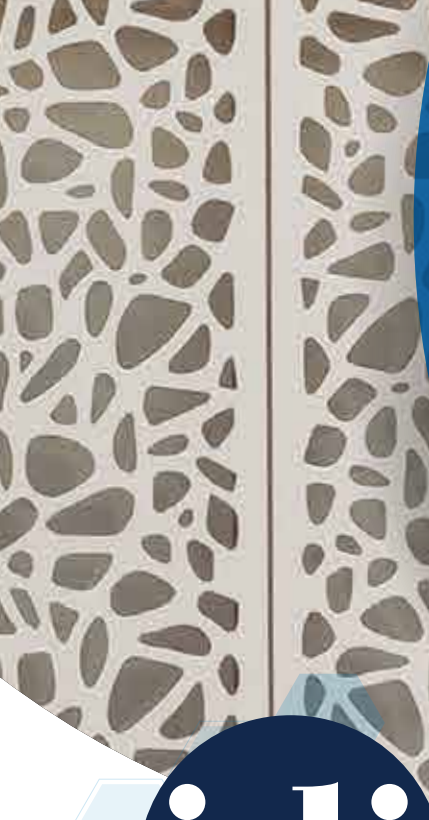


ANNUAL REPORT 2021

idis

HEALTH RESEARCH INSTITUTE
SANTIAGO DE COMPOSTELA

EDITION AND PRODUCTION

Scientific-Technical Coordination of the
Health Research Institute of Santiago de Compostela

José Ramón Castro Ruibal
Technical Management

Yolanda Liste Martínez
Technical Management

Iria Louzao Pernas
Technical Management

APROBATION

IDIS Board of Directors Meeting
Santiago de Compostela, on 23 May 2022.

ANNUAL REPORT 2021

idis

Mª Luz Couce Pico
Directora Científica
Scientific Director

O 27 de setembro de 2021 asumín o cargo de dirección científica deste Instituto, fíxeno consciente de que supón un compromiso e un reto moi importante xa que o IDIS é un dos grandes institutos de investigación biomédica de España. Non cabe dúbida de que os anteriores directores científicos, Carlos Diéguez inicialmente e José Castillo nos últimos 10 anos, impulsárono para que teña ese prestixio actual e dende aquí transmito o noso agradecemento.

Presentar o informe de 2021 é motivo de orgullo e satisfacción xa que seguimos con paso firme a pesar das circunstancias que se deron co COVID-19.

O IDIS está formado por grupos altamente competitivos que son un referente internacional no seu ámbito, cunha excelente calidade científica e cun crecente nivel de captación de fondos, tal e como recolle o informe.

Non obstante, hai que seguir nese camiño mantendo un alto nivel de esixencia e tendo presente o relevo xeracional para seguir nese nivel. Hai que potenciar plataformas e servizos de apoio de uso común, que estean acreditadas e que nos permitan realizar investigacións de prestixio. A innovación e a transferencia deben estar presentes no noso día a día, para que o IDIS sexa unha incubadora de empresas biotecnolóxicas. Superamos as auditorías internas e externas para a acreditación da Unidade de Ensaios Clínicos de Fase inicial; Con esta acreditación, a primeira de Galicia e unha das poucas de España, a nosa misión tamén é potenciar estes estudos.

Por outra banda, cómpre dar visibilidade ao que facemos, neste sentido hai unhas semanas presentamos unha nova web, máis dinámica e moderna, é misión de todos mantela actualizada.

Tamén queremos impulsar o plan de formación que se presenta periodicamente con investigadores de renome internacional.

E por todo iso, e aínda na liña da frase de Severo Ochoa "a investigación precisa máis cabezas que medios", no noso caso os medios físicos son imprescindibles. Precísase espazo para poder seguir medrando, necesitamos un novo espazo identitario común limítrofe co Hospital Clínico Universitario de Santiago de Compostela e a USC para dar un impulso á excelente ciencia e á atracción de talento investigador. Xuntos todos e co apoio das Institucións implicadas, agardamos conseguilo.

On September 27, 2021, I assumed the position of scientific director of this Institute, I have done so aware that it represents a very important commitment and challenge since IDIS is one of the great biomedical research institutes in Spain. There is no doubt that the previous scientific directors, Carlos Diéguez initially and José Castillo in the last 10 years, have promoted it so that it has this current prestige and from here I transmit our gratitude.

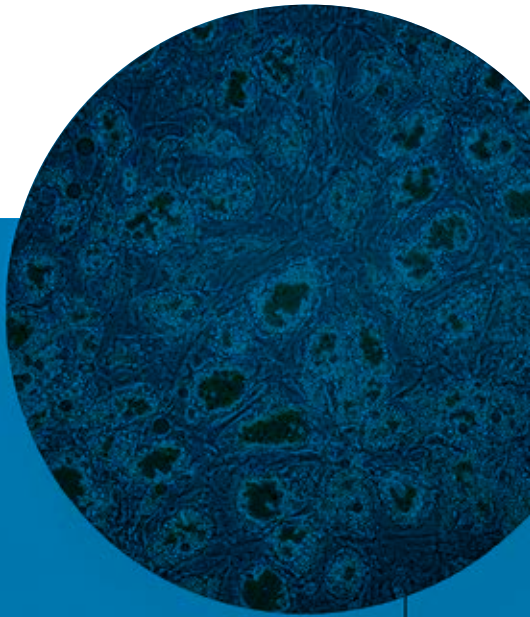
Presenting the report for 2021 is a source of pride and satisfaction as we continue with a firm step despite the circumstances that occurred with COVID-19. IDIS is made up of highly competitive groups that are an international benchmark in their field, with excellent scientific quality and a growing level of fundraising, as reflected in the report. However, we must continue on this path maintaining a high level of demand and bearing in mind the generational change in order to continue at that level. Support platforms and services for common use must be promoted, which are accredited and allow us to carry out prestigious research. Innovation and transfer must be present in our day to day, that IDIS be an incubator for biotechnological companies. We have passed the internal and external audits for the accreditation of the Early Phase Clinical Trials Unit; With this accreditation, the first in Galicia and one of the few in Spain, our mission is also to promote these studies.

On the other hand, we need to give visibility to what we do, in this sense we presented a new website a few weeks ago, more dynamic and modern, it is everyone's mission to keep it current. We also want to promote the training plan by establishing regular meetings with internationally renowned researchers.

And for all of this, and still in line with Severo Ochoa's phrase "research

needs more heads than means", in our case physical means are imperative. Space is needed to be able to continue growing, we need a new common identity space bordering the Hospital Clínico Universitario de Santiago de Compostela and the USC in order to give a boost to excellent science and the attraction of research talent. Together all of us and with the support of the Institutions involved, we hope to achieve it.

"IDIS is one of the great biomedical research institutes in Spain"



Se non coñezo unha cousa, investigareina

Louis Pasteur

Summary

1 Executive summary

The Health Research Institute of Santiago de Compostela (IDIS) is a biomedical research center of marked translational character that takes advantage of the synergies of the University Clinical Hospital of Santiago de Compostela (CHUS) and the University of Santiago de Compostela (USC) to promote and encourage excellent research, scientific and technological knowledge and its subsequent transfer to the productive sector, as well as teaching and training, focused on a clear objective: to improve the people´s health.

MISSION

We are a translational biomedical research center that involves professionals with a sole objective: to improve the health of citizens.

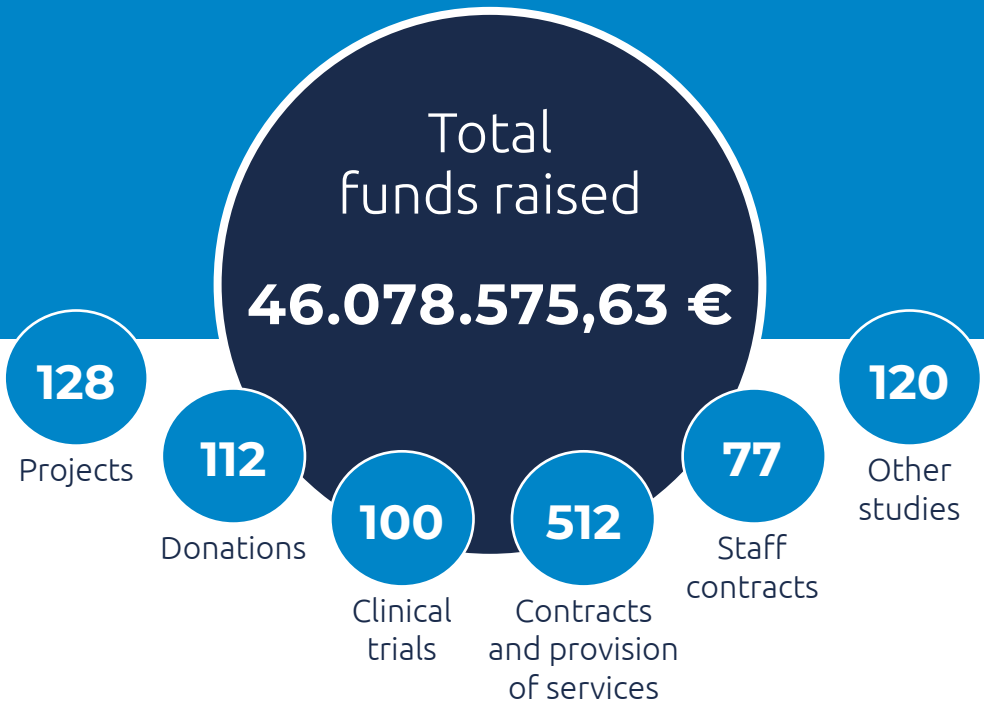
VISION

To consolidate our position as a research center of reference, at both national and international level, in the innovative approach of the great challenges of the population in the healthcare field, promoting at all times the transfer of high impact results to society.

VALUES

- Integration and collaboration.
- Communication and transparency.
- Leadership and research excellence.
- Innovation and result transfer orientation.
- Responsibility to and for society.


idis

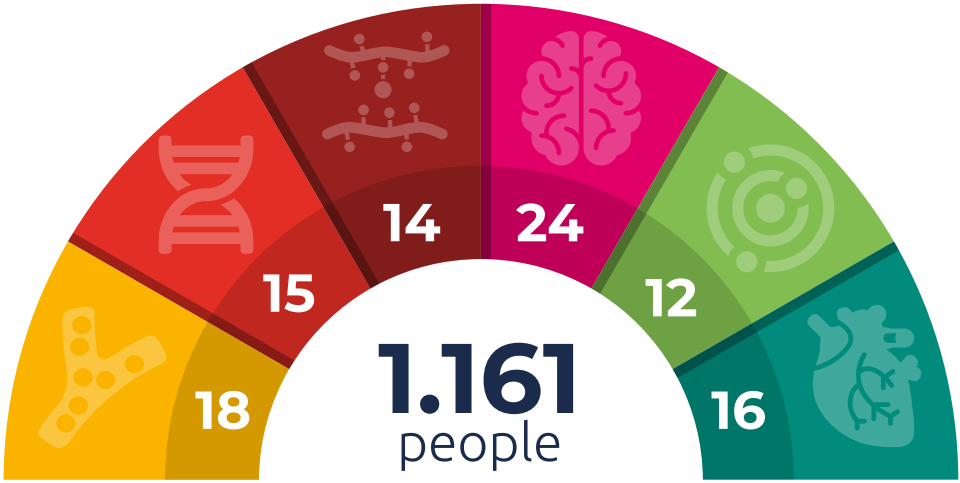


1.023	72	31	107
Published articles	PhD Theses	Granted patents	Requested patents

2 Global analysis

Number of groups per area

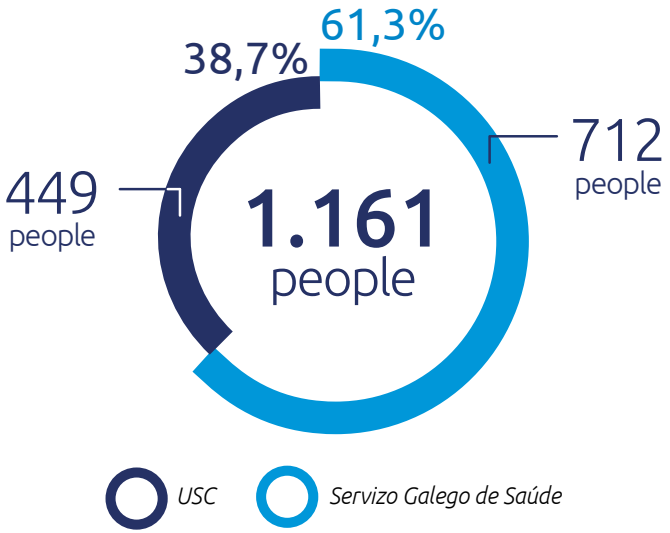
- Oncology
- Genetics and Systems Biology
- Endocrinology
- Neurosciences
- Platforms and Methodology
- Inflammation

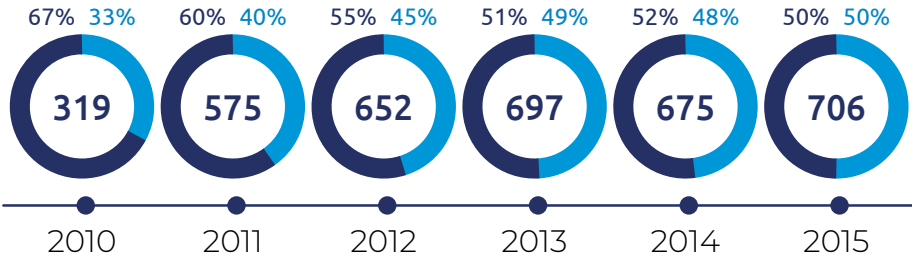


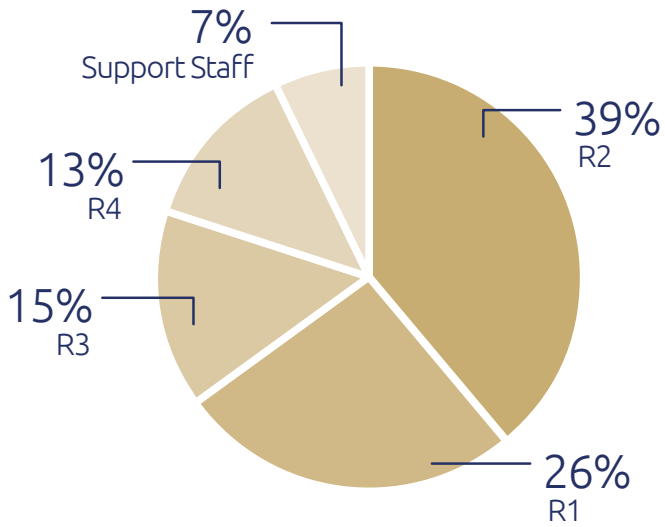
are integrated in **99 groups** organized in **6 research areas**

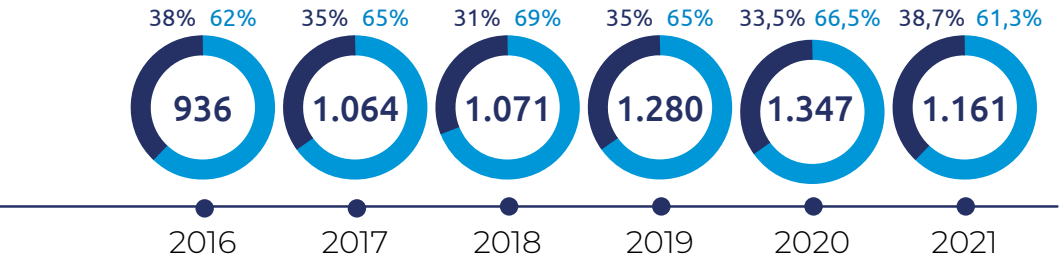
There is also a support area (Scientific-Technical Coordination and common support platforms for research).

History of a joint venture: human resources in figures

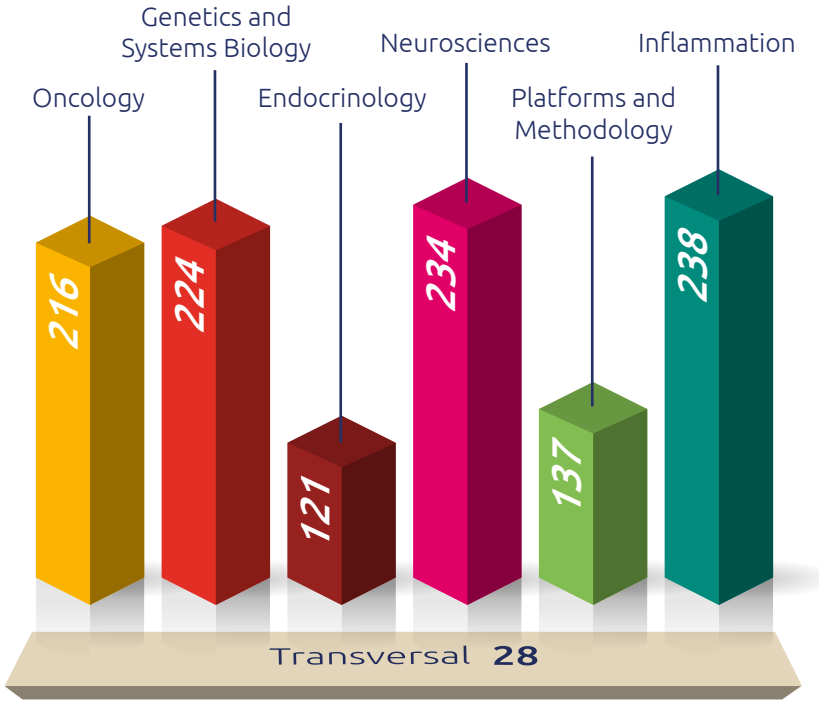


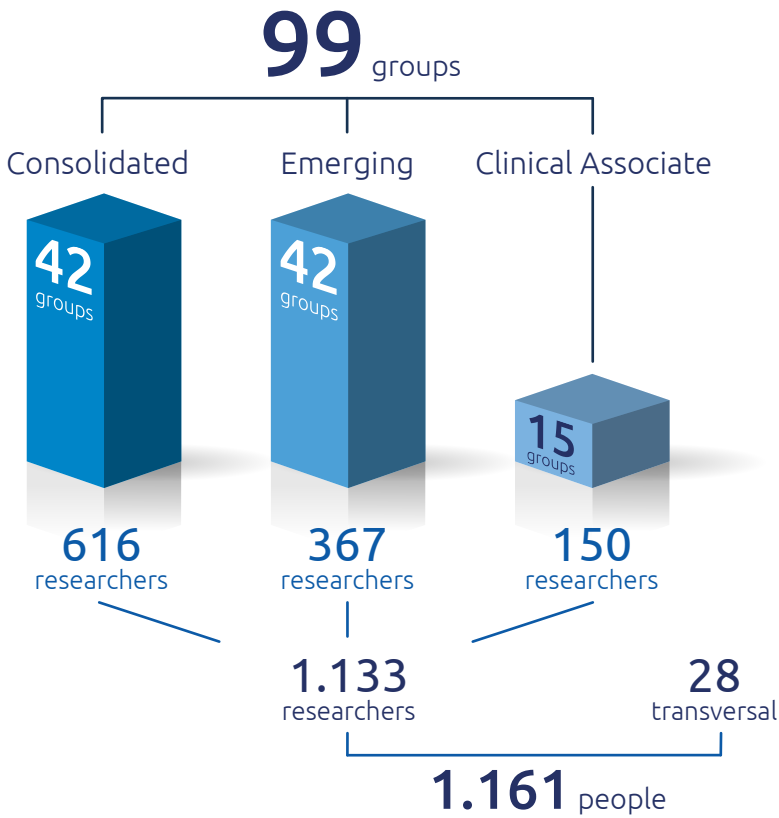



7%
Support Staff
39%
R2
13%
R4
15%
R3
26%
R1


38% 62%
936
35% 65%
1.064
31% 69%
1.071
35% 65%
1.280
33,5% 66,5%
1.347
38,7% 61,3%
1.161
2016
2017
2018
2019
2020
2021

Number of **researchers per area**



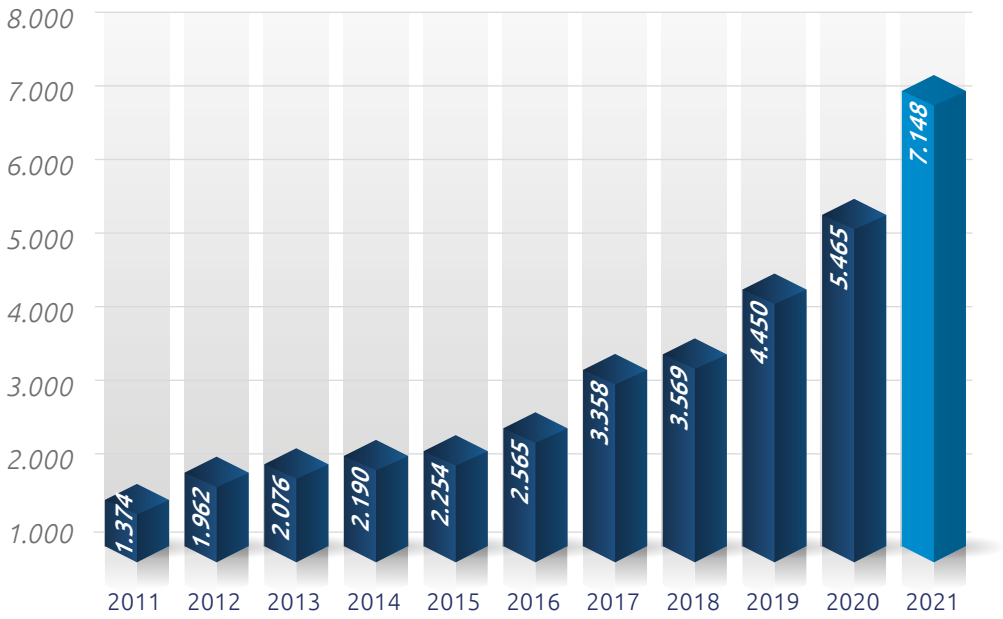

99 groups
Consolidated
Emerging
Clinical Associate
42 groups
42 groups
15 groups
616 researchers
367 researchers
150 researchers
1.133 researchers
28 transversal
1.161 people

Number of **published articles per year**

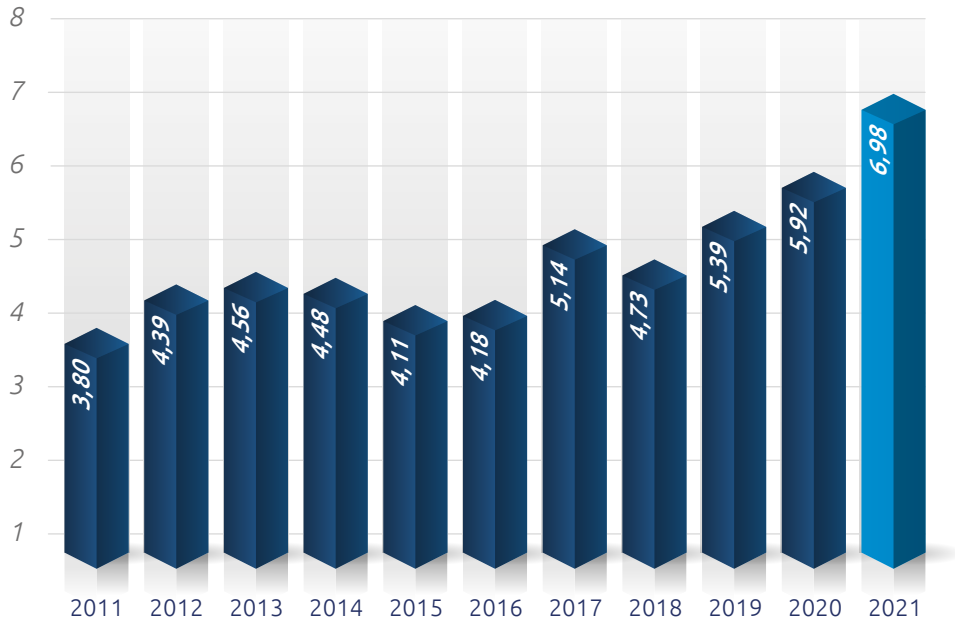
The Institute has published **1.023 original scientific articles, editorials and reviews** in **527 international journals** indexed in the *Journal Citation Report* with a **cumulative impact factor of 7.148,4 points**.

Cumulative impact factor

The upward trend of the **cumulative impact factor** is maintained since it moves **from 1.374 in 2011 to 7.148 in 2021**.

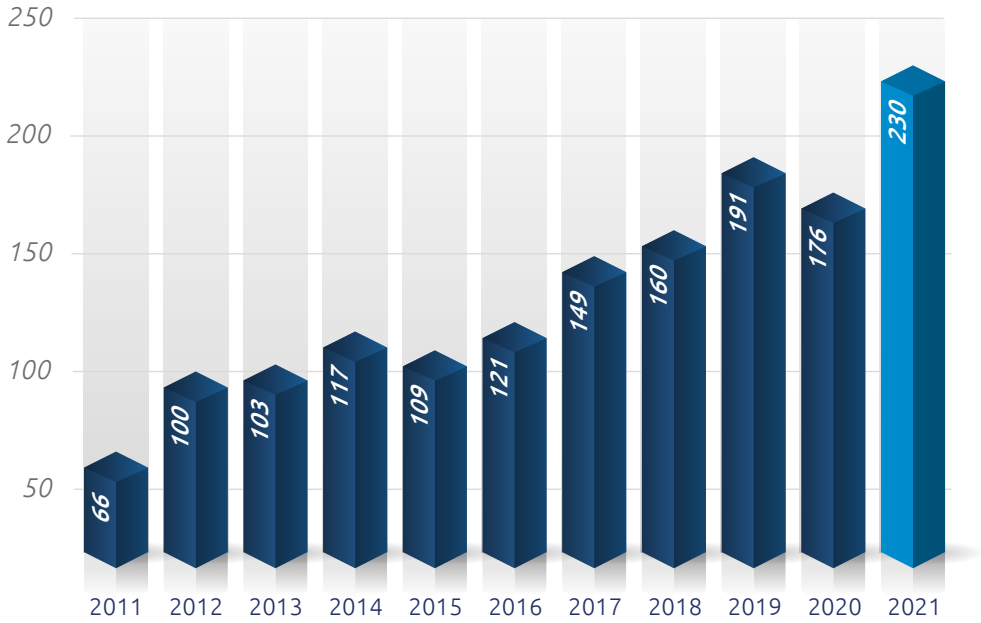


Average **impact factor**

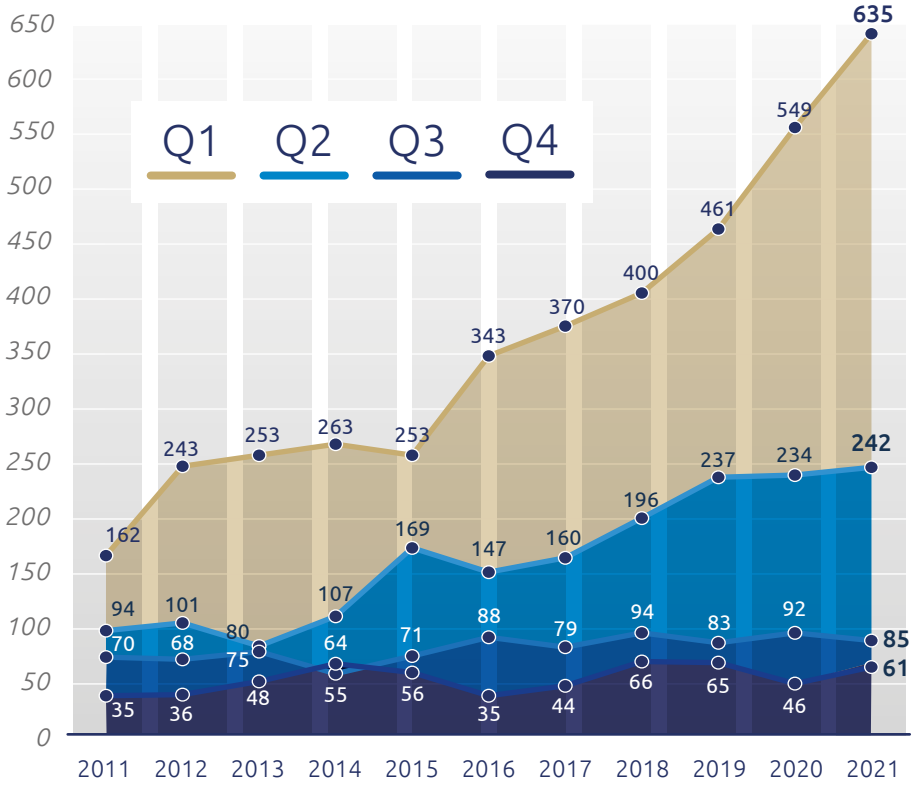


Number of **articles published in journals ranked** in the first decile

A remarkable increase in top ranked journals for the same period **from 66 articles published in 2011 to 230 in 2021**.



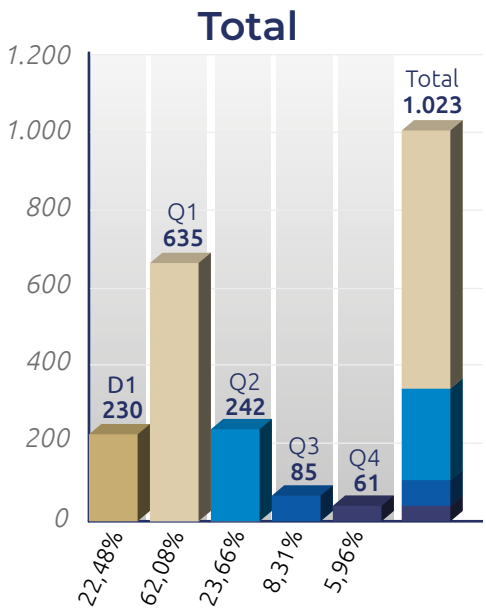
Number of published articles per year, by journal quartile

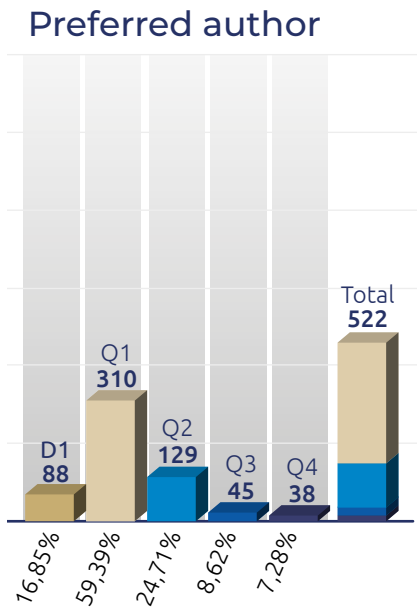


Number of **publications** and % of the total in 2021

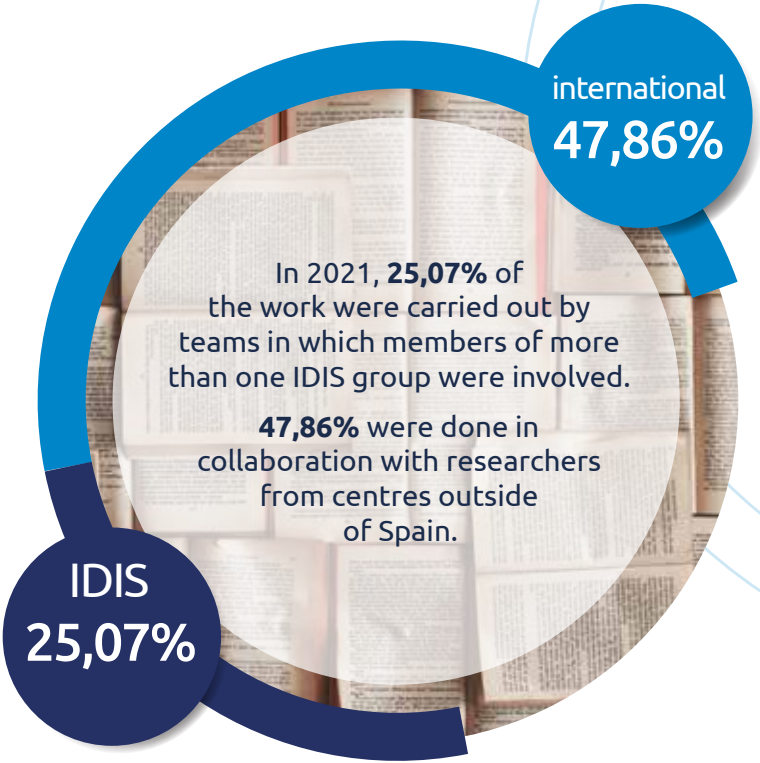
Although **the number of articles has gradually increased for the 2011-2021 period**, the relative increase of articles published in Q1 journals is noticeable.

Regarding the articles authorship, we identify those publications whose main authors (first, last or corresponding author) are affiliated to an IDIS group.





Number and % of **articles published in collaboration** between IDIS groups and groups of centres outside of Spain



IDIS
252

Articles published in collaboration **between IDIS groups.**

International
481

Articles published in collaboration **between groups of centres outside of Spain.**

Amount

46.078.575,63 €

During 2021, funding raised in competitive calls for **research projects,** the **recruitment of staff, infrastructures, agreements, contracts and provision of services, donations, clinical trials and observational studies** generated **46.078.575,63 €** which will complement the resources of the institutions that take part in IDIS.

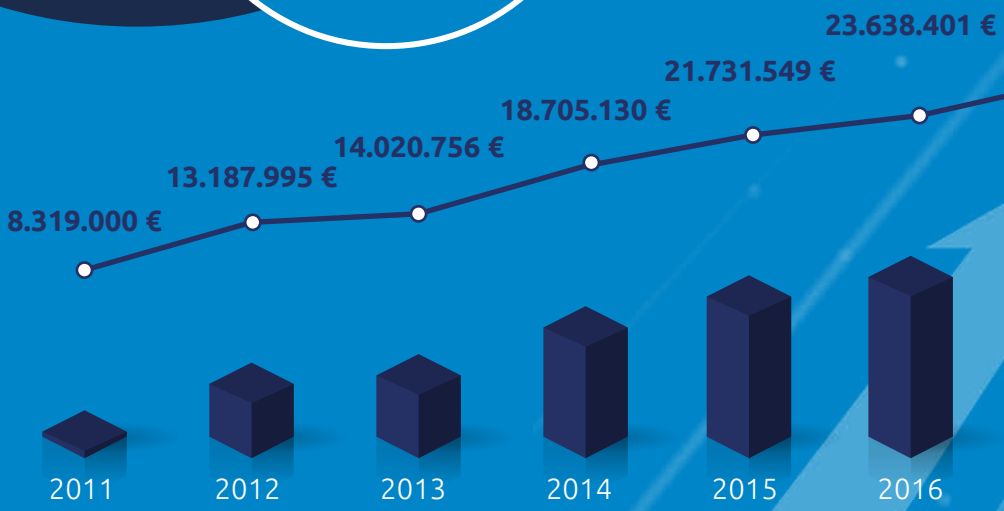
Summary of **the funding raised** in 2021

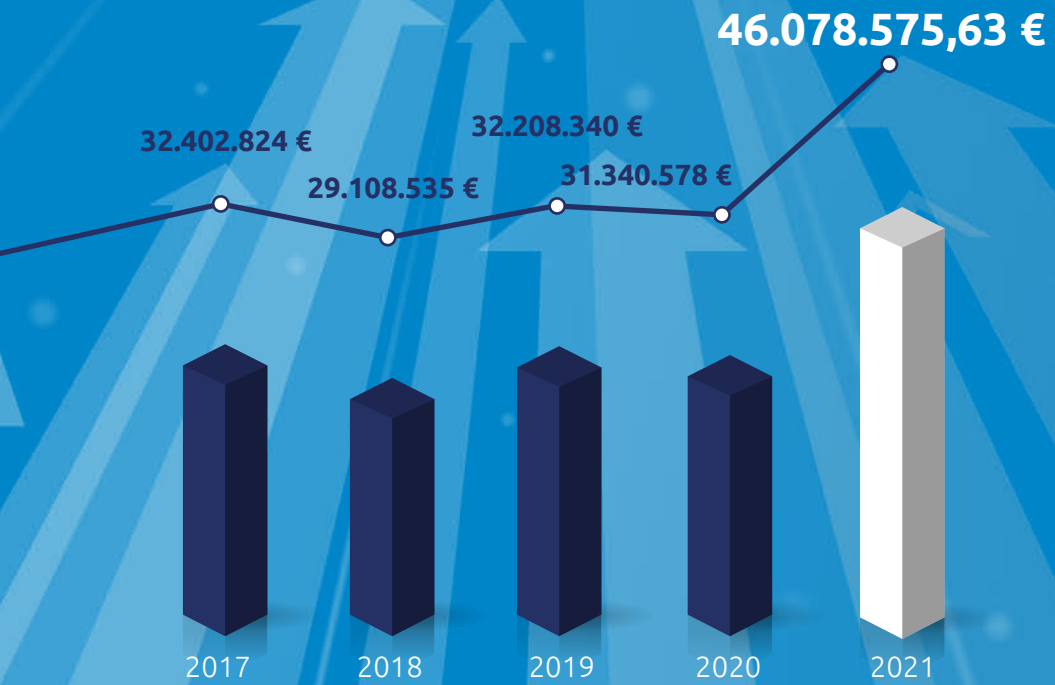
Concept	Number	Amount
Projects	128	**18.933.932,91 €**
Human resources	77	**6.050.729,20 €**
Infrastructures	1	**1.209.335,00 €**
Donations	112	**705.699,28 €**
Contracts and provision of services	512	**14.049.390,00 €**
Transfer	107	**34.900,00 €**
Studies *(Clinical Trials, Other Studies)*	220	**5.094.589,24 €**

2021

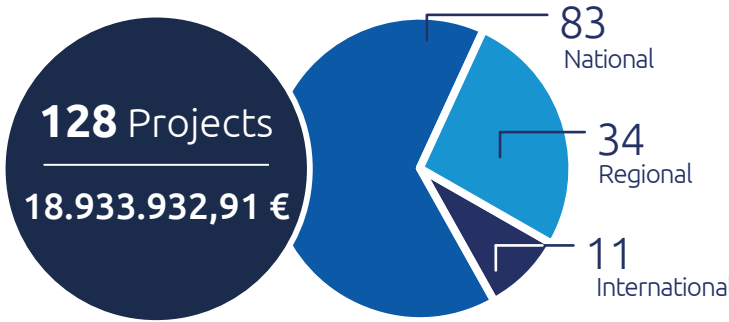
Amount raised

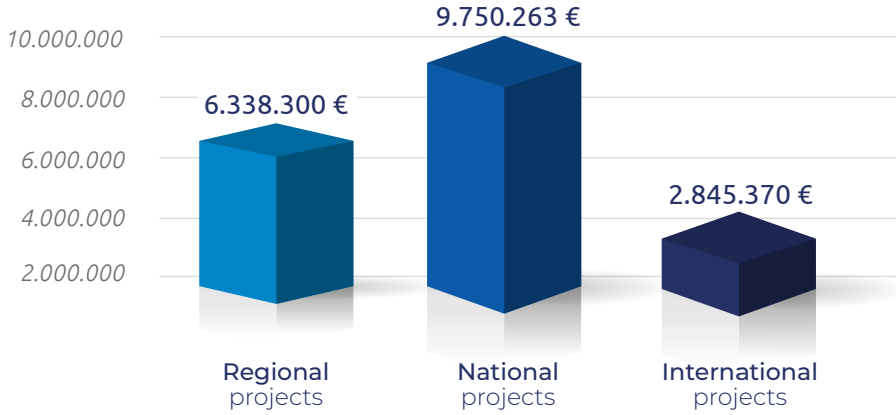
46.078.575,63 €



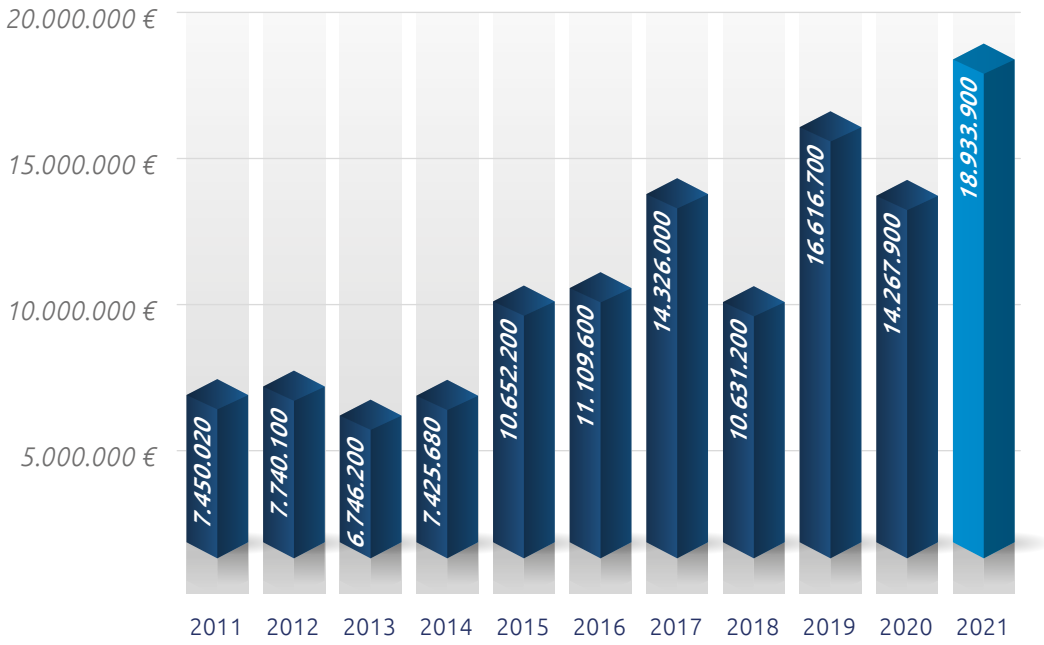

46.078.575,63 €
32.402.824 €
29.108.535 €
32.208.340 €
31.340.578 €
2017
2018
2019
2020
2021

Number and amount of **funds raised in 2021 for projects by location**





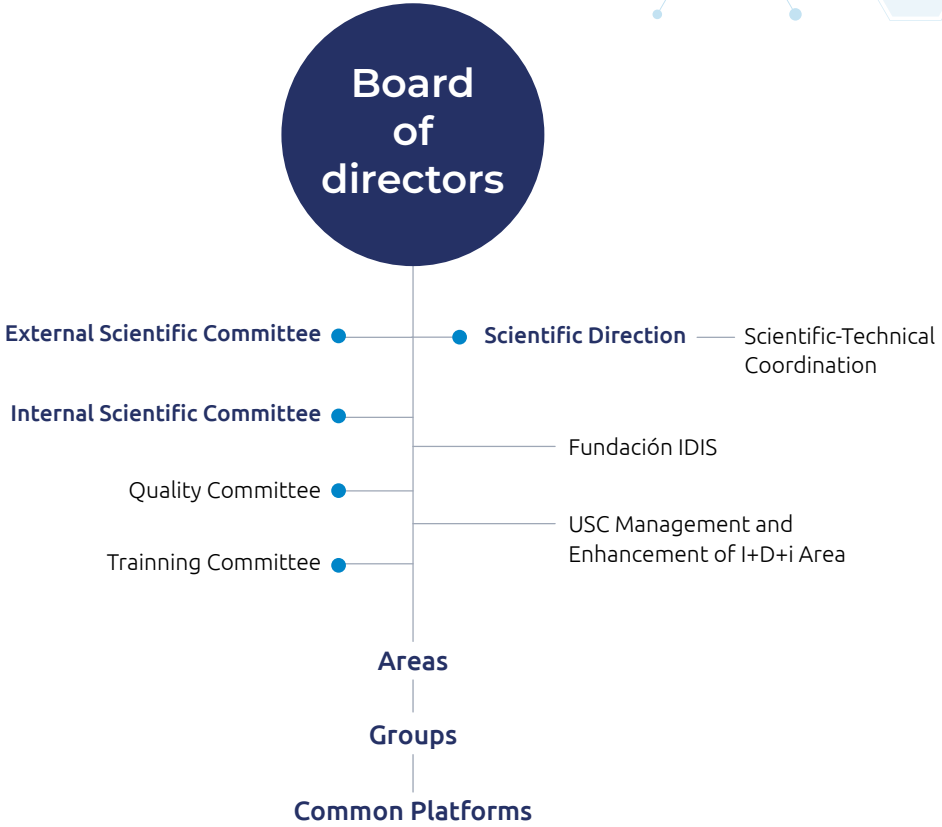
Project funding per year



Number of **clinical trials and other studies**


100
Clinical trials
15
National
85
International
120
Other studies
56
National
24
International
5
Regional
35
Local

3 Structure


Board of directors
External Scientific Committee
Scientific Direction
Scientific-Technical Coordination
Internal Scientific Committee
Fundación IDIS
Quality Committee
USC Management and Enhancement of I+D+i Area
Trainning Committee
Areas
Groups
Common Platforms

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Julio García Comesaña

Vice-President
Antonio López-Díaz

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Ángel Carracedo Álvarez
Enrique Domínguez Muñoz
Antonio Fernández Campa
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José Luis Labandeira García
Eloína Núñez Masid
Vicente Pérez Muñuzuri
Mª Luz Couce Pico(without vote)
Isabel Lista García (without vote)

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Ángeles Almeida Parra
Melchor Álvarez de Mon Soto
María del Carmen Ayuso García
Rosario Luquin Piudo
Joan Comella Carnicé

Internal Scientific Committee

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Mª Luz Couce Pico

Secretary
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José Ramón González Juanatey
Francisco Gude Sampedro
José Luis Labandeira García
Isabel Lista García
Rafael López López
Miguel López Pérez
Mabel Loza García
Paula Mariño Lorenzo
Miguel Ángel Martínez Olmos
Federico Martinón Torres
Laura Muinelo Romay
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Mabel Sampedro Parada
Ana Vega Gliemmo

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Secretary
Iria Louzao Pernas

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Isabel Lista García
Mª Pilar Montes Lourido
Mabel Sampedro Parada

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Sonia Eiras Penas
Ana Estany Gestal
Anxo Fernández Ferreiro
Cristina Fernández Pérez
Francisco Gude Sampedro
Ana Igea Fernández
María del Carmen Rivas Vázquez
Anxo Vidal Figueroa

Scientific - technical coordination

José Ramón Castro Ruibal
Yolanda Liste Martínez
Iria Louzao Pernas

A001 ONCOLOGY *Coordinator:* ***Rafael López López***

C010	**Genetics of Human Diseases**	*Fernando Domínguez Puente*
C011	**Pathology**	*José Ramón Antúnez López*
C025	**NANOBIOFAR**	*María José Alonso Fernández*
C030	**Traslational Medical Oncology**	*Rafael López López*
C032	**Molecular Imaging**	*Pablo Aguiar Fernández*
E004	**Molecular Oncology**	*José Antonio Costoya Puente*
E018	**Cell Cycle and Oncology (CiClon)**	*Anxo Vidal Figueroa*
E028	**Cell senescence, cancer and aging**	*Manuel Collado Rodríguez*
E031	**Oncologic Endocrinology**	*Román Pérez Fernández*
E032	**Preclinical Animal Models**	*Laura Sánchez Piñón*
E033	**Viruses and cancer**	*María del Carmen Rivas Vázquez*
E037	**DNA Repair and Genome Integrity**	*Miguel González Blanco*
E043	**Medical Physics and Biomathematics**	*Juan Pardo Montero*
E044	**Nano-Oncology and Translational Therapy Unit**	*María de la Fuente Freire*
E052	**Oral and maxillofacial medical-surgicalpathology**	*Abel García García*
AC01	**Lymphoproliferative Disorders**	*José Luis Bello López*
AC06	**Intraocular Tumours in Adults**	*Antonio Piñeiro Ces*
AC08	**Surgical Oncology**	*Manuel Bustamante Montalvo*

A002 GENETICS AND SYSTEMS BIOLOGY

Coordinator: ***Ángel Carracedo Álvarez***

C005	**Genetics**	*Ángel Carracedo Álvarez*
C009	**Translational Research in Digestive Diseases**	*Juan Enrique Domínguez Muñoz*
C020	**Genetics, Vaccines, Infections & Pediatrics**	*Federico Martinón Torres*
C041	**Cancer Genetics and Rare Diseases**	*Ana Paula Vega Gliemmo*
E012	**Comparative Genomics of Human Parasites**	*Julio Manuel Maside Rodríguez*
E015	**Population Genetics in Biomedicine**	*Antonio Salas Ellacuriaga*
E020	**Psychiatric Genetics**	*Javier Costas Costas*
E021	**Genetics and Developmental Biology of Kidney Diseases**	*Miguel Ángel García González*
E027	**Escherichia coli**	*Jorge Blanco Álvarez*
E035	**Genetics of Gastrointestinal Tumours**	*Clara Ruiz Ponte*
E036	**Stem Cells and Human Diseases**	*Miguel Ángel Fidalgo Pérez*
E040	**Mobile Genomes and Disease**	*José Manuel Castro Tubío*
E047	**Cancer Genetics and Epidemiology Group**	*Manuela Gago Domínguez*
E054	**Epitranscriptomics and aging**	*Diana Guallar Artal*
AC20	**Translational Research of Airway Diseases**	*Francisco J. González Barcala*

A003 ENDOCRINOLOGY *Coordinator:* ***Miguel A. Martínez Olmos***

C001	**Neoplasia and Endocrine Differentiation**	*Clara Álvarez Villamarín*
C006	**Molecular Endocrinology**	*Felipe Casanueva Freijo*
C008	**Obesity and Nutrition**	*Carlos Diéguez González*
C012	**Metabolic Disorders**	*María de la Luz Couce Pico*
C019	**Thyroid and Metabolic Disorders Unit (UETeM)**	*David Araújo Vilar*
C022	**Paediatric Nutrition**	*Rosaura Leis Trabazo*
C029	**Neurobesity**	*Miguel López Pérez*
C031	**Molecular Metabolism**	*Rubén Nogueiras Pozo*
E023	**Obesidomics**	*María Pardo Pérez*
E025	**Cellular Endocrinology**	*Jesús Pérez Camiña*
E026	**Endocrine Physiopathology**	*Luisa María Seoane Camino*
E039	**Diabesity**	*Sulay Tovar Carro*
E041	**Epigenomics in Endocrinology and Nutrition**	*Ana Belén Crujeiras Martínez*
AC04	**Paediatric Endocrinology**	*Manuel Pombo Arias*

A004 NEUROSCIENCES *Coordinator:* ***José Castillo Sánchez***

C004	**Neurobiology**	*Antonio Canedo Lamas*
C015	**Neurobiology of the Visual System**	*Francisco González García*
C018	**Experimental Neurology of Parkinson´s Disease**	*José Luis Labandeira García*
C026	**BIOFARMA**	*María Isabel Loza García*
C033	**Design, Synthesis and Medical Evaluation of Bioactive Compounds and New Materials**	*Antonio Mouriño Mosquera*
C034	**Physics of Polymers and Colloids**	*Victor Mosquera Tallón*
C035	**R&D in Drugs Dose Forms and Delivery Systems**	*Ángel Concheiro Nine*
C036	**Magnetism and Nanotechnology (NanoMag)**	*José Rivas Rey*
C037	**Trace Elements, Spectroscopy and Speciation**	*Pilar Bermejo Barrera*
C038	**Analytical Chemistry of Compounds of Alimentary, Environmental and Biological Interst**	*Antonia M. Carro Díaz*
C042	**Translational Stroke**	*Francisco Campos Pérez*
C043	**Neuroimaging and Biotechnology**	*Ramón Iglesias Rey*
C044	**Neuroaging**	*Tomás Sobrino Moreiras*
E014	**Prion Diseases**	*Jesús Rodríguez Requena*
E019	**Cell Stress**	*Juan Bautista Zalvide Torrente*
E029	**Cognitive Neuroscience**	*Fernando Díaz Fernández*
E049	**Gene Regulatory Control in Disease Laboratory**	*Ashwin Woodhoo*
E050	**Headaches and Craniofacial Pain**	*Rogelio Leira Muíño*
E052	**Corneal neurodegeneration**	*Mª Isabel Lema Gesto*
E053	**Circadian And Glial Biology**	*Olga Barca Mayo*
AC03	**Critical Patient**	*Julián Álvarez Escudero*
AC11	**Simulation, Life Support and Intensive Care**	*Antonio Rodríguez Núñez*
AC21	**Pharmacological Biochemistry**	*Fernando J Hermida Ameijeiras*
AC22	**Movement Disorders**	*José María Prieto González*

A005 PLATFORMS AND METHODOLOGY

Coordinator: ***Francisco Gude Sampedro***

C002	**Surgery: Complications and advances**	*Miguel Ángel Caínzos Fernández*
C013	**Epidemiology, Public Health and Evaluation of Health Services**	*Adolfo Figueiras Guzmán*
C017	**Research Methodology**	*Francisco Gude Sampedro*
C021	**Clinical Analysis**	*Santiago Rodríguez-Segade Villamarín*
C024	**Radiology**	*Miguel Souto Bayarri*
E002	**Biostatistics**	*Carmen María Cadarso Suárez*
E013	**Microbiology**	*María Luisa Pérez del Molino Bernal*
E034	**Clinical Pharmacology**	*Irene Zarra Ferro*
E046	**PARAQUASIL**	*José Blanco Méndez*
AC09	**Oral Sciences (OSRG)**	*Inmaculada Tomás Carmona*
AC10	**Healthy ageing, fragility and chronicity. Research in Primary Care**	*Juan Manuel Vázquez Lago*
AC13	**Dermatology and Craniofacial Pathology (DePaCra)**	*Pablo Ignacio Varela Centelles*

A006 INFLAMMATION

Coordinator: ***José Ramón González Juanatey***

C003	**Hypertension**	*Carlos Calvo Gómez*
C014	**Rheumatology**	*Juan Jesús Gómez-Reino Carnota*
C016	**Cardiology**	*José Ramón González Juanatey*
C027	**Neuroendocrine Interactions in Rheumatic and Inflammatory Diseases (Neirid)**	*Oreste Gualillo*
C028	**Experimental and Observational Rheumatology**	*Antonio González Martínez-Pedrayo*
C039	**Biodiscovery**	*Luis Miguel Botana López*
C040	**Oral Medicine and Surgery (OMEQUI)**	*Pedro Diz Dios*
E001	**Cardiovascular Genetics**	*María José Brión Martínez*
E009	**Cellular and Molecular Cardiology**	*Francisca Lago Paz*
E030	**Platelet Proteomics**	*Ángel García Alonso*
E038	**Musculoskeletal Pathology**	*Rodolfo Gómez Bahamonde*
E045	**Translational Cardiology**	*Sonia Eiras Penas*
E048	**Molecular and Cellular Gastroenterology**	*Javier Conde Aranda*
AC05	**Pneumology**	*Luis Guillermo Valdés Cuadrado*
AC07	**Semergal**	*Sergio Cinza Sanjurjo*
AC19	**Vascular Research Group of Santiago**	*Diego Caicedo Valdés*

Recurrent training

Defended **PhD theses** per year

5 Innovation and transfer

Transfer acceleration through public funding and private investment

ITEMAS network

The Innovation Platform in Medical and Healthcare Technologies (ITEMAS) is a support structure for healthcare innovation promoted by the Carlos III Health Institute (ISCIII), whose objective is to facilitate the innovative ideas of healthcare professionals to generate value for the system, through favoring the transfer of technology, the culture of innovation and communication with the rest of society.

ITEMAS 'main tool is the creation of Innovation Support Units (UAI) in hospitals and biomedical research institutes, including IDIS.

Atlantic Ket Med

Atlantic KET Med (AKM) is an Interreg funded, coordinated action aiming to establish a Transnational Advanced Pilot Manufacturing Ecosystem for Future Biomedical Products. Featuring partners with expertise in the Key Enabling Technologies (KETs), AKM plans to provide bottom-up support to the ecosystem through direct support of SMEs as well as top-down support through educational and infrastructure policies.

IDIS joins the ecosystem and it´s the only Spanish research centre that participates in AKM.

Adopting the Public-Private Partnership Model

Two P2 ongoing initiatives where public IDIS partners share risks with private investors.

Roche-CHUS

Precision Oncology Joint Unit.

PRECISION ONCOLOGY
ROCHE|CHUS JOINT UNIT

Esteve-USC

Drug Discovery Joint Unit.

ESTEVE USC UNIVERSIDADE DE SANTIAGO DE COMPOSTELA

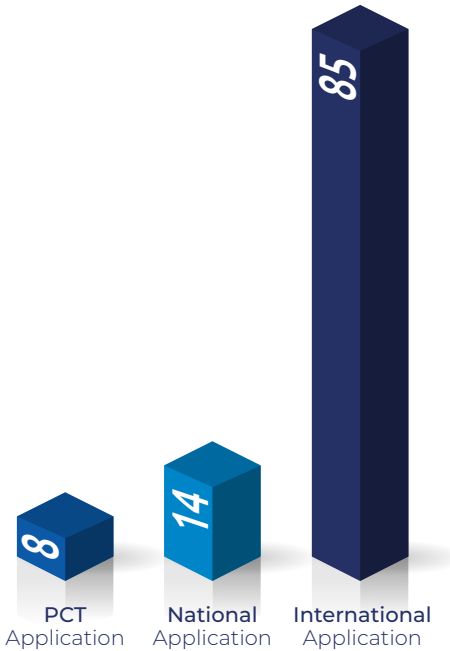
Disseminating our research

BioINCUBATECH

BioIncubaTech is the High Technology Incubator for the promotion of innovation and biotechnology transfer in the field of health and food technologies to micro-SMEs. BioIncubaTech belongs to "High Technology Incubators for the promotion of innovation and technology transfer to micro-SMEs" Project, aimed to modernize the regional productive fabric. These Incubators are created as traction instruments aligned with the objectives of the EU 2020 and Horizon 2020 Strategy and will promote inter-regional cooperation, as well as collaboration between public and private sector agents at international level.

IDIS collaborates since the beginning of this proposal and helped to create the project. We have 2 incubated projects.

Intelectual property



Spin off

FlowReserve
Personalized Medicine in Cardiology

bflow

QUBIO tech

NASAS BIOTECH

DART
Detection And Radiation Technologies

Lincbiotech

Innovations. Software. trademarks & apps

DIVERSA

galCovid

Nutrisen

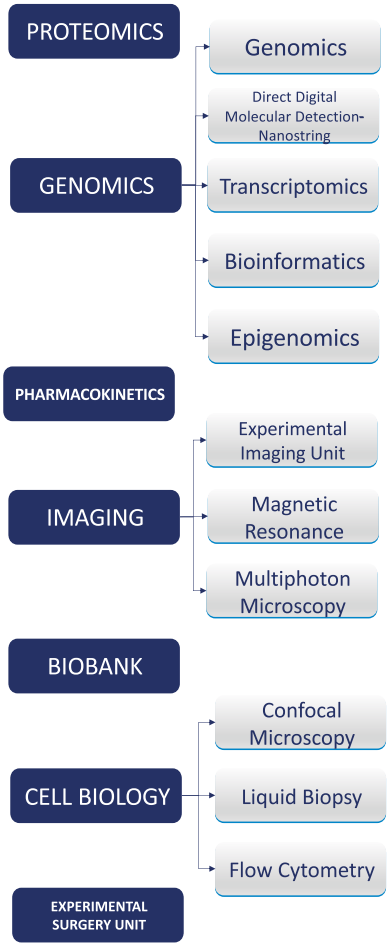
NEmecum

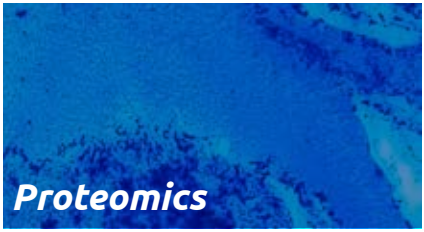
CYSTANALYSER

LIPO-DDX

6

Platforms


PROTEOMICS
Genomics
Direct Digital Molecular Detection- Nanostring
GENOMICS
Transcriptomics
Bioinformatics
Epigenomics
PHARMACOKINETICS
Experimental Imaging Unit
IMAGING
Magnetic Resonance
Multiphoton Microscopy
BIOBANK
Confocal Microscopy
CELL BIOLOGY
Liquid Biopsy
Flow Cytometry
EXPERIMENTAL SURGERY UNIT

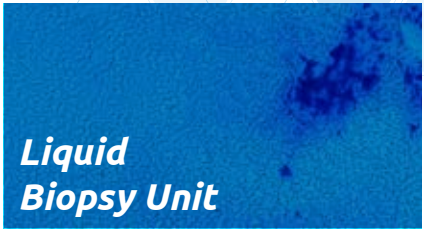


Susana Belén Bravo López

susana.belen.bravo.lopez@sergas.es

The Proteomics platform was created with the purpose of boosting research, providing support and offering researchers a comprehensive infrastructure in the field of proteomics managed by highly specialized staff.

It has cutting-edge equipment used to conduct complete proteome characterization studies, but also differential expression analysis studies.



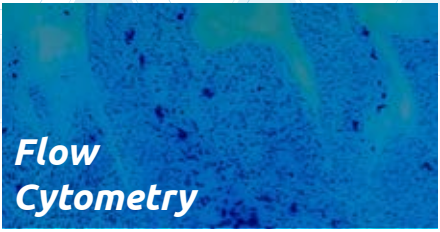
Laura Muinelo Romay

laura.muinelo.romay@sergas.es

The Liquid Biopsy Analysis Unit is a laboratory specialized in the analysis of circulating tumor cells (CTCs), circulating tumor DNA (ctDNA) and other tumor elements present in different biological fluids such as blood, saliva, pleural fluid or cerebrospinal fluid, among others. others.

The unit, created in 2012, provides services to different national and international clinical and research groups for the study of liquid biopsy.

Interest in the study of tumor material present in biological fluids has increased exponentially in the last decade, mainly because it is the least invasive and most dynamic strategy for characterizing tumors.



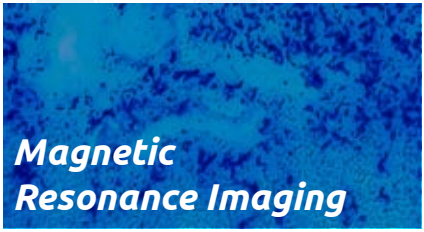
Flow Cytometry

Pablo Hervella Lorenzo

pablo.hervella.lorenzo@sergas.es

It is a technique of cell analysis that allows to measure the characteristics of light scattering and cell fluorescence when those cells pass through a light beam. The platform's main aims are:

- To advise users on the principles and applications of flow cytometry analysis and cell sorting.
- To develop, optimize and perform new analytical applications demanded by the users.
- To do cellular isolation through cell sorting.
- To quantify different soluble cytokines using multiplex tests.



Magnetic Resonance Imaging

Ramón Iglesias Rey

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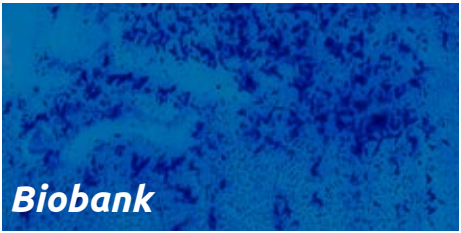
Magnetic Resonance Imaging is perhaps the most versatile neuroimaging technique that exists nowadays. The use of this platform in its different variants (anatomical, functional, spectroscopy and molecular imaging) allows for a complete, non-invasive (in vivo) and longitudinal monitoring over time of the process associated with neurovascular diseases and others such as plasticity, reorganization and functional recovery in animal models.



Lydia Fraga Fontoira (Manager)

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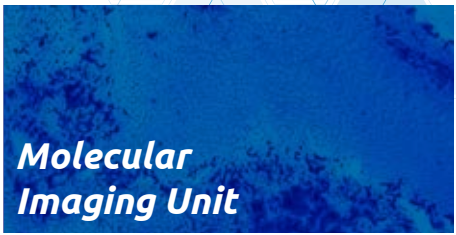
The Biobank is a transversal platform to support biomedical research. These are public, non-profit establishments in which biological samples and associated clinical information are kept of high quality for use in biomedical research. Its operation is focused on managing, under safety, quality and efficiency criteria, the reception, storage and subsequent transfer of samples to requesting researchers for use in their projects, as long as they meet the required ethical and legal requirements.

The Biobanks act, therefore, as a link between sample donors, healthcare staff and the research community for the harmonization of the rights, duties and interests of each of the groups and thus facilitate the advancement of biomedical research.



Pablo Aguiar Fernández

pablo.aguiar.fernandez@sergas.es

Our mission is to bridge the gap between in vitro biomedical research and in vivo preclinical and clinical imaging, providing novel molecular imaging biomarkers and imaging probes to gain information about physiology and pathology in vivo. We offer a core facility to provide opportunities for in vivo molecular imaging based on PET, SPECT and CT technologies.

The Animal Experimentation Unit

Francisco Campos Pérez

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The Animal Experimentation Unit provides support in biomedical research with several animal models for IDIS research groups, in strictly controlled sanitary and environmental conditions. The Animal Experimentation Unit is accredited by the Ministry of Rural Environment of the Xunta de Galicia. It has rat and mouse housing facilities, surgery rooms and specialized qualified personnel, in accordance with current regulations. It also has an Ethics Committee on Animal Experimentation. It holds the corresponding accreditation as an Authorized Body to carry out the evaluation of projects from a scientific or educational point of view.

It is responsible for advice on issues related to animal welfare, review of internal operational processes, issuance of reports and monitoring of projects. Its objectives are to promote research, and to develop and implement biomedical training, providing professionals with the necessary resources for the development of these initiatives.

Confocal Microscopy

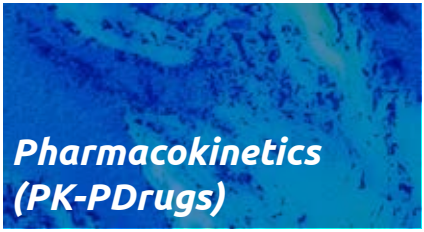
Marta Picado Barreiro

marta.picado.barreiro@sergas.es

The confocal scanning microscope is well-known for its ability to perform optical sectioning: a thin plane or section within a thick turbid medium is non-invasively imaged with high resolution and contrast. Nuclear, cellular and morphologic detail is imaged in living intact tissue without having to excise physically and prepare thin sections or cultures.

The services include the infrastructure and specialised staff to perform analysis as...

- 3D imaging reconstruction.
- Multiple labeling.
- Colocalization.
- In vivo fluorescence imaging.



Pharmacokinetics (PK-PDrugs)

Anxo Fernández Ferreiro
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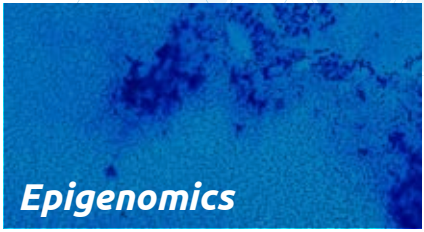
The unit (PK-PDrugs) coordinated from the Research and Innovation Unit of the Pharmacy Service of Santiago de Compostela, is committed to the most sophisticated analytical technologies focused on the determination of drugs and metabolites in the different fields of biomedical research.



Epigenomics

Ana Belén Crujeiras / Ángel Díaz Lagares
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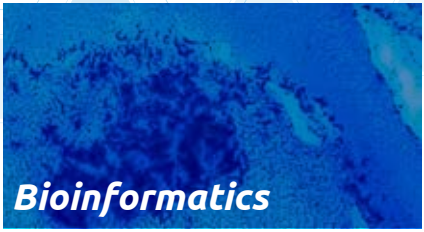
angel.diaz.lagares@sergas.es

Epigenomics contributes to solving multiple biological processes related to the development of diseases and is particularly useful in the field of personalized medicine. The Epigenomics Unit, created in collaboration between the Endocrinology and Nutrition area and the Oncology area of IDIS and in consortium between FIDIS and the CIBER Physiopathology of Obesity and Nutrition (CIBERobn), aims to provide help and support to research groups and industry at a national and international level in carrying out epigenomic studies, at the level of specific genes or the epigenome.

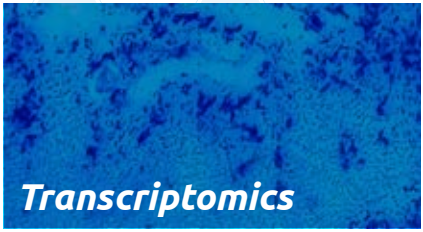


Bioinformatics

Jorge Amigo Lechuga

jorge.amigo@usc.es

The Bioinformatics Platform is made up of a multidisciplinary team with experience in handling data obtained from omics technologies and in translational medicine. Its purpose is to provide both basic and clinical researchers with technological support and advice on the numerical analysis and processing of large volumes of data from different areas of the life sciences, applying techniques from both the fields of biology and chemistry, physics or mathematics, to obtain new knowledge.



Transcriptomics

Isabel Ferreirós Vidal

Isabel.Ferreiros.Vidal@sergas.es

This technology allows millions of fragments to be sequenced massively and in parallel, improving the speed and accuracy of sequencing while reducing its cost.

The Illumina NextSeq 2000 Sequencing System is provided with a novel super-resolution optical system that produces high-precision imaging data with higher resolution and sensitivity than more traditional Illumina systems.

This technology also provides greater sequencing flexibility, and it is scalable to different production experimental needs and adaptable to both conventional and emerging applications.

Direct Digital Molecular Detection (Nanostring)

Alberto Gómez Carballa

alberto.gomez.carballa@sergas.es

The nCounter® Assay System allows hundreds of mRNAs, miRNAs, SNVs, CNVs or proteins to be analyzed directly by direct digital molecular detection, in a single reaction in the absence of enzymes (no reverse transcription or amplification). It is a system of high sensitivity and reproducibility, with great multiplexing capacity (up to 800 genes in the same reaction). The technique not only reduces the number of necessary reactions, but also saves the amount of RNA/DNA that is used. required for the test.

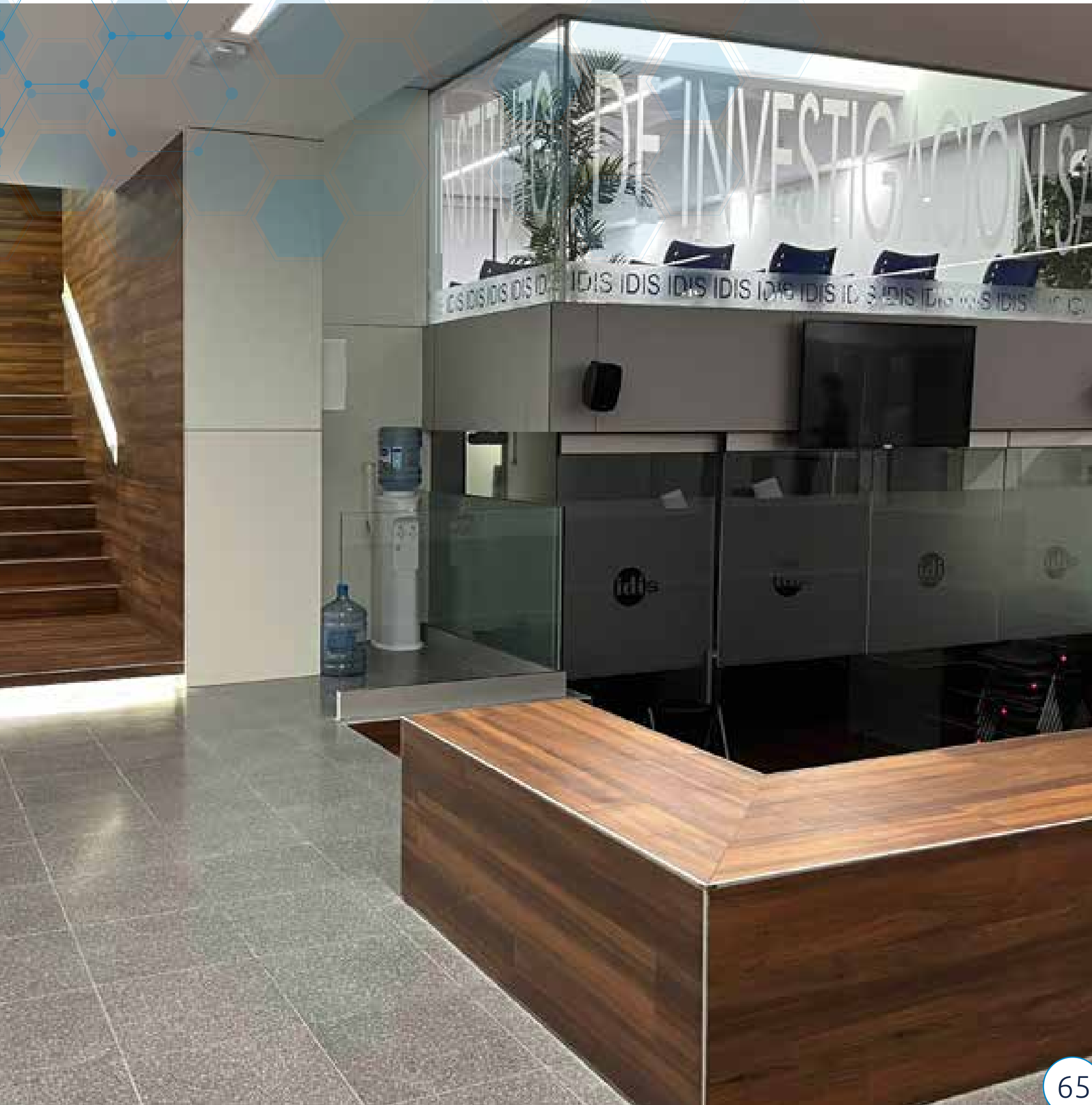
Genomics

Beatriz Sobrino Rey

beatriz.sobrino.rey@sergas.es

The application of the most modern technologies of genetic or pharmaceutical analysis require, in addition to the necessary equipment, expert knowledge for the adequate interpretation of the results obtained from them.

Before starting the process it is essential to have adequate general knowledge of the field and specific knowledge of the capacities, limitations and alternatives in each particular case.


DE INVESTIGACION
IDIS IDIS IDIS IDIS

7 Funding

128
Projects
18.933.932,91 €

77
Human resources
6,050.729,20 €

112
Donations
705.699,28 €

512
Contracts and provision of services
14.049.390,00 €

220
Studies *(Clinical Trials, Other Studies)*
5.094.589,24 €

1
Infrastructure
1.209.335,00 €

1
Transfer
34.900,00 €

During 2021, **46.078.575,63 €** were raised in the following concepts: projects, human resources, transfer, donations, contracts, infrastructures, provision of services, transfer, agreements and studies.

Total

46.078.575,63 €

Competitive Funding

26.193.997,11 €

128 Projects

18.933.932,91 €

33	**84**	**11**
Regional projects	**National** projects	**International** projects
6.338.299,88 €	**9.750.263,17 €**	**2.845.369,86 €**

77

6,050.729,20 €

Human resources

Agency	Concept	Number	Amount
gain	*GAIN Predoctoral Grant*	23	**1.467.079 €**
	GAIN Postdoctoral Grant	15	**1.131.543 €**
	Talento Senior	1	**63.360 €**
	Principia	1	**11.000 €**
ISCIII	*PFIS / iPFIS*	1	**89.900 €**
	Río Hortega	5	**325.000 €**
	Sara Borrell	3	**285.000 €**
	Miguel Servet (I/II)	2	**617.200 €**
Gobierno de España · Ministerio de Ciencia e Innovación	*FPI*	4	**340.893 €**
	Juan de la Cierva	3	**312.235 €**
	Technical Support Staff	1	**72.505 €**
Gobierno de España · Ministerio de Universidades	*FPU*	7	**564.692 €**
idis	*IDIS Grants*	9	**638.322 €**
	Others	2	**132.000 €**

8 Strategic alliances

PLATFORMS

3

RNBB. BIOBANK Network

ITEMAS ISCIII. Innovation in Medical and Health Technologies

SCREN. Spanish Clinical Research Network ISCIII

Red Biobancos
Instituto de Salud Carlos III

itemas isciii

SCReN Spanish Clinical Research Network ISCIII

CIBER

BIOMEDICAL RESEARCH NETWORKING CENTRES

6

CIBEROBN (1), Physiopathology of Obesity and Nutrition

CIBERER, Rare Diseases

CIBERESP, Public Health and Epidemiology

CIBERCV: Cardiovascular Diseases

CIBERONC: Cancer

CIBER CIBERNED: Neurodegenerative Diseases

ciberobn
ciberer
ciberesp
cibercv isciii
ciberonc isciii
ciber isciii

(1) Scientific Direction IDIS

RETICS

6

INVICTUS (1), Cerebrovascular diseases (stroke)

OFTARED, Eye Diseases

REDIAPP, Research Network on Preventive Activities and Health Promotion in Primary Care

RIER, Rheumatic Diseases

REDINREN, Kidney Diseases

TerCELL. Cell Therapy Network

(1) Scientific Direction IDIS

NETWORKS FOR COOPERATIVE RESEARCH IN HEALTH

INTERNATIONAL NETWORK

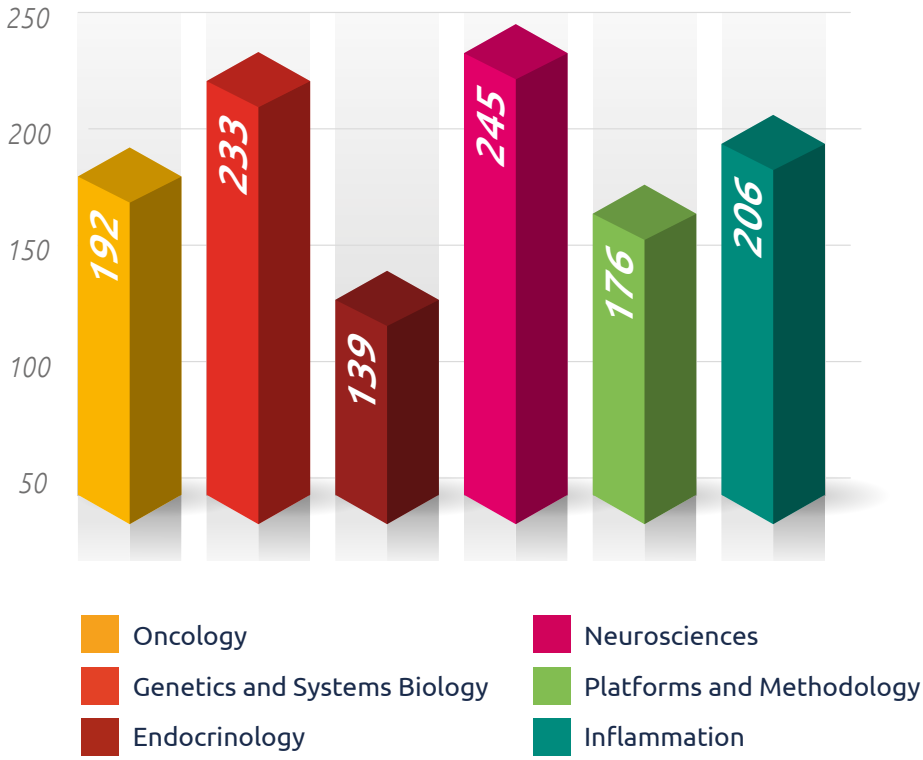
2

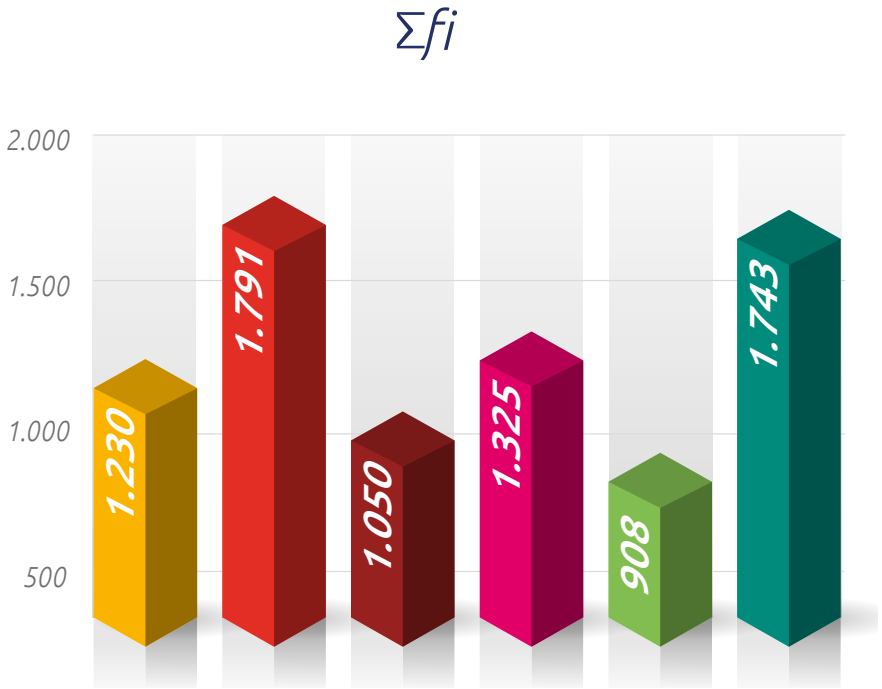
EATRIS, European infrastructure for translational medicine

COST, European Cooperation in Science and Technology

9 Areas

Publications in 2021




Σfi
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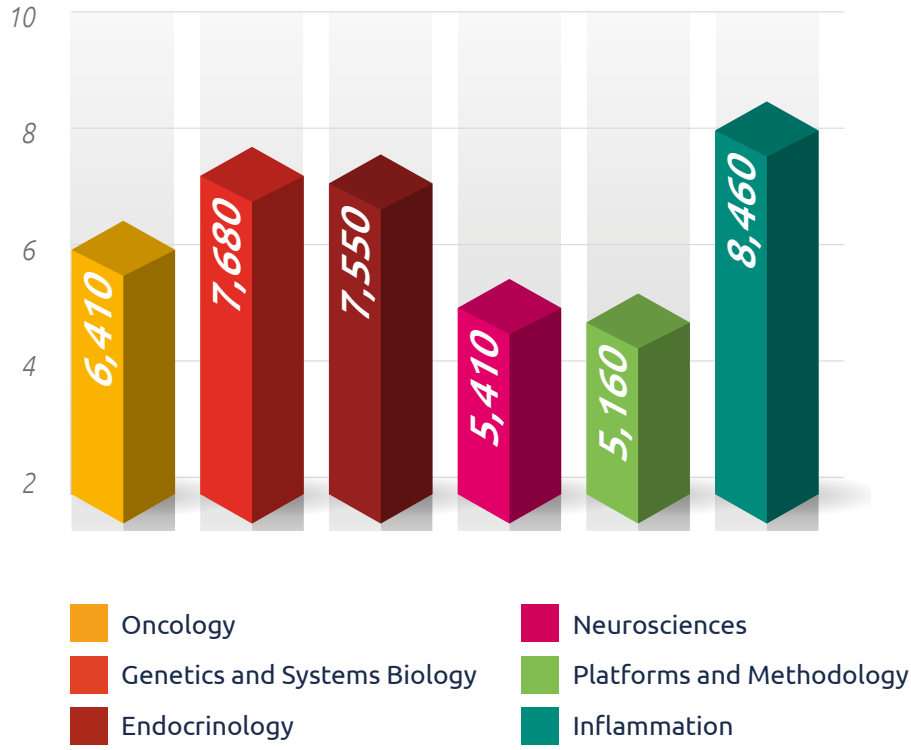
10
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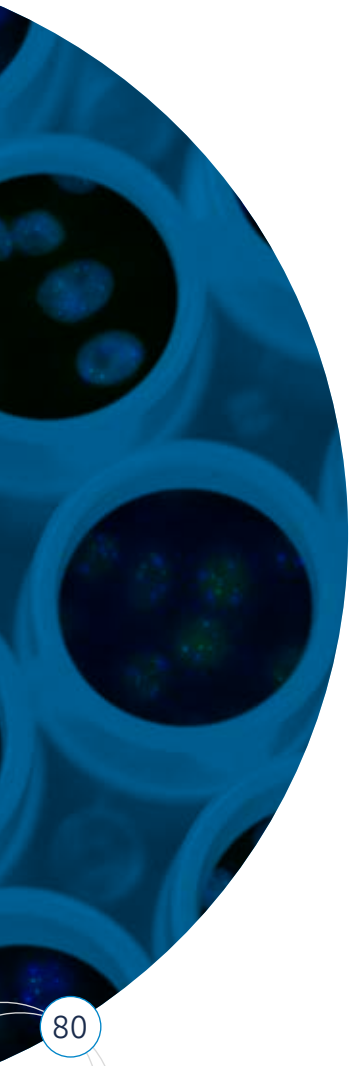
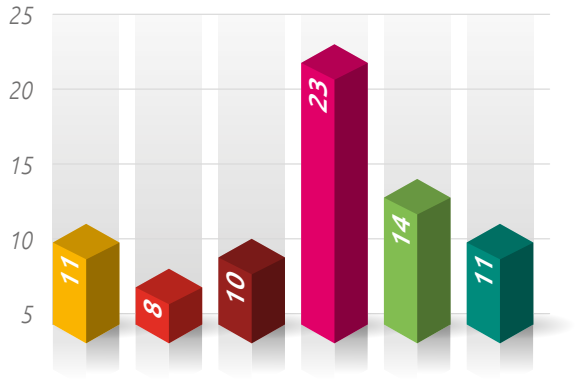
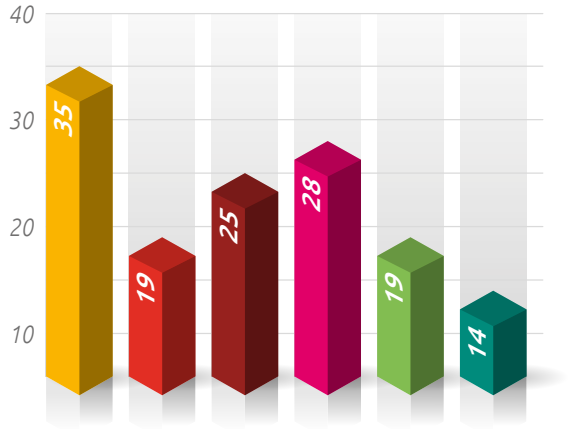
8,460
Oncology
Genetics and Systems Biology
Endocrinology
Neurosciences
Platforms and Methodology
Inflammation



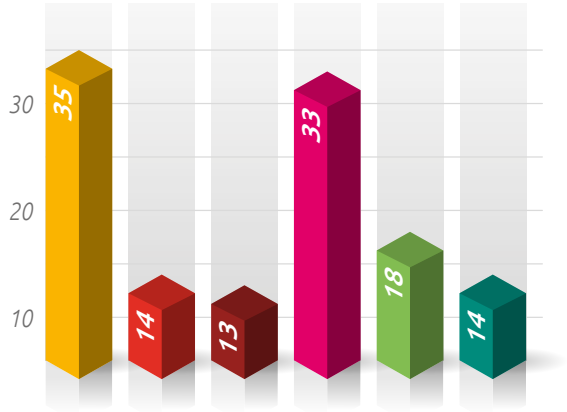
Theses



Patents

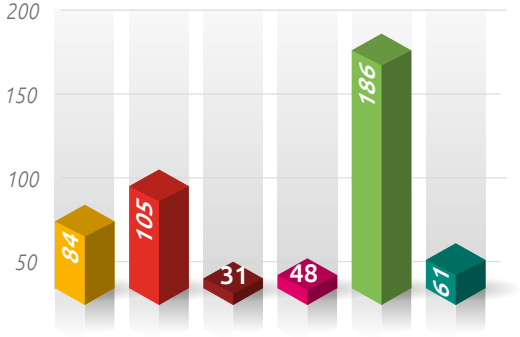


Projects

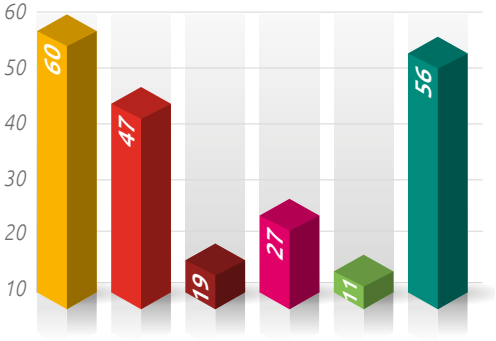


- Oncology
- Genetics and Systems Biology
- Endocrinology
- Neurosciences
- Platforms and Methodology
- Inflammation

Contracts



Clinical Studies



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INSTITUTO DE INVESTIGACIÓN SANITARIA
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