



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.

APROBATION

Direction Board of the Institute met in
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.



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 during the special, hard and complicated year 2020 that we had to live. It has not been easy for any of us, and we all have set aside other objectives to strive 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 fight 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 signing 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, more ambitious challenges.

The pandemic has entailed, 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 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 any other. The absence of an important research network has demonstrated the weakness of our economy. We must avoid this clamour to be forgotten. Our capacity for social communication must be reviewed and increased. Researchers are not a 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 have done so, we have an obligation to set ourselves higher challenges and work towards them. Dignifying economic and working conditionsof all scientific and management personnel dedicated to research, despite not being a direct responsibility of the Institute, is a collective obligation to achieve.

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 assumed by all the care and administrative personnel, the Hospital will never be excellent. Research is nothing more than persistently questioning whether what we do cannot be done better, and 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 also demand, so that emerging research groups become consolidated, and these become groups of excellence of national and international reference.

A serious problem that we suffer is the null availability of research spaces; despite the works that we have undertaken, and will continue to do, the spaces are barely increasing, while we are fortunate to have an exponential increase in the number of researchers. This absence of laboratories prevents the growth of IDIS, the development of more ambitious projects and convergence with European and international objectives, and without a doubt, it diminishes our attractiveness.

Our society is evolving rapidly. We cannot leave issues to solve in the future to come. The future is already here.



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AREAS

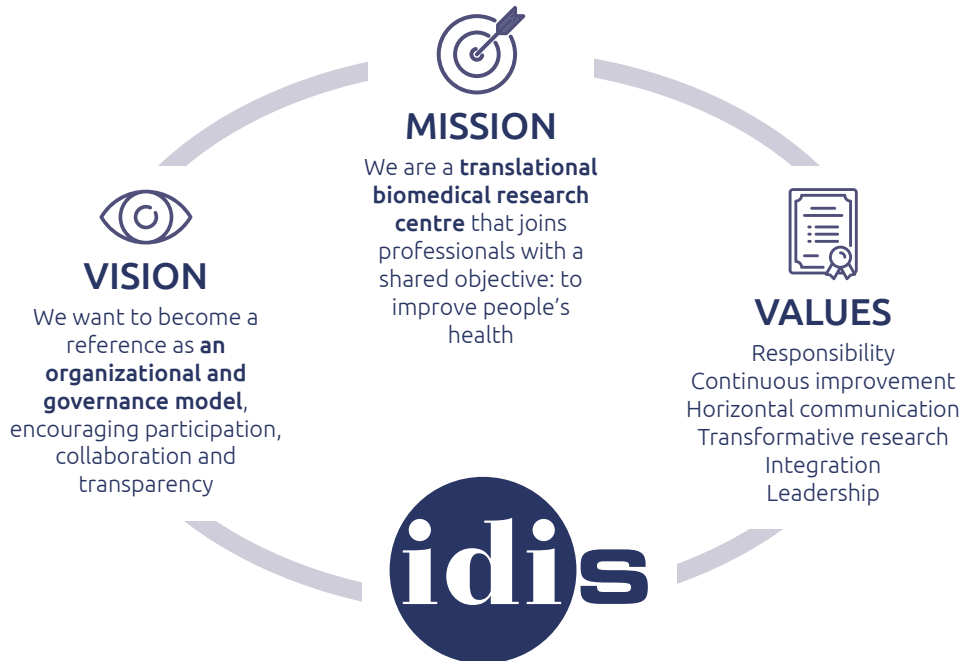
The background is a deep blue gradient. It features several abstract elements: a large, dark blue number '1' on the left side; a series of white, wavy lines that flow from the left towards the center; and a network of white dots connected by thin lines, resembling a molecular or data structure, scattered across the upper and right portions of the image.

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 Universidade 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

923

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, semi-transparent 'G' shape on the left; a series of thin, white, wavy lines that flow from the left towards the center; and a network of small, light blue dots connected by thin lines, resembling a molecular or data network, scattered across the upper and right portions of the image.

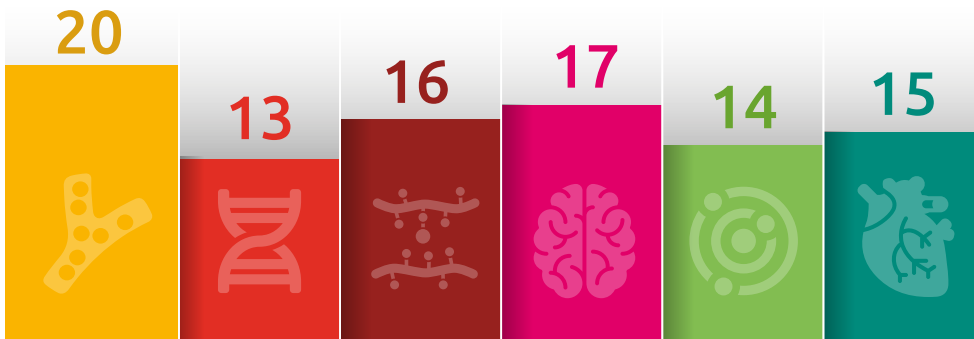
GLOBAL ANALYSIS

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

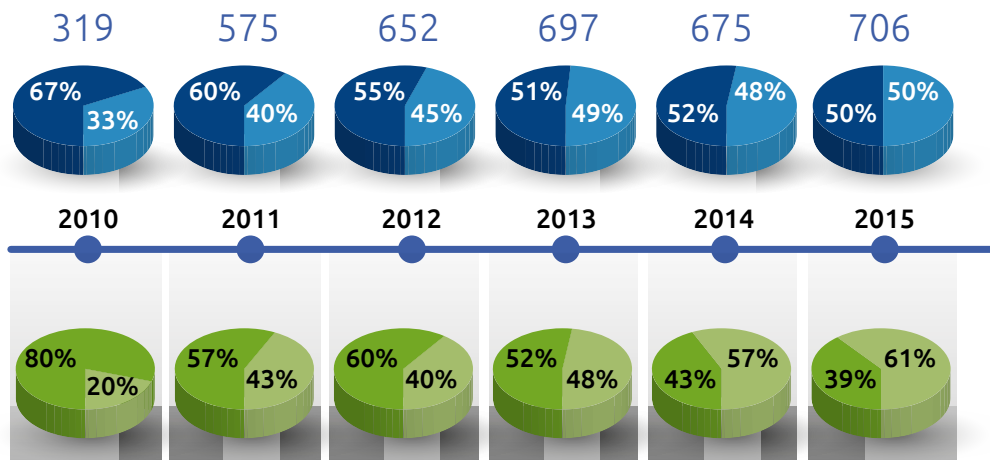
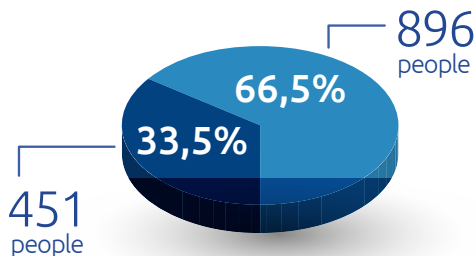
1.347
people



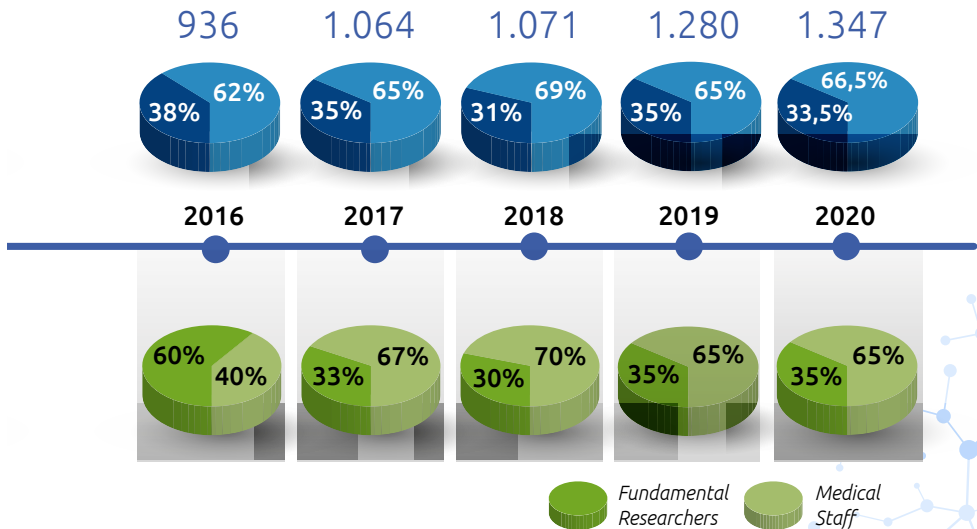
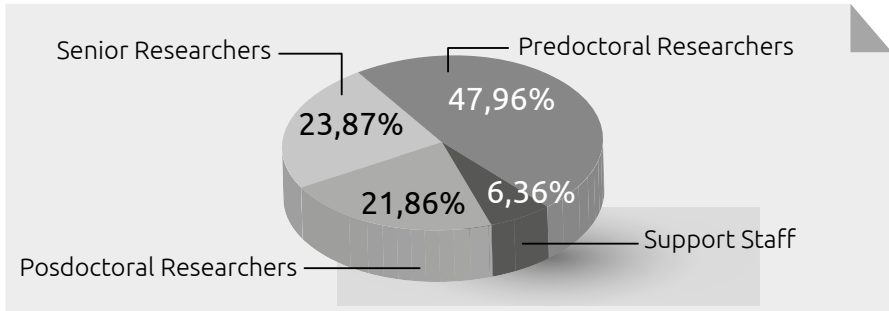
USC



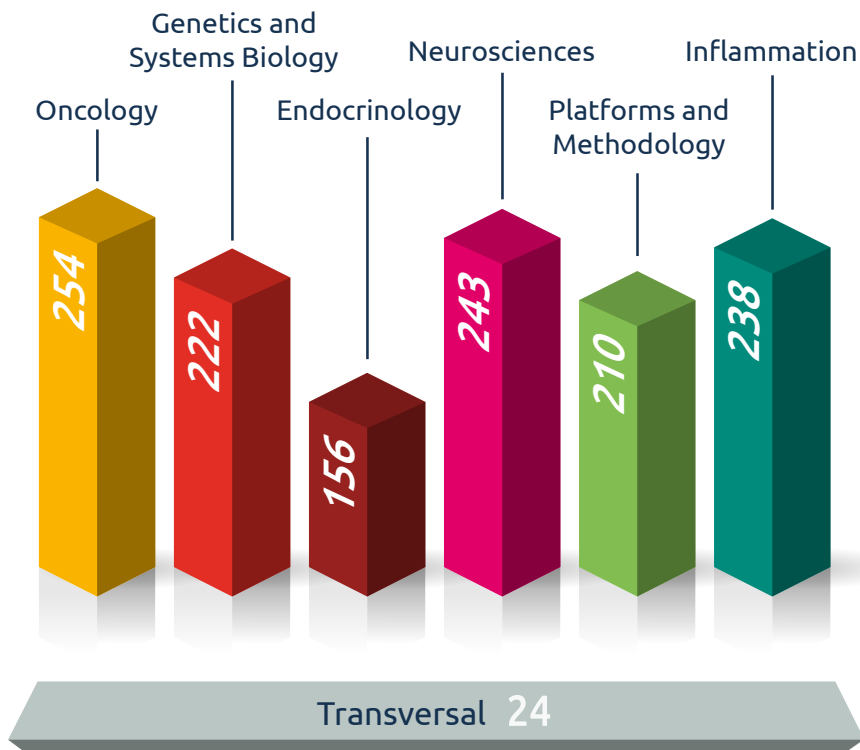
Servizo Galego de Saúde

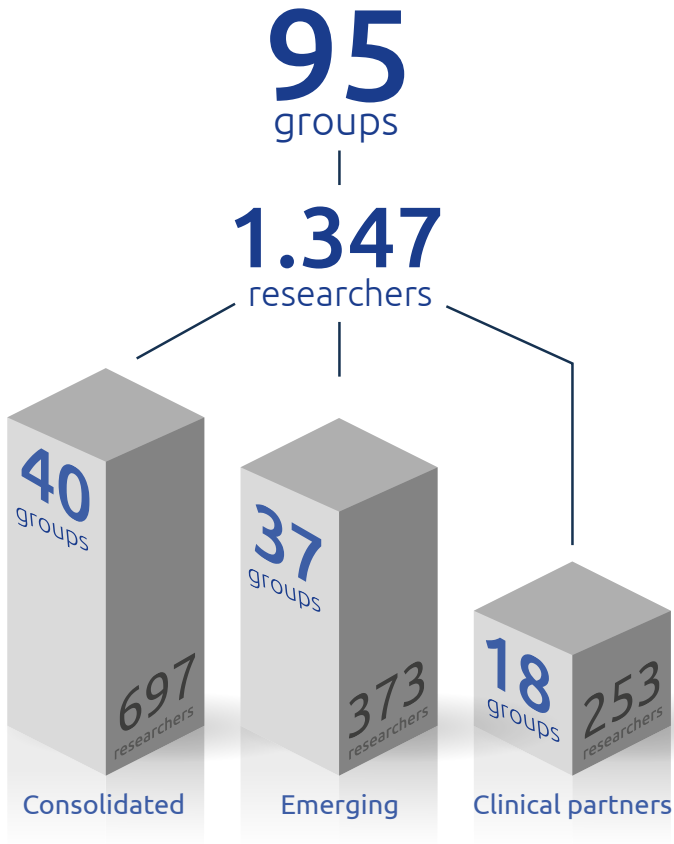


2. GLOBAL ANALYSIS



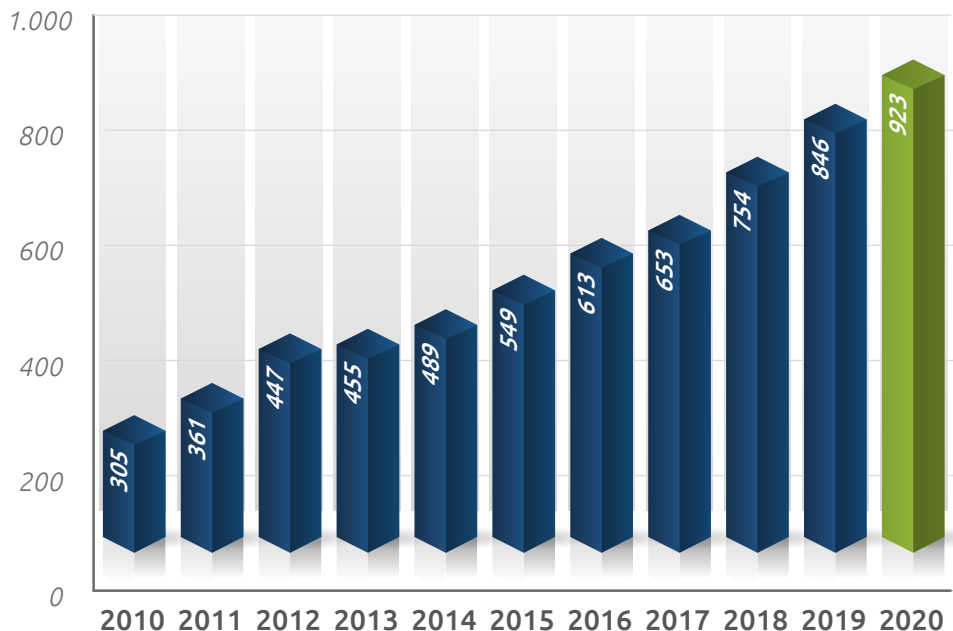
Number of researchers per area





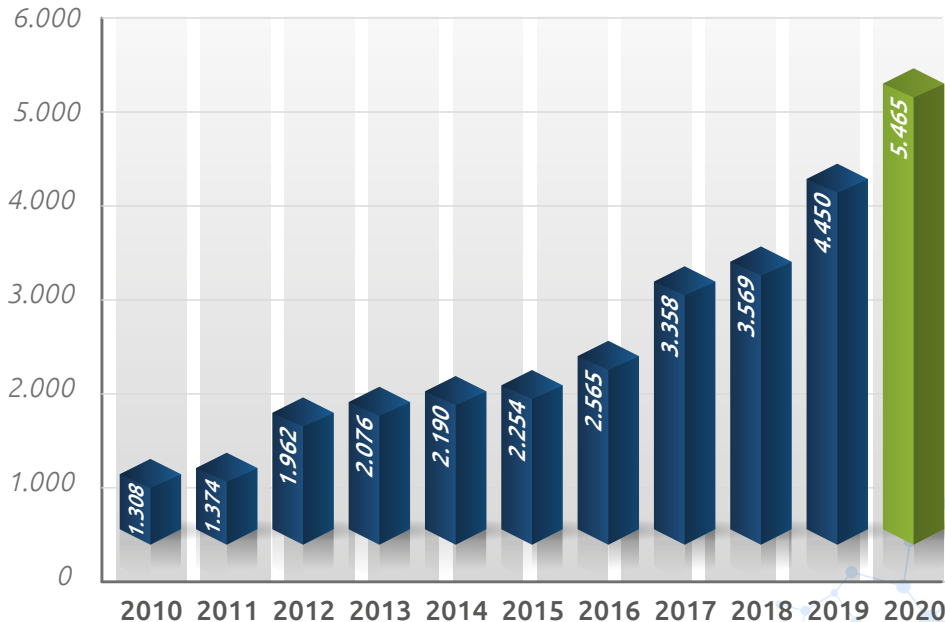
Number of published articles each year

The Institute has published **923 original scientific articles, editorials and reviews** in **488 international journals** indexed in the *Journal Citation Report* with an **cumulative impact factor of 5.465 points**.

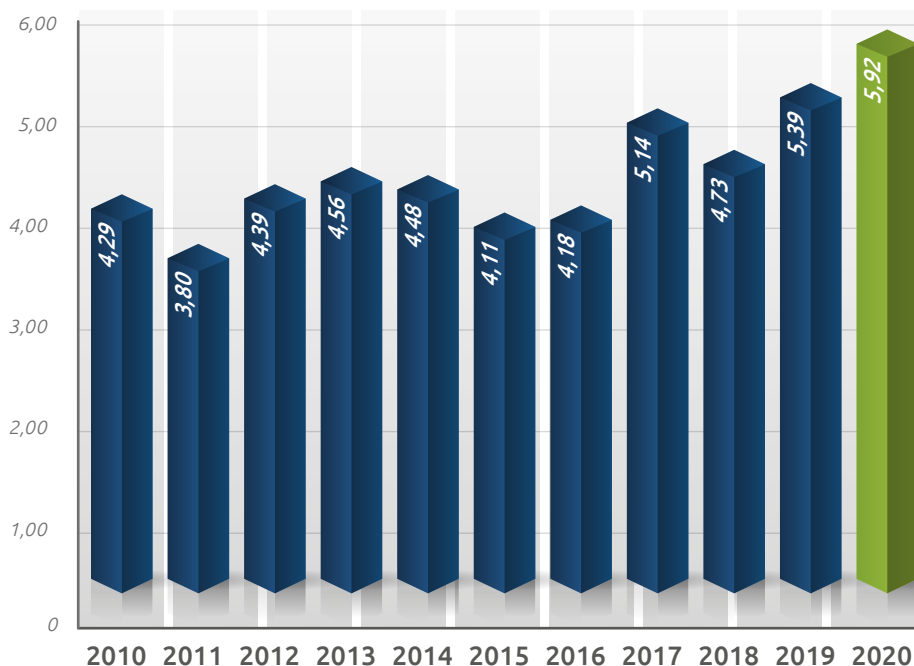


Cumulative impact factor

The upward trend of the cumulative impact factor is maintained and it moves **from 1.308 in 2010 to 5.465 in 2020**.

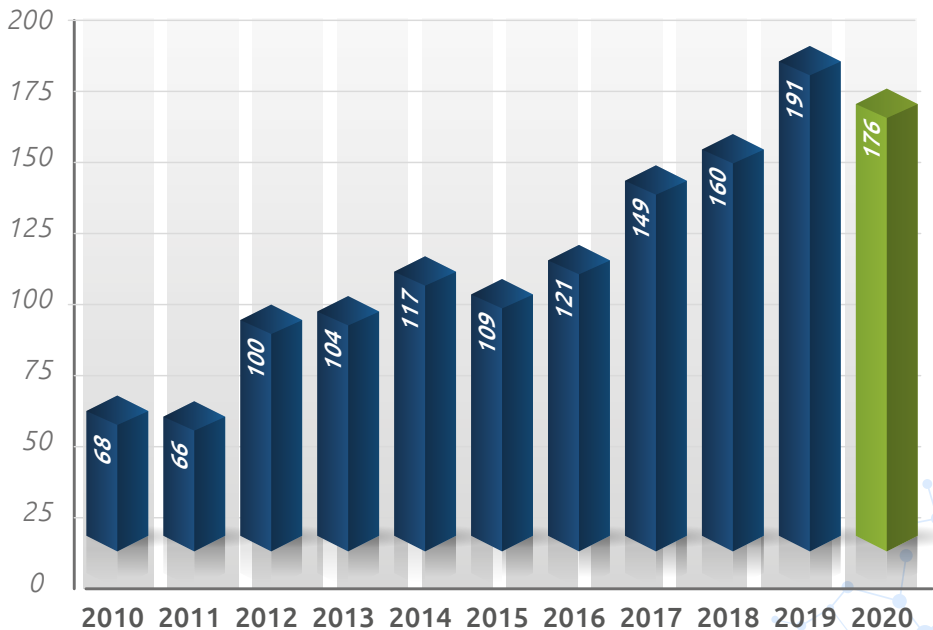


Average impact factor

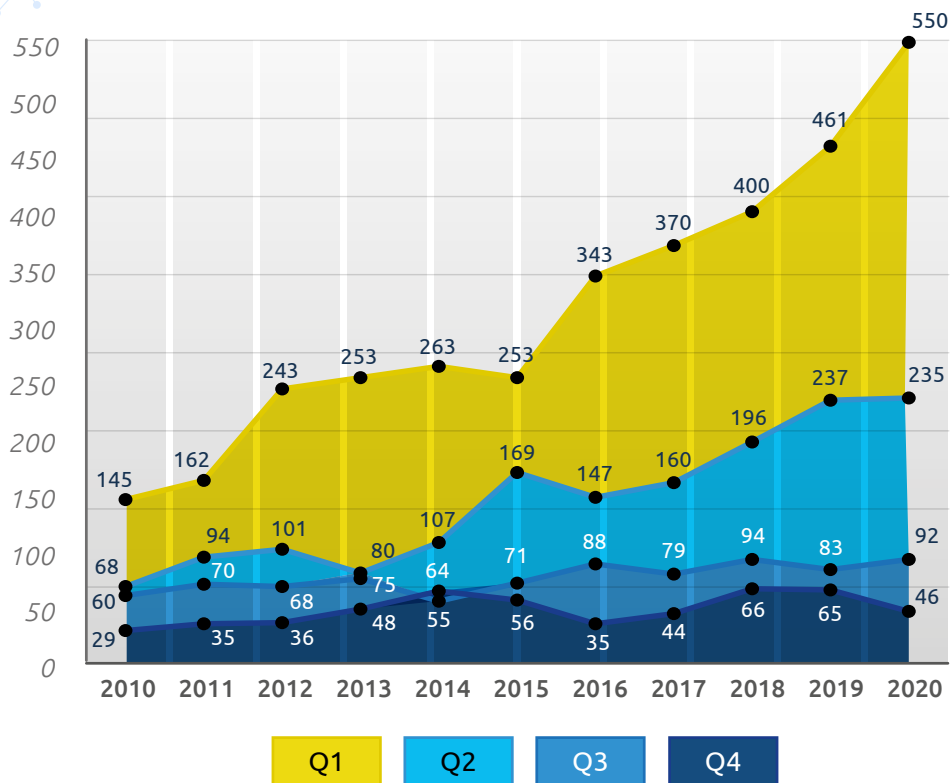


Number of published articles in the first decile

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.**

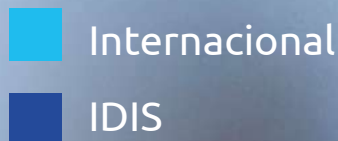
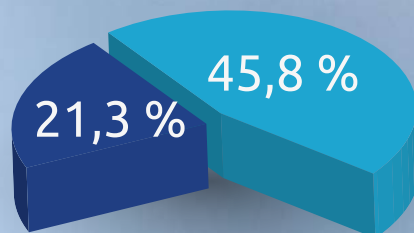
Taking into account the relevance of the authors in the articles signature, we identify those in which the first or the last author is assigned to an IDIS group. We define them as articles of our own.

Total		Owns	
19%	176	D1	50 10,8%
59,6%	550	Q1	262 56,8%
25,5%	235	Q2	124 26,9%
9,9%	92	Q3	53 11,5%
5%	46	Q4	22 4,8%
923	Σ	461	

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

197

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



During 2020, the 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 €

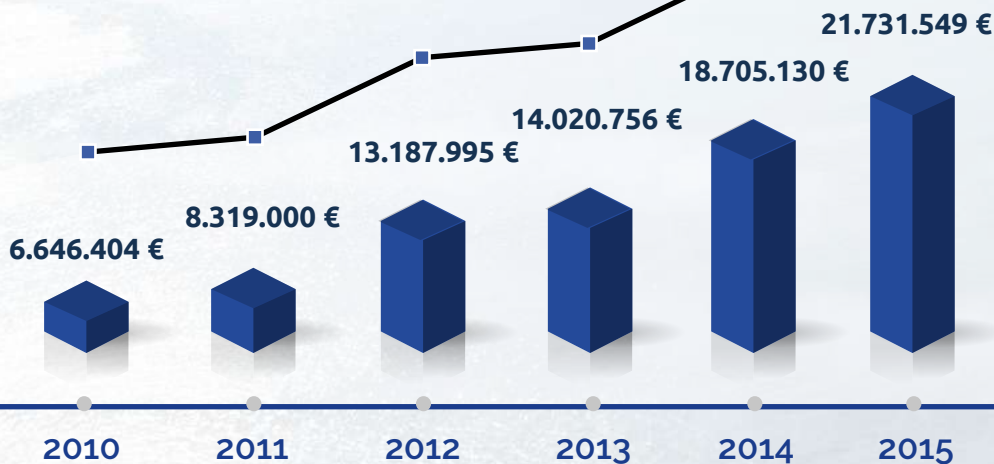
Summary of the funds raised in 2020

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

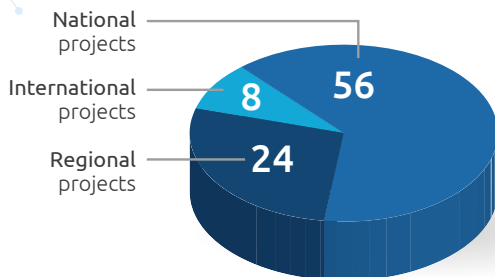
31.340.578,96 €



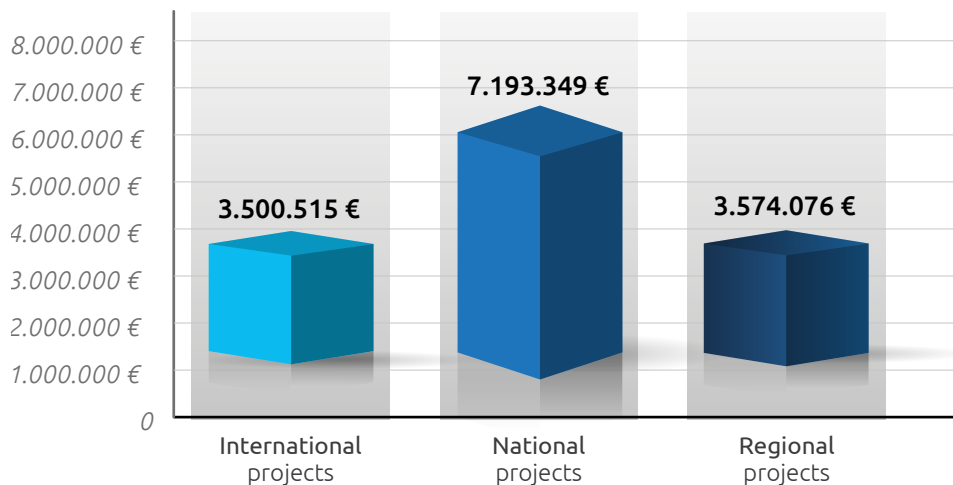
2. GLOBAL ANALYSIS



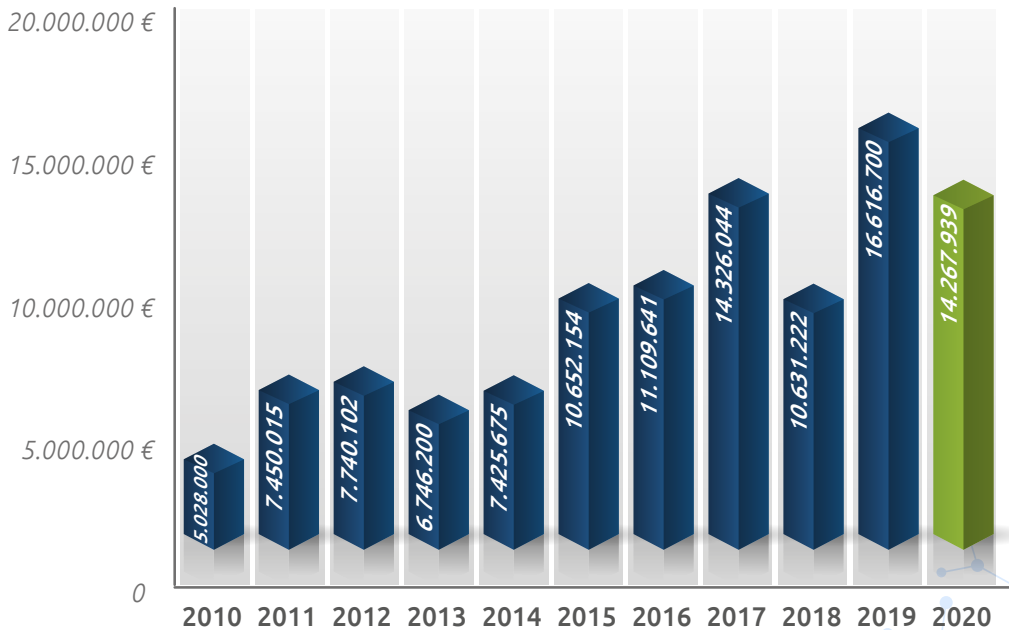
Number and amount of funds raised in 2020 for projects by location



88 Projects
14.267.939,46 €



Amount of funds raised by year for projects



114

CLINICAL TRIALS

40 National

74 International

242

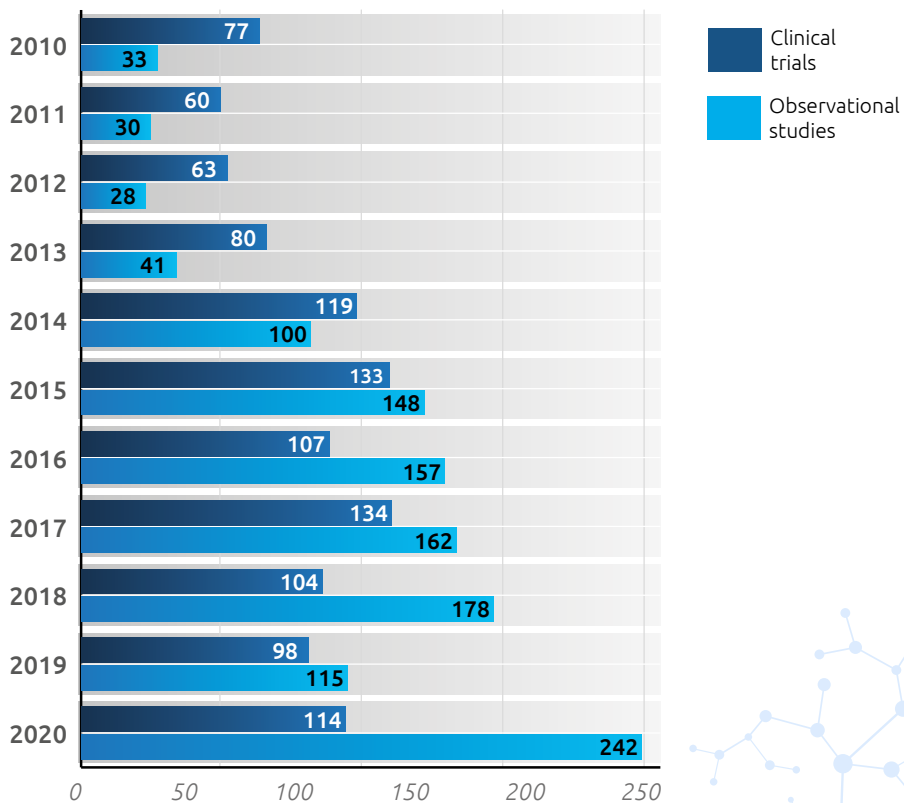
OBSERVATIONAL STUDIES

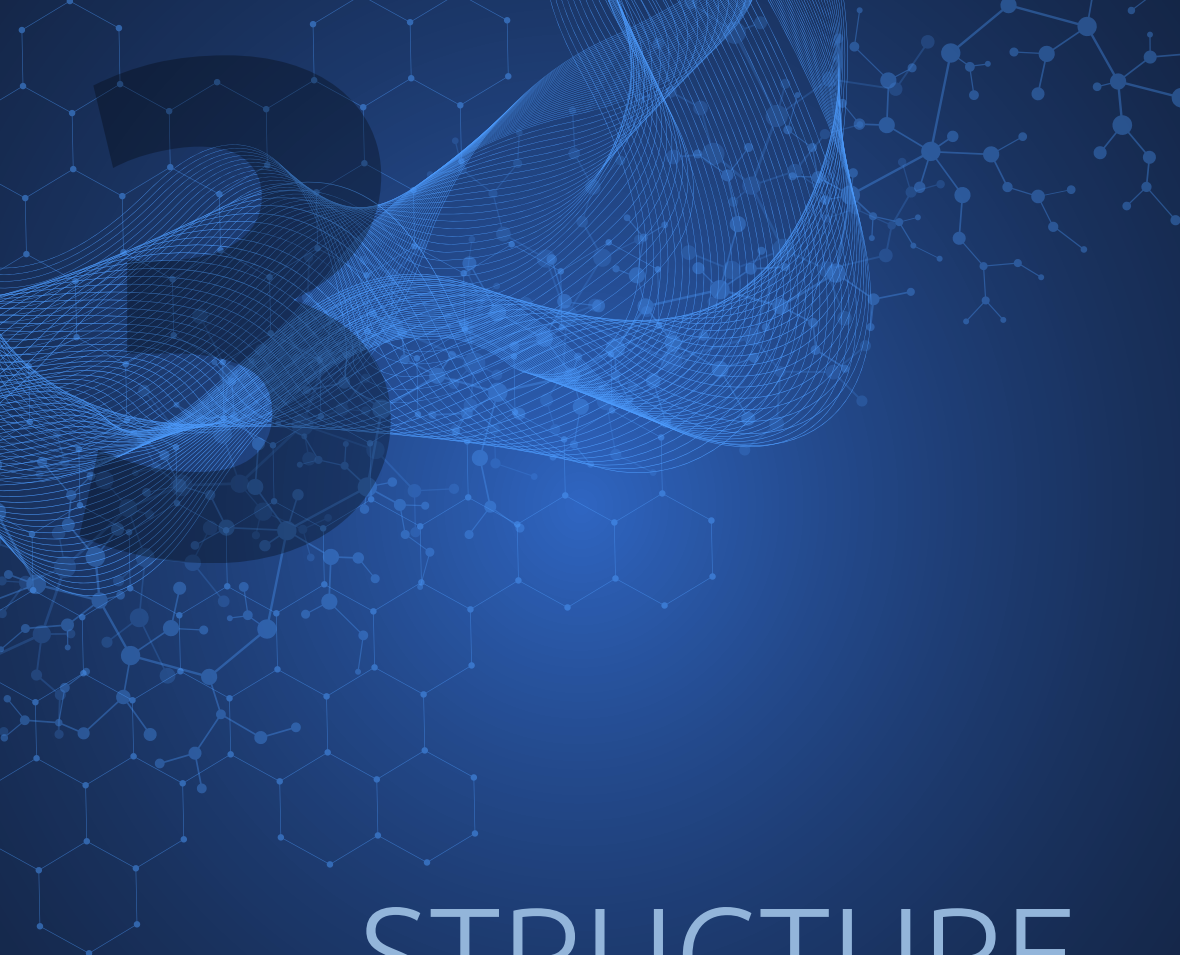
111 National

29 International

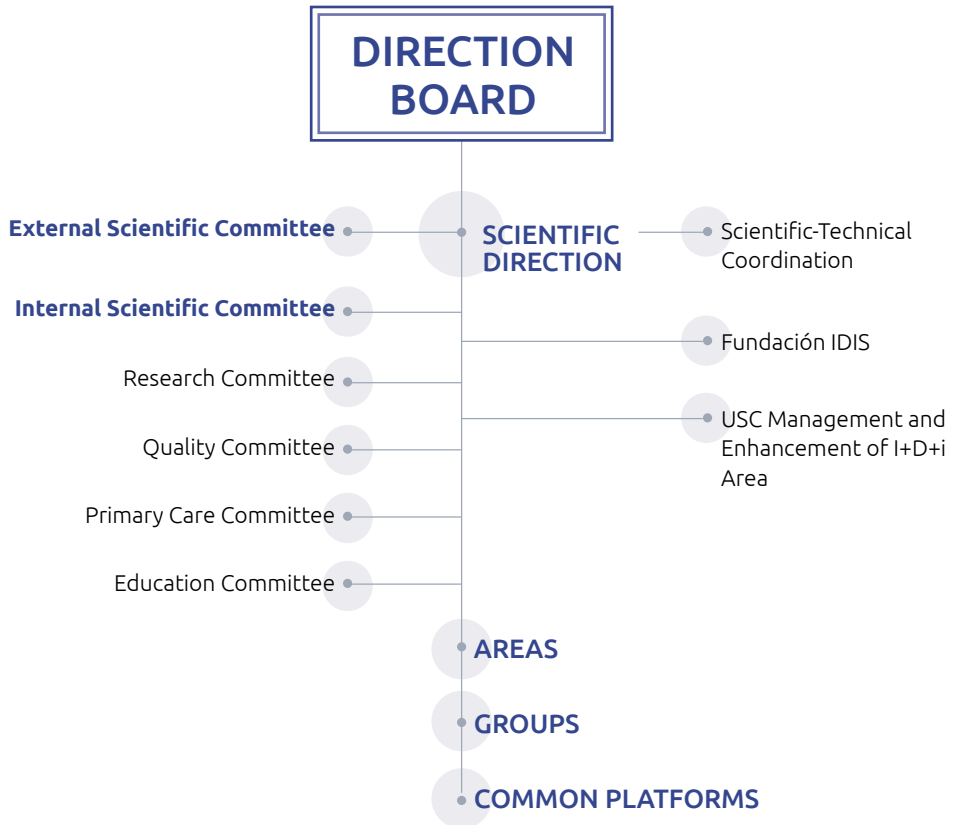
27 Regional

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
María Teresa Miras Portugal
Rosario Luquin Piudo

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Carlos González Juanatey
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Rafael López López
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Laura Muinelo Romay
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M Luisa Pérez del Molino Bernal
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Sabela da Silva Álvarez
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Irene Zarra Ferro

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Rodolfo Gómez Bahamonde
Carlos Peña Gil
Andrés Soto Varela
Ana Vega Gliemmo
Irene Zarra Ferro
Isabel Lista García

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Sergio Cinza Sanjurjo
Francisca Lago Paz
María Torres Español
Ángel Díaz Lagares
Adrián Mosquera Orgueira
Diana Guallar Artal

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SECRETARY

Yolanda Liste Martínez

Carlos Grande Sellera
Isabel Lista García
Pablo Mosquera Martínez

Advisory bodies

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Daniel Rey Aldana

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	Ángel Carracedo Álvarez
C009	Translational Research in Digestive Diseases	Juan Enrique Domínguez Muñoz
C020	Genetics, Vaccines, Infections and Paediatrics (GENVIP)	Federico Martínón 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 (GenPoB)	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

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	Diabetes	<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 is organic and sprawling, filling the corners and bottom of the frame against a dark blue background.

INNOVATION AND TRANSFER

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, stained with green and blue dyes. The cells are irregular in shape and clustered together.

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.

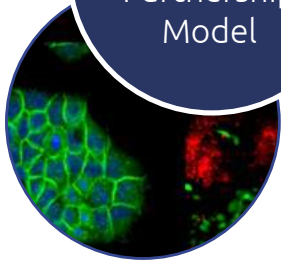
IDIS has 1 project granted.

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 circular images showing microscopic views of cells. The cells are stained with various colors, including green, blue, and red, against a dark background. The top circle is partially obscured by the bottom one.

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

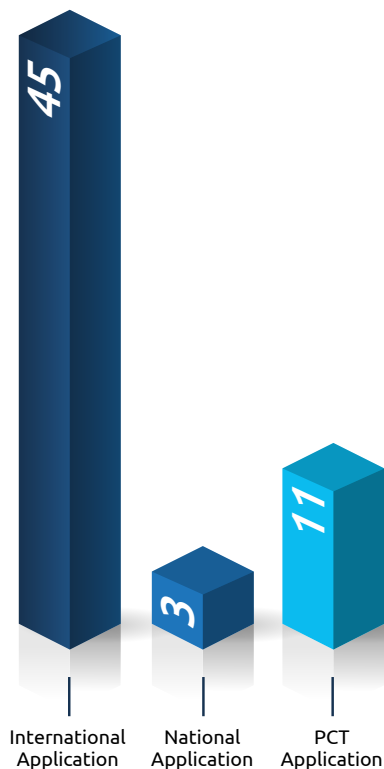
45 International Application

3 National Application

11 PCT Application

18 Granted

1 Licensed



5. INNOVATION AND TRANSFER



Trademarks

DIVERSEA

galCovid

Spin off



Personalized Medicine in Cardiology





An abstract graphic featuring a dark blue background with a complex network of light blue and white dots connected by thin lines. The network is denser in the top-left and bottom-right corners, with a faint, larger-scale mesh visible in the top-left. The word "PLATFORMS" is centered in a 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

Microscopy

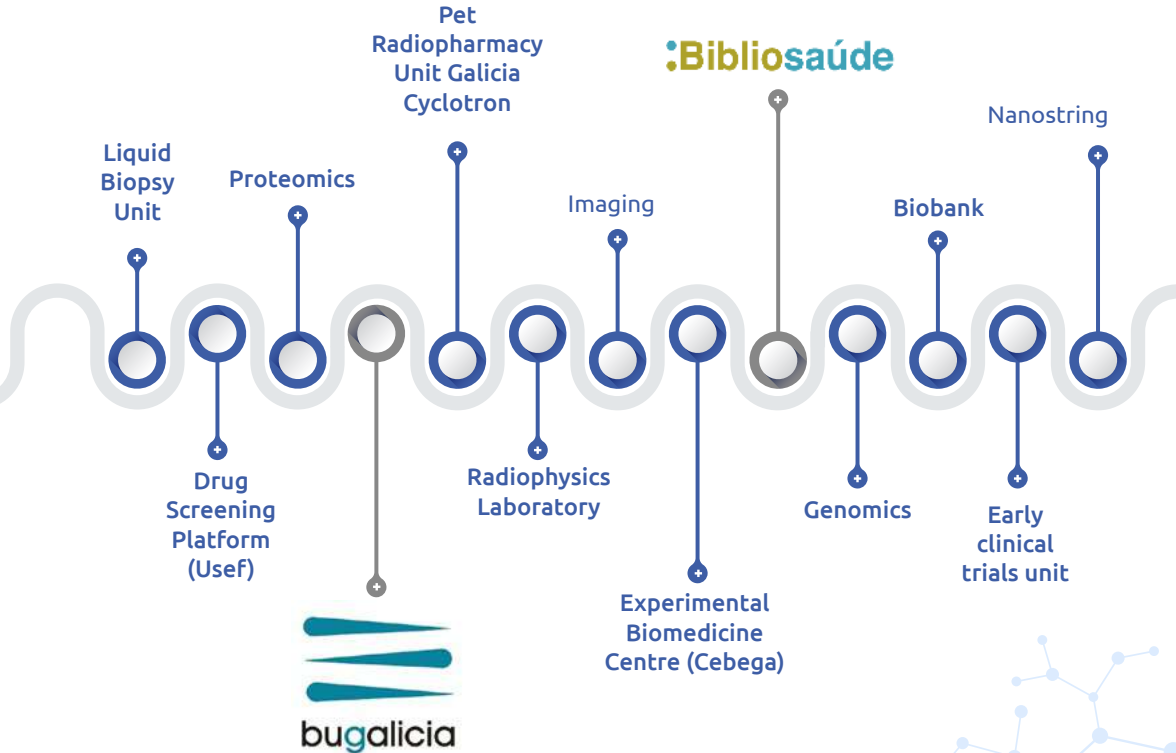
The Animal
Experimentation
Unit

Molecular
Imaging Unit
Micropet/spect/ct
Scan



SERVIZO
GALEGO
de SAUDE

6. PLATFORMS



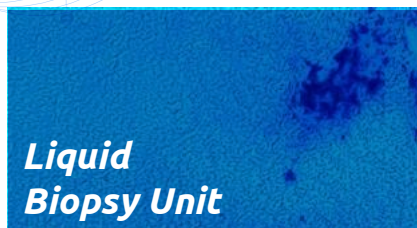


Proteomics

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 rectangular image with a blue background showing a complex, abstract pattern of light and dark spots, representing a flow cytometry analysis.

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 rectangular image with a blue background showing a complex, abstract pattern of light and dark spots, representing a Magnetic Resonance Imaging (MRI) scan.

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

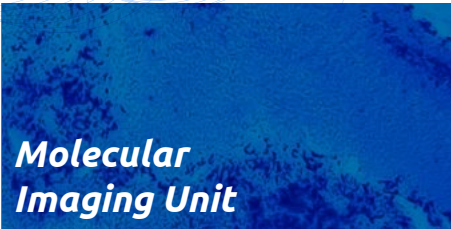
Lydia Fraga Fontoira (Manager)

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 rectangular box containing a blue-tinted microscopic image of tissue, showing cellular structures and some darker, more dense areas.

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 rectangular box containing a blue-tinted microscopic image of tissue, showing cellular structures and some darker, more dense areas.

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 network of interconnected 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. A large, dark blue, semi-transparent letter 'F' is positioned in the upper-left quadrant, partially obscured by the wavy lines.

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 €



The background of the slide is a dark blue gradient. It features an abstract network graphic composed of numerous small, light blue circular nodes connected by thin, light blue lines. These lines form a complex web that fills the corners and bottom of the slide, with a denser concentration of nodes and lines in the bottom right corner. The overall effect is one of interconnectedness and digital technology.

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

ítemas isciii



Spanish
Clinical
Research
Network
ISCIII

BIOMEDICAL
RESEARCH
NETWORKING
CENTRES

6

CIBER

cíberobn

cíberer

cíberesp

cíbercv isciii

cíberonc isciii

cíber 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

8. STRATEGIC ALLIANCES



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

NETWORKS FOR
COOPERATIVE
RESEARCH IN
HEALTH

(1) Scientific Direction IDIS



2

INTERNATIONAL NETWORK

EATRIS, European infrastructure for translational medicine

COST, European Cooperation in Science and Technology

eatris

cost
European Cooperation in
Science and Technology

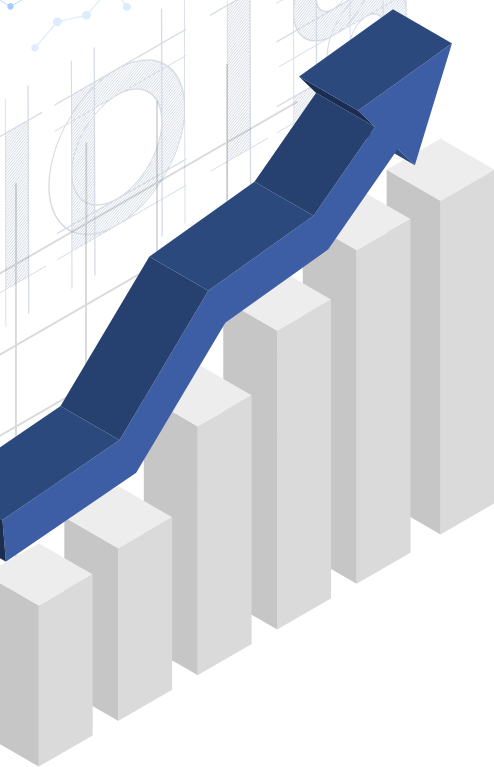


The background of the slide is a dark blue gradient. It is decorated with abstract molecular or network-like graphics. In the top-left corner, there is a cluster of light blue nodes connected by lines, with a faint, larger-scale mesh structure behind it. The bottom half of the slide is filled with a dense, complex network of nodes and lines in various shades of blue and grey, resembling a molecular structure or a data network.

AREAS

ANNUAL REPORT 2020

Health Research Institute. Santiago de Compostela

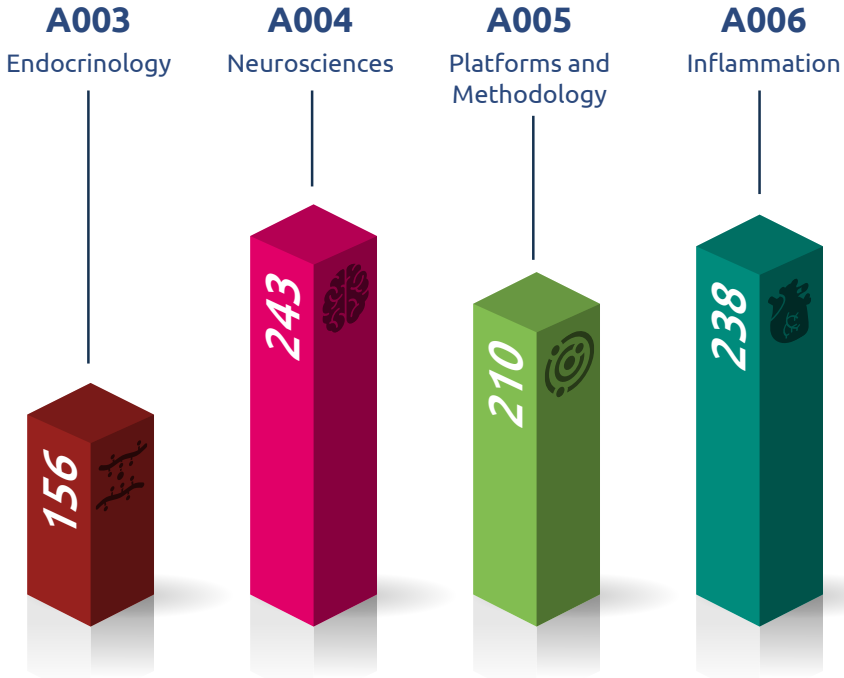


A001
Oncology



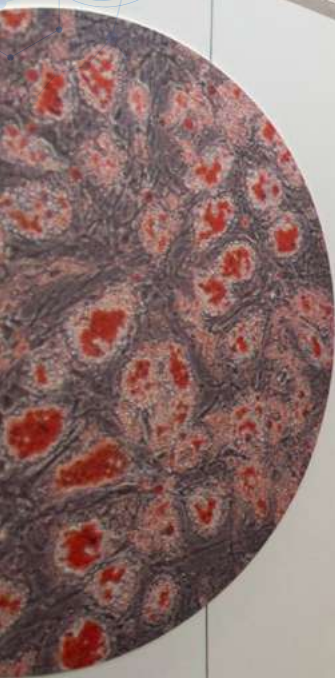
A002
Genetics and
Systems Biology





1.347 PEOPLE
are integrated
in **95 groups**

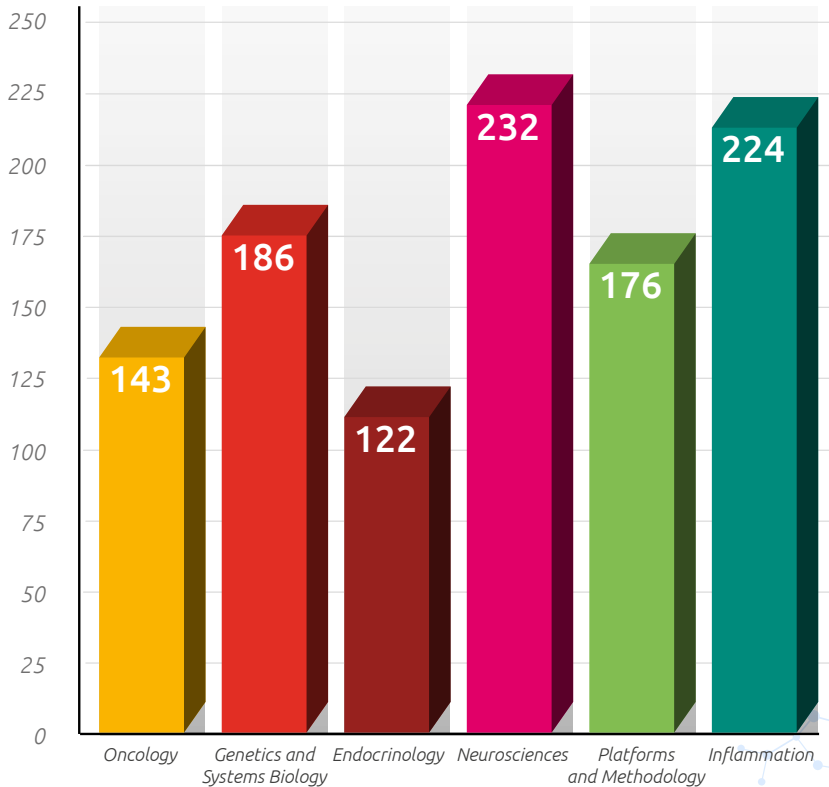
6
RESEARCH
AREAS

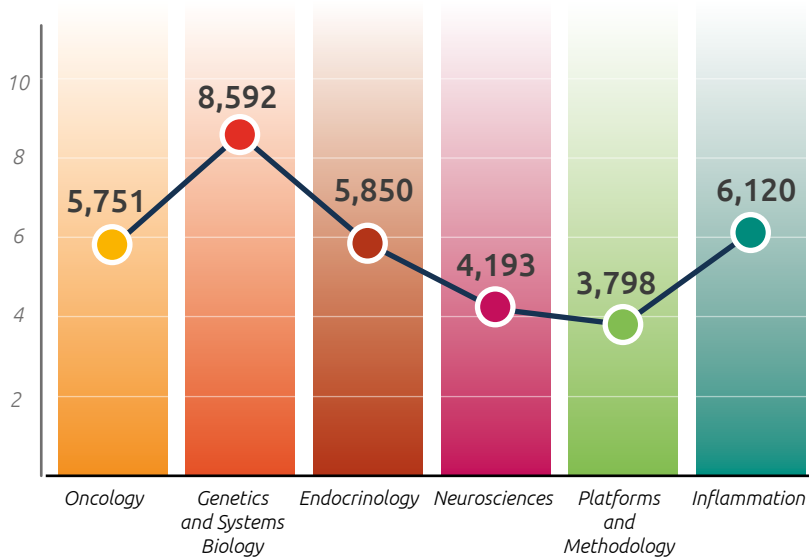


923

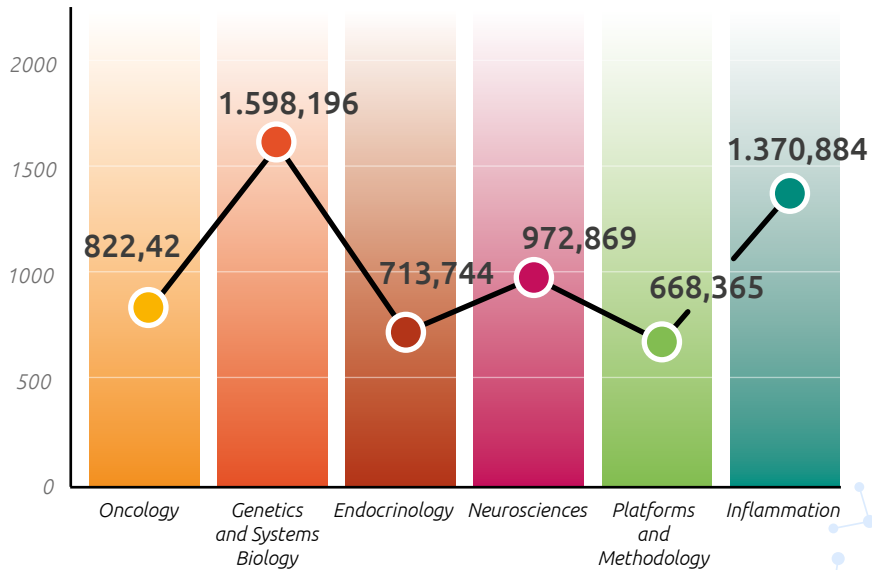
Publications

Publications in 2020

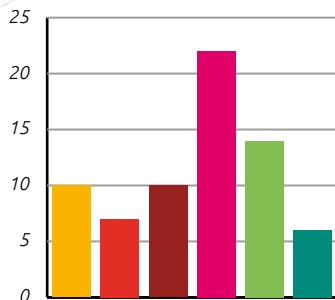




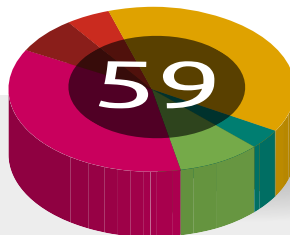
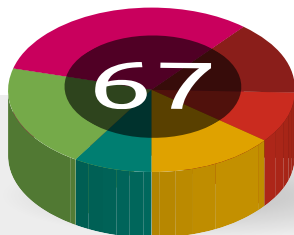
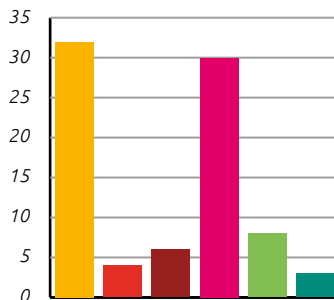
$$\Sigma f_i$$



Thesis



Patents



Oncology



Endocrinology



Platforms and
Methodology



Genetics and
Systems Biology

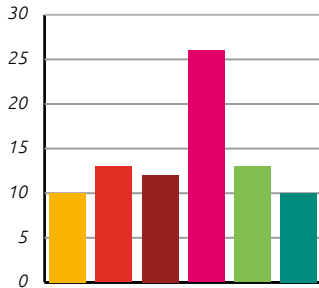


Neurosciences

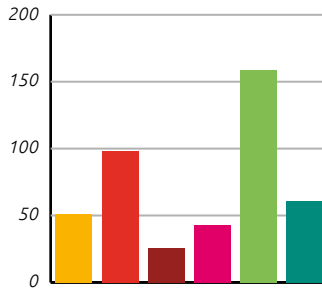


Inflammation

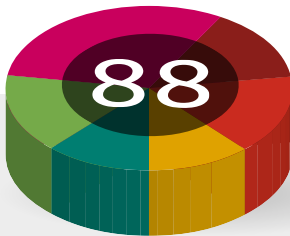
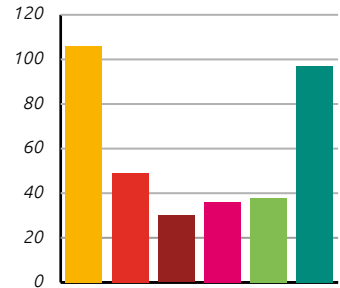
Projects



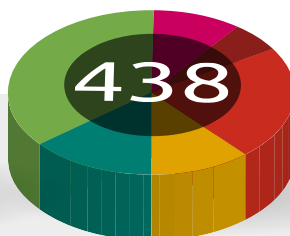
Contracts



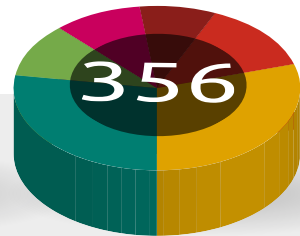
Clinical Studies



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 dots, with some larger blue dots acting as hubs. Below this, on the left side, is a more regular hexagonal lattice structure. At the bottom of the image, there is another layer of molecular structures, featuring a mix of blue and dark grey dots connected by lines.

idis

ANNUAL REPORT 2020

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UNIVERSIDADE
DE SANTIAGO
DE COMPOSTELA



XUNTA DE GALICIA
CONSELLERÍA DE SANIDADE