



HEALTH RESEARCH INSTITUTE
SANTIAGO DE COMPOSTELA

ANNUAL REPORT 2020



EDITION AND PRODUCTION

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

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Technical Management.

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Technical Research Management and Promotion.

APPROVAL

IDIS Board of Directors Meeting
Santiago de Compostela, on 18 May 2021.



ANNUAL REPORT 2020

INSTITUTO DE INVESTIGACIÓN SANITARIA
SANTIAGO DE COMPOSTELA

MEMORIA IDIS 2020

IDIS 2020 REPORT

Presentar a actividade que todos os membros do Instituto de Investigación Sanitaria de Santiago (IDIS) levaron a cabo é unha obriga anual e, sen dúbida, unha satisfacción xa que conseguimos sobrevivir con éxito durante este especial, duro e complicado ano 2020 que nos tocou vivir. Non foi doado para ningún de nós e todos deixamos de lado outros obxectivos para esforzarnos por manter a nosa actividade no Instituto.



A handwritten signature in black ink, which appears to read 'José Castillo Sánchez'.

José Castillo Sánchez

Director científico
Scientific Director

Platón dixo que cada bágoa nos ensina unha verdade, e a verdade é que, unha vez máis, podemos estar orgullosos e presumir colectivamente de que, a pesar das múltiples restricións e dificultades derivadas da pandemia, cumprimos. O éxito vén da loita contra os obstáculos; sen obstáculos non hai éxito real, e demostrámolo.

Alcanzamos os tres obxectivos institucionais principais que nos propuxemos este ano: a reacreditación do Instituto, o vínculo entre a Fundación e o Instituto e a sinatura do acordo IDIS entre a Consellería de Sanidade e a Universidade de Santiago de Compostela. Este triplo obxectivo abre o camiño a novos retos máis ambiciosos.

A pandemia supuxo, e segue a facelo, un inmenso custo humano, económico e profesional. Co esforzo de todos, conseguimos superar con éxito estes tres riscos. Resistimos a enfermidade e a maioría de nós xa tivemos a sorte de recibir a vacina e, como podemos ver nas páxinas seguintes, mantivemos e superamos os obxectivos económicos e profesionais.

Presenting the activity that all the members of the Health Research Institute of Santiago de Compostela (IDIS) have carried out is an annual obligation and, without a doubt, a satisfaction since we have managed to successfully survive during this specially hard and complicated year 2020.. It has not been easy for any of us, and we all had to set aside other objectives to maintain our activity at the Institute. Platon said that each tear teaches us a truth, and the truth is that - once again - we can be proud and collectively claim that, despite the multiple restrictions and difficulties arising from the pandemic, we have fulfilled our duty. Success comes from the struggle against obstacles; without obstacles there is no real success, and we have proven it.

We have achieved the three main institutional goals that we set ourselves for this year: the re-accreditation of the Institute, the link between the Foundation and the Institute and the signature of the IDIS agreement between the Department of Health and the University of Santiago de Compostela.

A pandemia tamén sensibilizou á sociedade sobre a necesidade de investigación como forma de progreso; non queda outra. A ausencia dun importante tecido investigador demostrou a debilidade da nosa economía. Debemos evitar que este clamor se perda. Débese revisar e aumentar a nosa capacidade de comunicación social. Os investigadores non son un problema, nós somos a solución. A sociedade e os seus representantes políticos non poden mirar, unha vez máis, para outro lado.

Pero non podemos estar satisfeitos co conseguido; se o fixemos, temos a obriga de fixarnos retos máis altos e traballar cara eles. A dignidade laboral e económica de todo o persoal científico e de xestión dedicado á investigación, aínda que non é unha responsabilidade directa do Instituto, é unha obriga colectiva conseguido.

A integración do IDIS co Hospital é outro desafío emocionante. Hai demasiados profesionais que consideran o Instituto como un

exerto prescindible e, con todo, se o que representa o IDIS non o asume todo o persoal administrativo e asistencial, o Hospital nunca será excelente. A investigación non é máis que cuestionar de xeito persistente se o que facemos non se pode facer mellor e, se os prestadores de servizos de saúde non teñen este obxectivo na súa propia identidade, posiblemente acabarán facendo unha práctica clínica mellorable e ás veces perigosa.

A investigación é unha carreira competitiva sen fin, polo que todos os grupos de investigación deben mellorar os seus obxectivos e resultados. Debemos proporcionar axuda, pero tamén esixir, para que os grupos de investigación emerxentes se consoliden, e se convertan en excelentes grupos de referencia nacional e internacional.

Un grave problema que padecemos é a nula dispoñibilidade de espazos de investigación; A pesar dos traballos emprendidos e que seguiremos facendo, os espazos apenas aumentan, mentres que temos a sorte de ter un aumento exponencial no número de

This triple objective paves the way for new and more ambitious challenges.

The pandemic has entailed, and still does, an immense human, economic and professional cost. With everyone's effort, we have managed to successfully overcome these three risks. We have weathered the disease and most of us have already been fortunate to receive the vaccine, and as we can see in the following pages, we have maintained and exceeded our financial and professional goals.

The pandemic has also raised awareness among society to the need for research as a form of progress; there is no other way about it. The absence of an important research network has exposed the weakness of our economy. We must not forget this outcry. We must review and increase our capacity for social communication. Researchers are the problem, we are the solution. Society and its political representatives cannot look the other way once again.

But we cannot be satisfied with what has been achieved; if we've done so, we have an obligation to set ourselves higher challenges and work towards them. Dignifying economic and working conditions of all scientific and management personnel dedicated to research, despite not being a direct responsibility of the Institute, is a collective obligation to achieve it.

The integration of IDIS with the Hospital is another exciting challenge. There are too many professionals who consider the Institute as a dispensable graft, and yet, if what the IDIS represents is not accepted by all clinical and administrative personnel, this Hospital will never achieve excellence. Research is nothing more than persistently questioning whether what we do can be done better, if health professionals do not have this objective in their own identity, they will possibly end up doing an improvable and sometimes dangerous clinical practice.

Research is a never-ending competitive race, so all research groups must improve their objectives and results.



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investigadores. Esta ausencia de laboratorios impide o crecemento do IDIS, o desenvolvemento de proxectos máis ambiciosos e a converxencia cos obxectivos europeos e internacionais e, sen dúbida, diminúe o noso atractivo.

A nosa sociedade evoluciona rapidamente. Non podemos deixar asuntos por resolver no futuro que está por vir. O futuro xa chegou.

We must provide help, but must also be demanding, so that emerging research groups become consolidated, and become groups of excellence of national and international reference.

A serious problem that we suffer is the lack of available research space. Despite the construction works that we have undertaken, and will continue to do, available space is barely increasing, while we are fortunate to have an exponential increase in the number of researchers. This absence of laboratory space stifles the growth of the institute, the development of more ambitious projects, convergence with European and international objectives, and, without a doubt, it diminishes our attractiveness.

Our society is evolving rapidly. We cannot leave issues to be solved in future days to come. The future is already here.



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AREAS

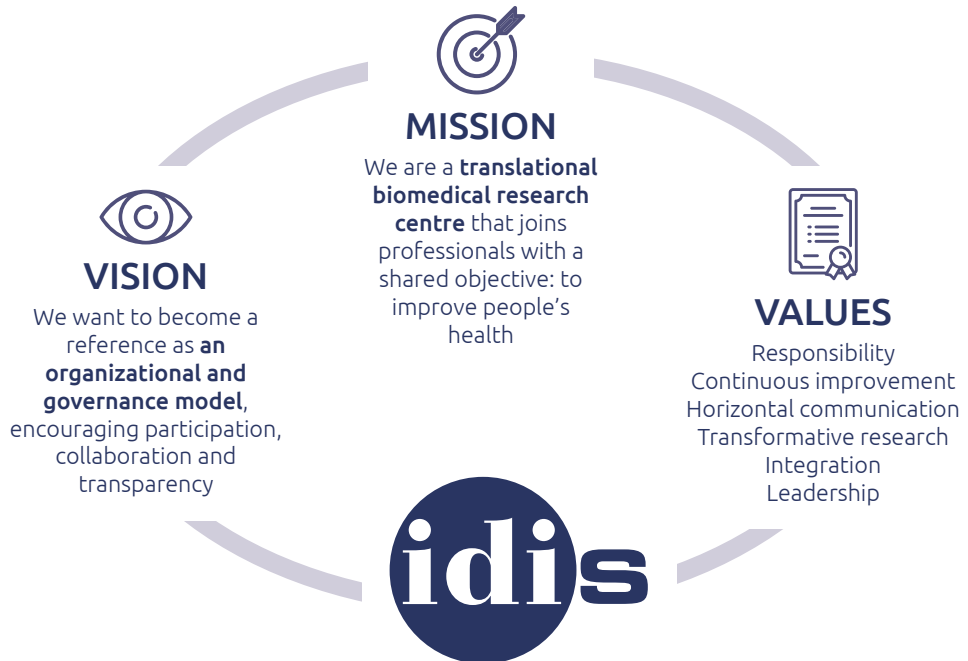


EXECUTIVE SUMMARY

1. EXECUTIVE SUMMARY



The **Biomedical Research Institute of Santiago de Compostela** is a translational research centre for innovation and transfer knowledge that optimizes existing synergies between the *Área Sanitaria de Santiago de Compostela* and the *Universidad de Santiago de Compostela* and the *University of Santiago de Compostela*. It is accredited as a medical research centre of the *National Health System by the Institute of Health Carlos III*.





2020

TOTAL FUNDS RAISED

31.340.578,96 €

88

Projects

97

Donations

114

Clinical trials

60

Staff
contracts

438

Contracts and
provision of
services

242

Other
studies

921

Published
articles

67

Thesis

18

Granted
patents

59

Requested
patents

The background is a deep blue gradient. It features several abstract elements: a large, dark blue number '2' on the left side; a complex, glowing blue molecular or network structure on the right side; and a series of thin, white, wavy lines that sweep across the center of the image. The overall aesthetic is high-tech and scientific.

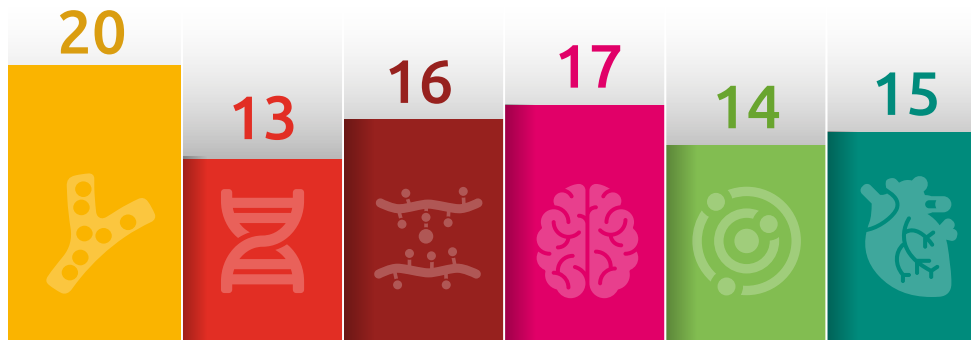
GLOBAL ANALYSIS

Number of groups per area

1.347 people are integrated
in **95 groups** organized
in **6 research areas.**

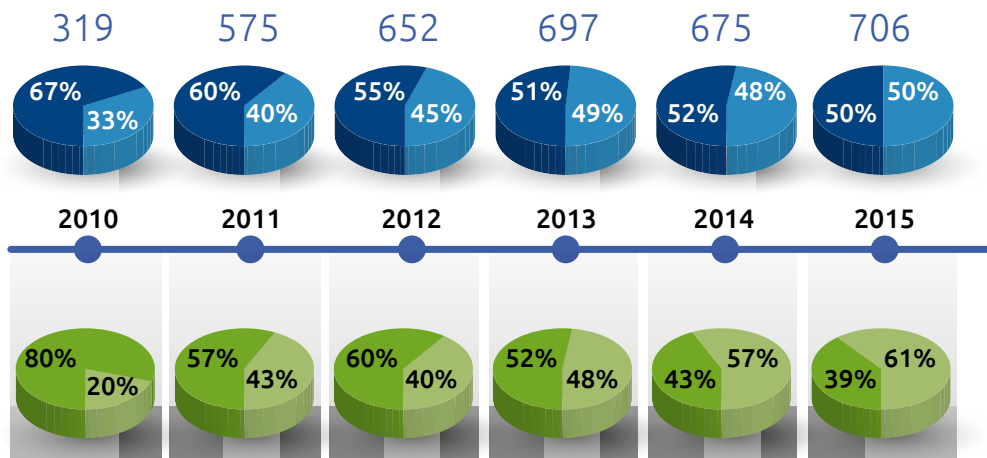
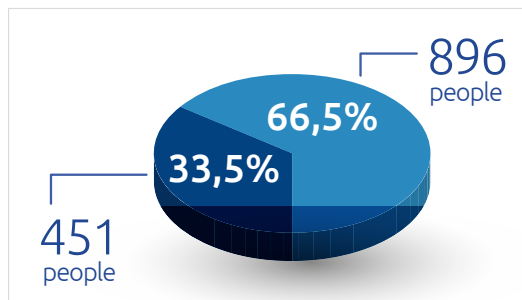
There is also a support area
(*Scientific-Technical Coordination
and common support platforms
for research*).

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

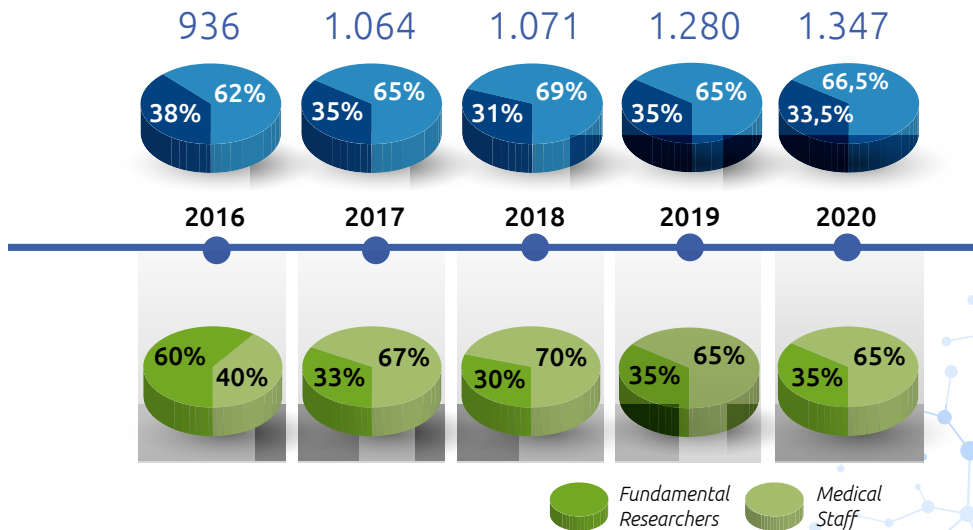
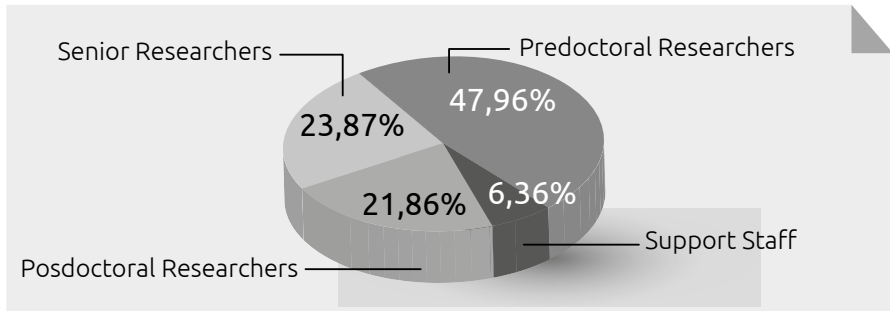


History of a joint venture: human resources in figures

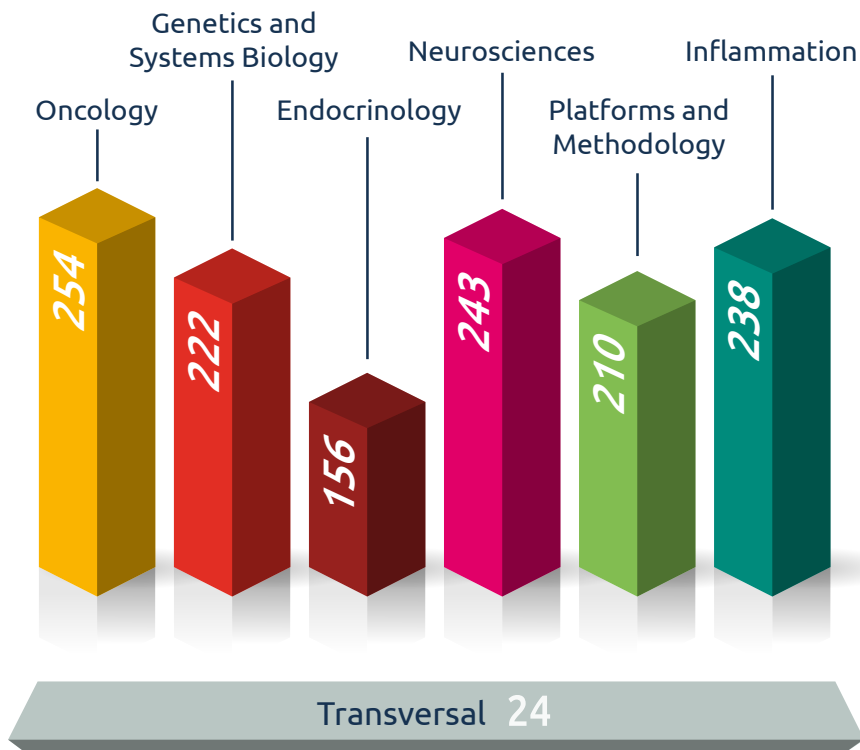
1.347
people

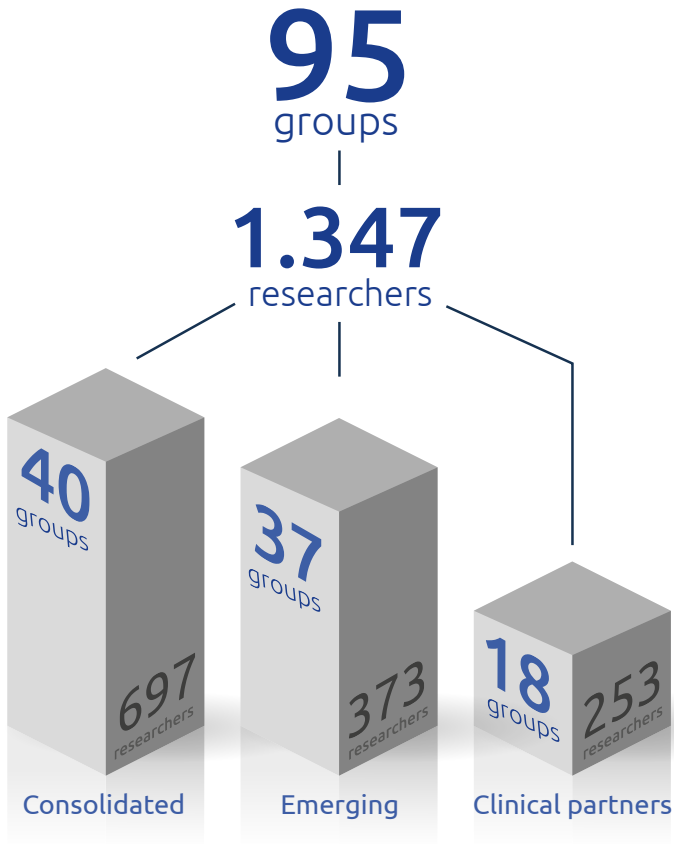


2. GLOBAL ANALYSIS



Number of researchers per area





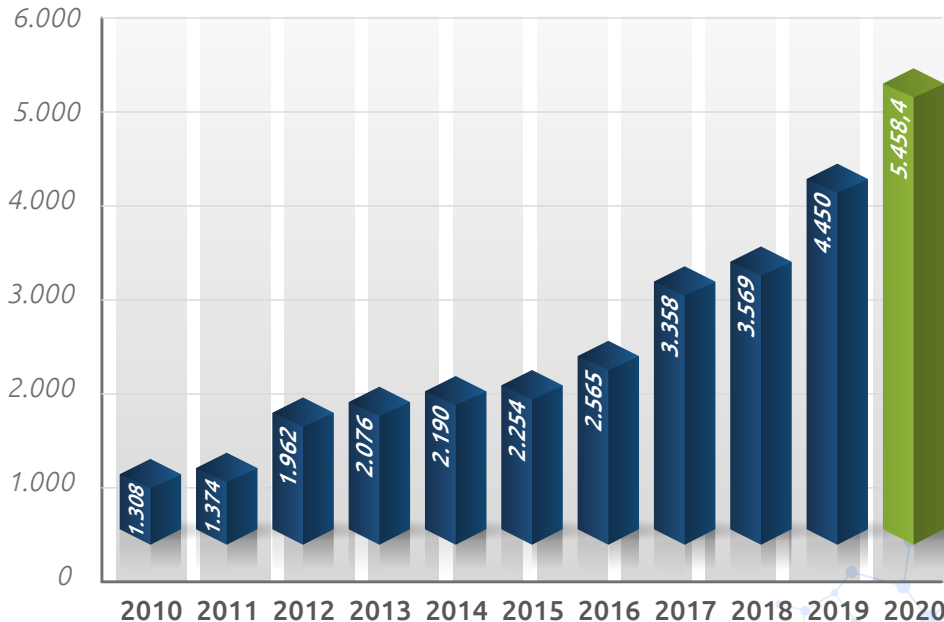
Number of published articles each year

The Institute has published **921 original scientific articles, editorials and reviews** in **488 international journals** indexed in the *Journal Citation Report* with a **cumulative impact factor of 5.458,4 points**.

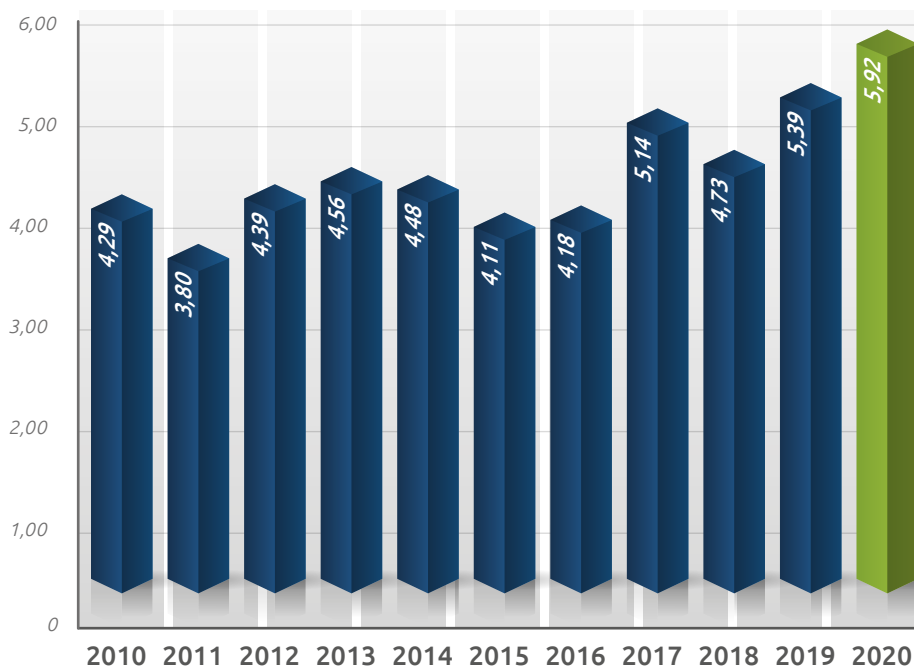


Cumulative impact factor

The upward trend of the cumulative impact factor is maintained and it moves **from 1.308 in 2010 to 5.458,4 in 2020**.

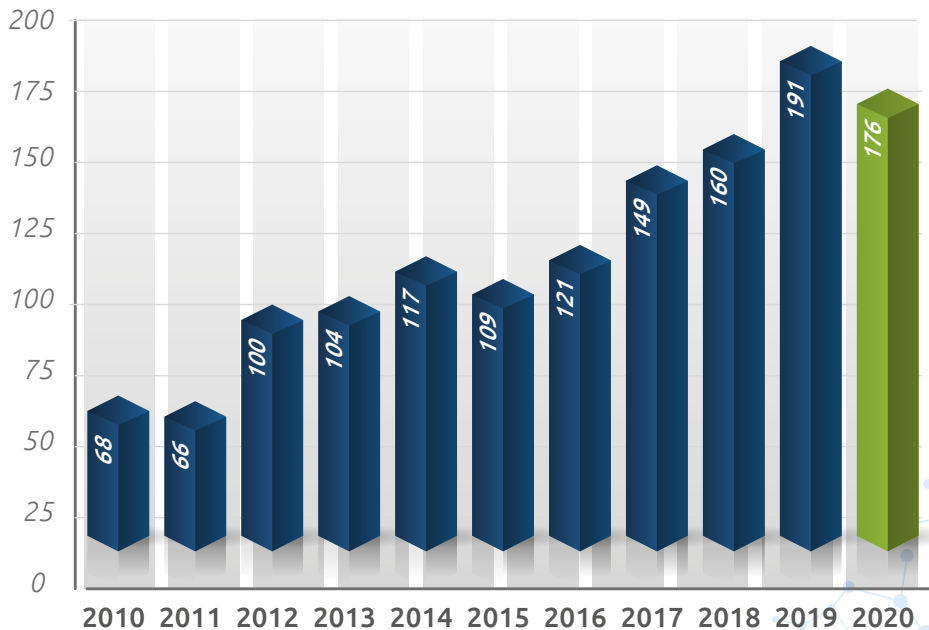


Average impact factor

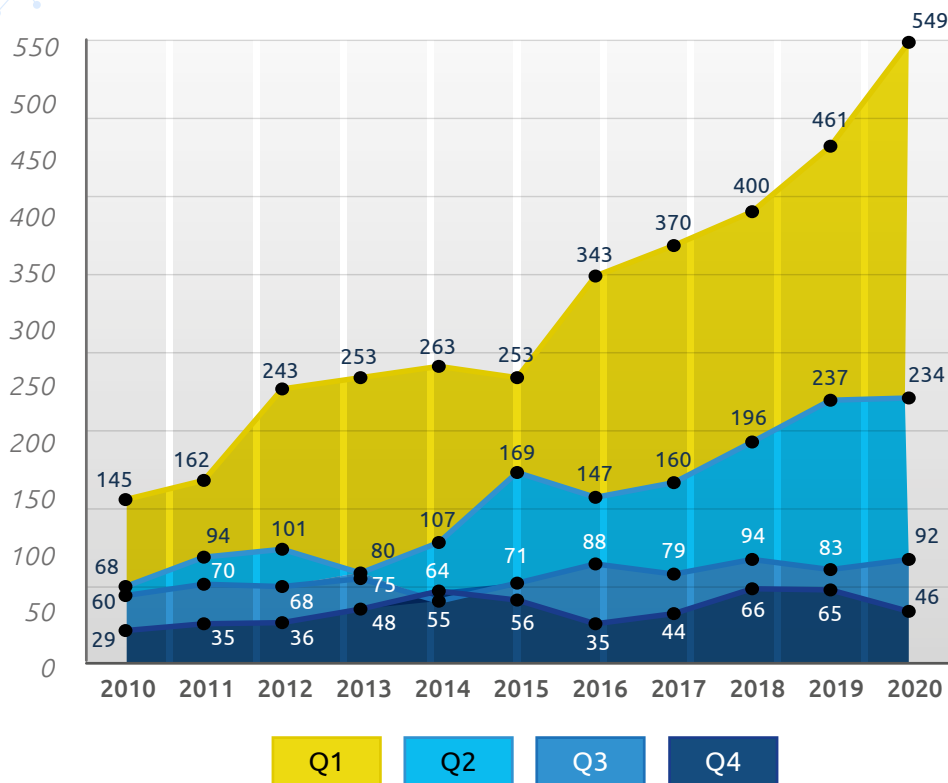


Number of published articles in the first decile

A remarkable increase in the first decile for the same period from **68 articles published in 2010** to **176 in 2020**.



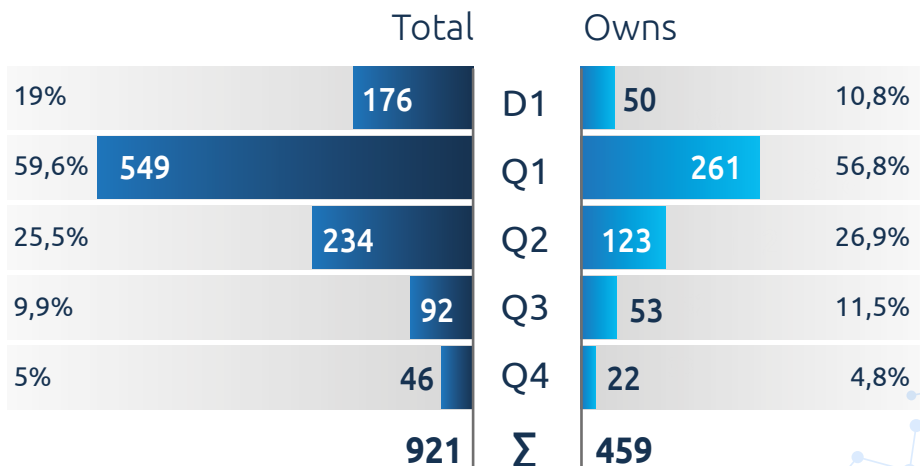
Number of articles by year published in each quartile



Number and % of the total number of publications and articles in 2020

The number of articles per quartile **increased gradually during the period of 2010-2020 almost in every quartile and every year.**

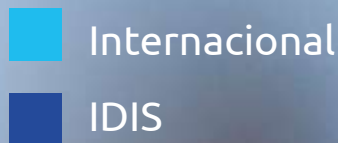
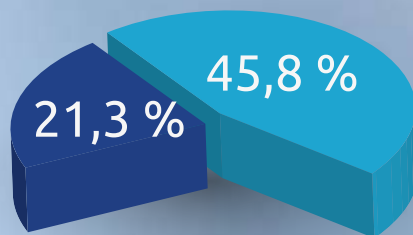
Taking into account the relevance of the authors in the articles signature, we identify those in which the first or the last author is assigned to an IDIS group. We define them as articles of our own.



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

In 2020, **21,3%** of the work were carried out by teams in which members of more than one IDIS group were involved.

45,8% were done in collaboration with researchers from centres outside of Spain.



Articles published in collaboration

423

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

195

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



During 2020, funds 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 **31.340.578,96 €** which will complement the resources of the institutions that take part in IDIS.

AMOUNT

31.340.578,96 €

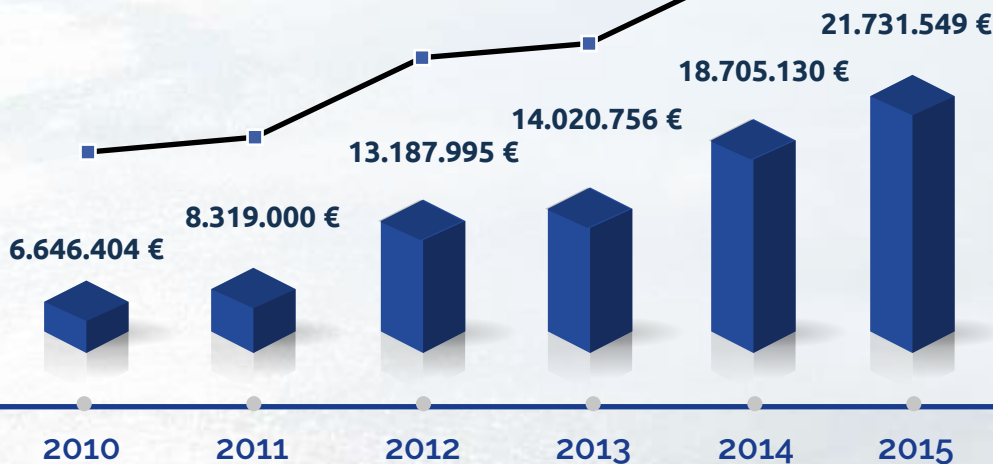
Summary of the funds raised in 2020

CONCEPT	NUMBER	AMOUNT
Projects	88	14.267.939,46 €
Human resources	60	5.196.898,69 €
Donations	97	953.240,23 €
Contracts and provision of services	438	6.745.072,44 €
Transfer	59	0 €
Studies (Clinical Trials, Observational Studies)	356	4.177.428,14 €

2020

AMOUNT RAISED

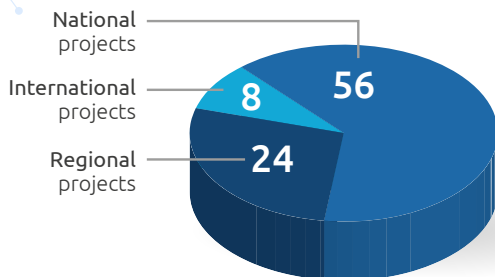
31.340.578,96 €



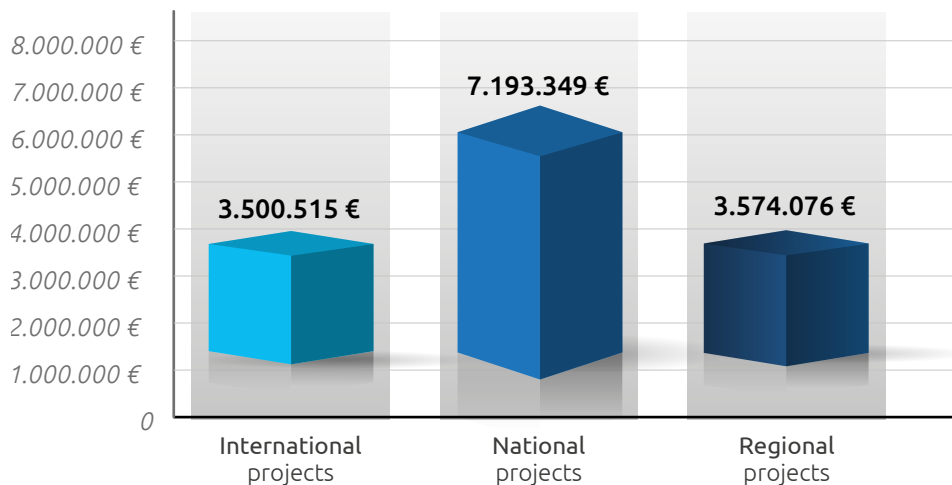
2. GLOBAL ANALYSIS



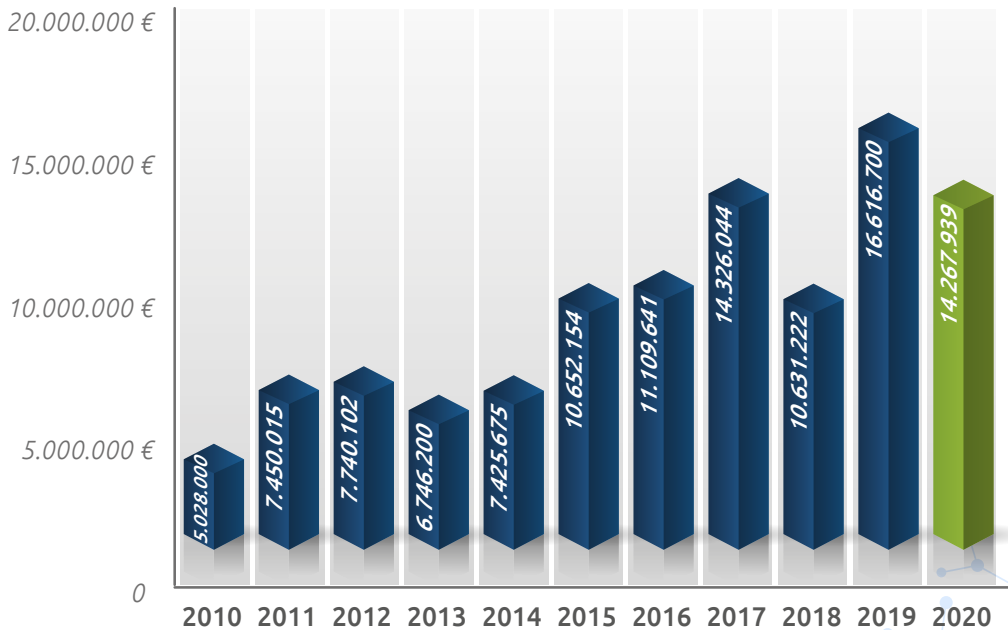
Number and amount of funds raised in 2020 for projects by location



88 Projects
14.267.939,46 €



Amount of funds raised by year for projects



114

CLINICAL TRIALS

40 National

74 International

242

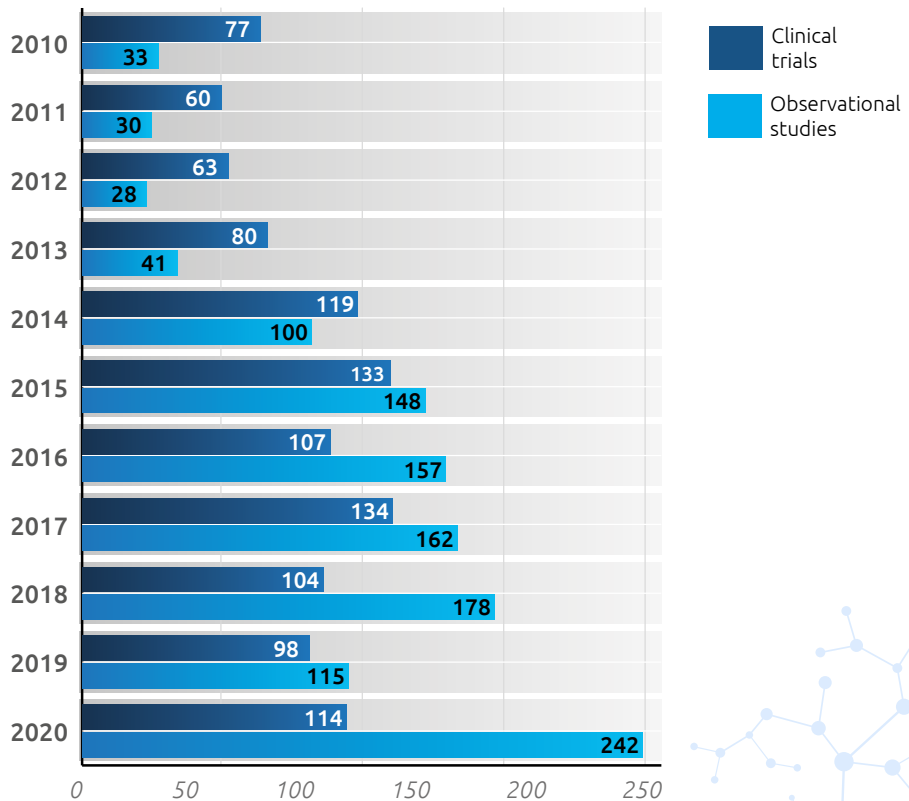
OBSERVATIONAL STUDIES

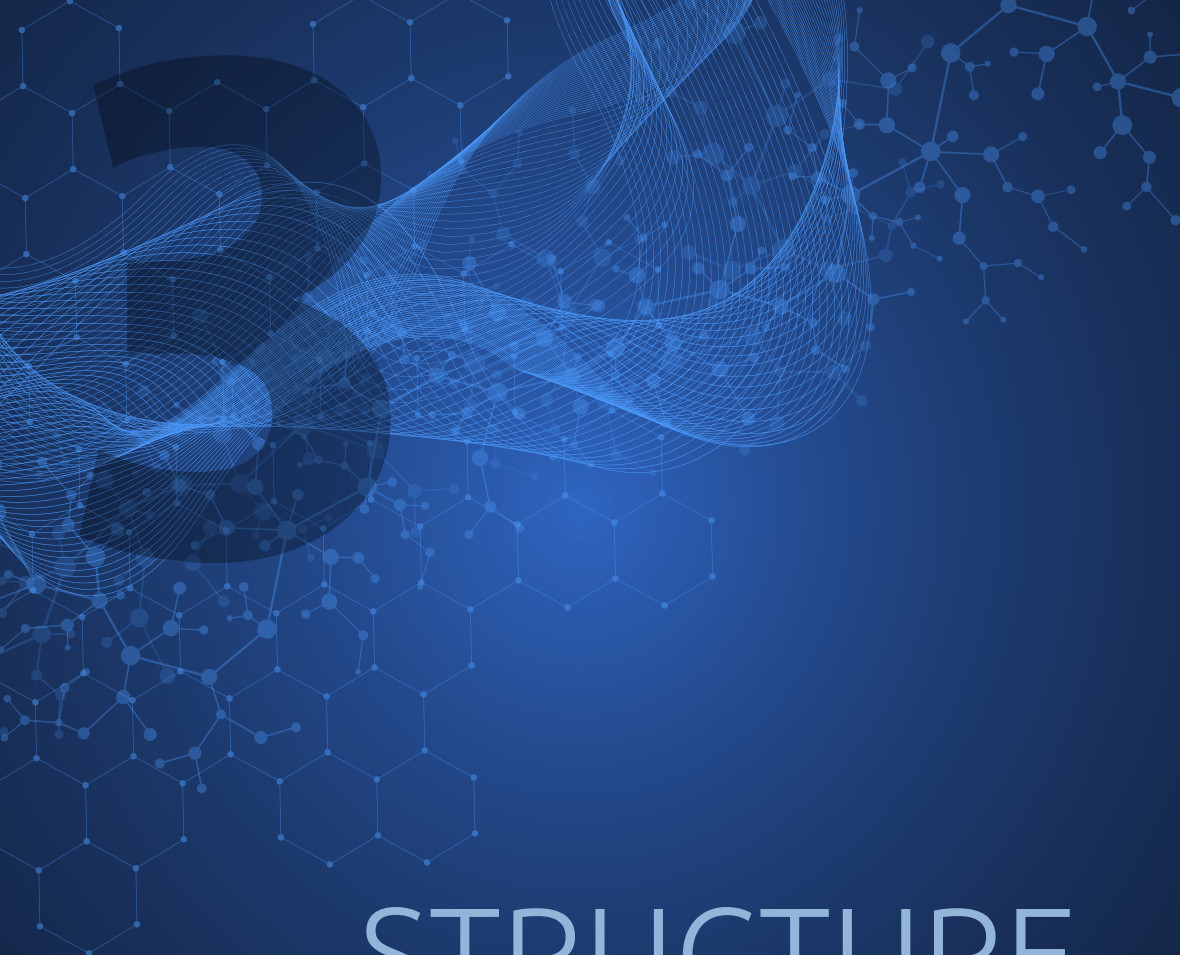
111 National

29 International

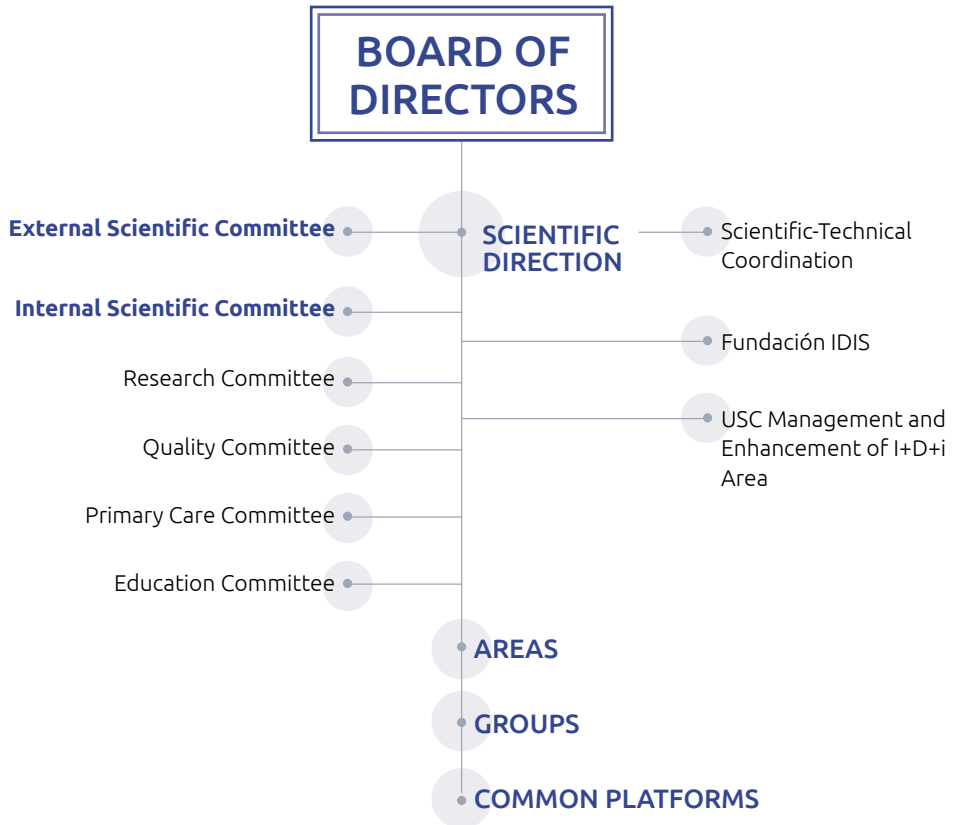
27 Regional

75 Local

Number of **clinical trials** and **observational studies**



STRUCTURE



Government bodies



Advisory bodies

EXTERNAL SCIENTIFIC COMMITTEE

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

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Sonia Eiras Penas
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Rafael López López
Mabel Loza García
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Luis Pérez de Llano
M Luisa Pérez del Molino Bernal
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Mabel Sampedro Parada
Sabela da Silva Álvarez
Ana Vega Gliemmo
Irene Zarra Ferro

Advisory bodies

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Adrián Mosquera Orgueira
Diana Guallar Artal

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Isabel Lista García
Pablo Mosquera Martínez

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SECRETARY

José Ramón Castro Ruibal

Sergio Cinza Sanjurjo

José Manuel Fernández García

José Ramón González Juanatey

Francisco Gude Sampredo

Soraya Mejjome Blanco

Agustín Pía Morandeira

Manuel Portela Romero

Juan Sánchez Castro

Xoán Vázquez Lago

Sandra Yáñez Freire

SCIENTIFIC - TECHNICAL COORDINATION

José Ramón Castro Ruibal

Yolanda Liste Martínez

A001 ONCOLOGY Coordinator: **Rafael López López**

C010	Genetics of Human Diseases	<i>Fernando Domínguez Puente</i>
C011	Pathology	<i>José Ramón Antúnez López</i>
C025	NANOBIOFAR	<i>María José Alonso Fernández</i>
C030	Traslational Medical Oncology	<i>Rafael López López</i>
C032	Molecular Imaging	<i>Álvaro Ruibal Morell</i>
E004	Molecular Oncology	<i>José Antonio Costoya Puente</i>
E018	Cell Cycle and Oncology (CiClon)	<i>Anxo Vidal Figueroa</i>
E028	Stem Cells in Cancer and Aging	<i>Manuel Collado Rodríguez</i>
E031	Oncologic Endocrinology	<i>Román Pérez Fernández</i>
E032	Preclinical Animal Models	<i>Laura Sánchez Piñón</i>
E033	Viruses and cancer	<i>María del Carmen Rivas Vázquez</i>
E037	DNA Repair and Genome Integrity	<i>Miguel González Blanco</i>
E042	Translational Oncology (GIOT-HULA)	<i>Cristina Núñez González</i>
E043	Medical Physics and Biomathematics	<i>Juan Pardo Montero</i>
E044	Nano-Oncology and Translational Therapy Unit	<i>María de la Fuente Freire</i>
AC01	Lymphoproliferative Disorders	<i>José Luis Bello López</i>
AC06	Intraocular Tumours in Adults	<i>Antonio Piñeiro Ces</i>
AC08	Surgical Oncology	<i>Manuel Bustamante Montalvo</i>
AC14	Breast Patology	<i>Manuel Vázquez Caruncho</i>
AC15	Hematology HULA	<i>Jesús Antonio Arias Sampedro</i>

A002 GENETICS AND SYSTEMS BIOLOGY

Coordinator: *Ángel Carracedo Álvarez*

C005	Genetics	<i>Ángel Carracedo Álvarez</i>
C009	Translational Research in Digestive Diseases	<i>Juan Enrique Domínguez Muñoz</i>
C020	Genetics, Vaccines, Infections and Paediatrics (GENVIP)	<i>Federico Martínón Torres</i>
C041	Cancer Genetics and Rare Diseases	<i>Ana Paula Vega Gliemmo</i>
E012	Comparative Genomics of Human Parasites	<i>Julio Manuel Maside Rodríguez</i>
E015	Population Genetics in Biomedicine (GenPoB)	<i>Antonio Salas Ellacuriaga</i>
E020	Psychiatric Genetics	<i>Javier Costas Costas</i>
E021	Genetics and Developmental Biology of Kidney Diseases	<i>Miguel Ángel García González</i>
E027	Escherichia coli	<i>Jorge Blanco Álvarez</i>
E035	Genetics of Gastrointestinal Tumours	<i>Clara Ruiz Ponte</i>
E036	Stem Cells and Human Diseases	<i>Miguel Ángel Fidalgo Pérez</i>
E040	Mobile Genomes and Disease	<i>José Manuel Castro Tubío</i>
E047	Cancer Genetics and Epidemiology Group	<i>Manuela Gago Domínguez</i>

A003 ENDOCRINOLOGYCoordinator: **Felipe Casanueva Freijo**

C001	Neoplasia and Endocrine Differentiation	<i>Clara Álvarez Villamarín</i>
C006	Molecular Endocrinology	<i>Felipe Casanueva Freijo</i>
C008	Obesity and Nutrition	<i>Carlos Diéguez González</i>
C012	Metabolic Disorders	<i>María de la Luz Couce Pico</i>
C019	Thyroid and Metabolic Disorders Unit (UETeM)	<i>David Araújo Vilar</i>
C022	Paediatric Nutrition	<i>Rosaura Leis Trabazo</i>
C029	Neurobesity	<i>Miguel López Pérez</i>
C031	Molecular Metabolism	<i>Rubén Nogueiras Pozo</i>
E006	Cytokines and Obesity (Citobes)	<i>María del Carmen García García</i>
E023	Obesidomics	<i>María Pardo Pérez</i>
E025	Cellular Endocrinology	<i>Jesús Pérez Camiña</i>
E026	Endocrine Physiopathology	<i>Luisa María Seoane Camino</i>
E039	Diabesity	<i>Sulay Tovar Carro</i>
E041	Epigenomics in Endocrinology and Nutrition	<i>Ana Belén Crujeiras Martínez</i>
AC04	Paediatric Endocrinology	<i>Manuel Pombo Arias</i>
AC16	Lipid Unit and Vascular Risk	<i>José Ignacio Vidal Pardo</i>

A004 NEUROSCIENCES
Coordinator: José Castillo Sánchez

C004	Neurobiology	<i>Antonio Canedo Lamas</i>
C007	Clinical Neurosciences (LINC)	<i>José Castillo Sánchez</i>
C015	Neurobiology of the Visual System	<i>Francisco González García</i>
C018	Experimental Neurology of Parkinson's Disease	<i>José Luis Labandeira García</i>
C026	BIOFARMA	<i>María Isabel Loza García</i>
C033	Design, Synthesis and Medical Evaluation of Bioactive Compounds and New Materials	<i>Antonio Mouriño Mosquera</i>
C034	Physics of Polymers and Colloids	<i>Victor Mosquera Tallón</i>
C035	R&D in Drugs Dose Forms and Delivery Systems	<i>Ángel Concheiro Nine</i>
C036	Magnetism and Nanotechnology (NanoMag)	<i>José Rivas Rey</i>
C037	Trace Elements, Spectroscopy and Speciation	<i>Pilar Bermejo Barrera</i>
C038	Analytical Chemistry of Compounds of Alimentary, Environmental and Biological Interest	<i>Antonia María Carro Díaz</i>
E014	Prion Diseases	<i>Jesús Rodríguez Requena</i>
E019	Cell Stress	<i>Juan Bautista Zalvide Torrente</i>
E029	Cognitive Neuroscience	<i>Fernando Díaz Fernández</i>
AC03	Critical Patient	<i>Julián Álvarez Escudero</i>
AC11	Life Support and Medical Simulation	<i>Antonio Rodríguez Núñez</i>
AC12	Otoneurology	<i>Marcos Rossi Izquierdo</i>

A005 PLATFORMS AND METHODOLOGY*Coordinator: Francisco Gude Sampedro*

C002	Experimental Surgery	<i>Miguel Ángel Caínzos Fernández</i>
C013	Epidemiology, Public Health and Evaluation of Health Services	<i>Adolfo Figueiras Guzmán</i>
C017	Research Methodology	<i>Francisco Gude Sampedro</i>
C021	Clinical Analysis	<i>Santiago Rodríguez-Segade Villamarín</i>
C024	Radiology	<i>Miguel Souto Bayarri</i>
E002	Biostatistics	<i>Carmen María Cadarso Suárez</i>
E013	Microbiology	<i>María Luisa Pérez del Molino Bernal</i>
E034	Clinical Pharmacology	<i>María Jesús Lamas Díaz</i>
E046	PARAQUASIL	<i>José Blanco Méndez</i>
AC09	Oral Sciences (OSRG)	<i>Inmaculada Tomás Carmona</i>
AC10	Healthy ageing, fragility and chronicity. Research in Primary Care	<i>Juan Manuel Vázquez Lago</i>
AC13	Dermatology and Craniofacial Pathology (DePaCra)	<i>Pablo Ignacio Varela Centelles</i>
AC17	Comprehensive care of the patient. Epidemiology and physiopathology of frailty	<i>María Bermúdez López</i>
AC18	Surgical Research (GRICI)	<i>José Conde Vales</i>
AC19	Vascular Research Group of Santiago (VARGROS)	<i>Diego Caicedo Valdés</i>

A006 INFLAMMATION
Coordinator: José Ramón González Juanatey

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

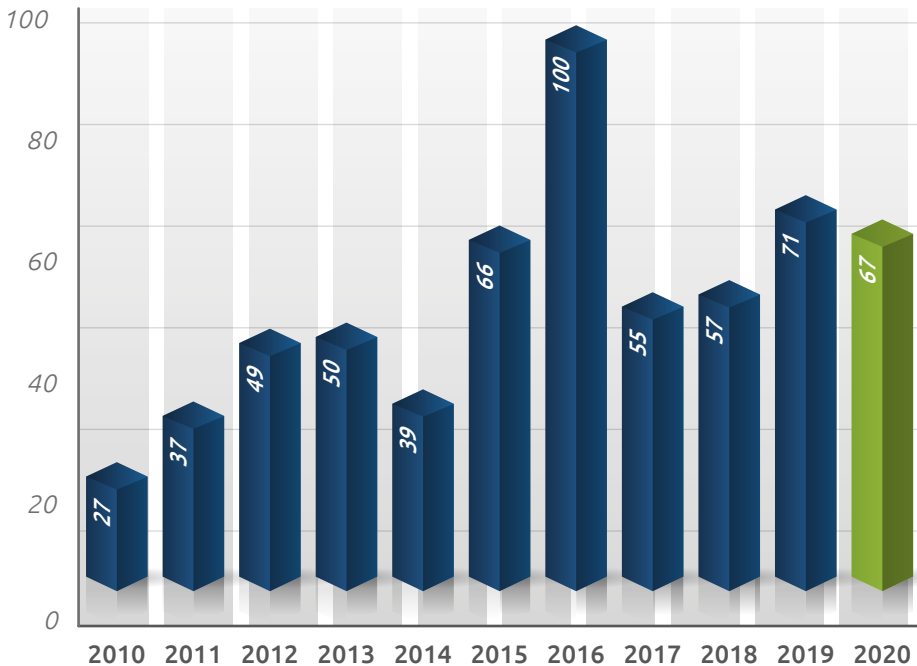


RECURRENT TRAINING

4. RECURRENT TRAINING



Number of thesis each year





An abstract graphic featuring a complex network of interconnected nodes and lines, resembling a molecular structure or a data network. The nodes are represented by small circles in various shades of blue and grey, connected by thin, light blue lines. The overall shape of the network is somewhat organic and sprawling, filling the corners and bottom of the frame. The background is a solid dark blue.

INNOVATION AND TRANSFER

ANNUAL REPORT 2020

Health Research Institute. Santiago de Compostela

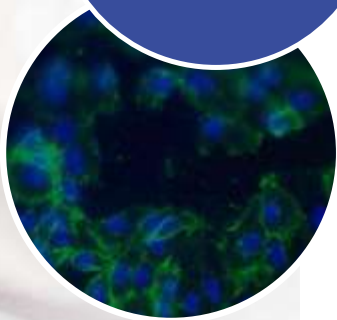
Transfer
acceleration
through public
funding and
private
investment

Adopting the
Public-Private
Partnership
Model

Disseminating
our research

Intellectual
property

5. INNOVATION AND TRANSFER

A circular inset image showing a microscopic view of cells, likely cancer cells, with green and blue fluorescence. It is positioned below the blue circle containing the text.

Transfer
acceleration
through public
funding and private
investment

ITEMAS network

Innovation in Medical and Health Technologies Network funded by the Instituto de Salud Carlos III.

IGNICIA

The IGNICIA Proof of Concept programme of the Galician Innovation Agency (GAIN) aims to enhance and support the transfer of research results generated by knowledge centres. IGNICIA seeks to accelerate and increase technology transfer, detecting projects with innovative and market potential, contributing to the profitability of public investment in research.

IDIS has 1 project granted.

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

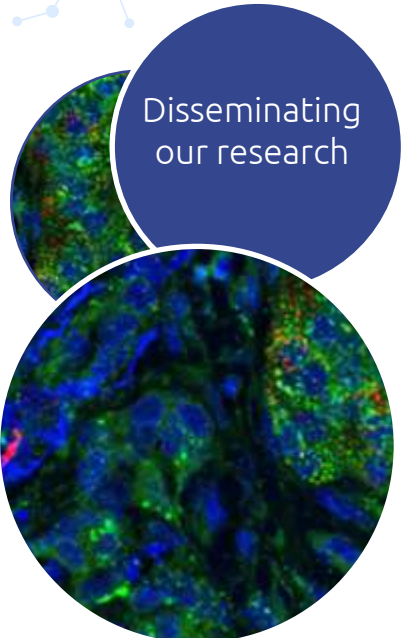
Precision Oncology Joint Unit.



Esteve-USC

Drug Discovery Joint Unit.



Two overlapping circles containing microscopic images of cells. The top circle is smaller and partially obscured by the bottom one. Both images show cells with green and blue fluorescence against a dark background.

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.

Intellectual property

59 Request

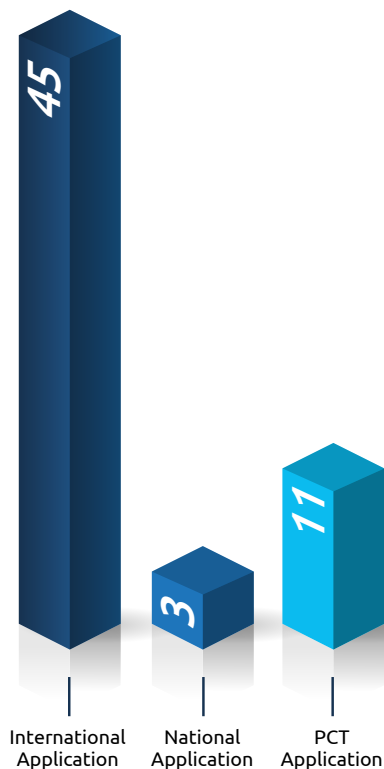
45 International Application

3 National Application

11 PCT Application

18 Granted

1 Licensed



5. INNOVATION AND TRANSFER



Trademarks

DIVERSEA

galCovid

Spin off



Personalized Medicine in Cardiology





The background of the slide is a dark blue gradient. It is decorated with abstract network graphics. In the top-left corner, there is a faint, light blue wireframe sphere. Scattered across the top-left and bottom-right corners are complex, interconnected node-and-edge structures in shades of light blue and white, resembling molecular models or data networks. The word "PLATFORMS" is centered in the middle of the slide in a large, white, sans-serif font.

PLATFORMS

ANNUAL REPORT 2020

Health Research Institute. Santiago de Compostela



ciMUS

9,4 Magnetic
Resonance



Citometry

Epidemiology
And Clinical
Research Unit

Sequencing
And Fragment
Analysis Unit

Molecular
Imaging Unit
Micropet/spect/ct
Scan

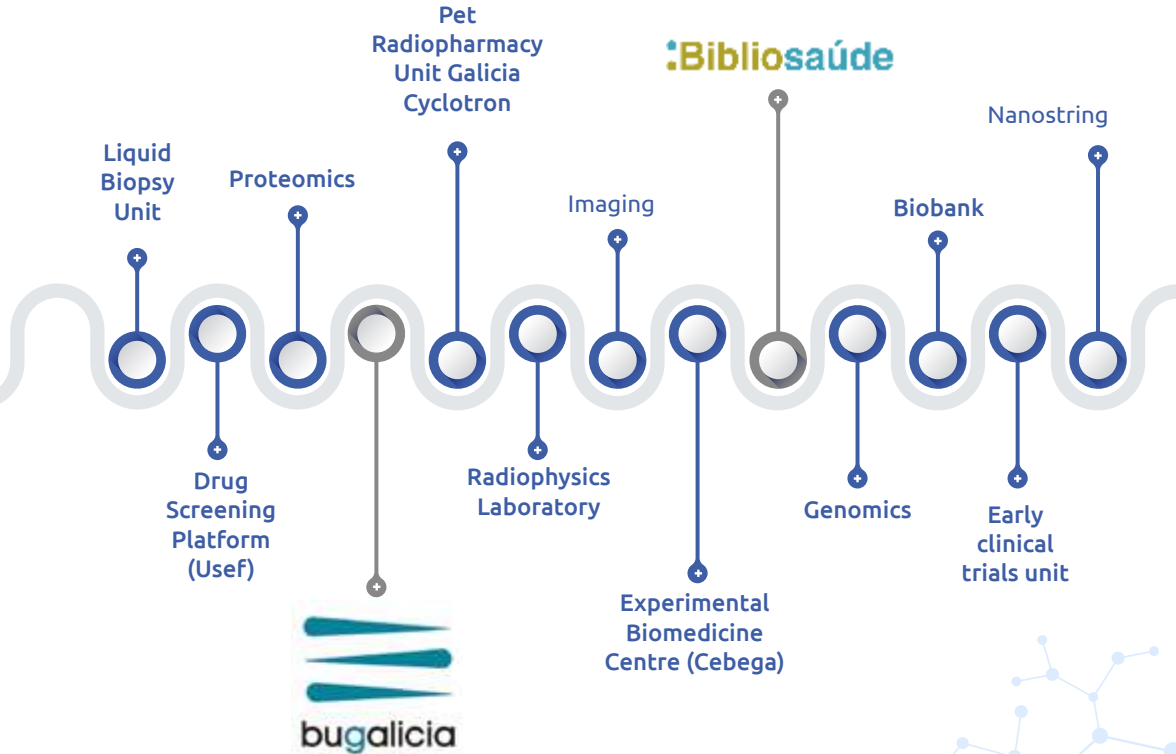
The Animal
Experimentation
Unit



SERVIZO
GALEGO
de SAUDE

Microscopy

6. PLATFORMS



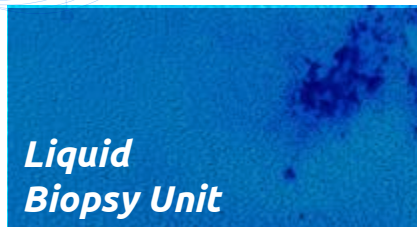


Proteomics

Susana Belén Bravo López

susana.belen.bravo.lopez@sergas.es

The proteomics platform was created to enhance, give support and offer a complete infrastructure in the field of proteomics to the Institute's researchers and other public and private bodies. It is equipped with the latest generation technology that allows the development of both studies of characterisation of complete proteomes as well as studies of analysis of differential expression.

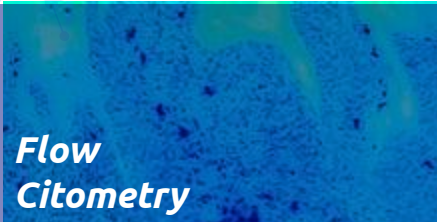


Liquid Biopsy Unit

Laura Muinelo Romay

laura.muinelo.romay@sergas.es

The service for the analysis of circulating cells works with the CellSearch™ system (Veridex) that allows, through the use of immunomagnetic techniques of enrichment and identification by immunofluorescence, isolate and quantify present cells in peripheral blood. Its main application is aimed to the detailed analysis of circulating tumor cells (CTC), even though the computer also allows identify other kind of cells such as endothelial. In addition, the platform has the capacity to carry out studies with circulating DNA.

A blue-toned microscopic image showing a dense population of cells, likely used as a background for the Flow Cytometry section.

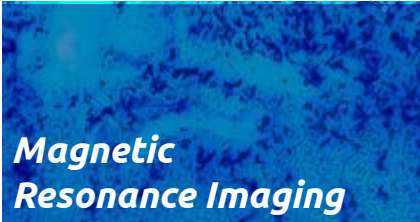
Flow Citometry

Pablo Hervella Lorenzo

pablo.hervella.lorenzo@sergas.es

It is a technique of cells analysis that allows one to measure the characteristics of light scattering and fluorescence that cells have when they pass through a ray of light. This platform's main aims are:

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

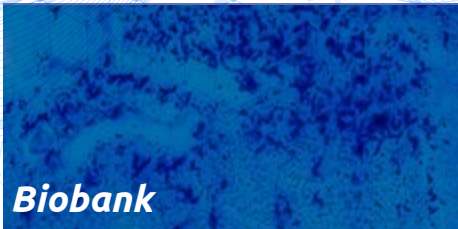
A blue-toned image showing a textured, possibly brain-like surface, used as a background for the Magnetic Resonance Imaging section.

Magnetic Resonance Imaging

Ramón Iglesias Rey

ramon.iglesias.rey@sergas.es

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



Biobank

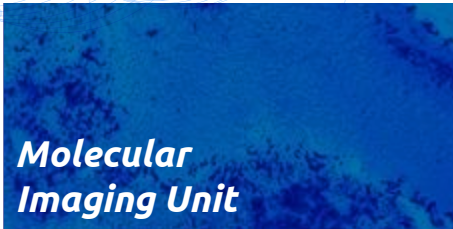
Lydia Fraga Fontoira (Manager)

biobanco.apa.santiago@sergas.es

lydia.fraga.fontoira@sergas.es

The Biobank is a transversal platform providing support to biomedical research. It is comprised of CHUS's Biobank (located in the University Hospital Complex of Santiago de Compostela) and the HULA Biobank (located in the Lucas Augusti University Hospital).

These are public and non-profit facilities in which biological samples and associated clinical information, of high quality for their use in biomedical research, are stored. They are focused on managing, under safety, quality and efficiency criteria, the reception, storage and subsequent transfer of samples to requesting researchers so they can use them in their projects, provided they meet the ethical and legal requirements.

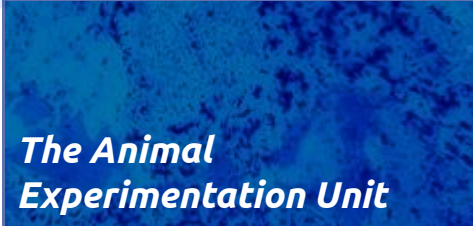


Molecular Imaging Unit

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.

A blue-tinted fluorescence microscopy image showing a dense network of cellular structures, likely from an animal model used in research.

The Animal Experimentation Unit

Francisco Campos Pérez

francisco.campos.perez@sergas.es

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 obtained 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 objective is to promote research, and to develop and implement biomedical training, providing professionals with the necessary resources for the development of these initiatives.

A blue-tinted fluorescence microscopy image showing a dense network of cellular structures, likely from an animal model used in research.

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. Real-time in vivo confocal fluorescence microscopy. 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

The background is a deep blue gradient. It features several abstract elements: a hexagonal grid pattern in the top-left and bottom-left corners; a complex, interconnected network of dots and lines resembling a molecular structure in the top-right and bottom-left; and a series of flowing, wavy lines made of many thin, overlapping curves in the center and right side. The word "FUNDING" is positioned in the bottom-right area, rendered in a clean, white, sans-serif typeface.

FUNDING

TOTAL

31.340.578,96 €**88**

Projects

14.267.939,46 €**60**

Human resources

5.196.898,69 €**97**

Donations

953.240,23 €**438**Contracts and
provision of services**6.745.072,44 €****356**Studies (Clinical
Trials, Other Studies)**4.177.428,14 €**

During 2020, **31.340.578,96 €** were raised in the following concepts: projects, human resources, transfer, donations, contracts, infrastructures, provision of services, agreements and studies.

COMPETITIVE
FUNDING

19.464.838,15 €

88
PROJECTS

14.267.939,46 €

24

Regional projects

3.574.076 €

56

National projects

7.193.349 €

8

International projects

3.500.515 €

60 Human resources

5.196.898,69 €

CONCEPT	NUMBER	AMOUNT
IDIS Predoctoral Grant	8	540.000 €
PFIS / iPFIS	3	247.200 €
GAIN Predoctoral Grant	18	1.296.356 €
FPI	3	267.885 €
FPU	6	492.180 €
Río Hortega	7	376.124 €
Juan de la Cierva	2	149.501 €
Sara Borrell	2	161.196 €
Ramón y Cajal	2	415.224 €
Joan Rodés	2	360.000 €
Miguel Servet (I/II)	3	586.250 €
Intensificación	2	120.000 €
Gestión Investigación en Salud	1	80.598 €
INPhINIT La Caixa	1	104.382 €



An abstract graphic featuring a dark blue background with a complex network of light blue and white dots connected by thin lines, resembling a molecular structure or a data network. The network is denser in the top-left and bottom-right corners, with a faint, larger-scale grid-like pattern visible in the top-left corner.

STRATEGIC ALLIANCES

3

PLATFORMS

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



Spanish
Clinical
Research
Network
ISCIII

BIOMEDICAL
RESEARCH
NETWORKING
CENTRES

6

CIBER

ciberobn

ciberer

ciberesp

ciber cv isciii

ciber onc isciii

ciber isciii

CIBEROBN (1),
Physiopathology of Obesity and Nutrition

CIBERER, Rare Diseases

CIBERESP, Public Health and Epidemiology

CIBERCV: Cardiovascular Diseases

CIBERONC: Cancer

CIBER CIBERNED: Neurodegenerative Diseases

(1) Scientific Direction IDIS

RETICS

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

6

NETWORKS FOR
COOPERATIVE
RESEARCH IN
HEALTH

INVICTUS

OFTARED
RETICS Patología Ocular

REDIAPP
Red de Investigación en Actividades Preventivas y de Promoción de Salud

RIER
Red de Investigación en Enfermedades Reumáticas

REDINREN
Red de Investigación en Nefropatías

TerCel | isciiii
Red de Terapia Celular

2

INTERNATIONAL NETWORK

EATRIS, European infrastructure for translational medicine

COST, European Cooperation in Science and Technology

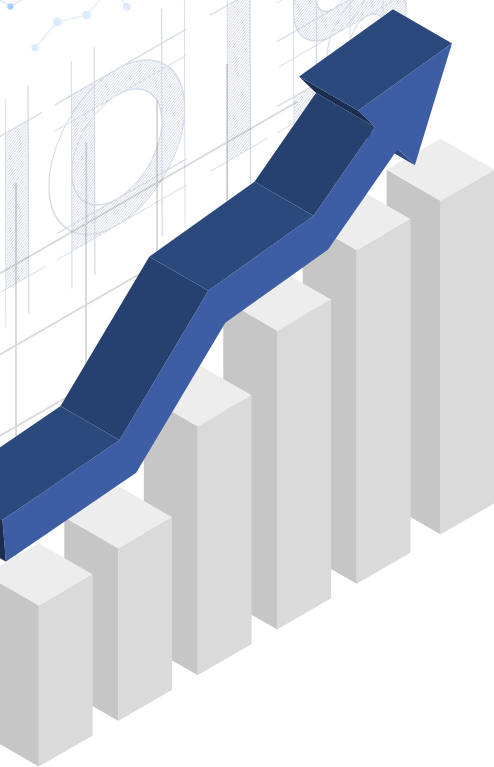
eatris

COST
European Cooperation in
Science and Technology



An abstract graphic featuring a dark blue background with a complex network of light blue and white dots connected by thin lines, resembling a molecular structure or a data network. The network is denser in the top-left and bottom-right corners, with a faint, larger-scale mesh visible in the top-left corner.

AREAS

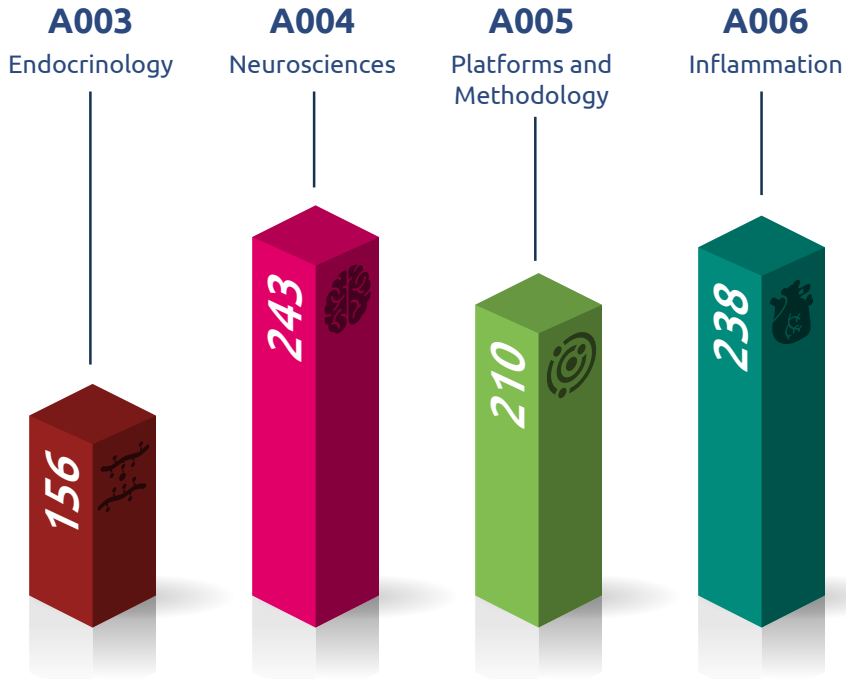


A001
Oncology



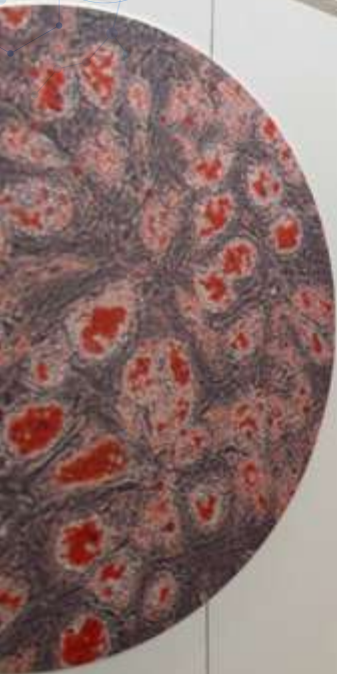
A002
Genetics and
Systems Biology





1.347 PEOPLE
are integrated
in **95 groups**

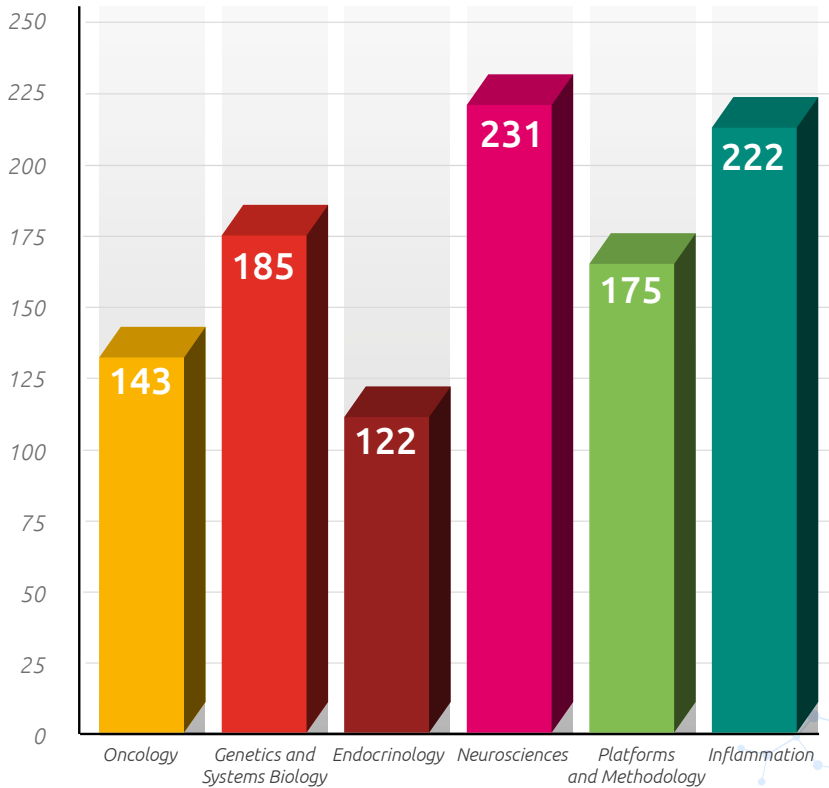
6
RESEARCH
AREAS

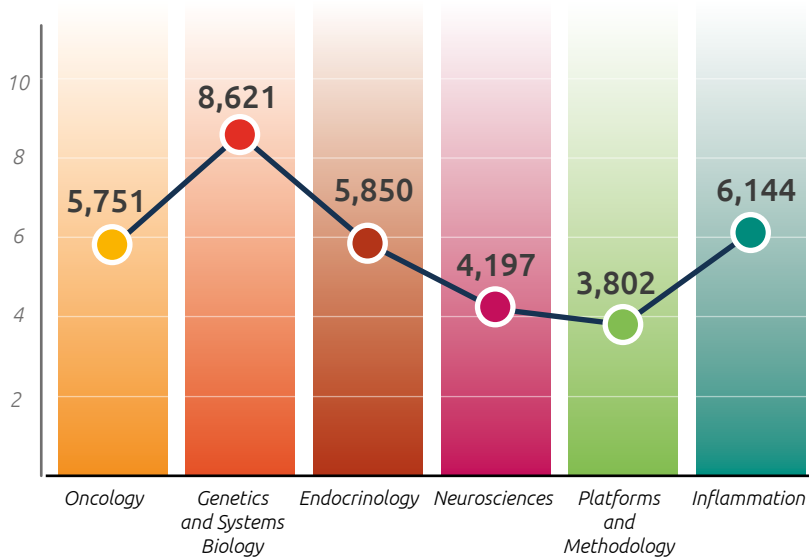


921

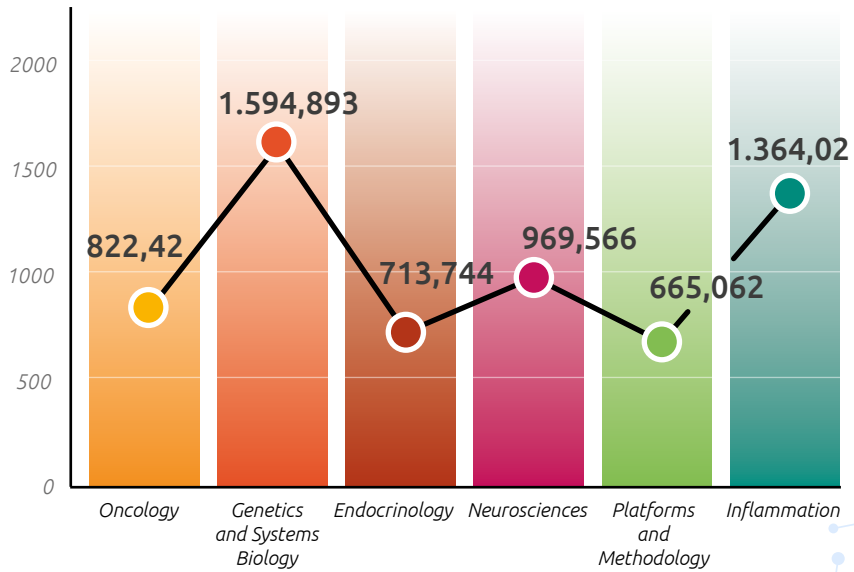
Publications

Publications in 2020

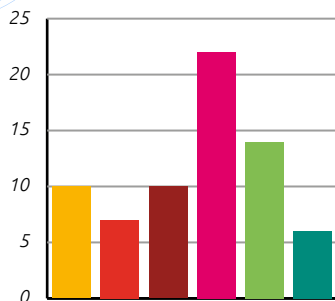




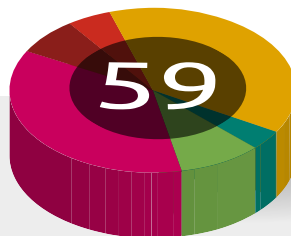
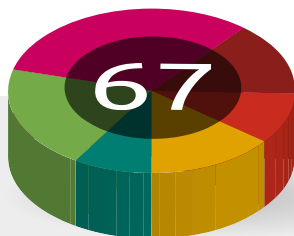
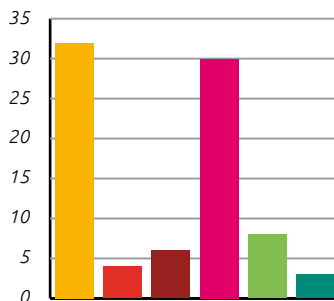
$$\Sigma f_i$$



Thesis



Patents



Oncology



Endocrinology



Platforms and
Methodology



Genetics and
Systems Biology

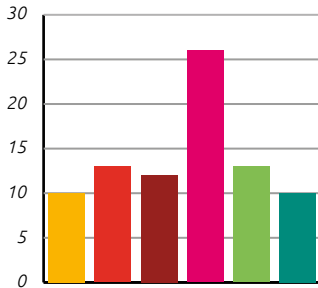


Neurosciences

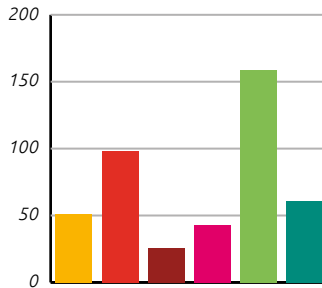


Inflammation

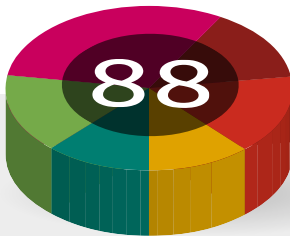
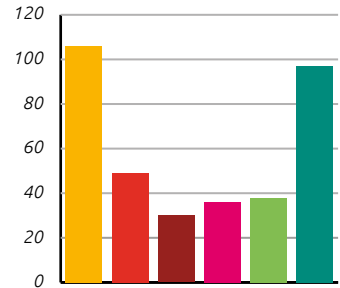
Projects



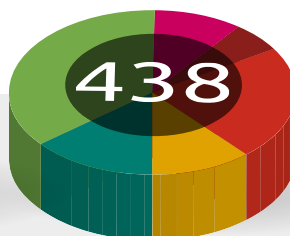
Contracts



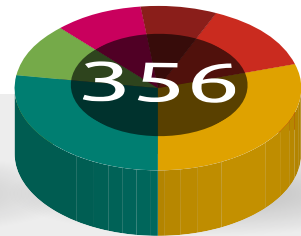
Clinical Studies



14.267.939,46 €



6.745.072,44 €



4.177.428,14 €

The background of the image is a dark blue gradient. It is decorated with abstract molecular or network-like structures. In the top-left corner, there is a complex web of thin white lines connecting small blue dots, with a semi-transparent blue mesh overlaying it. In the bottom-left corner, there is a cluster of interconnected hexagons, resembling a honeycomb or molecular lattice. The bottom-right corner features a dense, intricate network of blue dots of varying sizes connected by thin white lines. The word "idis" is centered in the middle of the image, enclosed within a dark blue circle.

idis

ANNUAL REPORT 2020

idis



XUNTA DE GALICIA
CONSELLERÍA DE SANIDADE