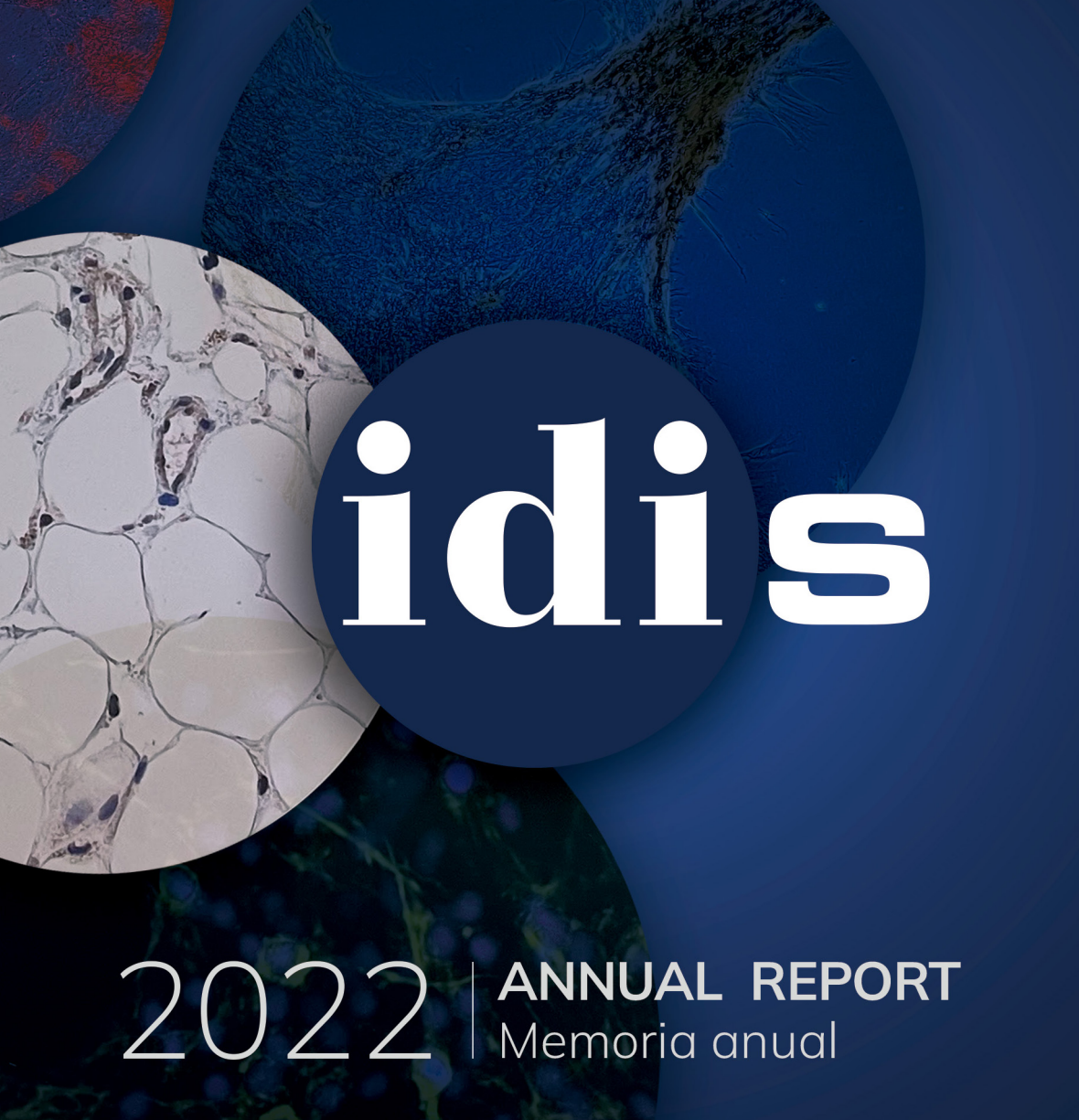

idis

2022 | **ANNUAL REPORT**
Memoria anual

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

APPROVAL

IDIS board of Directors meeting.
Santiago de Compostela,
on 24 April 2023.


idis

Mª Luz Couce Pico

Directora Científica
Scientific Director

Xa é o segundo ano que escribo o prólogo desta memoria, neste caso de 2022, e fágoo de novo con satisfacción e orgullo de continuar avanzando grazas, non cabe dúbida, á grande fortaleza deste Instituto, a súa masa crítica de investigadores e investigadoras que conforman grupos de excelencia, que son referencia a nivel nacional e internacional no seu ámbito.

O IDIS, como eixe da investigación sanitaria galega, é un dos grandes institutos de investigación biomédica de España, cunha crecente captación de recursos e produción científica como se reflicte na memoria. Un dato que me gustaría resaltar é o obtido na convocatoria dos proxectos AES do ISCIII de 2022, na que o IDIS destacou como quinto no número de proxectos captados, cuartos na captación económica media por proxecto e segundos en canto a porcentaxe de éxito. O IDIS destaca ademais pola súa capacidade de innovación e transferencia, é unha incubadora para empresas biotecnolóxicas, con xa 13 empresas de base tecnolóxica que saíron do noso centro.

Para tratar de proseguir nesta liña, no 2022 puxemos en marcha a Unidade Transversal de Metodoloxía da Investigación (UTAMI), co fin de axudar tamén aos investigadores xoves e emerxentes. Incorporamos por vez primeira un grupo investigador liderado por profesionais da enfermería; contribuímos a abrirnos máis á sociedade coa incorporación da cidadanía, con representantes de asociacións de pacientes, de empresas e de fundacións sociais nas nosas comisións; obtivemos a acreditación por parte da Consellería de Sanidade da nosa Unidade de Ensaios Clínicos en fases temperás, e puxemos en marcha unha oficina de ensaios clínicos; continuamos co plan de formación posto en marcha e de acreditación das plataformas e servizos de apoio común.

Ademais da nosa nova web, que estreamos nesta anualidade, temos aínda a materia pendente de dar unha maior visibilidade, que trataremos de impulsar neste novo ano. A nosa necesidade máis urxente, os medios físicos. Dispor de instalacións modernas e manter unha comunicación máis directa co persoal investigador para analizar os diferentes camiños que toman na investigación é prioritario para continuar neste camiño ascendente que trazamos. Ilusión e afán por conseguilo non nos faltará.

It is already the second year that I am writing the prologue of this report, in this case 2022, and I am doing it again with satisfaction and pride in continuing to move forward thanks to the great strength of this Institute, its critical mass of researchers who make up groups of excellence, which are of national and international reference in their field.

IDIS, as the axis of Galician health research, is one of the great biomedical research institutes in Spain, with a growing fundraising and scientific production as reflected in the report. I would like to highlight the results obtained for AES 2022 grant calls of the ISCIII, in which IDIS was ranked 5th in the number of projects captured, 4th in the average financial capture per project and 2nd in terms of the percentage of success. The IDIS also stands out for its capacity for innovation and transfer, it is an incubator for biotechnological companies, with already 13 technology-based companies that originated in our centre.

Trying to follow this line, in 2022 we launched the Research Methodology Transfer Unit (UTAMI), in order to also assist young and emerging researchers. We incorporated for the first time a research group led by nursing professionals; we contribute to increase our opening to society with the incorporation of citizens, with representatives of patient associations, companies and social foundations in our commissions; we have obtained accreditation from the Department of Health for our Clinical Trials Unit in the early stages, and we have launched a clinical trials office; we continue with the training plan launched and the accreditation of common support platforms and services.

Despite our new website, which we launched this year, we still have the pending issue of giving greater visibility to the institute, which we are developing this 2023. Our most pressing need, research spaces. Having modern facilities and maintaining more direct communication with the research staff to analyze the different paths taken by the research is a priority to continue on this upward path that we have drawn. Illusion and eagerness to achieve it will not be missing.

“O IDIS, como eixe da investigación sanitaria galega, é un dos grandes institutos de investigación biomédica de España,...”

“IDIS, as the axis of Galician health research, is one of the great biomedical research institutes in Spain,...”

Summary

5
Innovation and transfer
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Platforms
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Funding
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Strategic alliances
76

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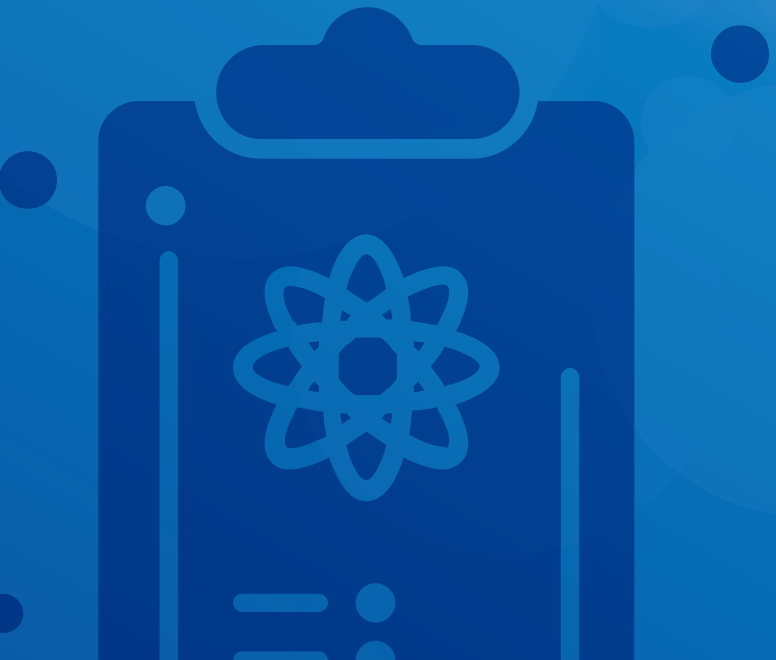
80

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.

43.577.655,29 €

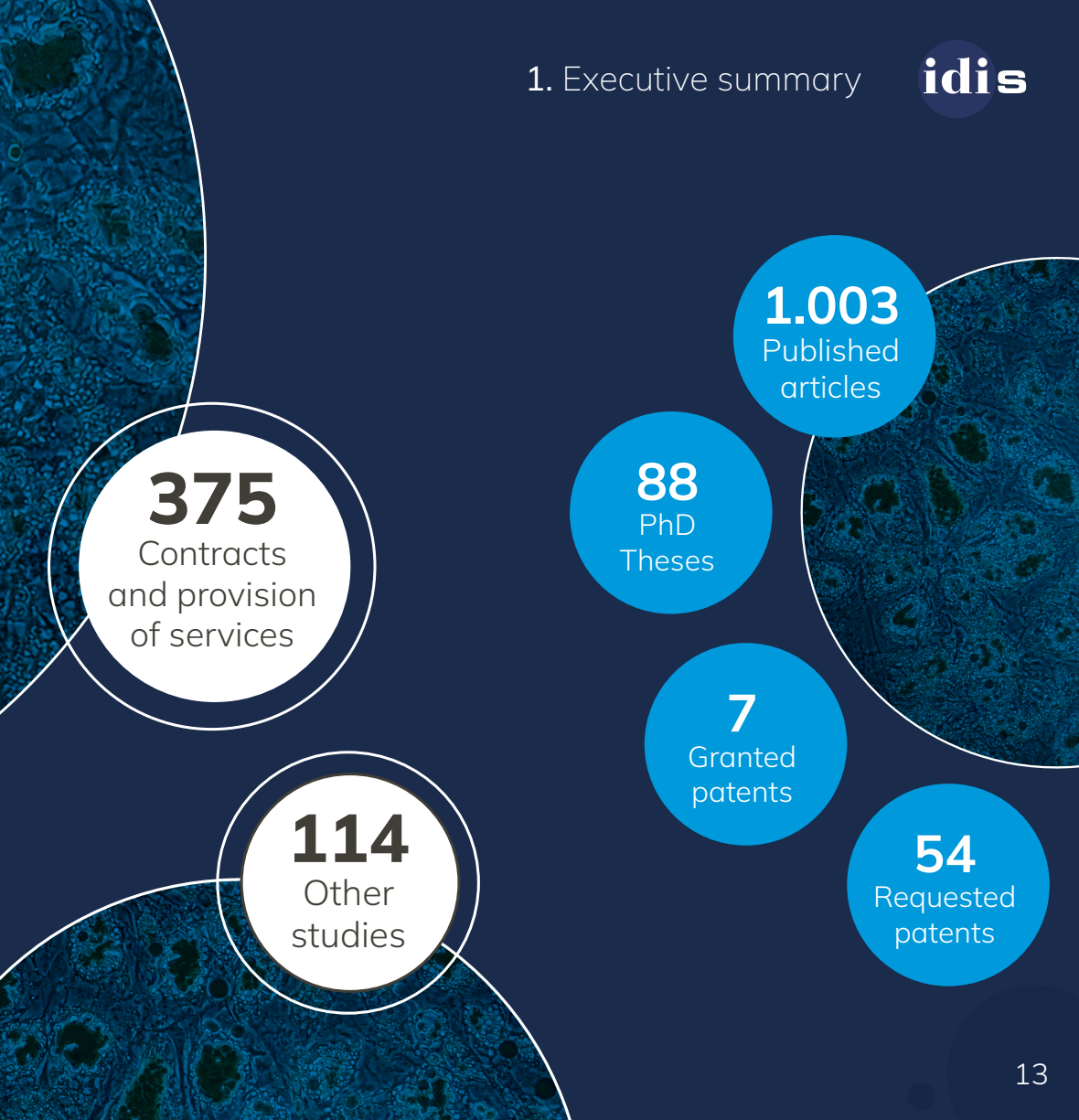
Total funds raised

118
Projects

103
Clinical trials

82
Staff contracts

129
Donations


1.003
Published articles
88
PhD Theses
375
Contracts and provision of services
7
Granted patents
54
Requested patents
114
Other studies

2

Global analysis

Oncology	Genetics and Systems Biology	Endocrinology, Nutrition and Metabolism	Neurosciences	Platforms and Methodology
243	146	131	207	141
				
19	11	15	20	12

Cardiovascular

Infectology, Inflammation and Vaccines

7 Research areas

157

158

1.183

Research and technical staff

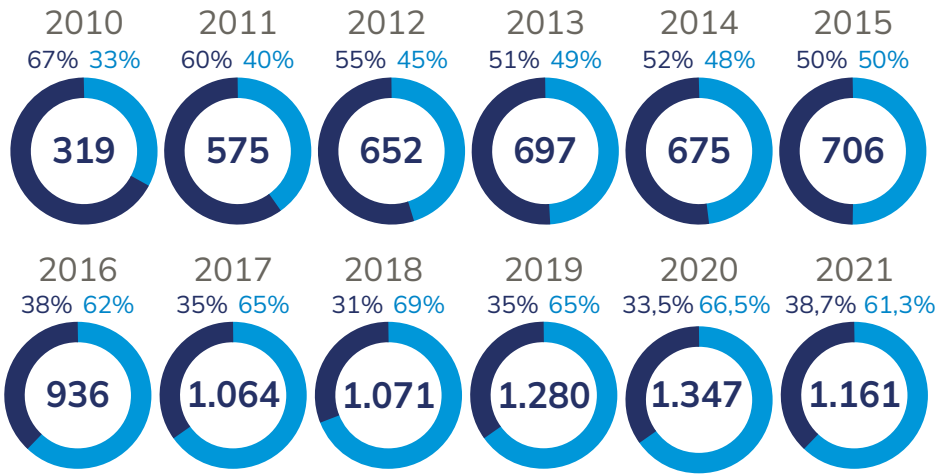
30 Transversal

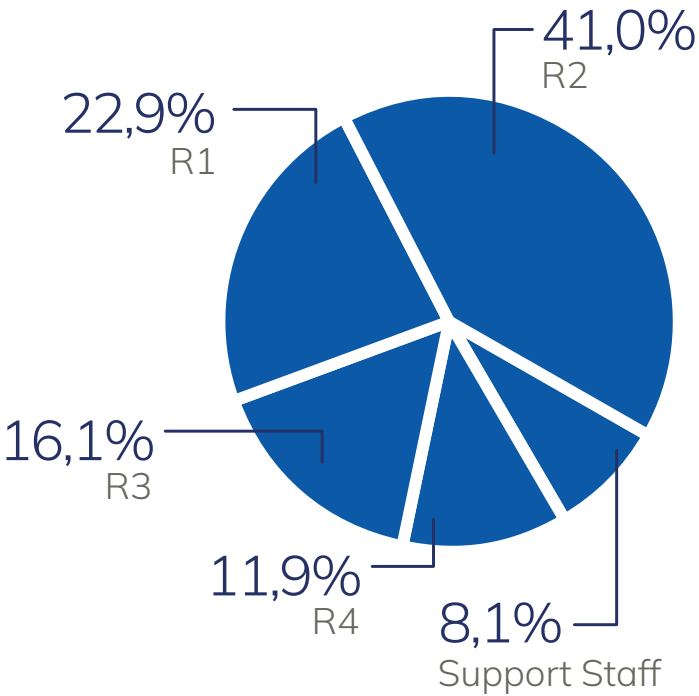
11

11

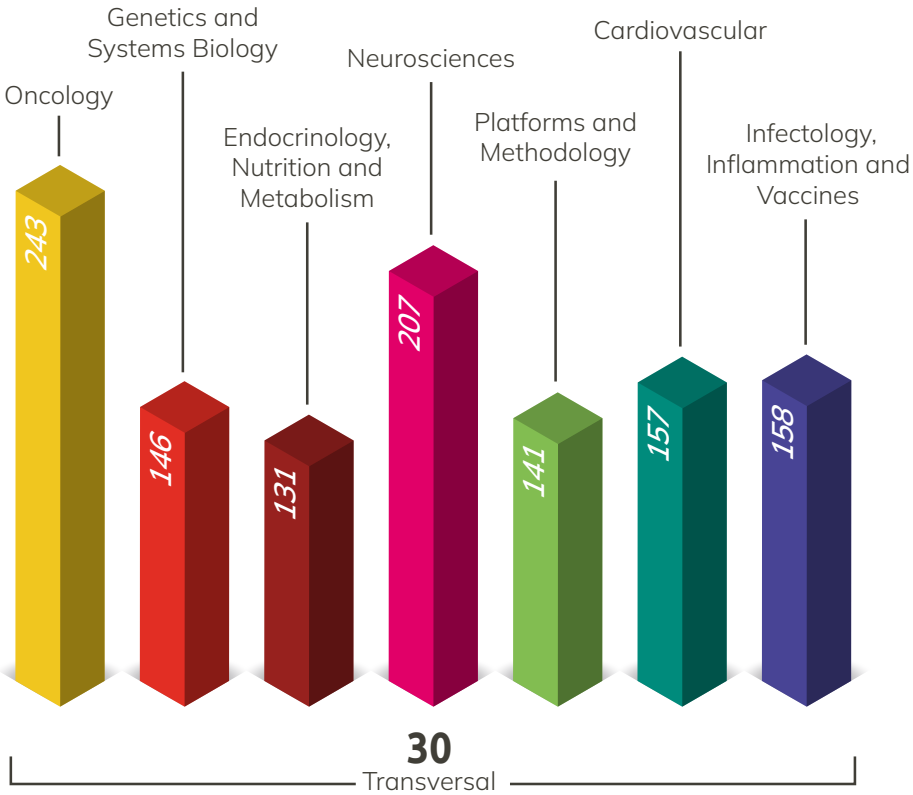
99 groups

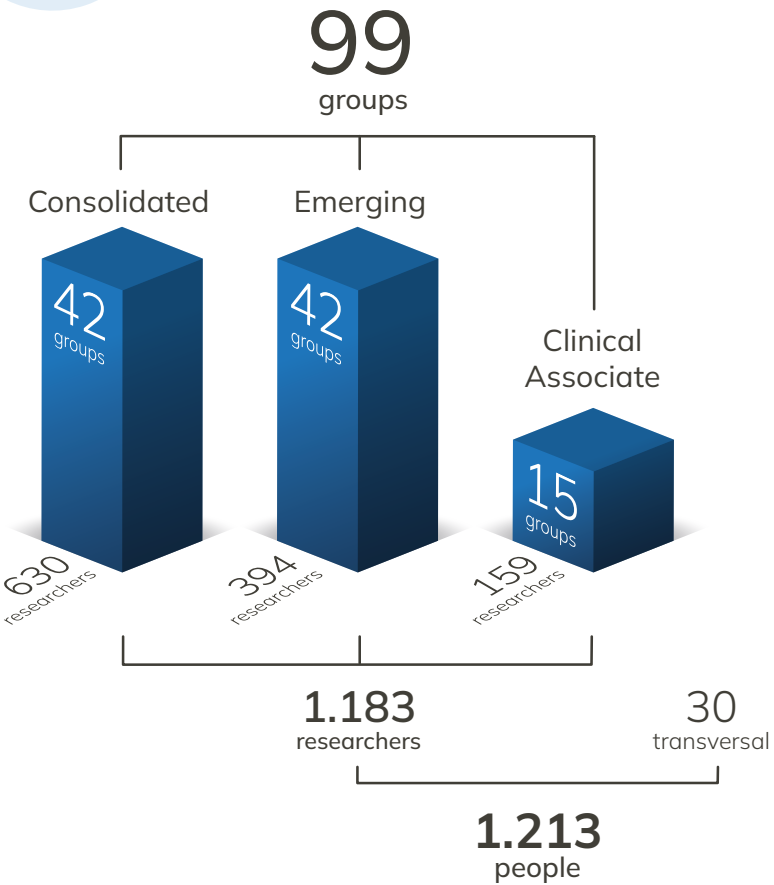
History of a joint venture: human resources in figures




41,0%
R2
22,9%
R1
16,1%
R3
11,9%
R4
8,1%
Support Staff

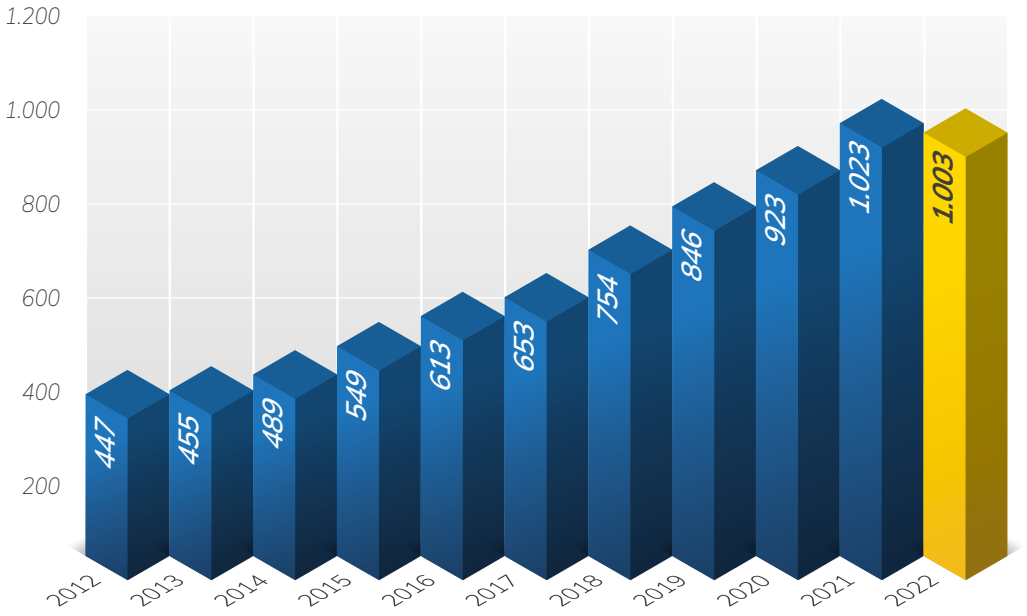
Number of researchers per area




99
groups
Consolidated
Emerging
Clinical Associate
42 groups
42 groups
15 groups
630 researchers
394 researchers
159 researchers
1.183 researchers
30 transversal
1.213 people

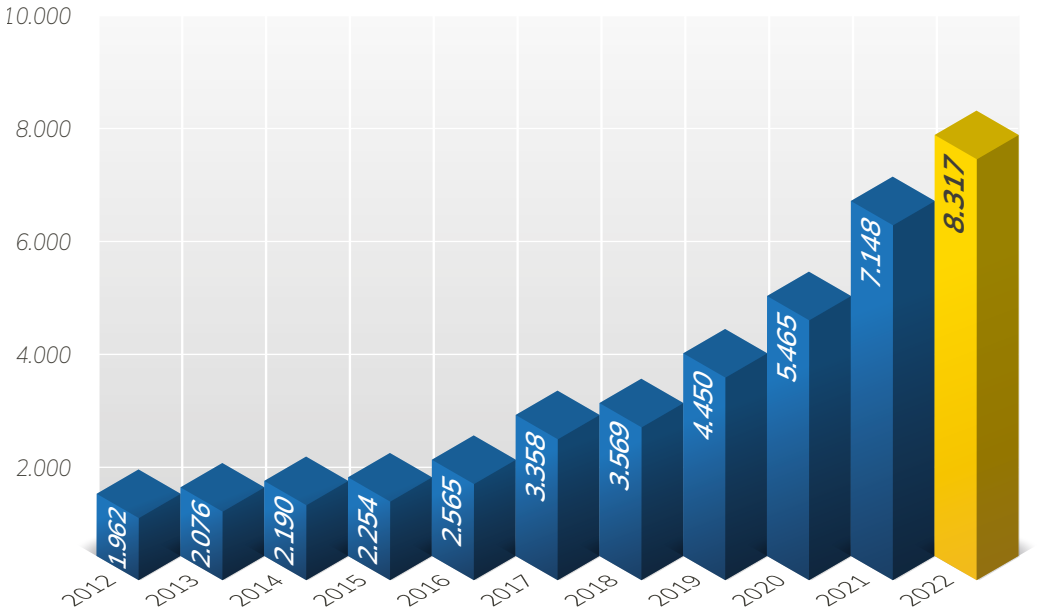
Number of published articles per year

The Institute has published **1.003 original scientific articles, editorials and reviews** in **536 international journals** indexed in the *Journal Citation Report* with a **cumulative impact factor of 8.317,05 points**.



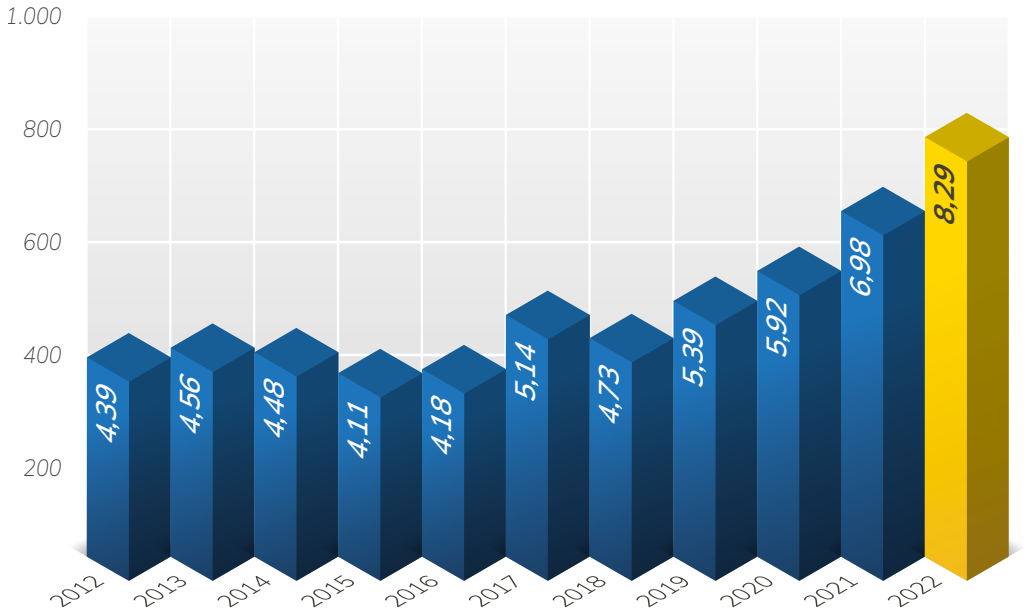
Cumulative impact factor

The upward trend of the **cumulative impact factor** is maintained since it moves from **1.962 in 2012 to 8.317,05 in 2022**.



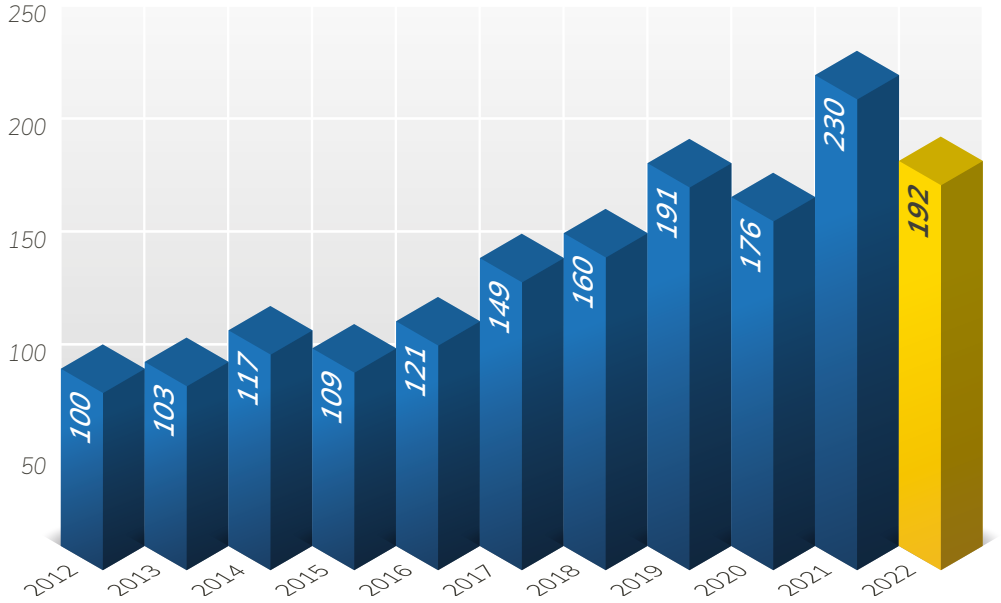
Average impact factor

The **average impact increased** by more than one entire point from last year, continuing the annual upward trend.

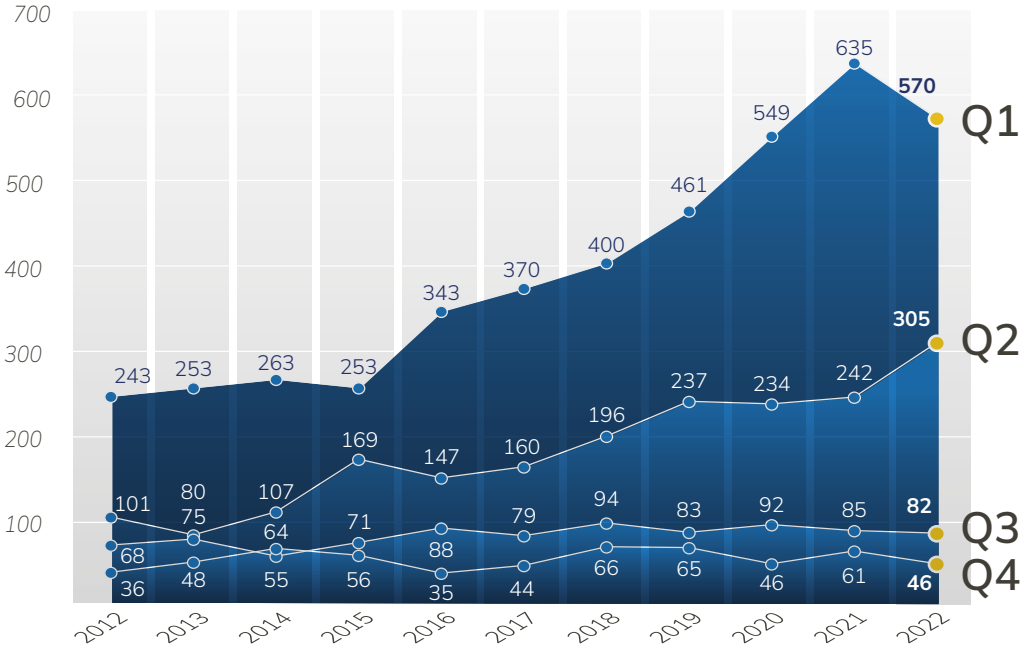


Number of articles published in journals ranked in the first decile

The **number of articles in leading journals increases** along the period 2012-2022, confirming a recurrent upward trend for that period, both for D1 and Q1 ranked journals.

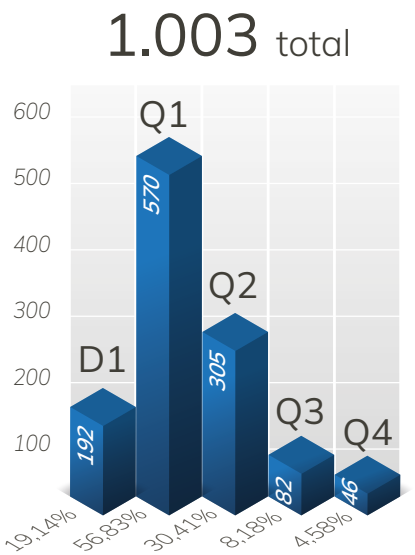


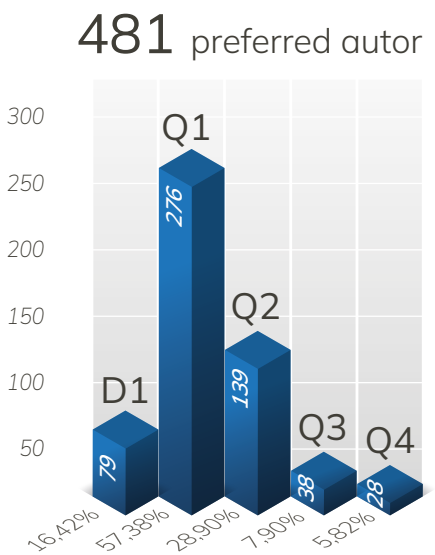
Number of published articles per year, by journal quartile



Number of publications and % of the total in 2022

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



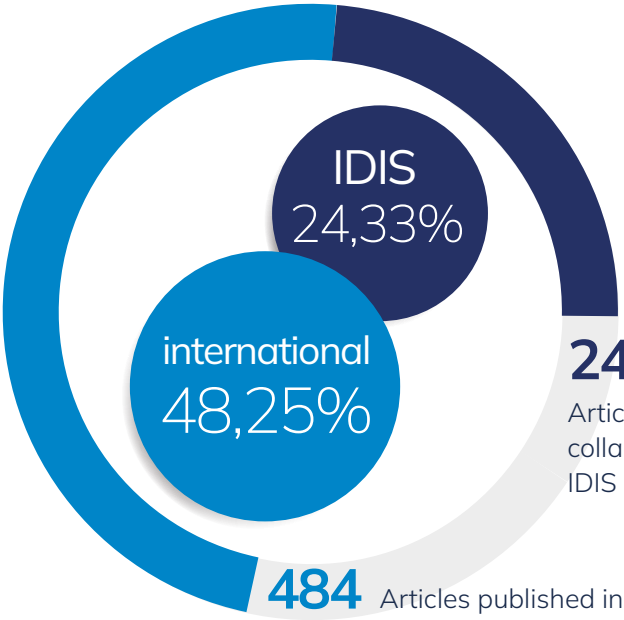


Publications in 2022

24,33% of the work was carried out by teams in which members of more than one IDIS group were involved.

48,25% was done in collaboration with researchers from centres outside of Spain.

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



244
Articles published in collaboration between IDIS groups.

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

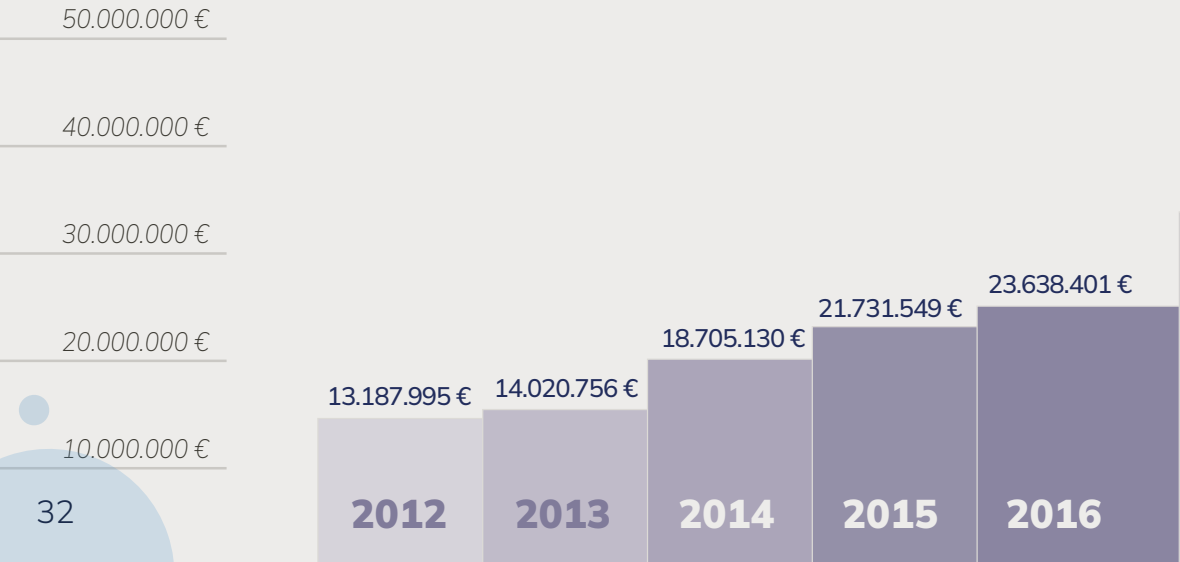
Summary of the funding raised in 2022

Concept	Number	Amount
Projects	118	**23.573.716,41 €**
Human resources	82	**9.574.362,91 €**
Studies *(Clinical Trials, Other Studies)*	217	**4.887.610,80 €**
Contracts and provision of services	375	**4.492.544,56 €**
Donations	129	**749.314,30 €**
Infrastructures	3	**265.000,00 €**
Mobility grants	4	**21.355,00 €**
Transfer	1	**13.751,30 €**

During 2022, 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 **43.577.655,29 €** which will complement the resources of the institutions that take part in IDIS.

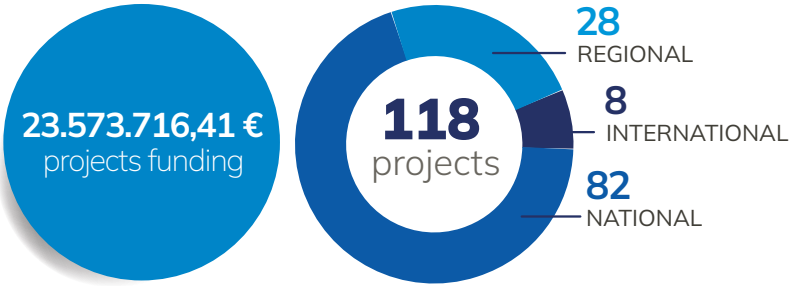
Amount raised, 2022

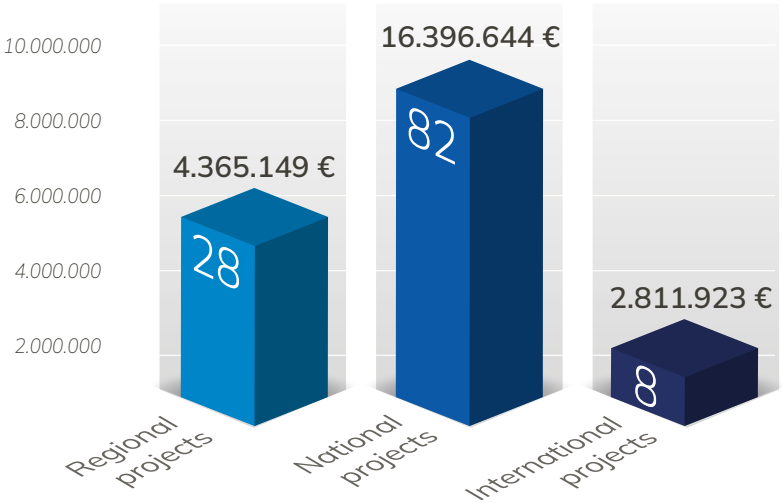
43.577.655,29 €



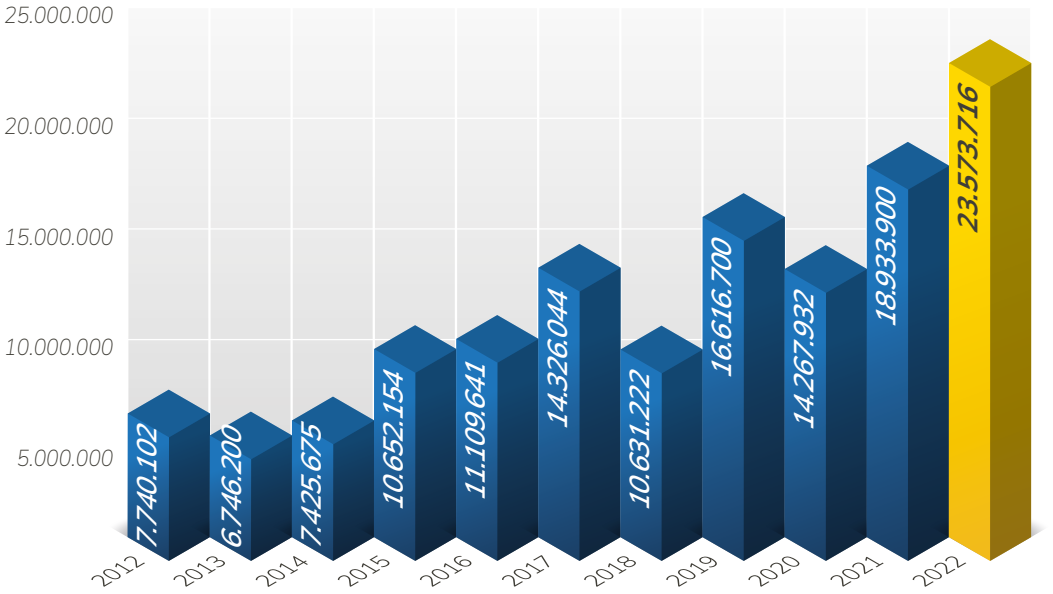

32.402.824 €
29.108.535 €
32.208.340 €
31.340.578 €
46.078.575 €
43.577.655 €
2017
2018
2019
2020
2021
2022

Number and amount of funds raised in 2022 for projects by location

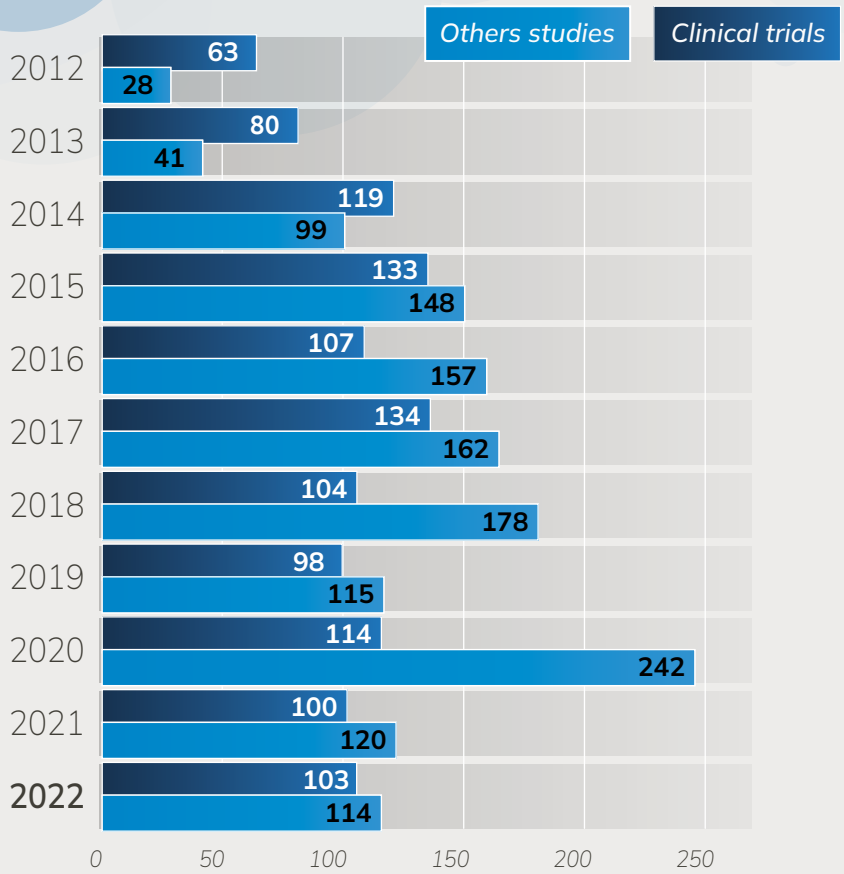




Project funding per year



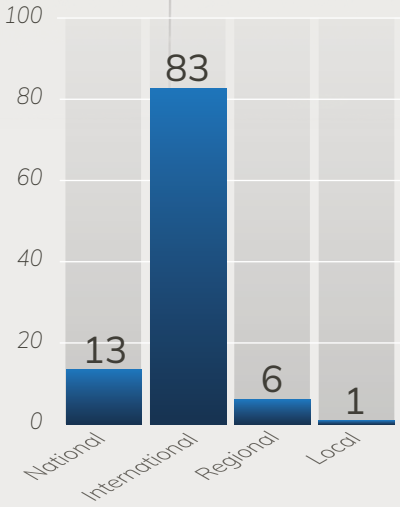
Number of clinical trials and other studies



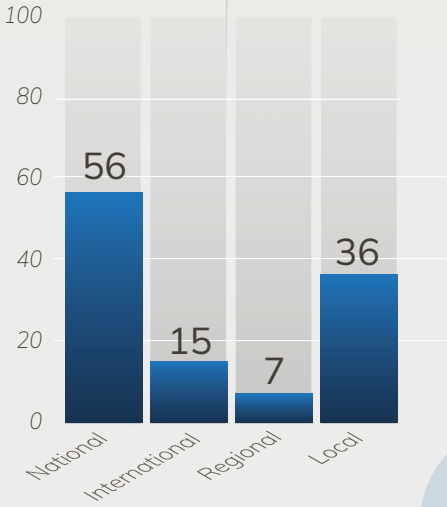
A maioría da xente pensa que é o intelecto o que fai
a un gran científico. Están equivocados: é o carácter
Albert Einstein

Pregúntate
ao lugar on
Walt Disney

103 clinical trials

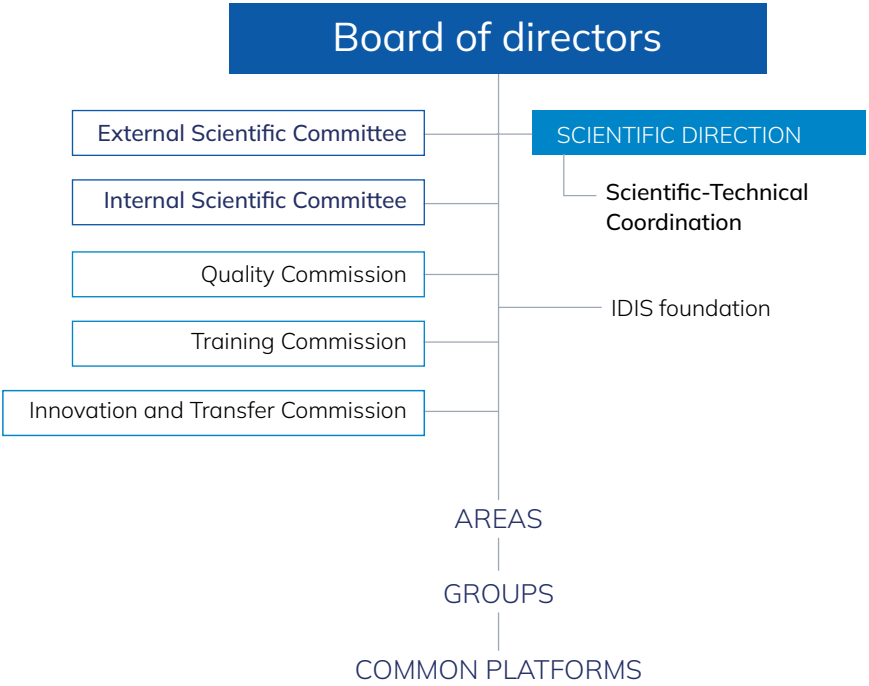


114 others studies



3

Structure


Board of directors
External Scientific Committee
Internal Scientific Committee
Quality Commission
Training Commission
Innovation and Transfer Commission
SCIENTIFIC DIRECTION
Scientific-Technical Coordination
IDIS foundation
AREAS
GROUPS
COMMON PLATFORMS

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Vice-President
Antonio López-Díaz

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

External Scientific Committee

Ángeles Almeida Parra
Melchor Álvarez de Mon Soto
María del Carmen Ayuso García
Joan Comella Carnicé
Encarnación Guillén Navarro
Rosario Luquin Piudo
Antonio Vidal Puig

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Secretary
José Ramón Castro Ruibal

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Francisco Gude Sampedro
José Luis Labandeira García
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Miguel López Pérez
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Paula Mariño Lorenzo
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Federico Martinón Torres
Laura Muinelo Romay
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Mabel Sampedro Parada
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Secretary
Iria Louzao Pernas

Mª Mar Lale Candal
Isabel Lista García
Mabel Sampedro Parada

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President
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Secretary
José Ramón Castro Ruibal

Jorge Barbazán García
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

Innovation and Transfer Commission

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Anxo Fernández Ferreiro

Secretary
José Ramón Castro Ruibal

Luis León Mateos
Cristina Fernández Pérez
María de la Fuente Freire
Moisés Rodríguez Mañero
José Brea Floriani
Adrián Mosquera Orgeira
Mabel Sampedro Parada

Scientific - technical coordination

José Ramón Castro Ruibal
Yolanda Liste Martínez
Iria Louzao Pernas

A001 ONCOLOGY

***Leaders:** Rafael López López / José Manuel Castro Tubío*

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*
E040	Mobile Genomes and Disease	*José Manuel Castro Tubío*
E043	Medical Physics and Biomathematics	*Juan Pardo Montero*
E044	Nano-Oncology and Translational Therapy Unit	*María de la Fuente Freire*
E051	Oral and maxillofacial medical-surgicalpathology	*Mario Pérez Sayáns*
AC01	Lymphoproliferative Disorders	*José Luis Bello López*
AC06	Translational ophthalmology	*María José Blanco Teijeiro*
AC08	Surgical Oncology	*Manuel Bustamante Montalvo*

A002 GENETICS AND SYSTEMS BIOLOGY

***Leaders**: Ángel Carracedo Álvarez / María Isabel Loza García*

C005	Genetics	*Ángel Carracedo Álvarez*
C009	Translational Research in Digestive Diseases	*Juan Enrique Domínguez Muñoz*
C026	BIOFARMA	*María Isabel Loza García*
C041	Cancer Genetics and Rare Diseases	*Ana Paula Vega Gliemmo*
E012	Comparative Genomics of Human Parasites	*Julio Manuel Maside Rodríguez*
E020	Psychiatric Genetics	*Javier Costas Costas*
E021	Genetics and Developmental Biology of Kidney Diseases	*Miguel Ángel García González*
E035	Genetics of Gastrointestinal Tumours	*Clara Ruiz Ponte*
E036	Stem Cells and Human Diseases	*Miguel Ángel Fidalgo Pérez*
E047	Cancer Genetics and Epidemiology Group	*Manuela Gago Domínguez*
E054	Epitranscriptomics and aging	*Diana Guallar Artal*

A003 ENDOCRINOLOGY, NUTRITION AND METABOLISM

***Leaders**: Miguel A. Martínez Olmos / Luisa Mª Seoane Camino*

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*
C037	Trace Elements, Spectroscopy and Speciation	*Pilar Bermejo Barrera*
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	*Lidia Castro Feijoo*

A004 NEUROSCIENCES

***Leaders:** José Luis Labandeira García / Francisco Campos Pérez*

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*
C033	Design, Synthesis and Medical Evaluation of Bioactive Compounds and New Materials	*Antonio Mouriño Mosquera*
C034	Physics of Polymers and Colloids	*Silvia Barbosa Fernández*
C035	R&D in Drugs Dose Forms and Delivery Systems	*Ángel Concheiro Nine*
C036	Magnetism and Nanotechnology (NanoMag)	*José Rivas Rey*
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*
AC22	Movement Disorders	*José María Prieto González*

A005 PLATFORMS AND METHODOLOGY

Leaders: *Francisco Gude Sampedro / Irene Zarra Ferro*

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 Cadarso Suárez*
E034	Clinical Pharmacology	*Irene Zarra Ferro*
E046	PARAQUASIL	*José Blanco Méndez*
AC09	Oral Sciences (OSRG)	*Benjamín Martín Biedma*
AC10	Healthy ageing, fragility and chronicity. Research in Primary Care	*Juan Manuel Vázquez Lago*
AC13	Dermatology and Craniofacial Pathology (DePaCra)	*Pablo Ignacio Varela Centelles*
AC21	Pharmacological Biochemistry	*Fernando J Hermida Ameijeiras*

A006 CARDIOVASCULAR

***Leaders:** José Ramón González Juanatey / Moisés Rodríguez Mañero*

C003	Hypertension	*Antonio Pose Reino*
C016	Cardiology	*José Ramón González Juanatey*
C027	Neuroendocrine Interactions in Rheumatic and Inflammatory Diseases (Neirid)	*Oreste Gualillo*
C039	Biodiscovery	*Luis Miguel Botana López*
E001	Cardiovascular Genetics	*María José Brión Martínez*
E009	Cellular and Molecular Cardiology	*Francisca Lago Paz*
E030	Platelet Proteomics	*Ángel García Alonso*
E045	Translational Cardiology	*Sonia Eiras Penas*
AC05	Pneumology	*Luis Guillermo Valdés Cuadrado*
AC07	Semergal	*Sergio Cinza Sanjurjo*
AC19	Vascular Research Group of Santiago	*Diego Caicedo Valdés*

A007 INFECTOLOGY, INFLAMMATION AND VACCINES

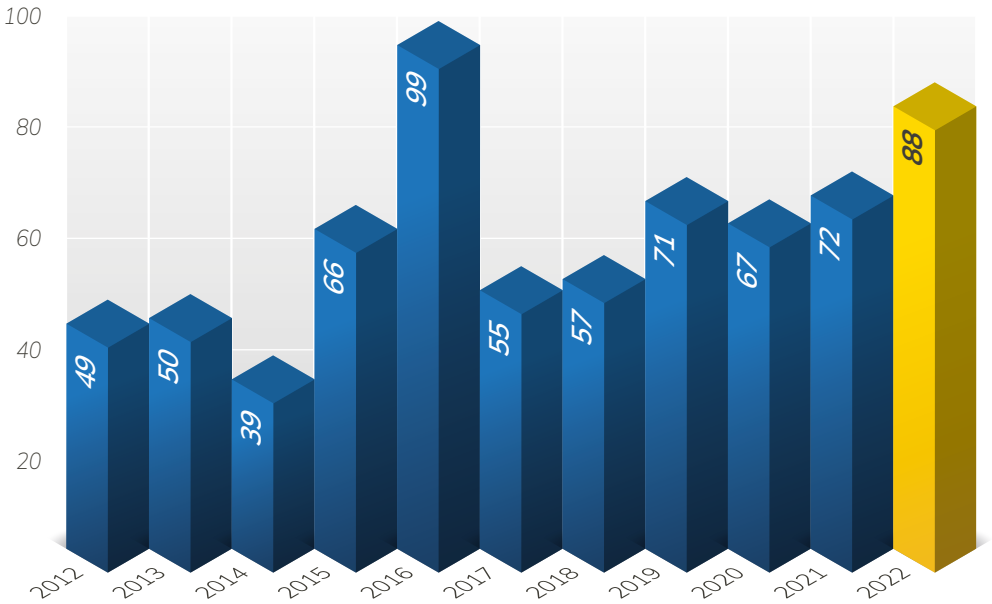
***Leaders:** Federico Martinón Torres / Rodolfo Gómez Bahamonde*

C014	Rheumatology	*Eva Pérez Pampín*
C020	Genetics, Vacines, Infections & Pediatrics	*Federico Martinón Torres*
C028	Experimental and Observational Rheumatology	*Antonio González Martínez-Pedrayo*
C040	Oral Medicine and Surgery (OMEQUI)	*Pedro Diz Dios*
E013	Microbiology	*María Luisa Pérez del Molino Bernal*
E015	Population Genetics in Biomedicine	*Antonio Salas Ellacuriaga*
E027	Escherichia coli	*Jorge Blanco Álvarez*
E038	Musculoskeletal Pathology	*Rodolfo Gómez Bahamonde*
E048	Molecular and Cellular Gastroenterology	*Javier Conde Aranda*
AC11	Simulation, Life Support and Intensive Care	*Antonio Rodríguez Núñez*
AC20	Translational Research of Airway Diseases	*Francisco J. González Barcala*

4

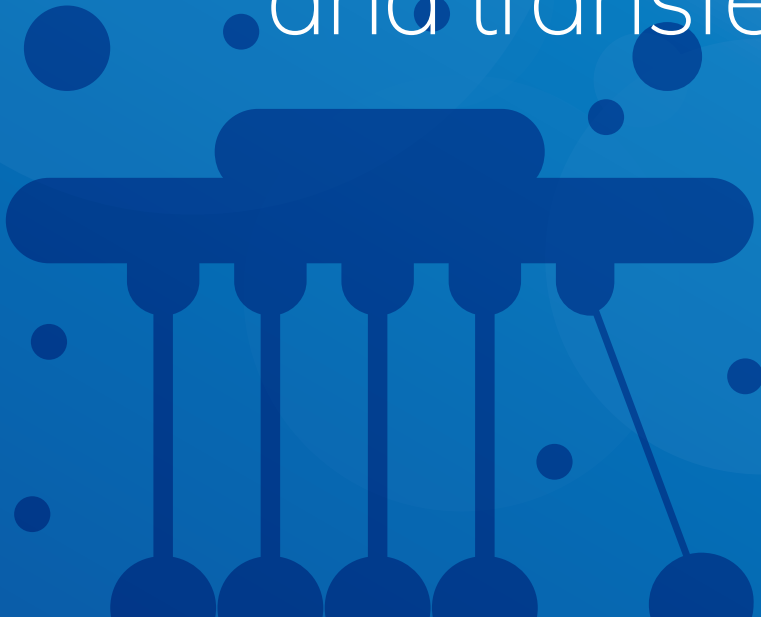
Recurrent training

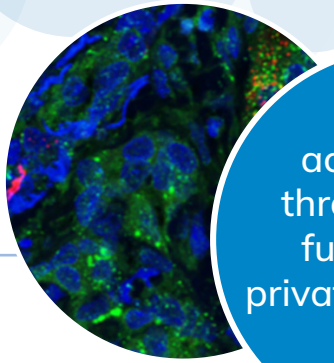
Defended PhD theses per year



5

Innovation and transfer





Transfer acceleration through public funding and private investment

ITEMAS network

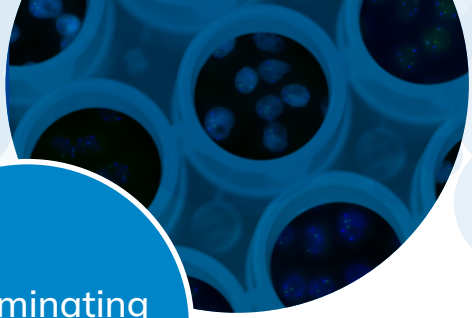
The Innovation Platform in Medical and Healthcare Technologies (ITEMAS) is a support structure for healthcare innovation promoted by the Carlos III Health Institute (ISCIII), whose objective is to facilitate the innovative ideas of healthcare professionals to generate value for the system, through favoring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

ITEMAS' main goal 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 at establishing 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

Roche-CHUS

Precision Oncology Joint Unit.

PRECISION ONCOLOGY
ROCHE|CHUS JOINT UNIT

Disseminating our research

BioINCUBATECH

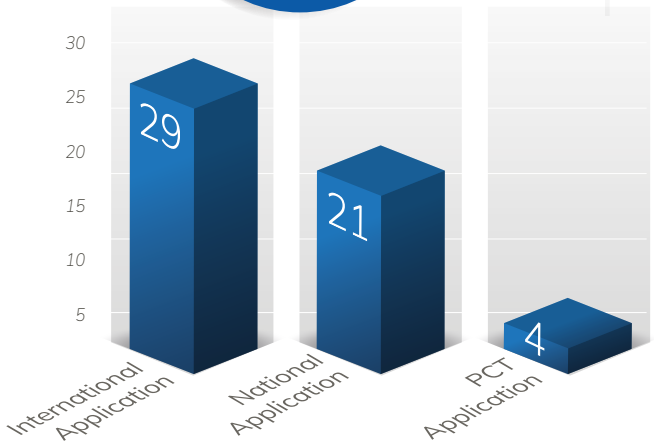
BioIncubaTech is the High Technology Incubator for the promotion of innovation and biotechnology transfer in the field of health and food technologies to micro-SMEs. BioIncubaTech belongs to "High Technology Incubators for the promotion of innovation and technology transfer to micro-SMEs" Project, aimed 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

54 Requested patents

7 Granted



Spin off

FlowReserve
Personalized Medicine in Cardiology

QUBIO tech

DART
Detection And Radiation Technologies

NASASBIOTECH

Lincbiotech

bflow

DIVERSA

Celtarys RESEARCH

FabRx

SunRock

Libera Bio

BIO STATECH

SMART VITAMINS

Innovations

Software. Trademarks & apps

7
trademarks

19
intellectual property

6

Platforms

PROTEOMICS

GENOMICS

- Genomics
- Direct Digital Molecular Detection-Nanostring
- Transcriptomics
- Bioinformatics
- Epigenomics

PHARMACOKINETICS

IMAGING

- Experimental Imaging Unit
- Magnetic Resonance
- Multiphoton Microscopy

BIOBANK & BIOMODELS

CELL BIOLOGY

- Confocal Microscopy
- Liquid Biopsy
- Flow Cytometry

EXPERIMENTAL SURGERY UNIT

TRANSVERSAL RESEARCH METHODOLOGY UNIT

Proteomics

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.

Liquid Biopsy Unit

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
ramon.iglesias.rey@sergas.es

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.

Integrated Unit of Biobanks and Biomodels

Máximo Fraga;
Rodolfo Gómez;
Anxo Vidal
biobanco.apa.santiago@sergas.es
bbi3d@mpgroup.es
cebega@usc.es
lydia.fraga.fontoira@sergas.es

With the aim of accelerating translational research by offering a comprehensive solution to the research community, currently the following Research Support Platforms dependent on SERGAS and the University of Santiago de Compostela (USC) are constituted as a unicentric integrated unit BIOBANK AND BIOMODELS:

- Biobank CHUS – Máximo Fraga
- Platform of Biovalidation, Biofabrication and 3D Printing (BBI-3D) – Rodolfo Gómez
- Experimental Biomedicine Centre of the University of Santiago de Compostela (CEBEGA) – Anxo Vidal

It is a unique structure made up of these three units with the main objective of accelerating translational research. It is precisely the close relationship between the units that sustains its unique value and its potential to offer a broad portfolio of services to the research community

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.

The Animal Experimentation Unit

Mª Luz Alonso Alonso
maria.luz.alonso.alonso@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 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
anxordes@gmail.com

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
anabelencrujeiras@hotmail.com
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.

Transversal Research Methodology Unit (UTAMI)

Ana Estany Gestal
metodologia.idis.santiago@sergas.es

The Research Methodology Transversal Unit (UTAMI) is a support unit specialized in research methodology, biostatistics, bioethics and regulation. UTAMI is coordinated from the Research Methodology Unit of IDIS Foundation, with the aim of promoting competitive research by offering research staff a highly qualified service, aimed at promoting three fundamental aspects of research: scientific publications, research projects and doctoral theses.

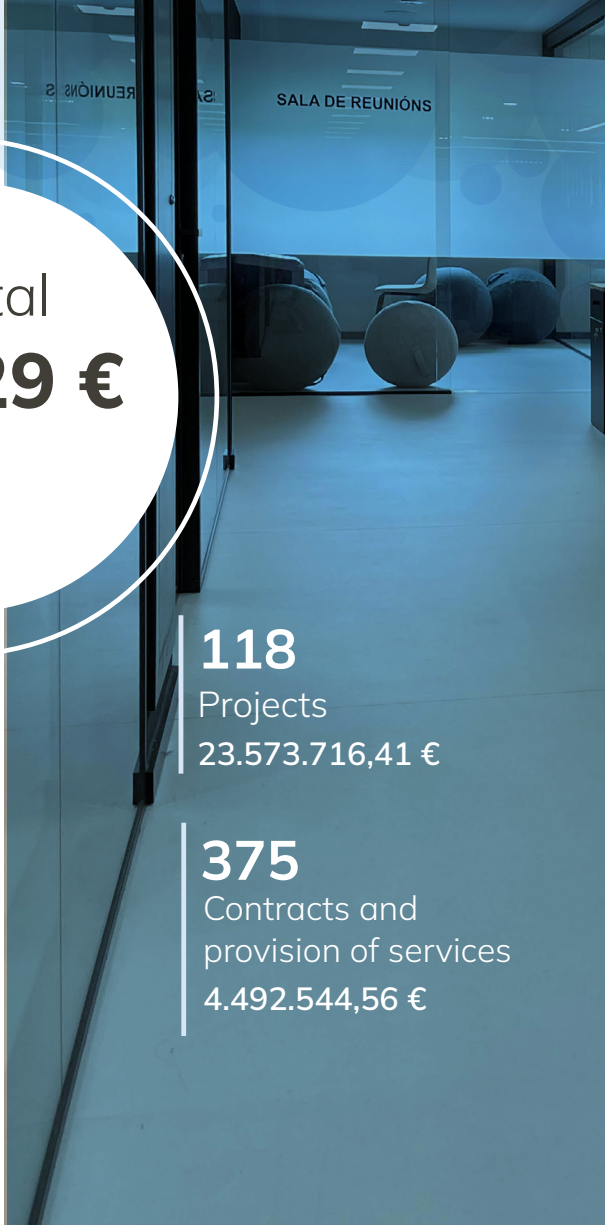
7

Funding

Total

43.577.655,29 €

During 2022, **43.577.655,29 €** were raised in the following concepts: projects, human resources, transfer, donations, contracts, infrastructures, provision of services, agreements and studies.



118
Projects
23.573.716,41 €

375
Contracts and provision of services
4.492.544,56 €

82
Human resources
9.574.362,91 €

129
Donations
749.314,30 €

3
Infrastructure
265.000,00 €

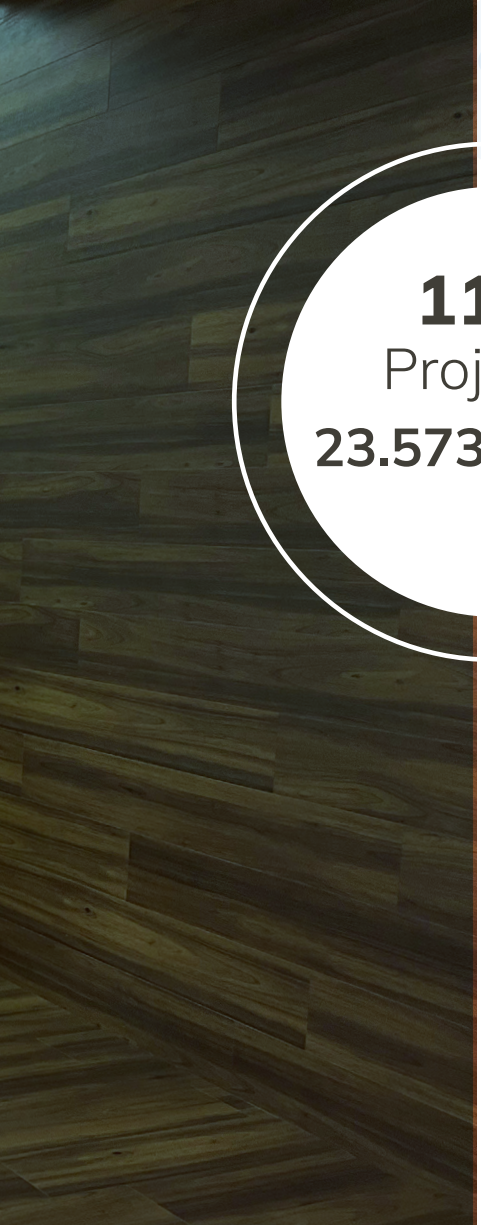
217
Studies (Clinical Trials, Other Studies)
4.887.610,80 €

1
Transfer
13.751,31 €

4
Mobility
21.355,00 €

COMPETITIVE FUNDING

33.434.434,32 €



118
Projects
23.573.716,41 €

28
Regional projects
4.365.149,31 €

82
National projects
16.396.644,54 €

8
International projects
2.811.922,56 €

Human resources

Agency	Concept
AXENCIA GALEGA DE INNOVACIÓN	GAIN Predoctoral Grant
	Investigo grants
	GAIN Postdoctoral Grant
Instituto de Salud Carlos III	Miguel Servet (I/II)
	Río Hortega
	PFIS / iPFIS
	Sara Borrell
GOBIERNO DE ESPAÑA MINISTERIO DE CIENCIA E INNOVACIÓN	Predoctoral contracts training doctors
	Ramón y Cajal
	Technical Support Staff
GOBIERNO DE ESPAÑA MINISTERIO DE UNIVERSIDADES	FPU
idis	IDIS Grants
European Commission	MSCA
	Others

Number	Amount
20	2.060.000 €
33	1.075.252 €
8	757.404 €
3	718.450 €
6	420.000 €
3	329.034 €
1	95.000 €
9	804.614 €
2	472.700 €
1	42.600 €
4	194.573 €
9	731.732 €
2	669.255 €
5	1.203.748 €

8

Strategic alliances

7 RICORS

RICORS REI
Inflammatory Disease Network

RICORS2040
Kidney Disease Network

RICORS-ICTUS
Cerebrovascular Diseases Network

RICORS RIAPAd
Network of Research in Primary Care of Addictions

RICORS SAMID
Primary Care Interventions to Prevent Maternal and Child Chronic Diseases of Perinatal and Developmental Origin

RICORS RICAPPS
Research Network on Chronicity, Primary Care and Prevention and Health Promotion

RICORS TERAV
Advanced Therapies Network

7
CIBER

Biomedical Research Networking Centres

CIBEROBN [1], Physiopathology of Obesity and Nutrition

CIBERER, Rare Diseases

CIBERESP, Public Health and Epidemiology

CIBERCV, Cardiovascular Diseases

CIBERONC, Cancer

CIBERNED, Neurodegenerative Diseases

CIBERES, Respiratory Diseases

ciber | OBN
ciber | ONC
ciber | ER
ciber | NED
ciber | ESP
ciber | ES
ciber | CV

[1] *National Coordination IDIS*

3 PLATFORMS

BIOBANKS & BIOMODELS

SPANISH CLINICAL RESEARCH NETWORK

ITEMAS. Innovation in Medical & Health Technologies

3 INTERNATIONAL NETWORK

EATRIS, European Infrastructure for Translational Medicine

COST, European Cooperation in Science and Technology

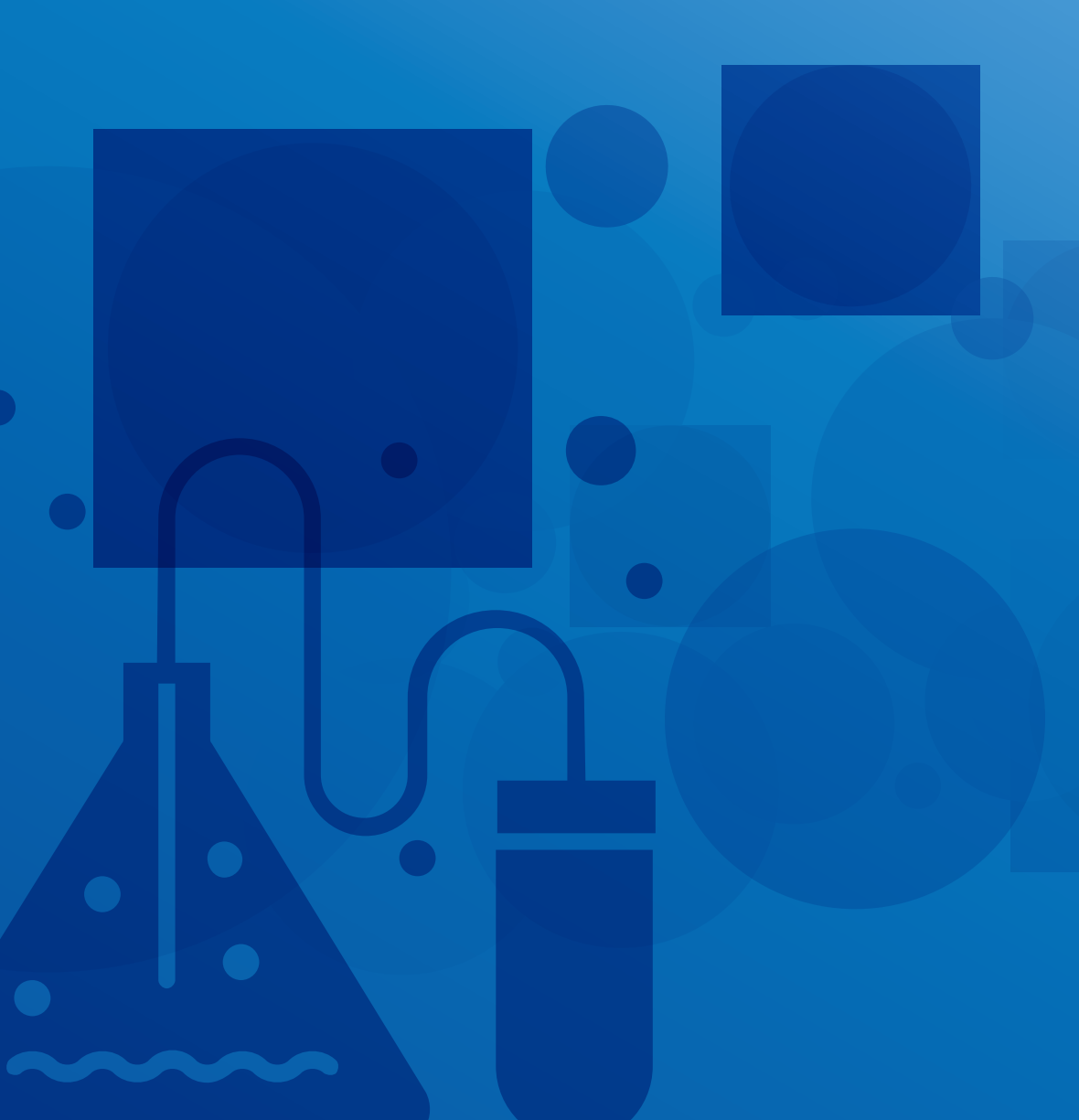
EU OPENSCREEN - European High-Capacity Screenging Network

2 OTHER NETWORKS

RECLIP [1], Spanish Pediatric Clinical Trials Network

REGIC, Clinical Research Management Entities Network.

[1] *National Coordination IDIS*



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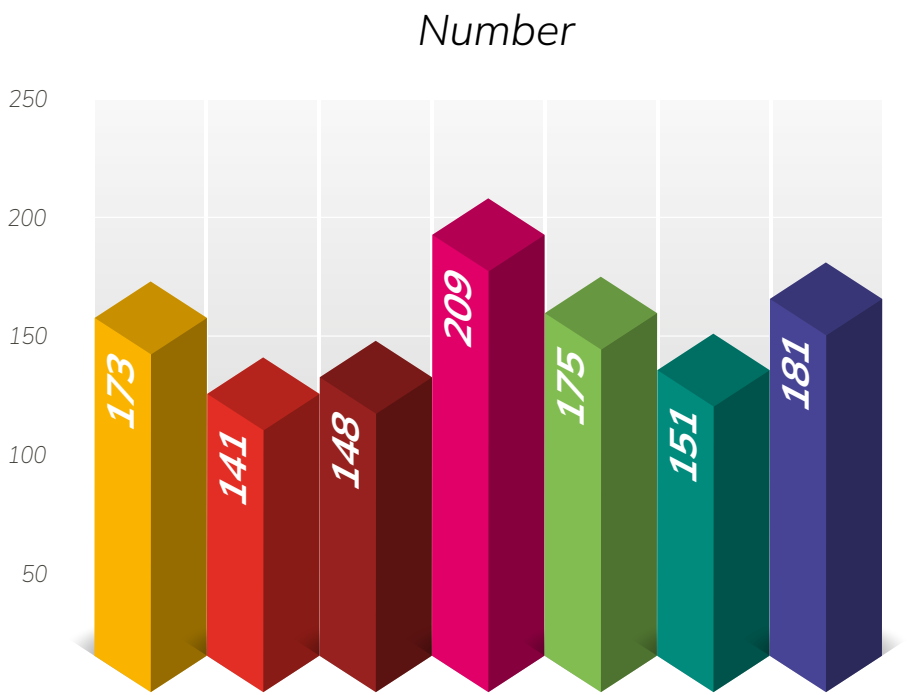
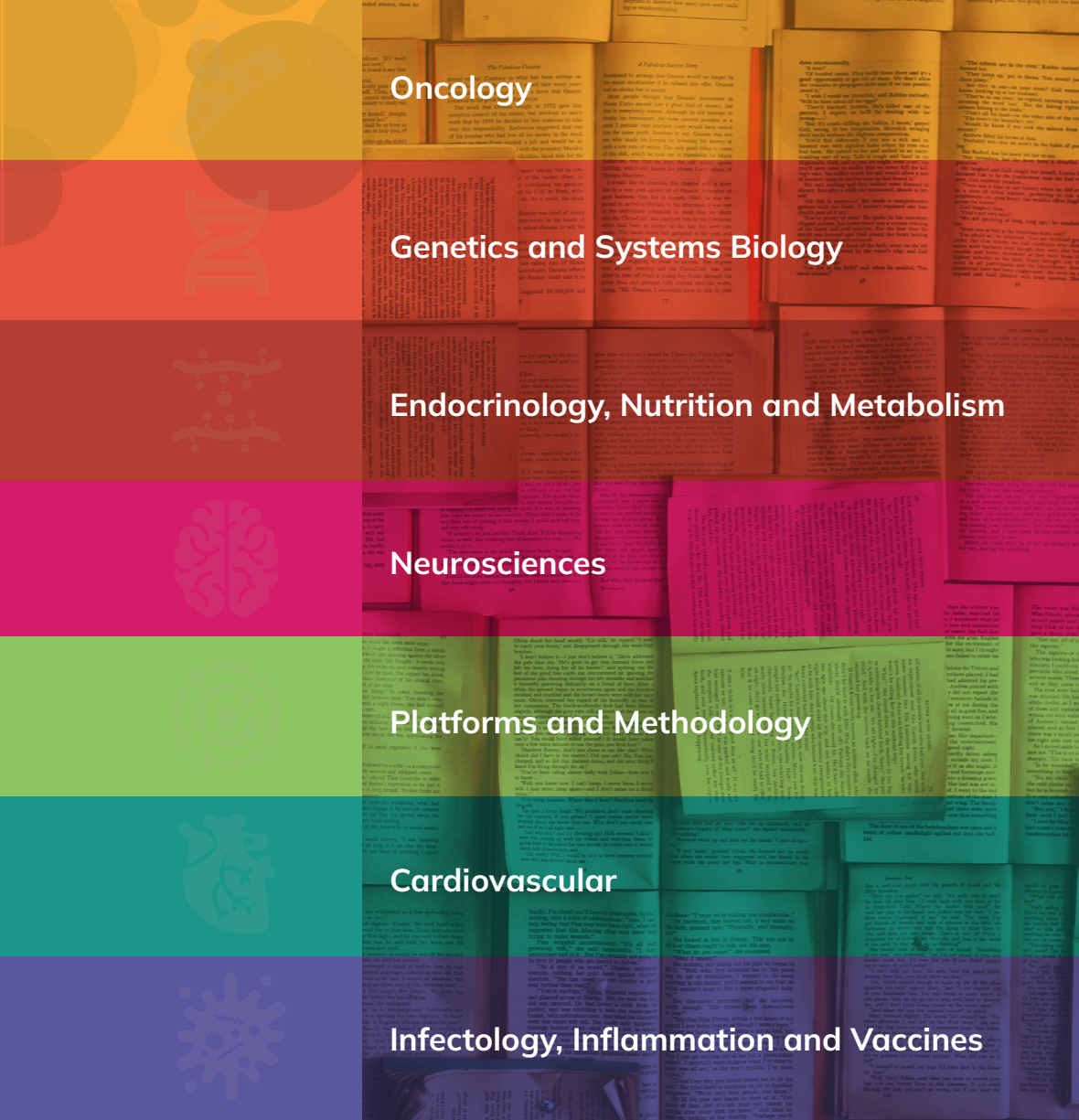
Areas

Publications in 2022




Oncology
Genetics and Systems Biology
Endocrinology, Nutrition and Metabolism
Neurosciences
Platforms and Methodology
Cardiovascular
Infectology, Inflammation and Vaccines

Σfi

Oncology

Genetics and Systems Biology

Endocrinology, Nutrition and Metabolism

Neurosciences

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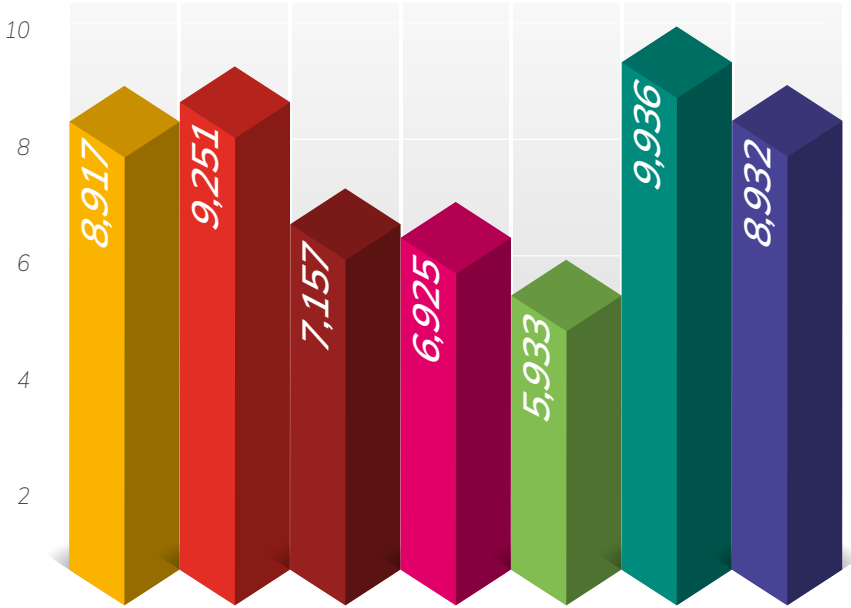
10
8
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2
8,917
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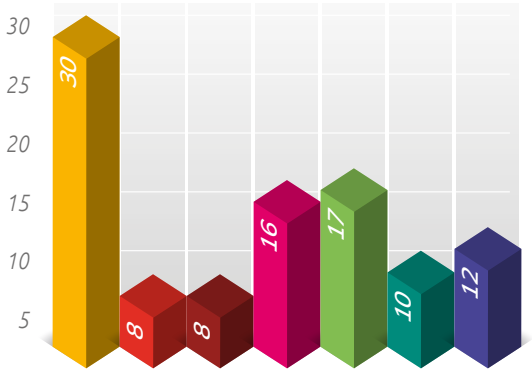
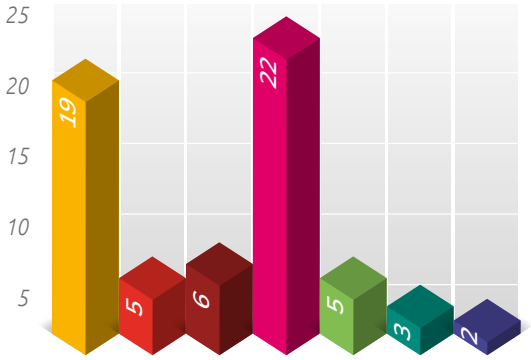
9,936
8,932
Platforms and Methodology
Infectology, Inflammation and Vaccines
Cardiovascular

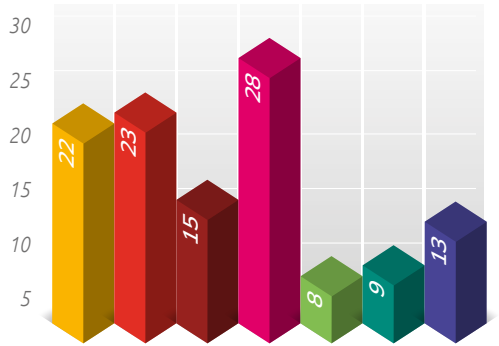
Theses



Patents

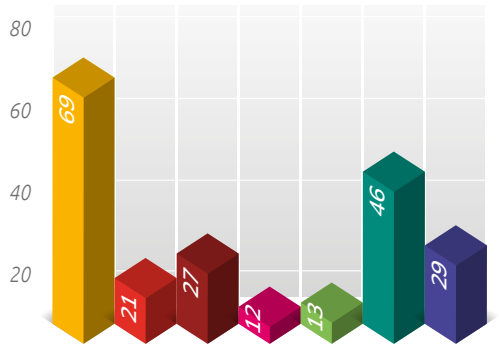


Projects

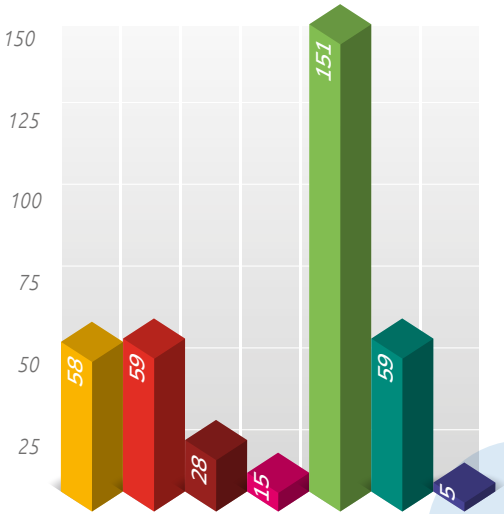


- *Oncology*
- *Genetics and Systems Biology*
- *Endocrinology, Nutrition and Metabolism*
- *Neurosciences*
- *Platforms and Methodology*
- *Cardiovascular*
- *Infectology, Inflammation and Vaccines*

Clinical Studies



Contracts & Services



Health Research Institute. Santiago de Compostela

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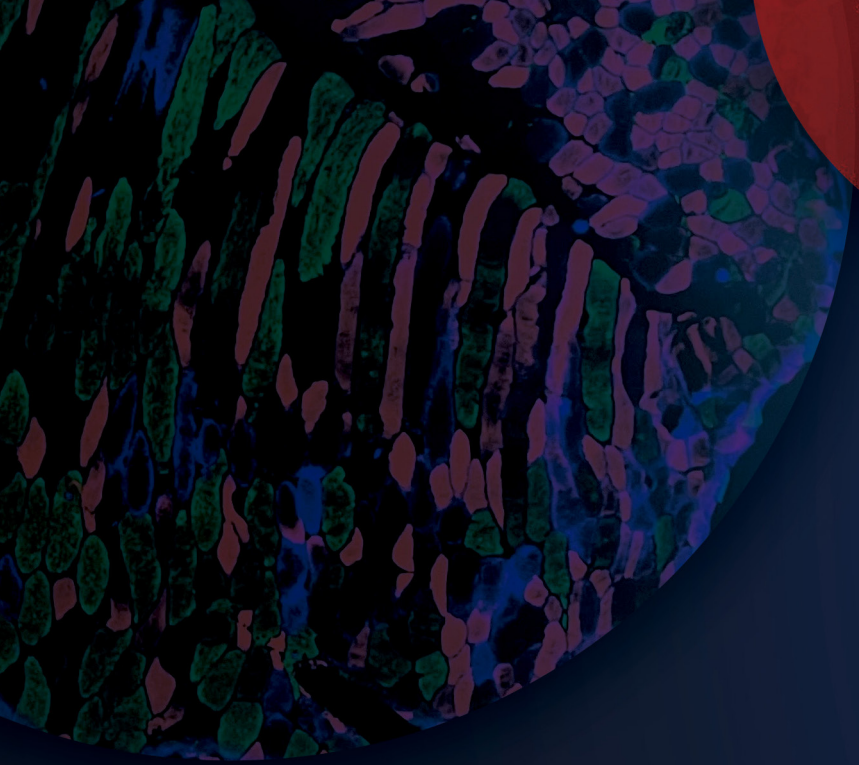

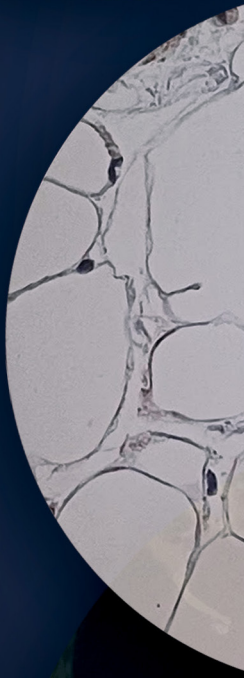

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CONSELLERÍA DE SANIDADE