería
Principal Investigator: Carlos Simón Vallés
Funding Body: Conselleria de Educación, Cultura y Deporte
Beneficiary institution: Universidad de Valencia
Duration: 2018-2021
Total budget: €297,066.67

Reference: PI-2021-010
Title: CellStats: Desarrollo de un modelo estadístico para la evaluación de cambios poblacionales en datos transcriptómicos de célula única del endometrio humano
Principal Investigator: Guillermo Ayala Gallego and Beatriz Rosón Burgo
Funding Body: Universidad de Valencia - INCLIVA
Beneficiary institution: Universidad de Valencia - INCLIVA
Duration: 2021-2022
Total budget: €16,150

THESIS

Thesis title: Decidualización defectuosa durante y después de un embarazo con preeclampsia revela la contribución materna en la etiología de la enfermedad
Doctoral candidate: Laura Rubert Torró
Director(s): Alfredo Perales Marín, Carlos Simón Vallés, Tamara Garrido Gómez
Date of the defense: 08/02/2021
Grade: Sobresaliente “cum laude”

Thesis title: Analysis of the endometrial microbiome and its impact on human reproduction
Doctoral candidate: Iolanda García Grau
Director(s): Carlos Simón Vallés, Inmaculada Moreno Gimeno, Jose Remohí Giménez
Date of the defense: 11/06/2021
Grade: Sobresaliente “cum laude”
Research Group on Therapies Against Endometriosis and Endometrial Cancer
Emerging group

Group members

Leading Researcher, R4
Raúl Gómez Gallego
University

Recognised Researcher, R2
Miguel Ángel Tejada Giráldez. INCLIVA

First Stage Researchers, R1
Ana Isabel Santos Llamas. INCLIVA
Víctor Rodríguez García. University

Strategic aims

• To refine the development of homologous and heterologous animal models initiated in the laboratory so that they allow to reproduce endometriosis in a more physiological way, reflecting the pain and infertility associated with it in order to achieve greater transferability of the findings in these to the clinic
• On these optimized endometriosis animal models, evaluate whether immunomodulatory compounds, such as those currently marketed for clinical use in the non-hormonal treatment of osteoporosis, are effective in the remission of pain as well as in the improvement of fertility
• To narrow down the molecular mechanisms involved in improving the parameters under study in order to refine therapeutic targets
• To evaluate the clinical feasibility of early non-invasive diagnosis of endometriosis through the combined analysis of multiple biomarkers

Main lines of research

• Dysregulation of the angiogenic component in the appearance and maintenance of endometriosis
• Development of animal models of pain and infertility associated with endometriosis and testing of the therapeutic role of immunomodulators in them
• Early non-invasive diagnosis of endometriosis through combined analysis of multiple biomarkers

PUBLICATIONS

5 Number of articles
27.506 IF
5.501 Average IF
2 National collaborations
1 International collaborations
1 Corresponding author
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI20/01835
Title: Evaluación del potencial papel terapéutico de la inhibición de RANK en modelos optimizados de dolor e infertilidad asociados a endometriosis
Principal Investigator: Raúl Gómez Gallego
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2023
Total budget: €98,010

Reference: PI17/02329
Title: Papel de los agonistas dopaminérgicos en el dolor e infertilidad asociados a endometriosis en modelos animales de nueva generación
Principal Investigator: Raúl Gómez Gallego
Funding body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2018-2021
Total budget: €111,320

Reference: FIPSE 3724-20
Title: Diagnóstico precoz no invasivo de endometriosis mediante análisis de nuevos biomarcadores a través de machine learning
Principal Investigator: Raúl Gómez Gallego
Funding body: Fundación para la Innovación y Prospectiva en Salud en España FIPSE
Beneficiary institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2021
Total budget: €30,000
Research Group on Maternal Fetal Communication
Emerging group

Group members

**Leading Researcher, R4**
Felipe Vilella Mitjana. IGENOMIX Foundation. INCLIVA

**Established Researcher, R3**
Francisco Raga Baixauli. Hospital. University

**Recognised Researcher, R2**
David Bolumar Recuero. University

**First Stage Researcher, R1**
Javier González Fernández. University

**Staff. Technician**
Ana Ochando Fernández. IGENOMIX Foundation

Researchers by categories

- R1: 1
- R2: 1
- R3: 1
- R4: 1
- STAFF: 1

Researchers financed by competitive public calls or networks

- R1: 1
- R4: 1

**Strategic aims**

- Project origin of diseases: functional capacity of miRNAs secreted into endometrial fluid in obese and type 2 diabetic patients to determine if they are capable of modifying mouse embryos transcriptomically and/or epigenetically
- Project Transcriptomic and epigenetic modifications in human embryos: obtain the target genes of miRNA miR-30d in human embryos to have a list of regions potentially susceptible to methylation. These regions will be used to design the PCRs of the bisulfite regions by miSeq sequencing
- Project Function of DNA and RNA contained in extracellular vesicles secreted by the human endometrium on the pre-implantation embryo: it has been described that the endometrial fluid is secreted by a series of populations of extracellular vesicles [apoptotic bodies, microvesicles and exosomes] that represent a conveyance. We propose that these vesicles contain biomolecules of different natures, specifically focusing on the different types of RNAs and DNA, and that their composition in these chemical species varies throughout the menstrual cycle and depending on the subpopulation of vesicles that is analyzed

**Main lines of research**

- Study of endometrial receptivity, search for new minimally invasive methods for predicting endometrial receptivity
- Maternal-Fetal Communication

**PUBLICATIONS**

- Number of articles: 3
- IF: 22.908
- Average IF: 7.636
- National collaborations: 1
- International collaborations: 2
- Corresponding author: 1
SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: 874867 - HUTER
Title: Human Uterus Cell Atlas
Principal Investigator: Carlos Simón Vallés (Felip Vilella Mitjana as collaborating researcher)
Funding Body: European Commission
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €4,118,942.50

Reference: PI18/00957
Title: Función del ADN y ARN contenido en vesículas extracelulares secretadas por el endometrio humano sobre el embrión pre-implantatorio
Principal Investigator: Felip Vilella Mitjana
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €135,520
4.3.5 Associated Clinical Groups

Group
Research Group in Care. INVESTENF-INCLIVA

- Number of articles: 7
- IF: 26,068
- Average IF: 3,724
- National collaborations: 6
- International collaborations: 0
- Corresponding author: 1
- First author: 0
- Last author: 1

- D1: 0
- Q1: 3
- Q2: 2
- Original articles: 4
- Reviews: 3
- Corrections: 2
scientific activity

Research Group on Research in Care. INVESTENF-INCLIVA
Clinical Associated group

Group members

Leading Researcher, R4
Mª José Gastaldo Zaragozá. Hospital

Recognised Researchers, R2
Antonio Martínez Sabater. Hospital. University
Iván Julián Rochina. Hospital. University
Montserrat Carabate Ros. Hospital. University
Pablo García Molina. University

First Stage Researcher, R1
Evelín Balaguer López. Hospital. University

Staff. Nurses
Adán Álvarez Ordiales. Hospital. University
Ana Bela Espinosa Briones. Hospital
Ana Gancedo Herrero. Hospital
Concepción Mateo Orrios. Hospital
Eva María Pérez Lafuente. Hospital
Laura Pla Marzo. INCLIVA
Mª Ángeles Montal Navarro. University
Mª Carmen Barberá Ventura. Hospital
Mª Carmen Rodríguez Dolz. Hospital. University
Mª Concepción Rodrigo Ruiz. Hospital
Mª Dolores Cantero López. Hospital
Mª Gabriela Chova Mallent. Hospital
Mª Jesús Zafra Pirés. Hospital
Mª Luisa Muñoz Illescas. Hospital
Mª Pilar Bernabéu Adrián. Hospital
Mª Victoria Orejón Lagunas. Hospital
Mireia Sánchez Morcillo. Hospital
Nuria Garrido Zafra. Hospital
Sonia Mora Navarro. Hospital

Staff. Technician
David Palanca Broseta. Hospital

Strategic aims

• Contribute with scientific nursing evidence to improve pediatric nursing care
• Conduct research in pediatric nursing to disseminate new knowledge
• Work for the Quality and Safety of pediatric nursing care

Main lines of research

• Child and adolescent health care
• Skin care and skin integrity
• Mental Health Care
• Care in aging, fragility and chronicity
scientific activity

PUBLICATIONS

- **Number of articles**: 10
- **Average IF**: 35.767
- **IF 3.576**: 8
- **National collaborations**: 2
- **International collaborations**: 2
- **Corresponding author**: 2

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

- **Reference**: AP-2021-015
- **Title**: VISUALSKIN: Diseño de dispositivo clínico para la evaluación del riesgo de lesión en la piel en personas encamadas o usuarias de silla de ruedas
- **Principal Investigator**: Julio Martos Torres and Pablo García Molina
- **Funding Body**: Universidad de Valencia - INCLIVA
- **Beneficiary institution**: Universidad de Valencia - INCLIVA
- **Duration**: 2021-2022
- **Total Budget**: €4.750
4.4 Hospital division research area

Groups
Department of Anesthesiology
Department of Biochemistry and Clinical Analysis
Arrhythmia and Cardiac Pacing Unit
Department of Cardiology
Department of Cardiovascular Surgery
Department of Dentistry
Department of Dermatology
Department of Digestive Medicine
Department of Endocrinology
Department of Family and Community Medicine
Department of General Surgery
Department of Gynecology and Obstetrics
Department of Hematology and Hemotherapy
Department of Home Hospitalization
Department of Infectious Diseases
Department of Intensive Medicine
Department of Internal Medicine
Department of Maxillofacial Surgery
Department of Medical Emergency
Department of Medical Oncology
Department of Microbiology
Department of Nephrology
Department of Neurology
Department of Neurosurgery
Department of Nuclear Medicine
Department of Ophthalmology
Department of Otorhinolaryngology
Department of Pathological Anatomy
Department of Pediatric Surgery
Department of Pediatrics
Department of Pharmacy
Department of Plastic Surgery
Department of Psychiatry
Department of Radiologic Diagnosis
Department of Radiotherapy
Department of Rehabilitation
Department of Thoracic Surgery
Department of Traumatology and Orthopedic Surgery
Department of Urology
Teaching and Dissemination of Knowledge Unit
scientific activity

- Number of articles: 232
- IF: 1157.404
- Average IF: 4.988
- National collaborations: 123
- International collaborations: 42
- Corresponding author: 48
- D1: 28
- Q1: 99
- Q2: 38
- First author: 66
- Last author: 41
- Original articles: 179
- Letters: 16
- Editorial: 12
- Review: 19
- Case reports: 8
- Corrections: 3
scientific activity

Department of Anesthesiology

Strategic aims

• The effects of advanced monitoring and drugs on hemodynamic management in patients undergoing surgery
• Open Lung Approach for the Acute Respiratory Distress Syndrome
• Study and development of methods of detection of infections
• Development of new strategies and drugs for pain treatment

Main lines of research

• Oxidative stress and protection of organs in ischemia-reperfusion surgery
• Ventilatory and pharmacological strategies to decrease organ damage in the lungs associated with mechanical ventilation in healthy and injured lungs
• Development of hemodynamic monitoring and its application in the field of patients undergoing surgery or admitted to critical care units
• Study and development of methods of detection of infections, especially fungal and virological, and how to prevent them
• Study and development of therapeutic drug monitoring (TDM) to describe antimicrobials pharmacokinetics (PK) and determination of minimum inhibitory concentration (MIC)
• Development of new strategies and drugs for pain treatment
• Development of new strategies and monitoring for Traumatic Brain Injury

PUBLICATIONS

SELECTED PUBLICATIONS


Department of Biochemistry and Clinical Analysis

Strategic aims

Development of strategies for laboratory test requesting appropriateness with electronic request system in online communication with the Medical Services of the Clínico-Malvarrosa Health Department

Main lines of research

- Group-specific: managing laboratory test requests and patient safety through electronic requests
- Laboratory Service staff research is carried out in collaboration collaboration with the following clinical research groups:
  - Clinical Cardiology (ischemic heart disease and heart failure), Cardiometabolic Risk and Diabetes [lipid metabolism and insulin resistance]
  - Clinical Hematology (Minimal Residual Disease)
  - Infant Gastroenterology (Inflammatory Bowel Disease)
  - Public Health and Digestive System (Stratification of the priority of colonoscopy using the SOH test in the Colorectal Cancer Screening Program)

PUBLICATIONS

SELECTED PUBLICATIONS


scientific activity

Arrhythmia and Cardiac Pacing Unit

Strategic aims

- Our Unit has received the Excellence Credit in the Program “Atrial Fibrillation Ablation” from the Spanish Society of Cardiology
- The multicentre project “Left atrial geometry and outcome in atrial fibrillation ablation, LAGO-AF” has been concluded. First results have been published

Main lines of research

- Collaboration in the national prospective observational study on Crioballoon ablation of atrial fibrillation (RECABA)
- Leading and Collaboration in the registry on sleep alterations in patients with pacemakers
- Leading a multicenter prospective study on ablation of typical atrial flutter without radioscopy and guided by electrogram amplitudes

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI-2021-015
Title: RECONST_ECG: Evaluación del proceso de reconstrucción de un electrocardiograma de 12 derivaciones a partir de 3 en condiciones ambulatorias
Principal Investigator: Javier Calpe Maravillas and Ricardo Ruiz Granell

Funding Body: Universidad de Valencia - INCLIVA
Beneficiary Institution: Universidad de Valencia - INCLIVA
Duration: 2021-2022
Total Budget: €8,712

Department of Cardiology
PUBLICATIONS

SELECTED PUBLICATIONS


### Department of Cardiovascular Surgery

**PUBLICATIONS**

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**SELECTED PUBLICATIONS**


### Department of Dentistry

**PUBLICATIONS**

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**SELECTED PUBLICATIONS**

Department of Dermatology

Strategic aims

- To continue making a biobank of melanoma patients

Main lines of research

- Melanocytic tumors. Malignant Melanoma: study of cytokines involved in tumor growth
- Hemangiomas
- Contact dermatitis
- Alopecia
- Psoriasis: application of new molecules in treatment

PUBLICATIONS

- Number of articles: 40,851
- Average IF: 2.723
- National collaborations: 5
- International collaborations: 0
- Corresponding author: 9

SELECTED PUBLICATIONS


Department of Digestive Medicine

Strategic aims

- Update of protocols and clinical guidelines of the Department
- It has been possible to consolidate the relationship of the Unit of Inflammatory Bowel Disease of our Department with the network of National Units, through collaborative studies that have been published in international journals of category Q1 and Q3
Main lines of research

- On the section of gastroenterology, to continue the studies on digestive hemorrhage, acute pancreatitis, inflammatory bowel disease, motion sickness and digestive benign anorectal pathology
- On the hepatology division to continue the analysis of hepatic encephalopathy, the nonalcoholic, epidemiological, therapeutic and immunoprophylaxis on Hepatitis Virus steatohepatitis. Also hepatocellular damage and nitric oxide and liver tumors
- About endoscopy division: study on the therapeutic dilatation, the ecoendoscopia diagnostics and therapeutics, ampulectomia, diverticulotomy of Zencker and digestive prostheses

PUBLICATIONS

16
Number of articles
95.781
IF
Average IF 5.986
10
National collaborations
1
International collaborations
2
Corresponding author

SELECTED PUBLICATIONS


**SELECTED PUBLICATIONS**

scientific activity

Department of Family and Community Medicine

PUBLICATIONS

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SELECTED PUBLICATIONS

1. Huerta O, Cubero I, Gutierrez A, Gonzalez M. Does primary care intervention have an impact in the place of death for patients in a palliative care program?. Atencion Primaria. 2021

Department of General Surgery

PUBLICATIONS

<table>
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SELECTED PUBLICATIONS


Department of Gynecology and Obstetrics

PUBLICATIONS

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</table>

SELECTED PUBLICATIONS


Department of Hematology and Hemotherapy

Strategic aims

• To maintain translational research in the lines prioritized: Myeloid Neoplasms, Lymphoid Neoplasms, Coagulopathies, Stem Cell Transplant and Cellular Therapy
• To favor the research collaboration between clinical hematologists and basic investigators
• To develop research projects using experimental models (for GvHD, and Advanced Therapies)
• To increase the number of clinical trials and research projects in Advanced Therapies
• To develop Cellular Therapies in the laboratory throughout collaboration with the Department of Pharmacy and the INCLIVA-IIS La Fe-Centro de Transfusiones CV consortium
• To enhance new research lines in Thrombophilia, Coagulopathies and Thrombopathies
• To improve the impact factor in publications resulting from our research and cooperative projects

Main lines of research

• Hematopoietic Transplantation and Cellular Therapy
• Lymphoproliferative Disorders
• Myeloid Neoplasms
• Hemostasis and Thrombosis

PUBLICATIONS

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</table>
SELECTED PUBLICATIONS


Department of Home Hospitalization

PUBLICATIONS

1 Number of articles
IF 1.137

Average IF 1.137

1 National collaborations
0 International collaborations
0 Corresponding author

SELECTED PUBLICATIONS

1. Huerta O, Cubero I, Gutierrez A, Gonzalez M. Does primary care intervention have an impact in the place of death for patients in a palliative care program?. Atencion Primaria. 2021

Department of Infectious Diseases

PUBLICATIONS

2 Number of articles
IF 5.386

Average IF 2.693

1 National collaborations
0 International collaborations
0 Corresponding author

SELECTED PUBLICATIONS


Department of Intensive Medicine

Main lines of research

- Plasma histones and septic shock. Immunosuppression in Critical Patient
- Local ICU epidemiology. Multiresistant bacteria surveillance
- COVID19 pneumonia. Severe ARDS
- Bacterial and opportunistic co-infections in a patient with severe COVID19 pneumonia
- Benefit of corticosteroids in the Severe ARDS
- Severe community pneumococcal fine IV-V pneumonia

PUBLICATIONS

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SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI19/00994
Title: Biomarcadores epigenéticos en sepsis y su implicación en inmunosupresión y futuras comorbilidades en supervivientes
Principal Investigator: José Luis García Giménez [José Ferreres and Ainhoa Lázaro as collaborating researchers]
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2022
Total budget: €111,320

Reference: PID2019-108973RB-C22
Title: Metabolomic study of mechanism for Se-related diabetes and insulin resistance
Principal Investigator: Daniel Monleón Salvadó [Mónica García Simón as collaborating researcher]
Funding Body: Ministerio de Ciencia e Innovación
Beneficiary Institution: Universidad de Valencia
Duration: 2020-2023
Total budget: €181,500

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Diagnóstico de infección por clostridioides difficile mediante análisis de metaboloma fecal
Principal Investigator: Rosa Oltra Sempere
Funding Body: Sociedad Valenciana de Medicina Interna
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €3,000
## Scientific Activity

### Department of Maxillofacial Surgery

#### Strategic Aims
- Innovation in personalised prosthesis for maxillofacial reconstruction
- Traslational research project for the development of implants with high added value through additive manufacturing
- Innovation in throat pack

#### Main Lines of Research
- Cost-effectiveness analysis on the management of oral surgery processes in patients with severe dependence and/or pluryphathological chronicles with comorbidities: proposal for a new organizational model of care
- Radiological evaluation of predictive factors of access to pterygopalatine fossa
- Research on materials involved in bone regeneration
- Research on materials involved in nerve repair
- Project: Mandibular Condylar Hyperplasia: Impact of Bone SPECT on Therapeutic Decision. Proposal of a decision algorithm

### Publications

#### SELECTED PUBLICATIONS


### Department of Medical Emergency

#### Publications

#### SELECTED PUBLICATIONS

scientific activity


THESIS

Thesis title: Study of the microRNA expression profile dysregulation by hydrogen on the retinal pigment epithelium cells: role of MIR-205-5P

Doctoral candidate: María Oltra Sanchis

Director(s): Jorge Miguel Barcia González, Francisco Javier Romero Gómez

Date of the defense: 27/01/2021

Grade: Sobresaliente “cum laude”

Quality recognition/Award: European PhD

Department of Medical Oncology

PUBLICATIONS

SELECTED PUBLICATIONS


Department of Microbiology

**Strategic aims**

- We have identified rotavirus and norovirus genotypes infecting populations studied in Valencia during recent years
- We have characterized the most common phenotypes of histo-blood antigens (secretory, Lewis and ABO antigens) in children infected with rotavirus
- Isolation in culture of human enteroids from norovirus strains

**Main lines of research**

- Phylogenetic analysis of polymerase and capsid genes sequences of norovirus strains in patients with acute gastroenteritis and chronic infections in immunocompromised patients
- Study of association between histo-blood antigens (HBGA) of patients infected with different rotavirus and norovirus genotypes
- Anti-adhesive effect of human milk oligosaccharides against rotavirus and norovirus
- Human norovirus replication in enteroids

**PUBLICATIONS**

- Number of articles: 115.573
- IF: 4.445
- Average IF: 2
- National collaborations: 15
- International collaborations: 0
- Corresponding author: 2

**SELECTED PUBLICATIONS**


scientific activity

THESIS

Thesis title: Vigilancia de la susceptibilidad antibiótica y caracterización genotípica de aislados de Neisseria Gonorrhoeae en la Comunidad Valenciana: proyecto multicéntrico GONOvig

Doctoral candidate: Aleix Borja Fabregat Bolufer

Director[s]: Javier Colomina Rodríguez

Date of the defense: 26/02/2021

Grade: Sobresaliente “cum laude”

Thesis title: Desarrollo de un dispositivo médico tipo “point of care” para la detección rápida de infección urinaria y sensibilidad antibiótica en países en vías de desarrollo

Doctoral candidate: Jorge Jover García

Director[s]: Javier Colomina Rodríguez

Date of the defense: 12/03/2021

Grade: Sobresaliente “cum laude”

Department of Nephrology

Strategic aims

- To work together with cardiology Department in order to explore new developments in treatment of cardio-renal syndrome by peritoneal dialysis
- Diabetic kidney disease: risk factors and progression. Diabetic kidney disease in dialysis patients
- To analyze risk factors for developing hyperkalemia and the adherence to the current treatments
- To establish the picture of the renal problems detected in Oncology and Hematology patients: kidney damage in the oncologic patients
- To analyze the incidence of acute kidney injury in hospitalized patients

Main lines of research

- Treatment of cardio-renal syndrome by peritoneal dialysis
- Diabetic kidney disease and chronic kidney disease: risk factors and progression and proteinuria development. Diabetic kidney disease in dialysis patients
- Hyperkalemia and chronic kidney disease
- Onco-nephrology: kidney damage in the oncologic patient
- Biomarkers of acute kidney injury

PUBLICATIONS

28
Number of articles

IF 168.082

Average IF 6.002

14
National collaborations

12
International collaborations

8
Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Comparación de dos tipos de dializadores (PMMA vs. Polisulfona) sobre la extracción de citocinas en pacientes en hemodiálisis con infección por COVID 19. Estudio prospectivo
Principal Investigator: Mª Jesús Puchades Montesa
Funding Body: Sociedad Valenciana de Nefrología
Beneficiary Institution: Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €3.500

Title: Estudio longitudinal, randomizado, cruzado sobre el efecto del uso de I-SGLT2 en la diuresis, natriuresis y en la ultrafiltración peritoneal en pacientes con diálisis peritoneal
Principal Investigator: Marco Montomoli
Funding Body: Sociedad Valenciana de Nefrología
Beneficiary Institution: Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €3.500

Reference: BCM-PD-02-INT
Title: Iniciativa sobre la evolución de los pacientes con Diálisis-DP
Principal Investigator: Alfonso Miguel Carrasco (Miguel González Rico and Mª Jesús Puchades Montesa as collaborating researchers)
Funding Body: Fresenius medical care
Beneficiary Institution: Hospital Clínico Universitario de Valencia
Duration: 2015-2021
Total Budget: €2,940
scientific activity

Department of Neurology

PUBLICATIONS

SELECTED PUBLICATIONS


Department of Neurosurgery

PUBLICATIONS

SELECTED PUBLICATIONS


THESIS

Thesis title: Exposición de la oliva bulbar mediante los abordajes FAR lateral y retrosigmoideo bajo. Análisis comparativo de la superficie expuesta y ángulo de ataque
Doctoral candidate: Pau Capilla Guasch
Date of the defense: 02/07/2021
Grade: Sobresaliente "cum laude"

Thesis title: Estudio biomecánico y correlación clínica de los sistemas de artrodesis cervical anterior caja-placa
Doctoral candidate: Félix Pastor Escartín
Date of the defense: 24/09/2021
Grade: Sobresaliente "cum laude"

Department of Nuclear Medicine

Strategic aims

• Comparison of low energy and medium energy collimators in the quantitative assessment of 123I-MIBG cardiac sympathetic innervation imaging
• Quantitation vs visual assessment of 99mTc-DPD cardiac uptake in patients with suspected cardiac amyloidosis
• Evaluation of left ventricular dysynchrony by Gated SPECT myocardial perfusion in the evaluation of cardiac resynchronization therapy
• Radioguided surgery by intraoperative scintigraphy with portable gamma camera in patients with primary hyperparathyroidism and not conclusive pre-surgical scintigraphy

Main lines of research

• Radioguided occult lesion localization of pulmonary nodules in video-assisted thoracic surgery
• Sentinel Lymph Node detection in patients with breast cancer and positive axillary Lymph Node after neoadjuvant chemotherapy
• Evaluation of left ventricular dyssynchrony by Gated SPECT myocardial perfusion in patients with cardiac resynchronization therapy
• Response assessment at one year after 131I treatment in patients with grave’s disease and multinodular goiter
• Diagnosis and follow-up of hyperplasia of the mandibular condyles by bone SPECT
## PUBLICATIONS

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## SELECTED PUBLICATIONS


## Department of Ophthalmology

### PUBLICATIONS

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### SELECTED PUBLICATIONS


### Thesis

**Thesis title:** Análisis cuantitativo, mediante OCT y Angio-OCT, del grosor corneal y flujo vascular retiniano y su relación con el espesor de las capas de fibras nerviosas y células ganglionares maculares en pacientes con Esclerosis Múltiple

**Doctoral candidate:** Marta Cerdá Ibáñez

**Director(s):** Antonio Miguel Duch Samper, Laura Manfreda Dominguez

**Date of the defense:** 27/10/2021

**Grade:** Sobresaliente “cum laude”

### Department of Otorhinolaryngology

#### Strategic aims
- Publication of the results of the clinical trial of the Osia transcutaneous osseointegrated implant in mixed hypoacusia
- Completion of the study of the results of unilateral cochlear implantation with the Oticon Neuro System implant

#### Main lines of research
- Experience of using a Nadia Link Cros device compared to Nadia CI in users of unilateral cochlear implants
- Publication of the study of the results of unilateral cochlear implantation with the Oticon Neuro System implant
- Oticon Medical Ponto Osteintegrated Implant Clinical Results

### Publications

#### SELECTED PUBLICATIONS


Department of Pathological Anatomy

PUBLICATIONS

SELECTED PUBLICATIONS


Department of Pediatric Surgery

PUBLICATIONS

1 Number of articles
IF 1.5
Average IF 1.5
1 National collaborations
0 International collaborations
0 Corresponding author

SELECTED PUBLICATIONS


Department of Pediatrics

PUBLICATIONS

15 Number of articles
IF 50,961
Average IF 3.397
8 National collaborations
1 International collaborations
4 Corresponding author

SELECTED PUBLICATIONS


**Funding Body:** Agencia Valenciana de la Innovación-AVI Generalitat Valenciana

**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia

**Duration:** 2021-2023

**Total Budget:** €107,904,85

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**RESEARCH PROJECTS AND GRANTS FOR RESEARCH**

**Title:** Sistema inteligente de apoyo a la toma de decisiones clínicas en medicina de precisión

**Principal Investigator:** Jaime Verdú Amorós

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**Department of Pharmacy**

**Strategic aims**

- Implementation of a new therapeutical drug monitoring system in a clinical analytical laboratory for pharmacokinetic control of antibiotic, antifungal and antineoplastic agents in the hospitalized patient, with the aim of optimal and rational use of pharmacological treatment
- Study of pharmacokinetics of caspofungin in patients under hemodialfiltration. Study approved by the Agencia Española del Medicamento y Productos Sanitarios with code MERCAS-2013-01
- Observational Study of population pharmacokinetic model of voriconazole in allogeneic stem cell transplantation. Study approved by the Agencia Española del Medicamento y Productos Sanitarios with code CSV-VOR-2014-01
- Study of pharmacokinetics of Ceftolozane in critical patients. Study pending of approval by the Agencia Española del Medicamento y Productos Sanitarios with code CEFT-TCRR-2017
- Study of Physico-chemical stability of a new mycophenolate mofetil intravenous solution in polypropylene infusion bag at different storage conditions
- Study of Physico-chemical stability of a new ophthalmic eyedrop formulation at different storage conditions

**Main lines of research**

- Implementation of a new therapeutical drug monitoring system in a clinical analytical laboratory for pharmacokinetic control of antibiotic, antifungal and antineoplastic agents in the hospitalized patient, with the aim of optimal and rational use of pharmacological treatment
- Study of pharmacokinetics of caspofungin in patients under hemodialfiltration. Study approved by the Agencia Española del Medicamento y Productos Sanitarios with code MERCAS-2013-01
- Observational Study of population pharmacokinetic model of voriconazole in allogeneic stem cell transplantation. Study approved by the Agencia Española del Medicamento y Productos Sanitarios with code CSV-VOR-2014-01
- Study of pharmacokinetics of Ceftolozane in critical patients. Study pending of approval by the Agencia Española del Medicamento y Productos Sanitarios with code CEFT-TCRR-2017
- Study of Physico-chemical stability of a new mycophenolate mofetil intravenous solution in polypropylene infusion bag at different storage conditions
- Study of Physico-chemical stability of a new ophthalmic eyedrop formulation at different storage conditions
- Dosing of caspofungin based on a pharmacokinetic/pharmacodynamic index for the treatment of invasive fungal infections in critically ill patients on continuous venovenous haemodiafiltration
- Cost effectiveness analysis of direct-acting antiviral therapy for treatment of patients with chronic HCV infection
scientific activity

PUBLICATIONS

Number of articles: 2
IF: 7.547
Average IF: 3.773

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Impact of continuous veno-venous hemodiafiltration on dosing of antibiotics in critically ill patients
Principal Investigator: Rafael Ferriols Lisart (Carlos Ezquer Garín as collaborating researcher)
Funding Body: Janssen - Cilag S.A.
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021
Total Budget: €22,500

Department of Plastic Surgery

PUBLICATIONS

Number of articles: 1
IF: 2.851
Average IF: 2.851

SELECTED PUBLICATIONS


Department of Psychiatry

PUBLICATIONS

Number of articles: 4
IF: 11.249
Average IF: 2.812

SELECTED PUBLICATIONS


**SELECTED PUBLICATIONS**


**THESIS**

**Thesis title:** Hospitalización Domiciliaria en Salud Mental: eficacia y viabilidad

**Doctoral candidate:** Elvira Ferrando Aparicio

**Director[s]:** Eduardo Jesús Aguilar García Iturrospe, Francisca Silvestre Pascual

**Date of the defense:** 07/07/2021

**Grade:** Sobresaliente "cum laude"

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**Department of Radiologic Diagnosis**

**Main lines of research**

- To participate in clinical trials with Hematology and Oncology Departments by performing CT and/or biopsies to check inclusion of patients in new chemotherapy treatments
- To evaluate cerebral reperfusion syndrome after treatment of carotid stenosis by stent
- To study gastric pre-oesophagectomy conditioning to reduce the incidence of dehiscence of sutured anastomoses

**PUBLICATIONS**

- **Number of articles**: 5
  - **IF**: 22.664
  - **Average IF**: 4.532
  - **National collaborations**: 3
  - **International collaborations**: 0
  - **Corresponding author**: 0

**SELECTED PUBLICATIONS**


**DEPARTMENT OF RADIOThERAPY**

**PUBLICATIONS**

![Number of articles](image1)

**IF**

5.923

**Average IF**

5.923

**National collaborations**

0

**International collaborations**

0

**Corresponding author**

1

**SELECTED PUBLICATIONS**


**DEPARTMENT OF REHABILITATION**

**PUBLICATIONS**

![Number of articles](image2)

**IF**

4.342

**Average IF**

4.342

**National collaborations**

1

**International collaborations**

0

**Corresponding author**

0

**SELECTED PUBLICATIONS**

scientific activity

Department of Thoracic Surgery

Strategic aims
- Tracheal tissue bioengineering

Main lines of research
- Tracheal tissue bioengineering
- Rare diseases
- Endoscopic VATS resections
- Fast track pulmonary surgery and ERAS project

PUBLICATIONS

SELECTED PUBLICATIONS

Department of Traumatology and Orthopedic Surgery

Strategic aims
- Non-invasive image in orthopedics
- Mechanisms of inflammation and oxidative stress in bone pathologies
- New systems of fixation of prostheses applied to Traumatology

Main lines of research
- Cellular oxidative stress and its relationship with idiopathic femoral osteonecrosis
- Sequentiality of muscle contraction: importance in early detection of lumbopelvic, cervical and shoulder girdle dysfunction
- Diagnosis and monitoring of the diabetic foot using infrared thermography
- Cellular mechanisms to regulate inflammatory response in chronic inflammatory diseases
- Protection strategies against osteoarticular deterioration
- Robotics for precision in orthopedic reconstructive surgery
- Rehabilitation to improve outcomes after total knee arthroplasty prospective randomized study
- Local mechanical stimulation of mesenchymal cells for osteogenic and chondrogenic differentiation in regenerative medicine
scientific activity

PUBLICATIONS

5 Number of articles
IF 19.6
Average IF 3.92
3 National collaborations
0 International collaborations
1 Corresponding author

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: DTS18/00177
Title: Desarrollo de un nuevo sistema de fijación intramedular para implantes (prótesis, clavos para fracturas y exoprótesis)
Principal Investigator: Antonio Silvestre Muñoz
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total Budget: €99,500

Title: Evaluación de la eficiencia de la metodología para el seguimiento de pacientes con prótesis de rodilla
Principal Investigator: Antonio Silvestre Muñoz
Funding Body: Fundación Mutua Madrileña
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total Budget: €65,000

Department of Urology

Strategic aims

- Study the use of metabolics in urine and tissue in patients with prostate cancer
- Study the use of perform biopsy liquid in bladder cancer using digital PCR
Main lines of research

- Usefulness of metabolomic analysis in the diagnosis and prognosis of prostate cancer: it involves performing a metabolomic analysis of urine and prostate tissue in patients with prostate cancer. The purpose is to define a metabolomic profile that allows establishing a diagnostic suspicion after urinalysis, as well as evaluating the metabolomic profile of prostate tumor tissue. In addition to evaluating its diagnostic utility, its prognostic capacity will be evaluated in patients with prostate cancer.

- Liquid biopsy in bladder cancer. The aim is to detect the presence of a certain genetic profile in patients with bladder cancer and to see its diagnostic correlation, as well as the correlation with grade and stage. Preliminary analysis.

PUBLICATIONS

SELECTED PUBLICATIONS


THESIS

Thesis title: Adhesión a las guías clínicas para el screening del cáncer de próstata en atención primaria e identificación de áreas de mejora

Doctoral candidate: Celia Juliá Romero

Director(s): Joaquín Ulises Juan Escudero, Cristina Doménech Pérez

Date of the defense: 15/07/2021

Grade: Sobresaliente “cum laude”
Teaching and Dissemination of Knowledge Unit

PUBLICATIONS

SELECTED PUBLICATIONS


RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: PI18/01937
Title: Desigualdades por genero derivadas de la inercia diagnostica en los factores mas prevalentes de riesgo cardiovascular: un estudio de cohortes de base poblacional (ESCAARVAL GENERO)
Principal Investigator: José Maria Martín Moreno
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total budget: €33,880

THESIS

Thesis title: Ganancia de peso gestacional: adecuación de recomendaciones en población gestante de la Comunidad Valenciana
Doctoral candidate: María Faus García
Director(s): José María Martín Moreno, Rafael Vila Candel
Date of the defense: 20/01/2021
Grade: Sobresaliente “cum laude”
4.5 Other scientific contributions from scientific platforms

4.5.1 Biobank

**Team**


Collaborating researchers:
Lorena Peiró Chova. INCLIVA

**Technicians**

biobanco@incliva.es

Olga Bahamonde Ponce. INCLIVA

Àngela Bañuls Alemany. INCLIVA

Laura Blasco Maza. INCLIVA

Marta Belda Moscardó. INCLIVA

**ACTIVITIES DEVELOPED**

**Incorporation of samples in pre-existing collections within the biobank regime in 2021:**

**Oncological Node:**
- Collection of solid tumors: 54 new sample donations
- Collection of peripheral blood and derivative products in patients suffering from breast cancer (including cases of Aurk-Seom project): 242 new sample donations
- Collections of peripheral blood and derivative products in patients suffering from lung cancer: 219 new sample donations
- Collection of peripheral blood and derivative products in patients suffering from melanoma: 5 new sample donations
- Collection of peripheral blood and derivative products in patients suffering from gastrointestinal cancer (including colorectal, pancreatic and gastric cancer, and cases of TFK project): 1202 new sample donations
- Collection of peripheral blood and derivative products in patients suffering from head and neck tumors: 279 new sample donations
- Collections of peripheral blood and derivative products in patients suffering from brain tumors: 12 new sample donations
- Collections of peripheral blood and derivative products in patients suffering from gynecological tumors (including cases of Aurk-Seom project): 39 new sample donations
- Collections of peripheral blood and derivative products in patients suffering from sarcoma: no new sample donations
- Collections of peripheral blood, derivative products and urine in patients suffering from bladder cancer: 16 new sample donations

**Immunological Diseases Node:**
- Collection of peripheral blood and derivative products in patients suffering from Systemic Lupus Erythematosus or other autoimmune diseases: 12 new sample donations

**Cardiovascular Node:**
- Collection of peripheral blood and derivative products and urine in patients suffering from Hyperaldosteronism: no new sample donations
- Collection of peripheral blood and derivative products in patients suffering from Hypertension: no new sample donations
- Collection of peripheral blood and derivative products and urine in patients suffering from Acute heart failure: 97 new sample donations
- Collection of peripheral blood and derivative products and urine in patients suffering from Heart failure: 2 new sample donations

**Endocrinology Node:**
- Collection of peripheral blood and derivative products and urine in patients suffering from endocrine diseases (DM1, DM2 and controls): 69 new sample donations

**Other collections:**
- Collection of peripheral blood and derivative products in patients suffering from sepsis gravis and septic shock from ICU: 26 new sample donations
- Collection of peripheral blood and derivative products in patients suffering from Multiple Esclerosis: no new cases
- Collection of peripheral blood and derivative products in patients suffering from Multiple Esclerosis: no new cases
- Collection of peripheral blood and derivative products and urine in patients suffering from COVID-19 disease: no new cases
- Collection of peripheral blood and derivative products in patients suffering from Pulmonary Emphysema disease: 263 sample donations

**Incorporation of new collections within the biobank regime in 2021:**
- Endocrine Disease Controls subcollection: peripheral blood and derivative products in standard population: 2 sample donations
- Hereditary Cancer Collection: peripheral blood and derivative products in patients suffering from Hereditary Breast and Ovarian Cancer Syndrome (BRCA1/2): 2 sample donations
products in patients suffering from this pathology: 12 sample donations
- COVID-19 Vaccinated Collection: peripheral blood mononuclear cells from standard population vaccinated against COVID-19 disease: 428 sample donations
- Reproductive Medicine Node, including Single Cell Cryopreserved Human Endometrial Sample Collection: viable cells from endometrial biopsy or from endometrial fluid taken from women at different phases of their menstrual cycle: 254 sample donations
- COVID-19 Disease Follow-up Collection: peripheral blood and derivative products in patients who have suffered from COVID-19 disease under follow-up: 69 sample donations

In summary, 3105 new sample donations have been received, 13108 samples have been processed and 55421 aliquots have been stored in 2021 at INCLIVA Biobank facilities from collections within biobank regime.

In addition, the Biobank has surplus diagnostic samples from the HCUV Pathology and Hematology services that may be used in research provided they have the corresponding Biobank Informed Consent.

Incorporation of samples in pre-existing collections outside the biobank regime in 2021. The collections are outside the organizational structure of the biobank and they are generated in the scope of projects and/or private clinical trials. The biobank manages the storage and custody of the samples, as well as the processing of the same in some cases.

- Amadix Study: processing, conservation and shipment of processed samples for the PancreaDIX study: Study for the development and validation of a genetic fingerprint for the diagnosis of pancreatic cancer and precursor lesions. AMD-CPA-2016-01: 19 new sample donations
- Renas Study: processing, conservation and shipment of processed samples for the study: Effect of CPAP on the deterioration of renal function in early stages of chronic kidney disease. 195/2015: custody of 2 cryoboxes
- Rolando Study: processing, conservation and shipment of processed samples for translational study within the framework of the ROLANDO trial: Multicenter and uncontrolled phase II clinical trial to evaluate the safety and efficacy of the combination of Olaparib and Pegylated Liposomal Doxorubicin (DLP) in patients with peritoneal carcinoma primary ovarian and resistant platinum fallopian tubes. GEICO-1601 ROLANDO: custody of 8 cryoboxes
- European LEGACY Project: processing, conservation and shipment of processed samples for this project: 226 new sample donations
- ROTATE-3 Study: processing, conservation and shipment of processed samples for this clinical trial: 185 new sample donations (Finished project)
- ALFAOMEGA/PEGASUS Study: processing, conservation and shipment of processed samples for this clinical trial: 148 sample donations

Incorporation of new collections outside the biobank regime in 2021:

- VERONA Study (RPL554-CO-302): processing, conservation and shipment of processed samples for the clinical trial: A Phase III randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of ensifentrine over 24 weeks in patients with moderate to severe Chronic Obstructive Pulmonary Disease: 1 sample donation
- HIPRA HH-2 Study: processing, conservation and shipment of processed samples for the clinical trial: A phase IIb, double-blind, randomised, active-controlled, multicentre, non-inferiority trial followed by a phase iii, single-arm, open-label trial to assess immunogenicity and safety of a booster vaccination with a recombinant protein rbd fusion dimer candidate [PHH-1V] against SARS-CoV-2 in adults fully vaccinated against COVID-19: 207 sample donations
- TRANSPAIRE Study: processing, conservation and shipment of processed samples for the study: Radiofrequency-assisted pancreatic transection vs endostapler: 1 sample donation
- Cytosorb Study: processing, conservation and shipment of processed samples for the study: Hemoabsorption with Cytosorb vs usual clinical practice to analyze its effect on kidney damage biomarkers in asystole donation controlled with ECMO: 4 sample donations

In summary, 863 new sample donations have been received in 2021 at INCLIVA Biobank facilities from studies outside biobank regime.
## Transfer of samples

<table>
<thead>
<tr>
<th>Project</th>
<th>Ref./Agency</th>
<th>Principal Researcher, Institution</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBI_12/2018 and BBI_10/2020 Identification and analysis of image and circulating biomarkers with prognostic value and response predictor in patients with head and neck squamous cell carcinoma</td>
<td>NA / INCLIVA</td>
<td>Gema Bruixola, HCUV/INCLIVA</td>
<td>Head and neck tumors: 206 plasma aliquots and 10 PBMC/DNA aliquots</td>
</tr>
<tr>
<td>BBI_01/2019 Exosomal microRNA profile and its long-term prognostic value in systemic lupus erythematosus. Association with established markers of kidney damage</td>
<td>P18/01405, ISCIII</td>
<td>Raquel Cortés, INCLIVA</td>
<td>Systemic Lupus Erythematosus and other autoimmune diseases: 36 plasma aliquots, 18 serum aliquots and 18 PBMC aliquots</td>
</tr>
<tr>
<td>BBI_04/2019 Analysis of the role of p53-Aurora-kinase pathway as potential predictive biomarkers and therapeutic targets in triple-negative breast cancer</td>
<td>NC, Fundación Mutua Madrileña</td>
<td>Begoña Pineda, INCLIVA</td>
<td>Gynecological tumors: 2 plasma aliquots</td>
</tr>
<tr>
<td>BBI_06/2019 and BBI_03/2020 Usefulness of liquid biopsy and organoids in the management and treatment of pancreatic adenocarcinoma: towards Precision Medicine</td>
<td>NA, Fundación Mutua Madrileña</td>
<td>Maider Ibarrola, INCLIVA</td>
<td>Pancreatic cancer: 116 plasma aliquots and 2 PBMC/DNA aliquots</td>
</tr>
<tr>
<td>BBI_09/2019 Personalized Medicine in patients with localized colorectal cancer: multibiomarker approach to minimal residual disease in liquid biopsy and organoid models</td>
<td>P18/01909, ISCIII</td>
<td>Andrés Cervantes, HCUV/INCLIVA</td>
<td>Gastrointestinal tumors: 490 plasma aliquots and 16 DNA aliquots</td>
</tr>
<tr>
<td>BBI_09/2020 Variability in immune response genes and prediction of severe infection by SARS-CoV-2 [INMUNGEN-CoV2 Study]</td>
<td>202020E086 / CSIC</td>
<td>Jordi Pérez Tur, IBV-CSIC</td>
<td>COVID-19 Collection: 5 DNA aliquots</td>
</tr>
<tr>
<td>Project Code</td>
<td>Title</td>
<td>PI/Co-PI</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>BBI_11/2020 and BBI_09/2021</td>
<td>Epigenetic biomarkers for sepsis. Focus on long-term immunosupression and future comorbidities in survivors</td>
<td>PI19/00994 / ISCIII</td>
<td>José Luis García Giménez, CIBERER</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sepsis and Septic Shock: 96+234 plasma aliquots and 6+39 DNA aliquots</td>
</tr>
<tr>
<td>BBI_12/2020 and BBI_14/2021: FUSOMAP</td>
<td>Development of diagnostic and prognostic models based on intratumoral infection by Fusobacterium and associated microbiota in localized colorectal cancer</td>
<td>NA / Fundación Mutua Madrileña</td>
<td>Paolo Nuciforo, VHID (Susana Rosselló, HCUV/INCLIVA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Colorectal Cancer: slides from 70 FFPE tissue blocks and 33 OCT tissue blocks</td>
</tr>
<tr>
<td>BBI_19/2020: Characterization and therapeutic impact of the ecology of HER2 positive breast cancer</td>
<td>PI18/D01219, ISCIII</td>
<td>Pilar Eroles, INCLIVA</td>
<td>Breast cancer: 32 plasma aliquots</td>
</tr>
<tr>
<td>BBI_20/2020: Congenital errors of immunity and predisposition to SARS-Cov-2 infection and to COVID-19 severity. International coordinated action of complete exomic sequencing</td>
<td>COV20/D01334, ISCIII</td>
<td>José Carlos Rodríguez Gallego, Hospital Universitario de Gran Canarias Dr. Negrin</td>
<td>COVID-19 Collection: 39 serum aliquots and 39 DNA aliquots</td>
</tr>
<tr>
<td>BBI_01/2021</td>
<td>Impact of oxidative stress and inflammation as a predictor of severity in SARS-CoV-2 pneumonia</td>
<td>NA, INCLIVA</td>
<td>Jaime Signes-Costa, HCUV Mª Jesús Sanz, UV José Viña, UV</td>
</tr>
<tr>
<td>BBI_02/2021</td>
<td>Tumor-associated macrophages, tumor angiogenesis and resistance to therapies in diffuse gastric cancer mesenchymal phenotype</td>
<td>PI18/D01508, ISCIII</td>
<td>Tania Fleitas Kanonnikoff, HCUV/INCLIVA</td>
</tr>
<tr>
<td>BBI_03/2021</td>
<td>Study of new genetic biomarkers in chronic lymphocytic leukemia B (CLL-B). Thesis project</td>
<td>NA, INCLIVA</td>
<td>Blanca Ferrer Lores, HCUV/INCLIVA</td>
</tr>
<tr>
<td>BBI_05/2021</td>
<td>Analysis of BRAF mutation in circulating exosomes from melanoma patients</td>
<td>LABAE19027PEIN, AECC</td>
<td>Héctor Peinado Selgas, CNIO</td>
</tr>
</tbody>
</table>
### scientific activity

<table>
<thead>
<tr>
<th>Project Code</th>
<th>Title</th>
<th>Principal Investigator</th>
<th>Funding Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBI_06/2021</td>
<td>Role of the inflammatory processes in metabolic diseases and associated complications</td>
<td>Herminia González Navarro, UV/INCLIVA</td>
<td>ISCIII</td>
<td>Endocrine diseases: 71 plasma aliquots and 70 PBMCs aliquots</td>
</tr>
<tr>
<td>BBI_09/2021</td>
<td>Development of EOSAL technology for its application to genetic diagnosis</td>
<td>Ana Bárbara García Garcia, INCLIVA</td>
<td>ISCIII</td>
<td>Standard population: 14 DNA aliquots</td>
</tr>
<tr>
<td>BBI_10/2021</td>
<td>TuMiCC. Tumor Microenvironment-derived factors in localized Colon Cancer: clinical impact and therapeutic implications</td>
<td>Andrés Cervantes, HCUV/UV/INCLIVA</td>
<td>AECC</td>
<td>Colorectal cancer: 103 FFPE tissue samples and 6 PBMCs aliquots</td>
</tr>
<tr>
<td>BBI_11/2021</td>
<td>Ex vivo pharmacological characterization study of treatments in malignant blood diseases and solid tumors, using the PharmaFlow automated flow cytometry platform</td>
<td>Joan Ballesteros Nobell, Vivia Biotech SL</td>
<td>ISCIII</td>
<td>Myelodysplastic syndrome (MDS): 13 viable cells aliquots</td>
</tr>
<tr>
<td>BBI_15/2021</td>
<td>Adaptive immunity of B and T lymphocytes against SARS-CoV-2 after vaccination of patients at risk of severe COVID-19 disease</td>
<td>David Navarro, HCUV/INCLIVA</td>
<td>ISCIII</td>
<td>COVID-19 Vaccinated Collection: blood simples and PBMCs</td>
</tr>
<tr>
<td>BBI_16/2021</td>
<td>Linking cofilin, an actin-binding protein, to calcium dyregulation: a precision approach to the treatment of Friedreich’s Ataxia</td>
<td>Pilar González Cabo, CIBER, INCLIVA/UV</td>
<td>ISCIII</td>
<td>Standard population: no samples released yet</td>
</tr>
</tbody>
</table>

In summary, 3128 aliquots were transferred in 2021.
In addition, 1168 aliquots have been processed and delivered to provide specialized technical services to the following research projects:

**SERV01/2021**: Optimization of tissue simples for the development and validation of disease biomarkers: OPTIMARK Project [100 RNA isolations].

**SERV02/2021**: Biomarkers of response to therapy in patients with lung cancer, UV [Automated aliquoting of plasma simples: 1050 aliquots generated].

**SERV03/2021**: ENOD Project Ref. C21071728 [18 DNA isolations].

## RESEARCH PROJECTS AND GRANTS FOR RESEARCH

**Reference**: PT20/00029  
**Title**: Biobanks and Biomodels Platform  
**Principal Investigator**: Antonio Ferrández Izquierdo  
**Funding Body**: Instituto de Salud Carlos III - Co-financed FEDER  
**Beneficiary Institution**: Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration**: 2021-2023  
**Total Budget**: €265,650

## PUBLICATIONS

Note that these are 2021 scientific publications derived from the use of samples or services provided by the biobank.


**THESIS**

**Thesis title:** Role of miR-99a-5p in breast cancer: translating molecular findings into clinical tool

**Doctoral candidate:** Iris Garrido Cano

**Director[s]:** Pilar Eroles Asensio, Ramón Martínez Máñez

**Date of the defense:** 17/12/2021

**Grade:** Sobresaliente “cum laude”

**Quality recognition/Award:** European PhD
4.5.2 Oncology Phase I Oncology Clinical Trials unit

**Team**

**PI:**
Andres Cervantes Ruipérez. Hospital. University

**Medical doctors**
Alba Viala Monleón. Hospital
Amelia Insá Moliá. Hospital
Begoña Bermejo de las Heras. Hospital. University
Cristina Herrando Meliá. Hospital
Desamparados Roda Pérez. Hospital
Gema Bruixola Campos. Hospital
Isabel Chirivella González. Hospital. University
Jose A. Pérez Fidalgo. Hospital. University
Juan Miguel Cejalvo Andújar. Hospital
Marisol Huerta Álvaro. Hospital
Paloma Martín Martorell. Hospital
Susana Roselló Keranen. Hospital
Tania Fleitas Kanonnikoff. Hospital
Valentina Garnbardella. Hospital

**Nurses**
Celia Martínez Ridaura. INCLIVA
Cristina Jordá Guerola. INCLIVA
Gloria Corredor Agulló. INCLIVA
Inma Blasco Blasco. INCLIVA
Luna Porta Campos. INCLIVA
Verónica Babiano Suárez. INCLIVA
Verónica García Oliver. INCLIVA

**Data Managers**
Ana Vercher Grau. INCLIVA
Beatriz López Montero. INCLIVA.
Guillermo Moret Peiró. INCLIVA
Ignacio Castaño López. INCLIVA
Mª Carmen Martínez López. INCLIVA
Sergio Romero Alcaide. INCLIVA

INCLIVA is the only hospital in Valencia performing Phase I cancer clinical trials, and one of the few in Spain. Phase I trials are those in which a substance or product is tested in humans for the first time.

INCLIVA is conducting, through the Oncology Department, 261 clinical trials, 146 of them related to treatment in the early stages of testing (74 phase I or “first in human” and 72 phase II). INCLIVA’s new facilities provide a full floor and a half specifically dedicated to host the unit.

The unit aims to develop and select new drugs through clinical trials and to perform studies related to the pathogenesis, prognosis and new experimental therapies in solid tumors.
scientific activity

FUNCTIONS
The unit implements early clinical trials with experimental agents in the field of Oncology.

EQUIPMENTS
- -80º C Freezer
- -20º C Freezer
- Refrigerated desktop centrifuge
- Scientific refrigerator
- Conventional fridge
- Defibrillator
- Electrocardiographic equipment
- 7 monitors (blood pressure, heart rate and O2 saturation)
- 7 double medication infusion pumps
- 7 heads gases [oxygen and vacuum]

LOCATION
The following facilities are located on the second floor:
- Reception and waiting room
- 2 Consulting rooms
- Staff room
- Meeting room
- Therapy room

The third floor hosts the following facilities:
- Clinical trials office
- Monitoring room
- Clinical trials archives

RESEARCH PROJECTS AND GRANTS FOR RESEARCH
Reference: PT17/0017/0003
Title: Clinical Research and Trials Platform
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2017-2021
Total budget: €266.475
4.5.3. Innovation Platform ITEMAS

**Team**

**PI:**
Josep Redón i Mas. Hospital. University

**Collaborating researchers:**
Carlos Guerrero Calatayud. INCLIVA  
Federico Pallardó Calatayud. University  
Marta del Olmo Zurriaga. INCLIVA

<table>
<thead>
<tr>
<th>Indicators in 2021</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>National collaborations managed by the UIA that have been formalized through agreements</td>
<td>15</td>
</tr>
<tr>
<td>International collaborations managed by the UIA that have been formalized through agreements</td>
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</tr>
<tr>
<td>Training activities, for IIS personnel, aimed at increasing competencies for the effective transfer of research results to healthcare practice</td>
<td>1</td>
</tr>
<tr>
<td>External diffusion events</td>
<td>2</td>
</tr>
<tr>
<td>Actions with companies to promote the innovation portfolio of the IIS</td>
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</tr>
<tr>
<td>Projects requested to competitive national calls for innovation / knowledge transfer</td>
<td>17</td>
</tr>
<tr>
<td>Projects awarded through competitive external calls for innovation / knowledge transfer</td>
<td>8 (€822.010,37)</td>
</tr>
<tr>
<td>Projects financed by internal innovation calls</td>
<td>2 (€398.125,00)</td>
</tr>
</tbody>
</table>

**RESEARCH PROJECTS AND GRANTS FOR RESEARCH**

- **Reference:** PT17/0005/0017  
  **Title:** Innovation Platform ITEMAS-ISCIII  
  **Principal Investigator:** Josep Redón i Mas  
  **Funding Body:** Instituto de Salud Carlos III - Co-financed FEDER  
  **Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
  **Duration:** 2018-2021  
  **Total Budget:** €104.775

- **Reference:** DTS19/00128  
  **Title:** Desarrollo preclínico de un fármaco innovador para Distrofia Miotónica  
  **Principal Investigator:** Rubén Artero Allepuz  
  **Funding Body:** Instituto de Salud Carlos III - Co-financed FEDER  
  **Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
  **Duration:** 2020-2021  
  **Total Budget:** €175.000

- **Reference:** CDV20/00279  
  **Title:** Detección y caracterización rápida de COVID19 y del paciente  
  **Principal Investigator:** Javier Chaves Martínez  
  **Funding Body:** Instituto de Salud Carlos III - Co-financed FEDER  
  **Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
  **Duration:** 2020-2021  
  **Total Budget:** €111.100
**scientific activity**

Reference: INNTA1/ 2021/27  
**Title:** Agente de innovación INCLIVA para la promoción de la innovación y transferencia del conocimiento  
**Principal Investigator:** Marta del Olmo Zurriaga  
**Funding Body:** Agencia Valenciana de Innovación  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2023  
**Total Budget:** €124,193,67

Title: Validación de microRNAs circulantes como biomarcadores de pronóstico y evolución clínica en Ataxia de Friedreich. Hacia la medicina de precisión en las Enfermedades Raras  
**Principal Investigator:** José Luis García Giménez  
**Funding Body:** Federación de ataxias de España (FEDAES)  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total Budget:** €6,000

Reference: INNTA1/ 2021/19  
**Title:** Agente de innovación INCLIVA para para la formación de espacios de cocreación hospitalarios con agentes del SM  
**Principal Investigator:** Carlos Guerrero Calatayud  
**Funding Body:** Agencia Valenciana de Innovación  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2023  
**Total Budget:** €126,483,95

Reference: INNVA1/2020/85  
**Title:** Valorización, estrategia de protección y transferencia de un método de diagnóstico y pronóstico de la sepsis y el shock séptico  
**Principal Investigator:** José Luis García Giménez  
**Funding Body:** Agencia Valenciana de Innovación  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2020-2021  
**Total Budget:** €110,670

Reference: FIPSE 3819-21  
**Title:** Valorización e internacionalización de HistShock, un test IVD para el diagnóstico y pronóstico de la sepsis y el shock séptico  
**Principal Investigator:** José Luis García Giménez  
**Funding Body:** Fundación para la Innovación y Prospectiva en Salud en España (FIPSE)  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021  
**Total Budget:** €30,000

From June 2021, INCLIVA has the status of Adhered Center of the ITEMAS Platform of the IDIBELL Node. INCLIVA is part of the Alliance for Health Innovation and Industrialization of the Mediterranean Axis (AIISEM) coordinated by the IDIBELL Foundation and created by the following institutions: IIS La Fe, FISABIO, IDIBELL, ISABIAL, IISPV, IDIAP and IMIB. AIISEM nodes meet once a month, both the Technical Commission and the Strategic Commission. The Alliance has a 3-year Action or Work Plan divided into 5 key objectives.
4.5.4. Spanish Clinical Research Network (SCReN), Clinical Research and Clinical Trials of the Clinical Trials Platform (UICEC INCLIVA)

Team

PI:
Andrés Cervantes Ruipérez. Hospital. University

Associated Members:
Julio Núñez Villota. Hospital. INCLIVA
Marta Peiró Signes. INCLIVA
Verónica Guillot Yacyszyn. INCLIVA
Dolores Iglesias Ferri. INCLIVA
José Enrique Muñoz Cebrería. INCLIVA

Hired Members:
Luis Sabater Orti. Hospital. INCLIVA
Esteban Jesús Morcillo Sánchez. Hospital. INCLIVA
Juan Antonio Carbonell Asins. Hospital. INCLIVA
Laura Silla Mira. INCLIVA

UICEC participates in all activities related with the correct development of observational studies and clinical trials, in accordance with the applicable legal regulations and the standards of good clinical practice.

Currently, the portfolio of services includes, among others, the following activities:

1. Methodological and regulatory advice: collaboration tasks in the drafting of the protocol, CRF, Patient Information Sheet and Informed Consent and all documentation necessary for the correct development of the study in accordance with applicable regulations.

2. Start-up activities: in this phase the Unit collaborate with economic viability evaluation; identification and selection of participating sites; submission to national and local Authorities and Ethics Committee; Contract management with the participating sites; Monitoring Plan; Master File creation.

3. Development activities: Project Management activities; notifications; processing of amendments, interim analysis and reports; home visits; maintenance of file and monitoring visits.

4. Completion and closure activities: close-out visits; resolution of queries, elaboration of final reports, closure notifications to national and local Authorities and Ethics Committees.

ACTIVITIES DEVELOPED

During 2021, UICEC had collaborated with the development of the following clinical trials, interventional and observational studies:

CLINICAL TRIALS / Interventional Studies

**Study: SEVO-COVID19**
*Title:* Sevoflurane versus propofol sedation in patients with acute respiratory distress syndrome caused by COVID19 infection
*EUDRACT:* 2020-001379-34
*Sponsor:* Fundación Investigación Hospital Clínico Universitario de Valencia
*Phase:* IV [Low intervention clinical trial]

**Study: SOLIDARITY**
*Title:* An international randomised trial of additional treatments for COVID-19 in hospitalised patients who are all receiving the local standard of care

**Study: ESR-17-13447(DAPA-HF)**
*Title:* Short-term effects of Dapagliflozin on Peak VO2 in patients with heart failure with reduced ejection fraction
*EUDRACT:* 2018-002614-12
*Sponsor:* Fundación Investigación Hospital Clínico Universitario de Valencia
*Phase:* IV

**Study: BBLOG-2017**
*Title:* Betablockers withdrawal in patients with heart failure with preserved ejection fraction and chronotropic incompetence: effect on functional capacity and life quality
*EUDRACT:* 2017-005077-39
**Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Phase:** IV

**Study:** ADAMPA  
**Title:** Impact of self-measurement of blood pressure and self-adjustment of antihypertensive medication in the control of hypertension and adherence to treatment. A pragmatic, randomized, controlled clinical trial (ADAMPA Study)  
**EUCRACT:** 2016-003988-25  
**Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Phase:** IV (Low intervention clinical trial)

**Study:** CECUM  
**Title:** Efficacy of high-dose corticosteroid pulses added to conventional oral corticosteroid course in comparison with monotherapy oral corticosteroid course for moderate flares of ulcerative colitis: a randomized multicentre clinical trial  
**EUCRACT:** 2016-001170-15  
**Sponsor:** Grupo Español de Trabajo en Enfermedad de Crohn y Colitis ulcerosa (GETECCU)  
**Phase:** IV

**Study:** ELECLA  
**Title:** Analysis of the effectiveness of neoadjuvant chemotherapy in treating colon cancer locally advanced  
**EUCRACT:** 2016-002970-10  
**Sponsor:** Jorge Arredondo Chaves, Complejo Asistencial Universitario de León  
**Phase:** IV (Low interventional clinical trial)

**Study:** X16082  
**Title:** Phase Ib/II trial to evaluate safety and efficacy of oral ixazomib in combination with sirolimus and tacrolimus in the prophylaxis of chronic graft-versus-host disease  
**EUCRACT:** 2016-002503-26  
**Sponsor:** Fundación Pública Andaluza para la Gestión en Salud de Sevilla (FISEV)  
**Phase:** Ib/II

**Study:** EXIT  
**Title:** Suspension of anti-tNF treatment in patients with intestinal inflammatory disease: multicenter, prospective and randomized clinical trial  
**EUCRACT:** 2015-001410-10  
**Sponsor:** Fundación de Investigación Biomédica Hospital Universitario de la Princesa  
**Phase:** IV

**Study:** SECURE  
**Title:** Secondary prevention of cardiovascular disease in the elderly  
**EUCRACT:** 2015-002868-17  
**Sponsor:** Fundación Centro Nacional de Investigaciones Cardiovasculares, Instituto de Salud Carlos III (CNIC)  
**Phase:** III

**Study:** IGR2009/1593  
**Title:** Intergroup trial for children or adolescents with B-cell NHL or B-AL: evaluation of rituximab efficacy and safety in high risk patients  
**EUCRACT:** 2010-019224-31  
**Sponsor:** Institut Gustave Roussy  
**Phase:** II/III

**Study:** LINES  
**Title:** European Low and Intermediate Risk Neuroblastoma  
**EUCRACT:** 2010-021396-81  
**Sponsor:** Fundación para la Investigación Hospital Universitario y Politécnico La Fe  
**Phase:** III

**Study:** RAPIDO  
**Title:** Randomized Multicentre Phase III study of short course radiation therapy followed by prolonged pre-operative chemotherapy and surgery in primary high risk rectal cancer compared to standard chemoradiotherapy and surgery and optional adjuvant chemotherapy  
**EUCRACT:** 2010-023957-12  
**Sponsor:** UMCG, Groningen, The Netherlands  
**Phase:** III

**Study:** DIAL-COVID  
**Title:** Comparison of two types of dialysers (PMMA VS POLYSULPHONE) on cytokine extraction in haemodialysis patients with COVID 19 infection. Prospective study  
**Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Phase:** Clinical trial with Medical Device
scientific activity

Study: PANGASBLUM
Title: Pancreatic anastomosis following pancreaticoduodenectomy: pancreatogastrostomy versus Blumgart’s anastomosis. A randomized, prospective, multicenter study
Sponsor: Fundación Investigación Hospital Clínico Universitario de Valencia
Phase: Non Observational with no drugs study

Study: MOSCA FRAIL
Title: Randomized comparison between the invasive and conservative strategies in elderly frail patients with non-ST elevation myocardial infarction: The MOSCA-FRAIL Clinical Trial
Sponsor: Sociedad Española de Cardiología
Phase: Interventional clinical trial

Study: CETUPANC
Title: Impact of the dissemination of the circulating tumor cells (CTCs) during the cephal duodenopancreatectomy at the appearance of metastasis and survival in patients with tumors of pancreas and periampullars (CETUPANC Study)
Sponsor: Fundación Pública Andaluza para la Gestión en Salud de Sevilla (FISEVI)
Phase: Interventional study

Study: FAIR
Title: Intravenous iron in patients with systolic heart failure and iron deficiency to improve morbidity & mortality (FAIR-HF2)
EUCRAGCT: 2016-000068-40
Sponsor: University Medical Center Hamburg-Eppendorf Investigator Initiated Trial [IIT] [financial support by DKMS]
Phase: IV

Study: COLICA
Title: Randomized double-blind trial to study the benefit of Colchicine in Patients with Acutely Decompensated Heart Failure (IMIB-CO-2020-01)
EUCRAGCT: 2020-000941-15
Sponsor: Fundación para la Formación e Investigación Sanitarias de la Región de Murcia (FFIS)
Phase: III

Study: ECACIKAGEL
Title: Ensayo Clínico Aleatorizado triple ciego para la evaluación de la seguridad y eficacia de CikaGel® en el tratamiento de las úlceras de pierna en pacientes sin Enfermedad Arterial Periférica
Sponsor: Georges Klein
Phase: Clinical trial with Medical Device

Study: ASTARTÉ
Title: Temociclina vs Meropenem para el Tratamiento de la Bacteremia por Enterobacteriales Resistentes a Cefalosporinas de Tercera Generación: Ensayo Aleatorizado y Pragmático
EUCRAGCT: 2020-000064-39
Sponsor: Fundación Pública para la Gestión de la Investigación en Salud de Sevilla (FISEV)
Phase: III

Study: CIRCULATE-SPAIN-01
Title: Phase II randomized trial to assess the effect of intensive vs standard adjuvant chemotherapy in localised colon cancer with circulating tumor DNA
EUDRACT: 2021-000507-20
Sponsor: Fundación Investigación Hospital Clínico Universitario de Valencia
Phase: II

Study: KEEP ON [ESR-19-20217]
Title: Phase III, multicenter, open-label, randomized clinical trial to evaluate efficacy of Sodium Zirconium Cyclosilicate (Lokelma) compared to standard of care to manage hyperkalemia in patients with chronic kidney disease (CKD) and heart failure history
EUDRACT: 2020-003229-47
Sponsor: Fundación Investigación Hospital Clínico Universitario de Valencia
Phase: III [Low intervention clinical trial]

Study: ROTATE
Title: Rotation for Optimal Targeting of Albuminuria and Treatment Evaluation (ROTATE-3)
EUCRAGCT: 2017-004641-25
Sponsor: University Medical Center Groningen
Phase: III

Observational studies

Study: INC-CVD-2020-01
Title: Study of the occurrence of fibrotic pulmonary changes associated with SARS-CoV-2 infection
Sponsor: Fundación Investigación Hospital Clínico Universitario de Valencia
Phase: NO- EPA

Study: DNO-IBR-2018-01
Title: Virology and immunology of cytomegalovirus (CMV) infection in patients with hematological malignancies in the time of new biotherapies
**Scientific activity**

- **Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia
  - **Phase:** EPA-AS

- **Study:** TFK-RAM-2018-01
  - **Title:** Macrophages associated with tumor, tumor angiogenesis and resistance to therapies in diffuse gastric cancer mesenchymal phenotype
  - **Sponsor:** Tania Fleitas Kanonnikoff
  - **Phase:** EPA-AS

- **Study:** JFA-ALI-2018-01
  - **Title:** Study of inflammatory marker changes associated with endothelial dysfunction in patients treated with PCSK9 inhibitors
  - **Sponsor:** Jose T. Real Collado
  - **Phase:** EPA-AS

- **Study:** OPTIM- B1OMA FIS-ANT-2017-01
  - **Title:** Optimization of antibiotic treatment in recipients of allogeneic LIP transplantation: impact on the intestinal microbiota and on clinical results
  - **Sponsor:** Fundación Pública Andaluza para la gestión de la Investigación en Salud de Sevilla (FISEVI)
  - **Phase:** EPA-AS

- **Study:** GOLD 0 - DLCO 1
  - **Title:** GOLD 0 - DLCO 1: A look beyond obstruction. Is spirometry sufficient in COPD screening?
  - **Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia
  - **Phase:** No-EPA

- **Study:** JSC-TAB-2015-01
  - **Title:** Effectiveness of an intensive smoking treatment program on the serious exacerbations of smoking patients with moderate severe EPOC
  - **Sponsor:** Jaime Signes Costa Miñana
  - **Phase:** EPA-SP

- **Study:** JGT-FER-2020-01 (COCOON)
  - **Title:** Efecto de la administración intravenosa de hierro carboximaltosa sobre el rendimiento físico, la fatiga y la calidad de vida en pacientes con enfermedad renal crónica no en diálisis y déficit de hierro
  - **Sponsor:** José Luis Górriz Teruel
  - **Phase:** EPA-SP

- **Study:** HK-01-21
  - **Title:** Evidencia en la vida real del uso de patiromer para el tratamiento de pacientes con hiperpotasemia crónica en una región de España
  - **Sponsor:** Fundación Investigación Hospital Clínico Universitario de Valencia
  - **Phase:** EPA-OD

- **Study:** RIS-BAZ-2012-01
  - **Title:** Acción del bazadoxifeno sobre el metabolismo óseo y los factores de riesgo cardiovascular
  - **Sponsor:** Antonio Cano Sánchez
  - **Phase:** EPA-SP

**UNIT ACTIVITY DURING LAST 5 YEARS**

During the last five years, the unit has initiated 33 studies (21 clinical trials and 12 observational studies). The following table shows its distribution by year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Clinical trials</th>
<th>Observational Studies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>2018</td>
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<td>2019</td>
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<tr>
<td>2020</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>2021</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

**New Studies**

[Graph showing new studies for 2020 and 2021]
As accumulative activity, new and ongoing studies, the Unit maintains an average of 26 active studies, per year, with a clear increasing tendency in the number of studies. Their distribution by type of study and year is detailed in the following table.

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
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<tbody>
<tr>
<td>Phase I</td>
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<tr>
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<tr>
<td>Phase III</td>
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<td>5</td>
<td>3</td>
<td>6</td>
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<tr>
<td>Phase IV</td>
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<td>8</td>
<td>9</td>
<td>10</td>
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<tr>
<td>Other Designs</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Observational</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>24</td>
<td>26</td>
<td>27</td>
<td>32</td>
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</table>

**RESEARCH PROJECTS AND GRANTS FOR RESEARCH**

**Reference:** PT20/0100  
**Title:** Spanish Clinical Research Network (SCReN)  
**Principal Investigator:** Andrés Cervantes Ruipérez  
**Funding Body:** Instituto de Salud Carlos III-Co-financed FEDER  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2021-2023  
**Total Budget:** € 199,650

**Reference:** PT17/0017/0003  
**Title:** Spanish Clinical Research Network (SCReN)  
**Principal Investigator:** Andrés Cervantes Ruipérez  
**Funding Body:** Instituto de Salud Carlos III-Co-financed FEDER  
**Beneficiary Institution:** Fundación Investigación Hospital Clínico Universitario de Valencia  
**Duration:** 2018-2021  
**Total Budget:** € 266,475
4.5.5. Precission medicine unit

**Team**

**PI:** Andrés Cervantes Ruipérez. Hospital. University

**Coordinator:** Pilar Rentero Garrido. INCLIVA

**Collaborating researchers:**
- Desamparados Roda Pérez. Hospital
- Valentina Gambardella. INCLIVA

**Technicians:**
- Enrique Seda García. INCLIVA
- Laura González Castillo. INCLIVA
- Sebastián Blesa Luján. INCLIVA

The Precission Medicine Unit was established in March 2018. Since then, the group have developed a robust and wide portfolio of services to support research at INCLIVA.

To date, the unit closely collaborates with the Oncology Phase I Clinical Trial Unit. Together we have developed an integrated screening system to support personalized patient care and hence implementing the latest techniques into the clinical practice. In addition, the unit currently collaborates in several research projects from different groups at INCLIVA.

The group integrates professional profiles from multiple disciplines (Medical Oncology, Molecular Biology, Bioinformatics and Biochemistry) with large professional experience in Human Genetics and Genomics.

**FUNCTIONS**

Our mission is to impulse, promote and execute quality translational research offering support in Molecular Biology as well as in Data Analysis techniques to the scientific community.

**LABORATORY EQUIPMENT**

- Two massive sequencers with Illumina chemistry: MiSeq and NextSeq550
- iScan System to scan Illumina microarrays
- nanoString n-Counter platform
- Biorad ddPCR
- Chromium Single Cell System (10X Genomics)
- Glomax Discovery System (Promega)
- Maxwell RSC (Promega)
- Quantitative thermalcycler
- Standard thermalcyclers
- TapeStation system to visualize DNA and RNA
- Laminar cabins, centrifuges, heat blocks, ovens, etc.

**SERVICES**

1. Next-Generation Sequencing (NGS):
   - Design, development, validation and sequencing of custom gene panels
   - Exome sequencing and analysis
   - Whole-genome sequencing
   - Sequencing small genomes “de novo”
   - RNA-sequencing [total RNA, poly[A] fraction, rRNA depleted…]
   - Microtranscriptome sequencing [smallRNA/miRNA…]

2. Microarrays:
   - Genotyping arrays
   - Methylation arrays

3. Digital PCR

4. nanoString platform

5. Chromium Single Cell System (10X genomics)

6. Other molecular biology techniques:
   - Nucleic acid isolation
   - Nucleic acid quantification [absorbance and fluorescence]
   - Luminiscence analysis
   - Uniplex and Multiplex PCR
   - Quantitative PCR

**LOCATION**

- Laboratories: Facultad de Medicina. Avenida Blasco Ibáñez 15, Building 2, 2nd floor, UCIM Corridor, Laboratory 1
7. Additional services:
   • Advice and methodological support in writing protocols, research project proposals, scientific papers
   • Mentoring of bachelor, master and doctorate students
   • On demand training
   • Consulting services

DEVELOPED ACTIVITIES

1800 oncologic patients have been molecularly tested to select the best treatment

RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Reference: IC20/00009
Title: Circulating Tumor DNA Based Decision for Adjuvant Treatment in Colon Cancer stage II-III (CIRCULANTE-SPAIN)
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2021-2024
Total budget: €1.039.970

Reference: PR18/01909
Title: Precision medicine in localized colorectal cancer patients: liquid biopsy-based multiomic approach in minimal residual disease and organoids
Principal Investigator: Andrés Cervantes and Desamparados Roda
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €140.000

Reference: PR18/01508
Title: Macrophages associated with tumor, tumor angiogenesis and resistance to therapies in gastric cancer diffuse mesenchymal phenotype
Principal Investigator: Tania Fleitas Kanonnikoff
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021
Total budget: €99.000

Title: Whole exome sequencing of circulating tumor DNA and genomic DNA to increase sensitivity in the detection of minimal residual disease and open new mechanisms for personalized medicine in localized colon cancer
Principal Investigator: Noelia Tarazona Llavero
Funding Body: SEOM
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €20.000

Title: Molecular mechanisms and tumor heterogeneity associated with primary and acquired resistance to trastuzumab treatment in gastric or gastroesophageal junction cancer
Principal Investigator: Tania Fleitas Kanonnikoff
Funding Body: SEOM
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2021

Title: Patient derived organoids (PDOs) to personalize the treatment of relapsed localized colon cancer (CC) by sequencing the whole exome and genomic DNA
Principal Investigator: Noelia Tarazona Llavero
Funding Body: TTD
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2022
Total budget: €40.000

Title: Tumor microenvironment-derived factors in localized colon cancer: clinical impact and therapeutic implications (TUMMIC)
Principal Investigator: Andrés Cervantes Ruipérez
Funding Body: Fundación AECC
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2020-2025
Total budget: €992.996

Title: Colorectal carcinogenesis: the interaction of the tumor microenvironment and stem cells. Impact on personalized treatment
Principal Investigator: Noelia Tarazona Llavero
Funding Body: Fundación Mutua Madrileña
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
scientific activity

Duration: 2020-2023
Total budget: €130,000

Title: Precision medicine in oncology: development of new technological approaches for personalized treatments in Immunotherapy
Principal Investigator: Desamparados Roda and Sheila Zúñiga
Funding Body: Fundación FERO
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia

Duration: 2019-2021
Total budget: €240,000

PUBLICATIONS

4.5.6. Bioinformatics and Biostatistics Unit

The Bioinformatics and Biostatistics Unit is a core facility created in 2013. The unit is mainly dedicated to collaborate in different research projects, providing advice and support to researchers in the design, workflow implementation, development of computing strategies and analysis of data.

FUNCTIONS

Our mission is to drive, promote and execute quality translational research through methodological and analytical support.

EQUIPMENT

INCLIVA has a computing facility with 100 cores, 400GB of RAM memory 80TB of redundant network storage and 20TB of fast non-redundant local storage to the nodes for high I/O processes such as those applied to omics data analysis.

In addition, and as part of the Valencian biomedical research community, we also have access to a large computing facility hosted at the Centro de Investigación Príncipe Felipe to cope with large projects.

SERVICES

1. Bioinformatics services:
   - Analysis of Next-Generation Sequencing Data (gene panels/exomes and genomes to detect both germline and somatic variants, RNA-Seq and smallRNA data analysis, Methyl-Seq data analysis)
   - Microarray data analysis [both expression and methylation arrays]
   - Functional enrichment analysis [identification of biological functions, cellular components or molecular functions with gene ontology terms, identification of altered metabolic pathways or related diseases]
   - Complex network data integration, analysis and visualization

2. Biostatistics services:
   - Design of clinical and epidemiological studies
   - Sample size estimation
   - Simulation techniques
   - Supervised and unsupervised analysis techniques
   - Predictive modelling

3. Additional services:
   - Advice and methodological support to write protocols, research project proposals, articles, doctoral/MSc/BSc thesis
   - Data mining and exploratory analysis of databases
   - Graphical representation of research results
   - Curation and analysis of databases
   - Consulting

RESEARCH PROJECTS AND GRANTS FOR RESEARCH

Title: Legacy: CELAC and European consortium for a personalized medicine approach to Gastric Cancer
Principal investigator: Andrés Cervantes and Tania Fleitas
Funding Body: European Commission
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
Duration: 2019-2022
Total Budget: €638,315

Reference: PI18/01909
Title: Precision medicine in localized colorectal cancer patients: liquid biopsy-based multimodal approach in minimal residual disease and organoids
Principal Investigator: Andrés Cervantes and Desamparados Roda
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia
**scientific activity**

Duration: 2019-2021  
Total budget: €140,000  
Reference: PI18/01508  
Title: Macrophages associated with tumor, tumor angiogenesis and resistance to therapies in gastric cancer diffuse mesenchymal phenotype  
Principal Investigator: Tania Fleitas Kanonnikoff  
Funding Body: Instituto de Salud Carlos III - Co-financed FEDER  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2019-2021  
Total budget: €99,000  
Title: Whole exome sequencing of circulating tumor DNA and genomic DNA to increase sensitivity in the detection of minimal residual disease and open new mechanisms for personalized medicine in localized colon cancer  
Principal Investigator: Noelia Tarazona Llavero  
Funding Body: SEOM  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2020-2022  
Total budget: €20,000  
Title: Molecular mechanisms and tumor heterogeneity associated with primary and acquired resistance to trastuzumab treatment in gastric or gastroesophageal junction cancer  
Principal Investigator: Tania Fleitas Kanonnikoff  
Funding Body: SEOM  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2019-2021  
Title: Patient derived organoids (PDOs) to personalize the treatment of relapsed localized colon cancer (CC) by sequencing the whole exome and genomic DNA  
Principal Investigator: Noelia Tarazona Llavero  
Funding Body: TTD  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2020-2022  
Title: Precission medicine in oncology: development of new technological approaches for personalized treatments in Immunotherapy  
Principal Investigator: Desamparados Roda and Sheila Zuñiga  
Funding Body: Fundación FERO  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2019-2021  
Total budget: €240,000  
Title: Colorectal carcinogenesis: the interaction of the tumor microenvironment and stem cells. Impact on personalized treatment  
Principal Investigator: Noelia Tarazona Llavero  
Funding Body: Fundación Mutua Madrileña  
Beneficiary Institution: Fundación Investigación Hospital Clínico Universitario de Valencia  
Duration: 2020-2023  
Total budget: €130,000

**PUBLICATIONS**


clinical trials
5. Clinical trials and other studies

5.1 Activity of the Ethical Committee for investigation with medicinal products (CEIm)

5.2 Clinical research activity performed by Valencia Clínico-Malvarrosa Health Department
5.1. Activity of the Ethical Committee for investigation with medicinal products (CEIm)

The Ethical Committee for Investigation with Medicinal Products are an independent board with a multidisciplinary composition whose main purpose is to oversee the protection of the rights, safety and well-being of subjects participating in clinical studies and biomedical research projects.

As a result of its activity along 2021, the CEIm has processed a total of 38 studies (clinical trials and observational studies): 37 were positively valued, and 1 is in the process of evaluating the response to the requested clarifications.

Of the 38 approved studies, 19 were approved in the first evaluation and 19 after requesting clarification to the promoter.

Of the 13 clinical trials with drugs evaluated, anyone has been evaluated through the Voluntary Harmonisation Procedure (VHP) process.

The following table shows the number of clinical trials and other studies according to their typology.

<table>
<thead>
<tr>
<th>TYPES OF EVALUATED STUDIES</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLINICAL TRIALS WITH MEDICINAL PRODUCTS</td>
<td>13</td>
</tr>
<tr>
<td>Phase 0</td>
<td>0</td>
</tr>
<tr>
<td>Phase I</td>
<td>1</td>
</tr>
<tr>
<td>Phase II</td>
<td>6</td>
</tr>
<tr>
<td>Phase III</td>
<td>6</td>
</tr>
<tr>
<td>Phase IV</td>
<td>0</td>
</tr>
<tr>
<td>CLINICAL TRIALS WITH MEDICAL DEVICES</td>
<td>0</td>
</tr>
<tr>
<td>OBSERVATIONAL STUDIES WITH MEDICINAL PRODUCTS</td>
<td>25</td>
</tr>
<tr>
<td>Post-authorization Studies other Designs: EPA-OD</td>
<td>2</td>
</tr>
<tr>
<td>Post-authorization Studies promoted by Health Authorities: EPA-AS and EPA-LA</td>
<td>0</td>
</tr>
<tr>
<td>No EPA</td>
<td>3</td>
</tr>
<tr>
<td>Post-authorization Studies with prospective follow-up: EPA-SP</td>
<td>3</td>
</tr>
<tr>
<td>Observacional studies with medicaments</td>
<td>12</td>
</tr>
<tr>
<td>OBSERVATIONAL STUDIES WITH MEDICAL DEVICES</td>
<td>5</td>
</tr>
<tr>
<td>RESEARCH PROJECTS</td>
<td>192</td>
</tr>
<tr>
<td>TOTAL</td>
<td>230</td>
</tr>
</tbody>
</table>

The following diagram illustrates the distribution of evaluated studies by type.
Distribution of the clinical studies depending on the department where they are performed is the following:

<table>
<thead>
<tr>
<th>CLINICAL TRIALS BY DEPARTMENT</th>
<th>Nº</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology and Reanimation</td>
<td>1</td>
</tr>
<tr>
<td>Cardiology</td>
<td>4</td>
</tr>
<tr>
<td>Digestive Medicine</td>
<td>4</td>
</tr>
<tr>
<td>Emergencies</td>
<td>1</td>
</tr>
<tr>
<td>General Surgery</td>
<td>1</td>
</tr>
<tr>
<td>Haematology</td>
<td>5</td>
</tr>
<tr>
<td>Hospital Pharmacy</td>
<td>2</td>
</tr>
<tr>
<td>Nephrology</td>
<td>3</td>
</tr>
<tr>
<td>Neurology</td>
<td>1</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>2</td>
</tr>
<tr>
<td>Oncology</td>
<td>6</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>3</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>1</td>
</tr>
<tr>
<td>Tutelage</td>
<td>3</td>
</tr>
<tr>
<td>Urology</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38</td>
</tr>
</tbody>
</table>

Distribution of the research projects depending on the department where they are performed is the following:

<table>
<thead>
<tr>
<th>RESEARCH PROJECTS BY DEPARTMENT</th>
<th>Nº</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology and Reanimation</td>
<td>6</td>
</tr>
<tr>
<td>Cardiology</td>
<td>9</td>
</tr>
<tr>
<td>Dermatology</td>
<td>3</td>
</tr>
<tr>
<td>Digestive Medicine</td>
<td>11</td>
</tr>
<tr>
<td>Emergencies</td>
<td>1</td>
</tr>
<tr>
<td>Endocrinology and Nutrition</td>
<td>12</td>
</tr>
<tr>
<td>External</td>
<td>7</td>
</tr>
<tr>
<td>General Surgery</td>
<td>16</td>
</tr>
<tr>
<td>Gynecology</td>
<td>5</td>
</tr>
<tr>
<td>Haematology</td>
<td>6</td>
</tr>
<tr>
<td>INCLIVA Research Groups</td>
<td>11</td>
</tr>
<tr>
<td>Intensive Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>6</td>
</tr>
<tr>
<td>Microbiology</td>
<td>11</td>
</tr>
<tr>
<td>Nephrology</td>
<td>3</td>
</tr>
<tr>
<td>Neumology</td>
<td>9</td>
</tr>
<tr>
<td>Neurology</td>
<td>3</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Nursery</td>
<td>6</td>
</tr>
<tr>
<td>Oncology</td>
<td>10</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>1</td>
</tr>
<tr>
<td>Oral and maxillofacial surgery</td>
<td>3</td>
</tr>
<tr>
<td>Orthopedic and Traumatology Surgery</td>
<td>6</td>
</tr>
<tr>
<td>Otorhinolaryngology</td>
<td>1</td>
</tr>
</tbody>
</table>
5.2. Clinical research activity performed by Valencia Clínico-Malvarrosa Health Department

5.2.1. Activity during 2021

INCLIVA Health Research Institute manages the clinical studies (trials, observational studies, and research projects) carried out by the Hospital Clínico Universitario de Valencia and the Valencia Clínico-Malvarrosa Health Department researchers.

As a result of its activity along 2021, the INCLIVA has managed a total of 211 studies (clinical trials and observational studies).

The distribution of these trials by phase is: Phase I: 24, Phase II: 56; Phase III: 67, Phase IV: 3, Observational studies: 57, others: 4. The following table shows the number of clinical trials and other studies according to their phase and department.

<table>
<thead>
<tr>
<th>Department</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Phase IV</th>
<th>Others</th>
<th>Observational</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>-</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Digestive Medicine</td>
<td>-</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Haematology</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Nephrology</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Neurology</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Oncology</td>
<td>20</td>
<td>36</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>93</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>23</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
<td><strong>56</strong></td>
<td><strong>67</strong></td>
<td><strong>3</strong></td>
<td><strong>4</strong></td>
<td><strong>57</strong></td>
<td><strong>211</strong></td>
</tr>
</tbody>
</table>

INCLIVA SCIENTIFIC REPORT 2021
The Department of Medical Oncology leads the number of trials assessed to INCLIVA. It is followed by the departments of Cardiology, Haematology, Neurology, Digestive Medicine and Internal Medicine. These six services make over 75% of the total processed trials.

Regarding the distribution of studies per promoter, 67 trials are considered as Independent Clinical Research (trials from associations, groups, foundations, and private individuals), 3 of which have been promoted by researchers from the Hospital Clínico Universitario de Valencia and INCLIVA and the rest of them have been promoted by the pharmaceutical industry.

<table>
<thead>
<tr>
<th>PROMOTOR</th>
<th>Nº</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOSPITAL CLÍNICO UNIVERSITARIO DE VALENCIA RESEARCHERS AND INCLIVA</td>
<td>3</td>
</tr>
<tr>
<td>INDEPENDENT CLINICAL RESEARCH</td>
<td>67</td>
</tr>
<tr>
<td>COMERCIAL RESEARCH</td>
<td>141</td>
</tr>
</tbody>
</table>
5.2.2 Assessment activity during last 5 years

The table below shows the number of studies processed yearly, during 2021 the number of processed studies has increased to over two hundred.

<table>
<thead>
<tr>
<th>Year</th>
<th>Processed studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>143</td>
</tr>
<tr>
<td>2018</td>
<td>172</td>
</tr>
<tr>
<td>2019</td>
<td>159</td>
</tr>
<tr>
<td>2020</td>
<td>206</td>
</tr>
<tr>
<td>2021</td>
<td>211</td>
</tr>
</tbody>
</table>

One of INCLIVA’s main goals is to develop clinical research at its early stages, thus contributing to translational research that moves scientific knowledge from bench to bedside. With this regard, during the period 2017-2021, Phase I and Phase II trials are prioritized and its number remains stable as shown in the table and graph below.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 0</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Phase I</td>
<td>13</td>
<td>20</td>
<td>17</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>Phase II</td>
<td>31</td>
<td>25</td>
<td>43</td>
<td>43</td>
<td>56</td>
</tr>
<tr>
<td>Phase III</td>
<td>46</td>
<td>67</td>
<td>43</td>
<td>64</td>
<td>67</td>
</tr>
<tr>
<td>Phase IV</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Observational</td>
<td>43</td>
<td>51</td>
<td>42</td>
<td>50</td>
<td>57</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

![Evolution of clinical trial distribution by phase](image_url)
5.2.3. Ongoing studies

During 2021, 579 studies have been active. The distribution of clinical trials per department analyzed below uses a semilogarithmic scale due to the great difference between the Department of Medical Oncology and the rest of the Departments.

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>Nº</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology and Reanimation</td>
<td>20</td>
</tr>
<tr>
<td>Cardiology</td>
<td>63</td>
</tr>
<tr>
<td>Digestive Medicine</td>
<td>38</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>8</td>
</tr>
<tr>
<td>General Surgery</td>
<td>5</td>
</tr>
<tr>
<td>Gynecology and Obstetrics</td>
<td>8</td>
</tr>
<tr>
<td>Haematology</td>
<td>85</td>
</tr>
<tr>
<td>Infectious Diseases unit</td>
<td>7</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>8</td>
</tr>
<tr>
<td>Medical Oncology</td>
<td>209</td>
</tr>
<tr>
<td>Nephrology</td>
<td>23</td>
</tr>
<tr>
<td>Neurology</td>
<td>35</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>6</td>
</tr>
<tr>
<td>Primary Health Care</td>
<td>1</td>
</tr>
<tr>
<td>Respiratory Diseases</td>
<td>10</td>
</tr>
<tr>
<td>Urology</td>
<td>5</td>
</tr>
<tr>
<td>Others</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>579</strong></td>
</tr>
</tbody>
</table>

![Graph showing the distribution of clinical trials per department in a semilogarithmic scale.](image)
The distribution of ongoing trials and other studies according to their typology are the following:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>Nº</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>64</td>
</tr>
<tr>
<td>Phase II</td>
<td>124</td>
</tr>
<tr>
<td>Phase III</td>
<td>210</td>
</tr>
<tr>
<td>Phase IV</td>
<td>30</td>
</tr>
<tr>
<td>Observational</td>
<td>139</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
</table>

![Bar chart showing distribution of clinical trials by phase and type](chart.png)
6. Initiatives for research promotion

6.1 Grants for external fellowships, Trainee students, Outgoing and Incoming Internships and new initiatives

6.2 Training and teaching activities
6.1. Grants for external fellowships, Trainee students, Outgoing and Incoming Internships and new initiatives

To allow researchers to acquire new knowledge for clinical and research techniques, every year INCLIVA sponsors its Grants for research internships in centers of excellence.

Since the establishment of this scholarship program, over 158 professionals have visited national and foreign centers. In 2021 the number of grants funded was 17.

List of beneficiaries and destination centers of the IIS INCLIVA Training Stays Grants during 2021:

<table>
<thead>
<tr>
<th>Ana Aliaga Chueca</th>
<th>Mariola Hernández Martínez</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of San Francisco. California [USA]</td>
<td>Complejo Quirón Salud (HRJB y HQSJ). Madrid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mª Pilar Ballester Ferré</th>
<th>Héctor Manuel Merenciano González</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCL Medical School-Royal Free Hospital. London [United Kingdom]</td>
<td>Hospital Universitario de Bellvitge. Barcelona</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manuel Ballesteros Redondo</th>
<th>Iría Mestre Díaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Universitario Ramón y Cajal. Madrid</td>
<td>Hospital Santa Cristina. Madrid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Silvia Busó Gil</th>
<th>Marina Miralles Sancho</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Clinic Barcelona. Barcelona</td>
<td>Hospital Psiquiátrico Román Alberca. Murcia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guillermo Cervera Ygual</th>
<th>Alejandro Pérez Mora</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Universitario Virgen del Rocio. Sevilla</td>
<td>Hospital Universitario Santa Cristina. Madrid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leopoldo Fernández Domper</th>
<th>Andrés Piolatti Luna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Universitario Ramón y Cajal. Madrid</td>
<td>Hospital Universitario Infantil Niño Jesús. Madrid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ana Mª Gálvez Llompart</th>
<th>Serena Pisoni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Universitario de Gran Canaria Dr. Negrin. Gran Canaria</td>
<td>Istituto Auxologico Italiano. Milan [Italy]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Francisco Gimeno Valiente</th>
<th>Mario Rodríguez Rivas</th>
</tr>
</thead>
<tbody>
<tr>
<td>University College of London. London [United Kingdom]</td>
<td>Hospital Universitario 12 de Octubre. Madrid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concepción Gómez Medina</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Pittsburgh Medical Center. Pittsburgh [USA]</td>
<td></td>
</tr>
</tbody>
</table>

**OUTGOING INTERNSHIPS**

Researchers from our IIS INCLIVA that during 2021 carried out external fellowships in foreign centers are shown in the following table:

<table>
<thead>
<tr>
<th>David Martí Aguado</th>
<th>Juan Antonio Carbonell Asins</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Pittsburgh Medical Center. Pittsburgh [USA]</td>
<td>Universidad de Puerto Rico. Mayagüez (Puerto Rico)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>César Ríos Navarro</th>
<th>Blanca Alabadí Pardiñas</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>David Martí Aguado</th>
<th>Laura Robles Rodríguez</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centro Nacional de Investigaciones Cardiovasculares (CNIC). Madrid</td>
<td>University of Colonia. Colonia [Germany]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ezequiel Monferrer Garzarán</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre for the Cellular Microenvironment University of Glasgow. Glasgow [United Kingdom]</td>
<td></td>
</tr>
</tbody>
</table>
Students who benefited from the Sanec 2021 Scholarship for Dual Training program for the academic years 2020-2021 and 2021-2022, promoted by the Bankia Foundation and several Research Institutes, including INCLIVA. There were a total of 5 beneficiaries.

<table>
<thead>
<tr>
<th>Bachelor Degree students</th>
<th>Master’s Degree students</th>
<th>Other students</th>
</tr>
</thead>
<tbody>
<tr>
<td>34 at the University of Valencia (including TFG students)</td>
<td>22 at the University of Valencia (including TFM students)</td>
<td>7 from other universities (including TFG students)</td>
</tr>
<tr>
<td>23 at the Polytechnic University of Valencia (including TFG students)</td>
<td>6 at the Polytechnic University of Valencia (including TFM students)</td>
<td>8 from other universities (including TFM students)</td>
</tr>
<tr>
<td>22 at the University of Valencia (including TFG students)</td>
<td>25 Higher Vocational Qualification students</td>
<td>1 ESO students Program for acquiring knowledge about the world of work</td>
</tr>
</tbody>
</table>

Students who benefited from the Sanec 2021 Scholarship for Dual Training program for the academic years 2020-2021 and 2021-2022, promoted by the Bankia Foundation and several Research Institutes, including INCLIVA. There were a total of 5 beneficiaries.

**INCOMING INTERNSHIPS**

The incoming researchers in 2021 are shown in the following table:

<table>
<thead>
<tr>
<th>Incoming Researchers</th>
<th>Universities</th>
<th>Research Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Francisco Lara Hernández</td>
<td>University of Valencia</td>
<td>Genomics and Diabetes Unit</td>
</tr>
<tr>
<td>Vlad Stefan Hancig</td>
<td>Polytechnic University of Valencia</td>
<td>Research Group on Hematopoietic Transplantation</td>
</tr>
<tr>
<td>Selene Valero Moreno</td>
<td>University of Valencia</td>
<td>Research Group on Rare Respiratory Diseases (RRD)</td>
</tr>
<tr>
<td>Marcella La Noce</td>
<td>Università della Campania “L.Vanvitelli”. Naples (Italy)</td>
<td>Research Group of Innovative Diagnostic and Therapeutical Developments in Solid Tumors – InDeST</td>
</tr>
<tr>
<td>Estrella Christabel Porrás Núñez</td>
<td>Università Nazionale di Piura (Perù)</td>
<td>Genomics and Diabetes Unit</td>
</tr>
<tr>
<td>Adrián Pérez Andrés</td>
<td>Research Group on Neurological Impairment</td>
<td>Mrs. Carmina Montoliu Félix</td>
</tr>
<tr>
<td>Alejandra Gutiérrez Pérez</td>
<td>Research Group on Lymphoproliferative Disorders</td>
<td>Mrs. Blanca Ferrer Lores</td>
</tr>
<tr>
<td>María Fernández Calduch</td>
<td>Group on Translational Research in Ischemic Heart Disease</td>
<td>Mrs. Amparo Ruiz Saurí</td>
</tr>
</tbody>
</table>

**TRAINEE STUDENTS**

There is a table attached that includes the number of students of Vocational Qualification, Degree or Master accepted during 2021 in INCLIVA. They have carried out training practices in different research groups:

<table>
<thead>
<tr>
<th>Numbers of Students</th>
<th>Universities</th>
<th>Research Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ESO students Program for acquiring knowledge about the world of work</td>
<td>University of Oxford. Oxford (United Kingdom)</td>
<td>Research Group on Rare Respiratory Diseases (RRD)</td>
</tr>
</tbody>
</table>
NEW INITIATIVES

The first call for applications for TFD and TFM Tutorials was opened in 2021. The call is aimed at university students enrolled in University Degrees and Masters in the Area of Health and Allied Sciences.

The following list shows the students who are going to do their TFD or TFM:

TFG

<table>
<thead>
<tr>
<th>Malena Parlatore</th>
<th>Genomics and Diabetes Unit - Mrs. Ana Bárbara García García</th>
</tr>
</thead>
<tbody>
<tr>
<td>María Janini Vilarrasa</td>
<td>Research Group on the Study of Cardiometabolic and Renal Risk - Mr. David Martí Aguado</td>
</tr>
<tr>
<td>Alexandre Ruix Morell</td>
<td>Research Group of Innovative Diagnostic and Therapeutical Developments in Solid Tumors - InDeST - Mr. Andrés Cervantes</td>
</tr>
<tr>
<td>Laura Arias Blanco</td>
<td>Research Group on Breast Cancer Biology - Mrs. Pilar Eroles Asensio</td>
</tr>
<tr>
<td>Inés Escobedo Camacho</td>
<td>Research Group on the Study of Cardiometabolic and Renal Risk - Mrs. Raquel Cortés Vergaz</td>
</tr>
</tbody>
</table>

TFM

<table>
<thead>
<tr>
<th>Victoria Muriach Pérez</th>
<th>Research Group on Neurological Impairment - Mrs. Carmina Montoliu Félix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrià López Gramaje</td>
<td>Research Group on Neurological Impairment - Mrs. Carmina Montoliu Félix</td>
</tr>
<tr>
<td>Carmen Costa Gregori</td>
<td>Genomics and Diabetes Unit - Mrs. Ana Bárbara García García</td>
</tr>
<tr>
<td>Celeste Moya Valera</td>
<td>Genomics and Diabetes Unit - Mr. Felipe Javier Chaves Martínez</td>
</tr>
<tr>
<td>Antonio Pérez-Cardona García</td>
<td>Research Group on the Study of Cardiometabolic and Renal Risk - Mr. Josep Redón i Mas</td>
</tr>
<tr>
<td>Cristian Martínez Fajardo</td>
<td>Research Group on Healthy Aging - Mr. Juan Gambini Buchón</td>
</tr>
<tr>
<td>Noelia Ruiz Alonso</td>
<td>Research Group on Breast Cancer Biology - Mrs. Pilar Eroles Asensio</td>
</tr>
<tr>
<td>Ana Mª Agreda Roca</td>
<td>Research Group on Breast Cancer Biology - Mr. Juan Miguel Cejalvo Andújar</td>
</tr>
<tr>
<td>Ana Puertes Espada</td>
<td>Research Group on the Study of Cardiometabolic and Renal Risk - Mrs. Raquel Cortés Vergaz</td>
</tr>
<tr>
<td>Carme Maria Ortega Albiach</td>
<td>Bioinformatics and Biostatistics Unit - Mrs. Sheila Zúñiga Trejos</td>
</tr>
</tbody>
</table>

6.2 Training and teaching activities

Courses (14)

- La Diabetes Tipo 2 desde la Perspectiva de la Multimorbilidad
- VII Workshop Internacional Ecografía y Resonancia Anorrectal
- C19_SPACE Curso de Preparación de Habilidades
- Curso teórico práctico Leucemia Linfocítica Crónica-LLC
- I Curso de Laparoscopia Experimental para Residentes de Urología
- Estadística Aplicada a la Medicina
- Curso Online en Atención Sanitaria Basada en Valor
- Curso Catéter Venoso Central de Inserción Periférica-PICC
- Formación Progresiva Cirugía Laparoscópica Colorrectal
- Curso Buenas Prácticas Clínicas para Investigadores
- I Curso sobre Gestión de la Cronicidad
- Curso Aspectos Básicos Protección de Datos
- 9ª Edición Curso de Anatomía Quirúrgica Aplicada HBP
- VII Workshop Cirugía Laparoscópica Colorrectal Avanzada

Scientific Conferences (24)

- Jornada Personal de Enfermería Hematología
- Nueva Normativa de Estudios Observacionales con medicamentos
- Jornada Estratégica de Investigación EERR
- Normativa de Protección de Datos en los Proyectos
- Reunión Virtual THP Domiciliario-Jornada Ruta Asistencial
- Visualización del Personal Investigador en Redes Sociales
- Con la Igualdad Siempre Ganas 1ª sesión
- Requisitos para la presentación de proyectos de investigación
initiatives

• Proyecto Formativo para Atención Primaria
• Programa de Formación en Hematología 2021
• Proyecto Marco Polo I (3 sesiones)
• Jornada Formativa Acceso a HC en Investigación Biomédica
• Innovación y Transferencia de Conocimientos
• Nuevas tecnologías aparatos WB
• Jornada Enfermedades Raras en Pediatría y Atención Primaria
• Proyecto Marco Polo II (4 sesiones)
• Post-ESMO 2021
• Innova HUB SALUD LANZADERA
• Con la Igualdad Siempre Ganás 2ª Sesión
• Formación Sanitaria Especializada
• Actualización Cáncer de Próstata 2021
• Jornada Papel del médico residente en la lucha contra el VIH
• Técnicas de abordaje del paciente con espasticidad post ictus
• Jornada Formativa sobre Patología Hematológica y Oncológica. Evolución de Enfermería: estudio de un caso

INCLIVA Seminars / Meet the Expert (10)
• Los biomarcadores para la Enfermedad de Alzheimer en la práctica clínica
• La Investigación Biomédica del Dolor con Perspectiva de Género
• 2ª Reunión “Los biomarcadores para la Enfermedad de Alzheimer”
• Mitos frente a realidades en el cáncer de próstata avanzado
• Visitas de observación “Shadow Visit”
• Seminarios Científicos Deterioro Neurológico
• Proyecto THP Domiciliario
• Seminario Incliva-BIOBANCO
• Seminario INCLIVA Dr. Batlle
• I Reunión Matriz extracelular en el sistema nervioso

Social Dissemination Days (5)
• Día Mundial EERR 2021
• Encuentro on-line Club Triple Negativo
• C3 Coloquio Visión de la Ciencia de Investigadoras Valencianas
• Celebración: Día del Prematuro
• Prevención y Tratamiento de Úlceras por Presión-UPP
communication
7. Communication
   7.1 Highlights
   7.2 Communication Indicators 2021
7.1. Highlights

January

- INCLIVA coordinates an international and multicenter study on the prevalence of coma and delirium in ICU patients with COVID-19
- INCLIVA participates in a European project to analyze and reduce energy poverty and its impact on health
- Igenomix-INCLIVA researchers decode for the first time the cellular behavior of the human endometrium

February

- INCLIVA participates in a project to disseminate the contributions of senior female scientists in the field of physical activity and health
- INCLIVA analyzes the effectiveness of 3D printing in understanding neuroblastoma and other tumors
- An INCLIVA study opens up new therapeutic possibilities in patients with Friedreich’s Ataxia (FA)
- INCLIVA ends the study of non-invasive stimulation of the vagus nerve in COVID-19 patients with respiratory symptoms

March

- INCLIVA and AVA-ASAJA initiate biomedical projects to study and disseminate the healthy properties of Valencian agricultural products
- An INCLIVA study shows that the increase in potassium level after an episode of severe hyperkalaemia is associated with the risk of death
- INCLIVA research confirms the efficacy of circulating microRNA-30b as a diagnostic marker for breast cancer
- An INCLIVA-CIBERFES study points to a new therapeutic target for satisfactory aging
- An INCLIVA study identifies a molecular profile associated with the development of kidney disease in early stages in patients with hypertension

April

- An INCLIVA study demonstrates the importance of a new molecular target in the treatment of obesity and diabetes
- An INCLIVA investigation opens the doors to a new DAAT study model
- INCLIVA develops, with the support of the AVI, a test that detects early and predicts the evolution of sepsis, one of the main causes of death in hospital
- An INCLIVA study shows that stress in childhood and adolescence can modify the brain

May

- INCLIVA develops a rapid detection kit for COVID-19, highly sensitive and easy to use
- INCLIVA receives funding from FIPSE for the development of a rapid diagnostic and prognostic test for sepsis and septic shock
- INCLIVA, UPV and CIBERBBN develop a new biosensor that helps in the early diagnosis of breast cancer

June

- Professor Cervantes warns of the impact of COVID-19 on women oncologists and highlights the need for more measures to guarantee gender equality
- The College of Customs Agents and ATEIA-Oltra collaborate with INCLIVA to promote research on gastric cancer
- INCLIVA and IATA-CSIC researchers confirm the absence of COVID-19 and the presence of defenses against the virus in breast milk
- INCLIVA participates in a pioneering clinical trial to validate the efficacy of immunotherapy in 29 types of tumors
communication

July
- INCLIVA renews its accreditation as a Health Research Institute
- Big Data & AI: Actionable Insights Transforming European Healthcare shows the results of 12 big data and artificial intelligence pilots that make up this BigMedilytics Project
- II Ideas Contest to stimulate the innovative culture of the Hospital Clínico Universitario de Valencia and its department, through the INCLIVA Innovation Support Unit
- INCLIVA and IIS La FE participate in a European clinical trial aimed at reducing infections and rejection in kidney transplant patients

August
- INCLIVA participates in a project funded by the EU to improve post-treatment in breast cancer
- INCLIVA and CIBERONC promote a study aimed at improving the diagnosis of aggressiveness and advancing in personalized therapies in uterine cancer
- An INCLIVA study demonstrates the relationship between chronic kidney disease and heart conditions through the Rabphilin protein

September
- UV and INCLIVA researchers demonstrate for the first time the influence of pheromonal signals on memory generated in the hippocampus
- An INCLIVA study shows the relevance of personalized treatments in patients with advanced tumors and specific molecular abnormalities
- European researchers promote the large-scale integration of Big Data and Artificial Intelligence techniques in health
- INCLIVA demonstrates the usefulness of cardiac magnetic resonance imaging of cardiac function in patients with acute myocardial infarction

October
- INCLIVA demonstrates the impact of the G6PD enzyme in the prevention of frailty in the elderly
- INCLIVA and Boehringer Ingelheim renew their collaboration to promote training and health research
- INCLIVA, AIDIMME and IBV will bring a custom-made maxillo-mandibular prosthesis to the market in collaboration with the 3DSolutions Group
- An international trial shows, for the first time, that associating an immunotherapy with standard chemotherapy improves survival in triple-negative breast cancer
- An INCLIVA study analyzes the potential of microRNAs as biomarkers of osteoporosis and osteoarthritis

November
- An INCLIVA and UV study highlights the importance of combined dietary-nutritional and physical exercise programs during childhood to prevent obesity in adulthood
- About half of the patients admitted for moderate or severe pneumonia due to COVID-19 present alterations in lung function six months after hospital discharge
- Professor Cervantes defends a paradigm shift in oncology based on the molecular abnormalities that cause cancer rather than on the location of the tumor in a specific organ

December
- INCLIVA and the International University of Valencia (VIU) sign an agreement to collaborate in training and research activities
- Professor Cervantes conveys to the deputies and senators of the Health commissions of the Congress and Senate the challenges of Personalized Precision Medicine in a colloquium organized by Diariofarma
- Fundación Bancaja and INCLIVA renew the agreement to promote the Precision Medicine Unit in Oncology
### 7.2. Communication Indicators 2021

#### Press office

During 2021, INCLIVA issued a total of 149 press releases on the Web.

<table>
<thead>
<tr>
<th>Month</th>
<th>Total press releases</th>
<th>Total media appearances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-21</td>
<td>18</td>
<td>143</td>
</tr>
<tr>
<td>Feb-21</td>
<td>16</td>
<td>112</td>
</tr>
<tr>
<td>Mar-21</td>
<td>8</td>
<td>199</td>
</tr>
<tr>
<td>Apr-21</td>
<td>12</td>
<td>245</td>
</tr>
<tr>
<td>May-21</td>
<td>33</td>
<td>319</td>
</tr>
<tr>
<td>Jun-21</td>
<td>18</td>
<td>157</td>
</tr>
<tr>
<td>Jul-21</td>
<td>5</td>
<td>112</td>
</tr>
<tr>
<td>Aug-21</td>
<td>9</td>
<td>115</td>
</tr>
<tr>
<td>Sep-21</td>
<td>7</td>
<td>171</td>
</tr>
<tr>
<td>Oct-21</td>
<td>6</td>
<td>166</td>
</tr>
<tr>
<td>Nov-21</td>
<td>12</td>
<td>194</td>
</tr>
<tr>
<td>Dec-21</td>
<td>5</td>
<td>84</td>
</tr>
</tbody>
</table>

#### Social Media users 2021

<table>
<thead>
<tr>
<th>Platform</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>6.191</td>
</tr>
<tr>
<td>Twitter</td>
<td>5.165</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>10.688</td>
</tr>
<tr>
<td>Instagram</td>
<td>1.055</td>
</tr>
</tbody>
</table>
## INCLIVA Website 2021

<table>
<thead>
<tr>
<th>Website users</th>
<th>Website sessions</th>
<th>Website new sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>77.163</td>
<td>153.049</td>
<td>84.1%</td>
</tr>
</tbody>
</table>

## Outreach 2021

- 149 Issued press releases
- 112 Newpieces on INCLIVA’s website
- 19 News on Radio
- 14 News on TV

In May was held **MedNight 2021: Nit Mediterrànea de les investigadores**, an event associated with the European Union’s **Noche Europea de los Investigadores** initiative, funded by the Marie Skłodowska-Curie actions of the Horizon2020 European funding programme.

Its objectives are to value science and the role of women in scientific and technological research in the Region of Murcia and the Valencian Community for the first time jointly, and to promote scientific vocations through formats and attractive activities for all ages and all types of audiences like talks, workshops, virtual exhibitions and scientific shows.
social initiatives
8. INCLIVA social initiatives
  8.1 Philantropic projects
  8.2 Private philanthropic donations and acknowledgments
8. INCLIVA social initiatives

In 2021, the Institute of Health Research at the Hospital Clinico Universitario de Valencia, INCLIVA, launched an awareness campaign on the importance of health research to guarantee first-rate assistance in the field of public health, and thus save more lives every year.

Under the slogan I support research, which is part of its Patronage Plan, INCLIVA underlines the essential nature of research to achieve medical advances that translate into improved quality of life for all citizens.

These are the main highlights:

18 March, 2021. AVA-ASAJA (Valencian association of Farmers) became an honorary ambassador of INCLIVA. The two entities signed a framework collaboration agreement to launch biomedical research projects studying the health properties of different Valencian agricultural products and promoting them within society. This agreement shows the commitment of the agricultural and health sectors to offering consumers a healthy and balanced diet, coinciding with the Covid-19 pandemic which highlighted the importance of health in disease prevention.

December 2020-January 2021. The INCLIVA Health Research Institute at the Clinical Hospital of Valencia launched the campaign ‘Give research as a gift this Christmas’, inviting people to make donations to health research as a Christmas present. Running until 6 January, the objective of this campaign was to raise public awareness of the importance of health research and suggest the possibility that by donating, anyone can contribute individually and within their means to the advancement of science and to unravelling unsolved medical problems.

February 2021. Solidarity campaign: “The art of painting to defeat childhood cancer, neuroblastoma”. The Research Group led by Dr Rosa Noguera launched a fundraising campaign for research into neuroblastoma, the most common tumour type in childhood. The campaign invited everyone making a donation to this cause to enter a competition to draw a painting by urban artist Dridali. The prize-winner who won the painting was the Iraila National Association, initiatives for funding childhood cancer research.

April 2021. INCLIVA participates in the ‘Make history with your story’ campaign to help women with breast cancer trying to conceive. Launched by the GEICAM Breast Cancer Research Group to coincide with Mother’s Day, the initiative involved mothers with breast cancer explaining their experience and highlighting the importance of both the medical team to overcome the challenges involved, and of research to help other women with this disease become mothers. The aim of the campaign was to advance knowledge of the relationship between breast cancer and pregnancy via the patients themselves, and help women with this disease who are trying to conceive by providing them with the best and most appropriate advice.

June 2021. The Colegio de Agentes de Aduanas (Association of Customs Agents) and ATEIA-Oltra (Business Association of Freight Forwarders in Valencia) collaborated with INCLIVA to promote research on gastric cancer, allocating the proceeds from the trilogy ‘How much do you know about customs and customs duties?’ to INCLIVA to further the study of gastric cancer immune microenvironment.

July 2021. Launch of the charity campaign “When I grow up I want to be like you” supporting childhood cancer research. Promoted by Maria Ferrer, this initiative aimed to raise funds for childhood cancer research by placing money collection tins in various collaborating restaurants and shops, mainly in the Marina Alta area. The campaign started on July 10 and ran until the end of the Christmas holidays. This campaign aims to raise awareness about childhood cancer and funds to investigate this disease and give children with cancer the opportunity to grow up healthy. The collection tins, prepared by hand by Maria and her children, will raise life expectancy and hope for children suffering from Neuroblastoma, the most common childhood cancer. Today these children are ill, but thanks to research, we hope that they will become healthy adults who can enjoy life and contribute their full potential to society.
social initiatives

3 November, 2021. INCLIVA Health Research Institute at the Clinical Hospital of Valencia joined the ‘ADN Mestalla Solidari’ campaign of Valencia CF Football club and Foundation, which gives visibility to the important charitable work of various Valencian organisations. INCLIVA has thus joined entities such as Cruz Roja Juventud, Civil Protection, Fivan, Hogares Compartidos and Lamna in receiving support and promotion from Valencia CF and the VCF Foundation during La Liga matches played at Mestalla football grounds this season.

DONATIONS

January 2021. The Els Generals falla collaborated with INCLIVA as part of its EN VENA initiative. Thanks to the campaign carried out and the “Remember the 80s” concert held before the pandemic, INCLIVA received €2,345 to support precision medicine and liquid biopsy research in their institute.

March 2021. ASPANION (Association of Parents of Children with Cancer in the Valencian Community), together with the charity initiative Contigo por la Batalla, made a donation to the INCLIVA Health Research Institute towards development of health research in childhood cancer, from an idea put forth by two women from Castellón with children affected by cancer. The donation of €3,009.64 was allocated specifically to the INCLIVA Pediatric Solid Tumor Translational Research Group, co-directed by Drs. Samuel Navarro and Rosa Noguera from the CIBER Cancer group (CIBERONC), towards research into Ewing’s sarcoma, a cancer which although it can occur at any age, is more common in children and adolescents.

15 March, 2021. The Esperança de Pego Cancer Association supported INCLIVA with a donation of €3,000 for breast cancer research, adding to a contribution made last year to support ovarian cancer research. This year funds were raised through association member Carlos Siscar Bay. This athletics fan set himself the challenge of running 12 charity marathons in 12 months. Beyond raising money for this cause, he also helped raise awareness of the importance of continuing research and creating hope for everyone living with cancer.

21 May, 2021. Amunt Contra el Cancer signed a collaboration agreement with the INCLIVA Health Research Institute, making a donation this year of €12,250 euros to research projects in ovarian cancer, head cancer and neck and liquid biopsy. The agreement, signed by INCLIVA director Dr. Andrés Cervantes and the president of Amunt Contra el Cancer, Mª Isabel Llorca, will increase resources to investigate ovarian cancer (€4,100), head and neck cancer (€4,000) and liquid biopsy (€4,150).
July 2021. ASPANION (Association of Parents of Children with Cancer in the Valencian Community), together with the solidarity initiative Painting the way in pink made a donation to the INCLIVA Health Research Institute at the Hospital Clinical of Valencia to contribute to the development of health research in childhood cancer. Raised through charity collection tins from collaborating businesses, and donations with fundraising gifts at communions, weddings and baptisms, the final amount collected of €10,000 will be used for translational research in the field of Pediatric Non-Hodgkin’s Lymphoma (NHL).

September 2021. The Valencia-Castellón Association of Property Administrators and the Special Section Fallas Federation have awarded the second annual “Specialist Award” to Dr. Ana Lluch, and have made a donation of €1,000 for research in breast cancer. This award, which acknowledges excellence of work in art, science or sports, this year went to our researcher Ana Lluch for her professional dedication and research effort in the fight against breast cancer. Held at the headquarters of the Association of Property Administrators of Valencia-Castellón, this emotive ceremony was attended by the principal falleras of Valencia in 2021, Consuelo Llobell and Carla Gracia, as well as political representatives of the Consell, the Corts and Valencia City Council, the Association of Property Administrators and the Special Selection Fallas Federation.

October 2021. The Le Cadó Foundation donated €12,500 to INCLIVA for research into breast cancer. Founded in 2010, the foundation aims to finance projects for breast cancer research, and in addition to ours, they currently are funding two other studies: “Deciphering the genome of hereditary breast cancer” at the Provincial Hospital of Castellón in conjunction with La Fe Hospital in Valencia, led by Dr María Fonfría Esparcia and Dr Eduardo Martínez de Dueñas, and most recently the BAFC (Benefits of Physical Activity in Cancer) project, a physical exercise program directed at women with breast cancer currently under development at the UJI.

December 2021. The Bancaja Foundation and INCLIVA renewed their collaboration promoting our Precision Medicine Unit, which received a €22,000 contribution from Bancaja on renewal of the agreement. The unit is focused on molecular screening of cancer patients for genetic sequencing of the tumour, which enables a personalized approach through the most appropriate therapy in each case and experimental therapeutic alternatives.

December 2021. The Corazón Solidario Association presented INCLIVA with €10,000 to be used for the NED breast cancer project, coordinated by Dr Juan Miguel Cejalvo of the Breast Cancer Biology Research Group. INCLIVA signed a collaboration agreement with the entity in 2020, becoming the only organisation that receives funds from this Association.
social initiatives

8.1 Philanthropic projects

**FUNDACIÓN LE CADó**

Fundación Le Cadó was created in 2010 under the leadership of its president Elvira Monferrer Daudi. This initiative seeks to unite efforts and resources in supporting this kind of tumor research, which is currently the fourth leading cause of death in women.

Fundación Le Cadó collaborates with INCLIVA in funding the research project “Study of breast cancer in young women under 35 years”, conducted by Dr. Mª Teresa Martínez Martínez. It also involves other researchers such as Dr. Isabel Chirivella (a genetic diagnosis specialist physician) and the entire team led by the oncologists Dr. Ana Lluch and Dr. Pilar Eroles.

**FUNDACIÓN NEOBLASTOMA**

The Neuroblastoma Foundation, created in 2017, funds research on neuroblastoma, a particularly aggressive type of childhood cancer that affects the nervous system. Survival figures have not improved in recent years. The Neuroblastoma foundation informs families about existing treatments, and brings together families of sick children, motivating them to raise funds for research through numerous campaigns. The funds are destined to research projects and clinical trials in Spanish laboratories and hospitals, this year the donation received has been €14.000.

**ASOCIACIÓN NACIONAL DE ALPHA 1**

The Alfa-1 Spain Association defends the interests of patients affected by the Deficit, their families and their caregivers, and promotes the research and training of health personnel who treat these patients. The defense of early diagnosis, access to available medical treatments and the daily support of patients and newly diagnosed, are its foundational tasks. This year Alfa-1 Spain Association and INCLIVA had signed a CV. The Research Group on Rare Respiratory Diseases (RRD) has been awarded the 1st Amadeu Monteiro Research Scholarship.

**AMUNT CONTRA EL CANCER**

Amunt Contra el Càncer is an association based in Denia, province of Alicante, that carries out different services and actions aimed at improving the quality of life of cancer patients and their families. Organizes informative talks, offers psychological support to patients and promotes various activities to raise funds for research. This year the donation received has been €12.250.
**FUNDACION SANDRA IBARRA**

The Sandra Ibarra Foundation is a non-profit organization with a history of twelve years joining efforts against cancer. During these years, the Foundation has invested its time in promoting campaigns and financing research, awareness and prevention projects against cancer, as well as the development of the humanization of health. This year the donation received has been €10,500.

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**CORAZÓN SOLIDARIO**

Corazón Solidario is an Association born out of the joint project of five colleagues, who having collaborated in various NGOs decided to pool their work to fundraise for the fight against cancer. All profits of this association go to INCLIVA.
8.2 Private philanthropic donations and acknowledgments

On behalf of INCLIVA, we want to thank all the people who have helped our research through their donations, for their support and solidarity. For us, this collaboration means much more than an economic contribution: it is the encouragement we need to keep investigating and working in research.

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publications list
List of 834 scientific publications derived from the activity of the IIS


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145. Sanchez Ramos D, Pinto Pla C, De Gracia Leon A, Coloma Rodriguez J. Rare infectious complica-tion after intramuscular self-injections. Revista Es-


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833. NCD Risk Factor Collaboration. Worldwide


