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2022



MINISTERIO DE CIENCIA E INNOVACIÓN



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The logo of the Instituto de Salud Carlos III (ISCIII) is centered within the letter 'O' of the word 'REPORT'. The logo consists of the lowercase letters 'isc' in a stylized, blue, sans-serif font, with three small dots above the 'c'. Below the 'isc' logo, the text 'Instituto de Salud Carlos III' is written in a smaller, blue, sans-serif font, arranged in three lines: 'Instituto', 'de Salud', and 'Carlos III'.

2022





**ACKNOWLEDGEMENTS:**

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PUBLISHED BY:  
Ministry of Science and Innovation







1

PRESENTATION



## Cristóbal Belda

Director



Last year our work was characterized by the drive that, year after year, we want to give to our main goal: to research, train, finance and offer services so that Science and Health improve the citizen's health.

The growing and sustained budgetary commitment over time allows us to advance steadily in providing rigorous and robust solutions to many health problems. Still, it is necessary to emphasize that the main asset of our organization is the enormous talent of the nearly 3,000 people linked to our organization. Their effort, hard work, and tenacity have enabled us to become one of the 20 organizations with the greatest scientific impact on health globally and the fourth in Europe. Thank you very much to all of you for your work.

In 2022 we had the great news of the reform of the Law on Science, Technology, and Innovation, whose improvements already benefit all ISCIII entities and the other agents of the Spanish Science, Technology, and Innovation System. Although there are many solutions

2022 has witnessed of the progressive return to normality after the hardest years of the pandemic. We cannot begin our annual report without having a special remembrance for all those who have suffered the different faces with which the pandemic has been evident in our lives.

The ISCIII has continued to increase production and innovation, and we have had the largest budget in our history: nearly 560 million euros, some of which comes from the Recovery, Transformation and Resilience Plan. We have dedicated more than 300 million euros of these funds to calls for grants based on competitive competition, while also maintaining the financial support to our associated centers -CNIO, CNIC, CIEN, and CIBER- to which we have transferred more than 85 million euros as of direct grants.

This report, although it includes a brief summary of our associated centers work, focuses on the annual results of ISCIII as parent organization, so we invite you to read their respective annual reports.

## 1. PRESENTATION

that this reform provides for the daily problems of research activity, I would like to focus on those aspects focused on people. Specifically in the job stability of researchers, insofar as the Science Law solves the temporability of scientific job. Thus, the permanent contract is the standard on which the hiring of researchers must be based. Even the training periods, are chained in a predictable path and depend solely on individual talent. All this, together with the different calls for stabilization and return, are the elements on which the Spanish Science System is being rebuilt. ISCIII has been a major actor and recipient of its benefits during 2022.

PERTE for cutting-edge Health has moved forward during 2022 to promote a healthcare system transformation based on science, innovation, precision medicine, and digitalization. Precisely under this umbrella, in 2022 we have launched new calls for grants to fund research, such as those linked to the Consortium for Advanced Therapies, the ISCIII-Health Seal of Excellence, and the Joint Action in personalized medicine with the Center for Technological Development and Innovation (CDTI). In addition to these innovative calls for proposals, there are also those for Precision Medicine and Infrastructures and all the calls for contracts and projects awarded annually by our Strategic Action in Health, the main funding tool for biomedical and health research in Spain.

With SARS-CoV-2 still very much present in 2022, another virus has been particularly prominent. The outbreak of the MPox virus has shown once again that the ISCIII is always available to the National Health System. As part of our work in providing scientific-technical services, our researchers have sequenced the virus and made it easily available to the research, academic, and business community. As for COVID-19, we have continued working to collaborate in monitoring and addressing the pandemic with studies such as COSMO-Spain, which concluded this 2023 and which, for more than two years, has analyzed the knowledge and social perception of the pandemic; the study of persistent COVID, led by the CIBER, and the ENE-COVID-Senior study, which continues providing valuable information on immunity and vaccines.

Public health surveillance is another of our main tasks. This year, two tools have been particularly important: the Daily Mortality Monitoring System (MoMo), which has continued providing estimates of increases in mortality, and the consolidation of the respiratory infections joint surveillance, which has enabled comprehen-

The Cutting-edge Health PERTE has advanced during 2022 to promote a health system transformation based on science, innovation, precision medicine and digitization.

sive analyses of SARS-CoV-2, influenza, and respiratory syncytial viruses within the SIVIRA program, which has been progressively incorporated into most of the Autonomous Communities.

In the structural area of the Institute, one of the most interesting novelties has come with the integration of the Doping Control Laboratory, which until a few months ago depended on the Spanish Commission for the Fight against Doping in Sport (CELAD).

In the field of internationalization, the Institute has continued showing its relevance in the European Research Area, being engaged in international projects such as the 1 Million Genomes Initiative, the Vaccelerate project, and contributing to the new R&D&I partnerships proposed by Horizon Europe. We have kept contact with various European and international agents, with prominent examples such as the workings with Science Europe and the collaboration agreement with the German Foundation for Scientific Research.

Finally, I would like to highlight all our communication and outreach activities, which allow us to reveal the scientific fact from our scientific community to the media and, from there, to the people, the object and path of our activity.

*Cristóbal Belda*



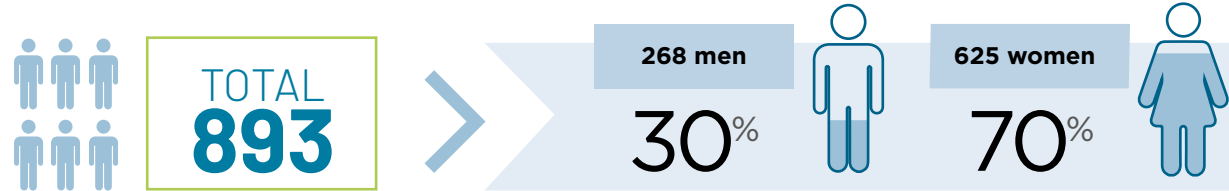


2



## ISCIII IN NUMBERS

### ISCIII STAFF



### BUDGET



Funded by the Recovery and Resilience Fund

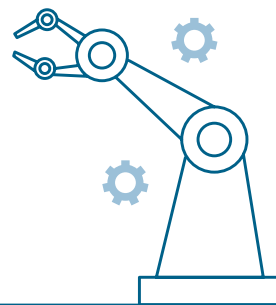
**€ 559,339,550**

**€ 270,355,000**

### R&D+I COORDINATION AT THE NHS

1,368 certified grants

**€ 264,553,564** funding



### ERDF FUNDS



**271** certified grants

**€ 8.5 m** declared expenditure



### ESF FUNDS



**217** certified grants

**€ 7 m** declared expenditure



What is the Instituto de Salud Carlos III working on?

## ACTIONS OF THE CUTTING-EDGE HEALTH PERTE



ISCIII call for Personalized Precision Medicine

**€ 111 m**

2021-2022 ISCIII calls for ICI and Advanced Therapies

**€ 31.69 m**

ISCIII-CDTI joint call Personalized Medicine and Advanced Therapies

**€ 20.11 m**

Consortium for Advanced Therapies (C-TA)

**€ 58.4 m**

ISCIII platforms to support research (biobanks-biomodels, ITEMAS, SCReN)

**€ 18 m**

Call for research infrastructures and equipment

**€ 15 m**

2021 and 2022 Training Grants in Health Research Management Health

**€ 0.882 m**

## TOTAL AES-2022 FUNDING IN R&D+I PROGRAMS AND SUBPROGRAMS

### State Program for Training Talent

**511** certified grants | **€ 49,003,869** funding

Training State Subprogram\*: 273 grants awarded / Funding: € 23,713,084  
 Incorporation State Subprogram: 158 grants awarded / Funding: € 23,924,050  
 Mobility State Subprogram: 87 grants awarded / Funding: € 1,366,735

### State Program to Promote Scientific-Technical Research and its Transfer

**777** certified grants | **€ 197,994,216** funding

State Subprogram for the Generation of Knowledge: 574 certified grants / Funding: € 71,387,108  
 State Subprogram for Knowledge Transfer: 142 certified grants / Funding: € 111,617,108.89  
 State Subprogram for Scientific-Technical Infrastructures and Equipment: 61 certified grants / Funding: € 14,989,999

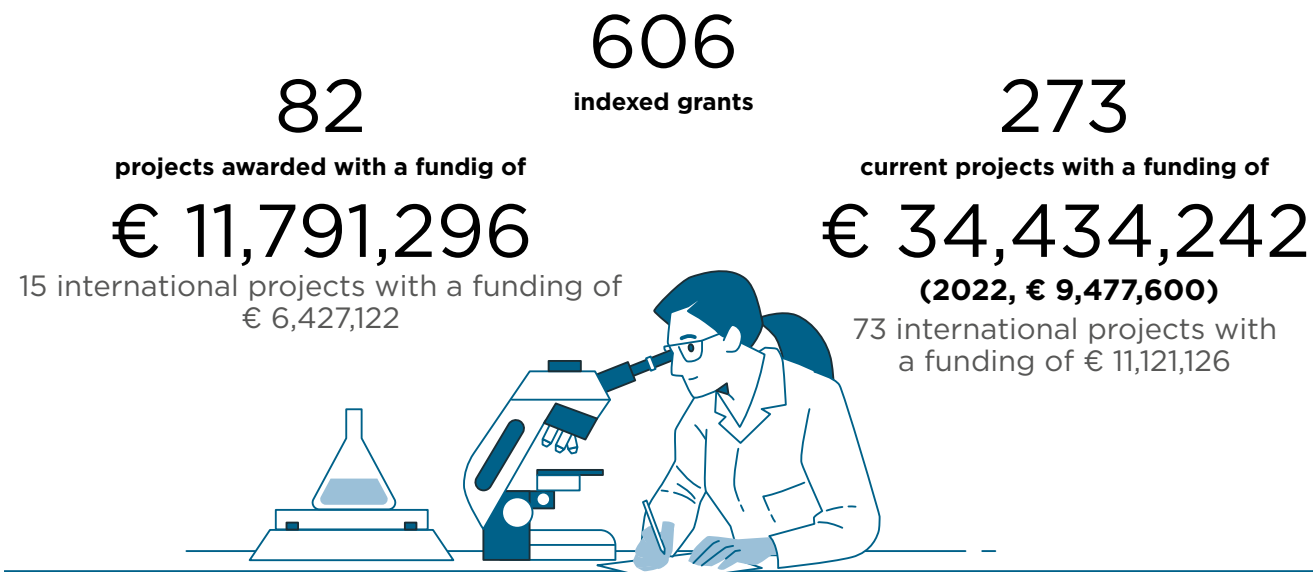
### State Program to Address Environmental Priorities

**80** certified grants | **€ 17,996,479** funding

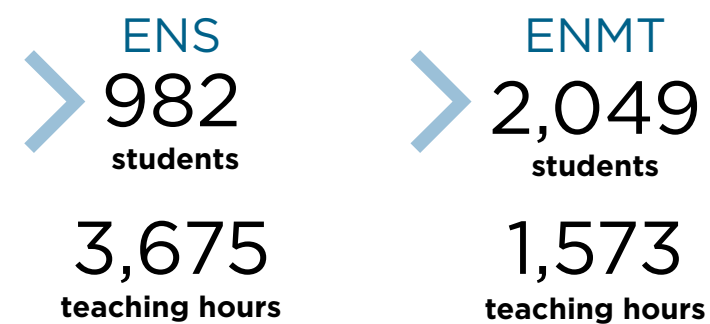
State Subprogram for Internationalization: 80 certified grants / Funding: € 17,996,479

Collaborative research and accreditation of IIS  
 7 Thematic Networks of Cooperative Research oriented to Health Outcomes  
 13 Thematic Areas of the Networked Biomedical Research Centers (CIBER)  
 34 accredited Health Research Institutes  
 Participation in 6 European research infrastructures

## INTRAMURAL SCIENTIFIC ACTIVITY



## NATIONAL SCHOOLS OF PUBLIC HEALTH



## INSTITUTO DE SALUD CARLOS III VIRTUAL CAMPUS FOR HEALTH PROFESSIONALS

5,948 professionals in virtual classrooms



## NATIONAL LIBRARY OF HEALTH SCIENCES



## 2. ISCIII IN NUMBERS

### SCIENTIFIC AND TECHNICAL SERVICES

- ✓ **3,522 Covid-19 diagnostics** and 1265 sequencing of SARSCov2 variants
- ✓ **1,639 samples analyzed** for SARS-CoV-2 genome consensus sequence generation and mutation and lineage identification
- ✓ **365 updates of the COVID-19 panel in Spain**  
<https://cnecovid.isciii.es/>
- ✓ **52 MoMo reports** (Daily Mortality Monitoring System)
- ✓ **52 Weekly** Epidemiological Bulletin
- ✓ **51 specific epidemiological reports**
- ✓ **25 Laboratory Surveillance** programs with 41,627 microbiological diagnostic determinations
- ✓ **28,802 services provided** within the CNM Service Portfolio.
- ✓ **1,823 genetic diagnostic** determinations
- ✓ **126 characterized** outbreaks of pathogenic microorganisms with 5,047 determinations
- ✓ **15 resolved alerts** with 428 determinations carried out by the Rapid Response System in the event of health alerts
- ✓ **12,822 samples** on air quality
- ✓ **1,640 samples** on Environmental Toxicology
- ✓ **37,698 samples** on Environmental Radioactivity
- ✓ **1,135 Environmental Alerts Unit** measurements
- ✓ **1 action** for detecting and identifying biological agents in alerts produced by possible deliberate release.
- ✓ **641 consultations received**, and 366 registrations made in RePER..
- ✓ **73 reports issued** in the Program of Cases of Rare Diseases without Diagnosis (SpainUDP).

### COMMUNICATION



Over 3 million of visits to the ISCIII website

90 press releases

47 videos published  
11 of them are live events

147 information notes and popular articles



More than 3 million tweets



Over 600,000 impressions on LinkedIn



78.7 million viewings on our Youtube channel



# PERTE Para la Salud de Vanguardia.



GOBIERNO  
DE ESPAÑA



3

STRATEGIC PROJECTS:  
PERTE FOR CUTTING-EDGE HEALTH





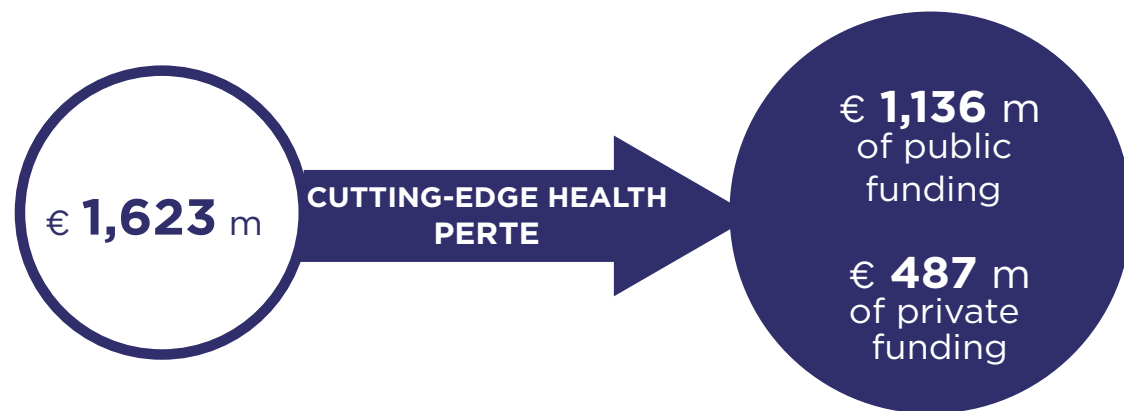
## CUTTING-EDGE HEALTH PERTE

Strategic Projects for Economic Recovery and Transformation, are a new instrument of public-private collaboration defined by Royal Decree-Law 36/2020, of December 30, on Urgent Measures for the Modernization of the Public Administration and the Implementation of the Recovery, Transformation, and Resilience Plan. This Royal Decree-Law aims to facilitate the design and implementation of actions to be financed with European Funds from the European Recovery Instrument "Next Generation EU" approved by the European Council in July 2020 to address the economic and social consequences of COVID-19 in Europe.

These are strategic projects with a potential driving force for the rest of the Spanish economy, which require collaboration between public administrations, private companies and research centers to scale up their operations in our country.

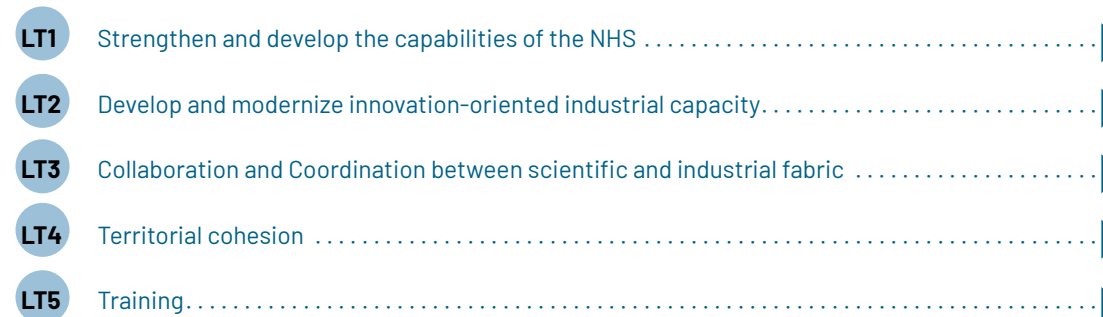
### A PERTE for cutting-edge health

On November 30, 2021, the Council of Ministers approved the Cutting-edge Health PERTE with an initial budget of 1,469 million euros. Since its start date, other actions have been incorporated with associated public funding, which has led to the current figure of 1,623 million euros of total investment, of which 1,136 million euros correspond to public contribution and € 487 m to private contribution.



## 3. STRATEGIC PROJECTS

The Cutting-edge Health PERTE Health has four strategic objectives and five cross-cutting lines:



Administrative coordination is carried out by an inter-ministerial working group chaired by the heads of the Ministries of Science and Innovation and Health and made up of representatives of all the ministerial departments participating in PERTE to ensure a permanent dialogue between all the relevant actors and to integrate public-private collaboration, a Cutting-edge Health Alliance was set up, involving public administrations, biomedical research centers, companies, hospitals, healthcare centers, research centers and the private sector, companies, hospitals, healthcare centers and representatives of citizens and patients.

PERTE also has a *Technical Office* located at the Instituto de Salud Carlos III, whose mandated functions are to provide the necessary resources to the interministerial working group and to the Alliance so that all public and private actors have the relevant executive and administrative support to develop their investment instruments.



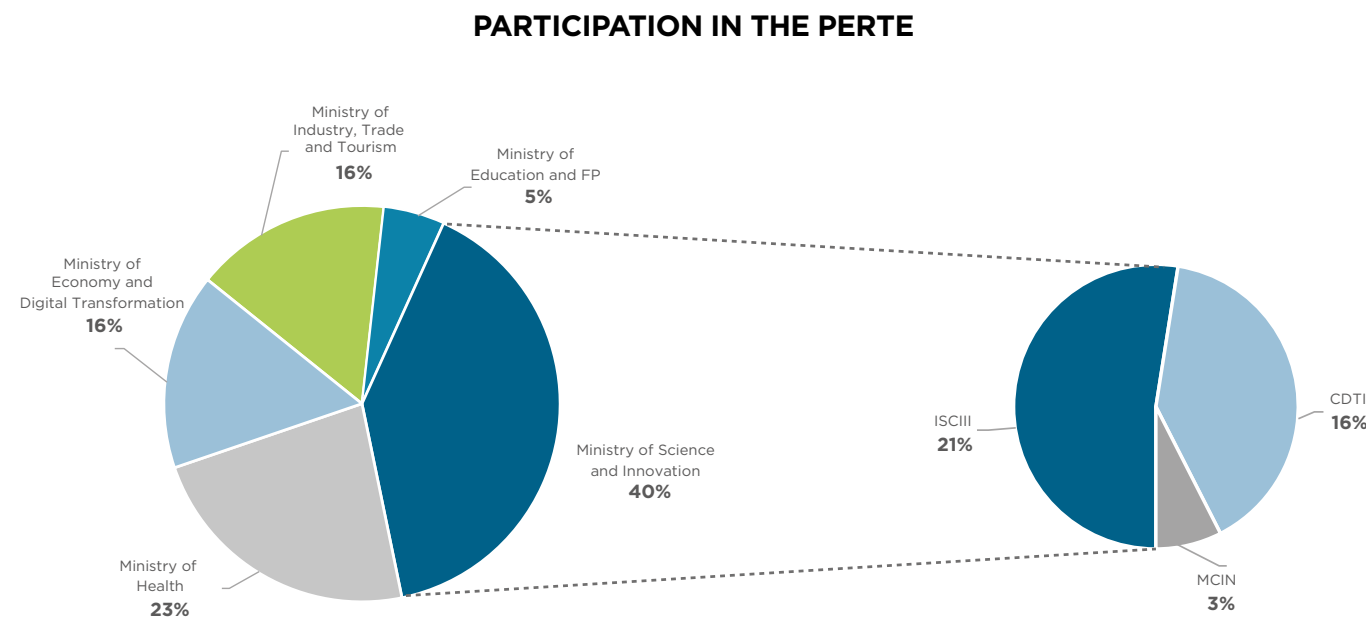
## PERTE FOR CUTTING-EDGE HEALTH INSTRUMENTS

This strategic project encompasses and coordinates two specific investment agendas: one aimed at the scientific fabric and the other aimed at the business fabric, promoting the other aimed at the business fabric, particularly fostering scientific-business alliances. These investment agendas are articulated through the following instruments:

- Calls aimed at the scientific fabric, the industrial fabric, and collaborative projects combining both investment agendas.
- Creation of an R&D&I structure for advanced therapies (consortium) in a network that allows the structuring of the existing capacities throughout Spain.
- Creation of a public-private investment vehicle for advanced therapies (public-private commercial company) with the participation of companies with production capacity.
- Elements of coordination and early identification of capacities and needs of the National Health System.
- Innovative and pre-commercial public procurement.
- Agreements with Autonomous Regions and sectoral conference agreements.
- Private initiatives and co-programmed projects within the Cutting-edge Health Alliance with the leadership of the industrial sector.
- Public tenders.

## ISCIII PARTICIPATION IN THE CUTTING-EDGE HEALTH PERTE

The ISCIII, which participates with a total budget of € 254.05 m (21% of the total public contribution to PERTE), **has executed during 2021-2022 volume of € 244.7 m.**



## 3. STRATEGIC PROJECTS

ISCIII actions are focused on the following strategic objectives and cross-cutting lines:

### Objective 1 Personalized Precision Medicine:

- ISCIII 2021 and 2022 calls for R&D&I projects in **Personalized Precision Medicine for € 111 m** for 86 research groups.

### Objective 2 Advanced Therapies and other innovative drugs:

- **ISCIII 2021 and 2022 calls for ISCIII 2021 and 2022 for Independent Clinical Research projects for € 31.69 m** for 48 research groups.
- **Joint ISCIII-CDTI call for proposals in innovation linked to Personalized Medicine and Advanced Therapies** for a total value of **€ 20.73 m** (9.78 M€ contributed by the ISCIII in 2022) for 19 projects led by 19 companies and 37 research groups.
- **Creation of a Consortium of Advanced Therapies C-TA** for a total value of **€ 58.4 m**, where the following amounts have been executed:
  - **€ 5.9 m** through the AES 2021 call for the Advanced Therapies Network funding **RICORS** for 32 research groups.
  - **€ 7.5 m** from a tender already awarded for constructing a **high-security laboratory at the C-TA** in Majadahonda (Madrid).
  - **€ 45 m additionally contributed from the MRR** for the call for incorporation of research entities to the consortium of advanced therapies. The **CERTERA Consortium** aims to facilitate preclinical development and to articulate the nodes of a research network for advanced therapy drugs in which SNS research centers and hospitals will participate. This consortium will have its own legal personality and network structure.
- **ISCIII platforms to support R&D and transfer** (ITEMAS, SCREN), to promote innovation capabilities in health technologies and the implementation of Precision Medicine as instruments that contribute to the sustainability of the NHS for a total value of **€ 18 m** (2021-2022) for three research centers.
- **Public-Private Partnership (CDTI-ISCIII)** for **€ 36.69 m** in which ISCIII provides the scientific-technical contents.

### Transversal Line 1. Strengthen and develop the capabilities of the SNS:

- **Agreements among the ISCIII and the regional governments for developing and strengthening SNS clinical research capacities aimed at attracting investment in Spain, including highly complex clinical trials.**
- **Clinical Research Platform ISCIII - SCREN.**
- **Call 2022 for Singular Research Infrastructures and Scientific-Technical Equipment for € 14.99 m** for 61 health research centers and institutes.

### Transversal Line 3. Collaboration and Coordination between the scientific and industrial fabric:

- **ISCIII Clinical Research Platform - SCREN\*.**
- **Platform for the dynamization and innovation of the NHS industrial capacities and their effective transfer to the productive sector ISCIII - SCREN\*.**





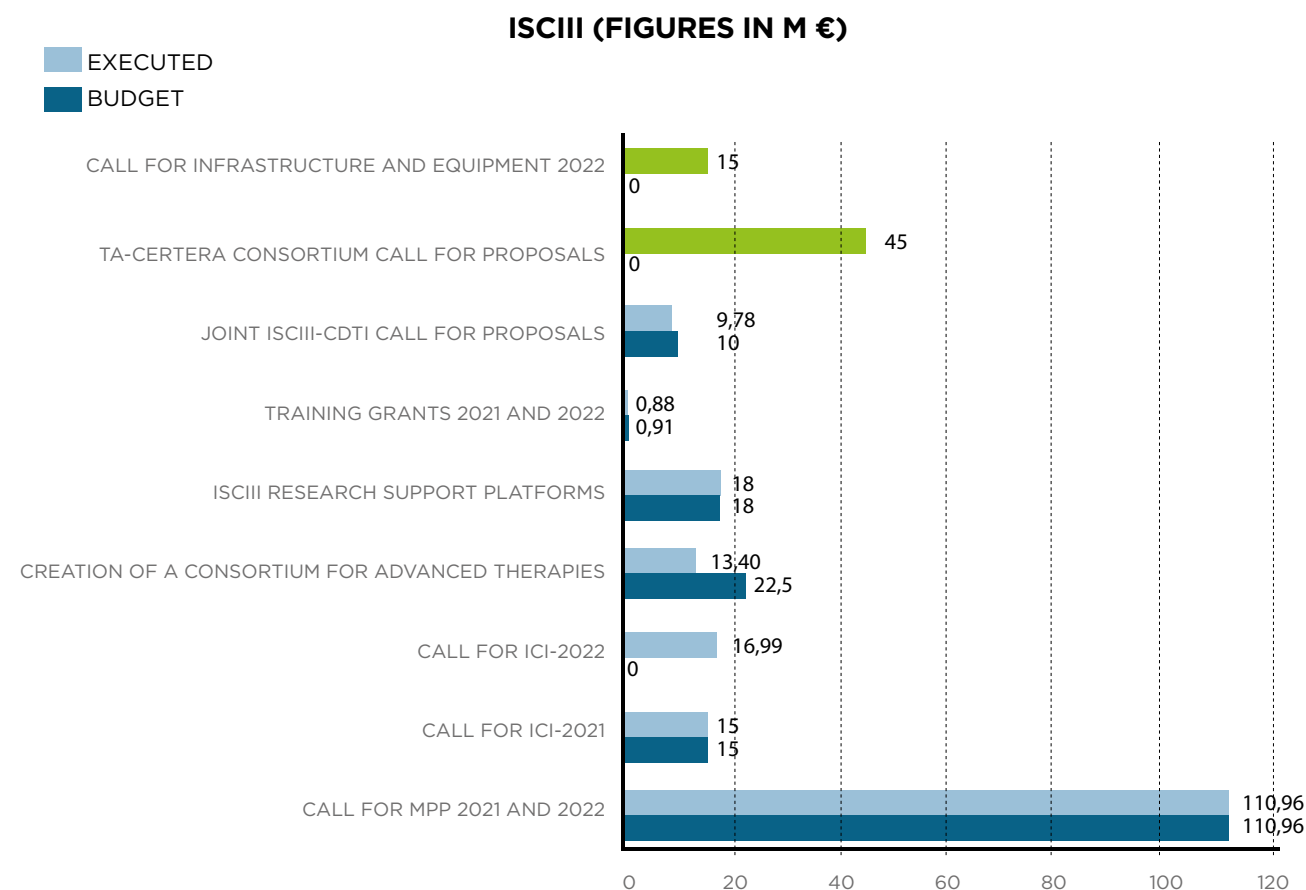
Two actions are pursued within the framework of this platform:

- Portfolio of health innovation projects
- Monitoring system for projects in preclinical phases.

\* These platforms are agglutinated in both cross-cutting lines LT1 and LT3.

**Transversal Line 5. Strengthen and articulate new training programs between companies, NHS, and R&D+i centers:**

- **ISCIII grants for Training in Health Research Management**, amounting to **€ 0.882 m** in 2021 and 2022 calls for 14 graduates.



Note: green color, the new actions incorporated into the initial PERTE budget.





## 4. HIGHLIGHTS 2022

### JANUARY

30

World Day for Neglected Tropical Diseases. Agustín Benito, director of the CNMT-ISCIII  
<https://www.youtube.com/watch?v=ciCFTsbTwXA>

### FEBRUARY

09

Cristóbal Belda, director of the ISCIII, presents the Strategic Action in Health (AES) 2022.  
<https://www.youtube.com/watch?app=desktop&v=OJl9qmMK208&t=6s>

11

Women and Girls in Science Day 2022  
<https://www.youtube.com/watch?v=s6VtGTn2fiE>

15

Presentation of the AES 2022: news and content of the call for proposals  
<https://www.youtube.com/watch?v=YnA1bZHLzG>

25

Feb New research units at the Rare Diseases Research Institute of the ISCIII  
[https://www.youtube.com/watch?app=desktop&v=\\_Zlwd73v5FM](https://www.youtube.com/watch?app=desktop&v=_Zlwd73v5FM)

25

Eva Bermejo, Director of the IIER, World Rare Disease Day  
<https://www.youtube.com/watch?app=desktop&v=tRn-VZ73fR8&t=4s>

### MAR

02

Juan Echevarría, CNM, talks about rabies  
<https://www.youtube.com/watch?app=desktop&v=Z08SAkNfP2w>

08

International Women's Day "Colloquium and health."  
<https://www.youtube.com/watch?v=rviWtymDEA0&t=1767s>

18

CINEFÓRUM Antonio Iniesta  
<https://www.youtube.com/watch?app=desktop&v=kHkfmISOHns&t=76s>

21

ISCIII-IARC Conversations. Research and cancer: kick-off meeting  
<https://www.youtube.com/watch?app=desktop&v=cFL02h2sodc>

24

X SCIENTIFIC CONFERENCE ON SCIENTIFIC REVIEW STUDIES ON OCCUPATIONAL HEALTH  
<https://www.youtube.com/watch?app=desktop&v=55uodWdfbXI>

25

Mar 10th SCIENTIFIC CONFERENCE ON SCIENTIFIC REVIEW STUDIES ON OCCUPATIONAL HEALTH  
<https://www.youtube.com/watch?v=iW86k0cnuKc>

### APRIL

05

Tenth Anniversary of the Program for Centers Committed to Excellence in Care  
<https://www.youtube.com/watch?app=desktop&v=qcgzJBTgVLY>

Symposium of Centers Committed to Excellence in Care (CCEC\*/BPSO\* Spain)  
<https://www.youtube.com/watch?v=ll7315ivWh4&t=641s>

08

Diana Morant visits the ISCIII to learn about brain and childhood cancer research projects.  
<https://www.youtube.com/watch?v=VqRfrRsVu3A>

12

Research with zebrafish embryos for toxicology studies at the CNSA-ISCIII  
<https://www.youtube.com/watch?app=desktop&v=q735HUVrFX8&t=2s>

29

International Immunology Day: how ISCIII researches on the immune system  
<https://www.youtube.com/watch?app=desktop&v=d40yG28mhyU>

ISCIII-IARC Conversations. Second meeting Genomic Epidemiology  
<https://www.youtube.com/watch?app=desktop&v=2mvdPkg3rNI&t=905s>

### JUNE

08

ISCIII-IARC Conversations. Third meeting: Nutrition and chronic diseases  
<https://www.youtube.com/watch?app=desktop&v=aERIUDigqz0&t=400s>

13

Jordi Ochando, researcher at the National Microbiology Center. Cellular immunity test COVID-19  
<https://www.youtube.com/watch?app=desktop&v=8EVwfoQmgmA>

20

INFORMATIVE DAY IRs IN BIOMEDICAL SCIENCES. The role of IR in personalized medicine  
<https://www.youtube.com/watch?app=desktop&v=mxbmBDNge0o>

27

ISCIII joins the Open Administration Week with visits to its Chamartín Campus  
<https://www.youtube.com/watch?app=desktop&v=85s5EcuphDM>

### JULY

12

Informative session: research projects in Precision Medicine and Infrastructures. AES 2022  
<https://www.youtube.com/watch?v=LdRNafMafKA>

### AUGUST

- 16-Aug Research on pneumococci with lung organoids. Alberto Zambrano.  
<https://www.youtube.com/watch?app=desktop&v=qcgzJBTgVLY>

### SEPTEMBER

01

Review on elite controllers in HIV. José Alcamí.  
<https://www.youtube.com/watch?v=YTKrthJZGo>

08

Visit and signing of agreement ISCIII-DFG Germany.  
<https://www.youtube.com/watch?v=qLMpEjNLLKU>

30

European Researchers' Night.  
<https://www.youtube.com/watch?v=QILUbTcPEB>

### OCTOBER

03

Inauguration of academic year ENMT 22-23  
<https://www.youtube.com/watch?v=53435u2Pyyk>

04

Information Day on the Joint ISCIII-CDTI Action on Innovations in Personalized Medicine and Advanced Therapies  
<https://www.youtube.com/watch?v=2kH9jROBaV8&t=43s>

25

Presentation of the AES 2021-2023 'ISCIII-HEALTH Seal of Excellence' Call for Proposals  
<https://www.youtube.com/watch?v=jD79116X-2Q>

26

Ana Alastruey, CNM. WHO report on fungal pathogens  
<https://www.youtube.com/watch?app=desktop&v=wRTXWW5eYNI>

### NOVIEMBRE

04

Final presentation of the COSMO-Spain study on knowledge and social perception of the pandemic  
<https://www.youtube.com/watch?v=ZKjxPiN1cZY>

18

ISCIII Activities in the Science and Innovation Week 2022  
<https://www.youtube.com/watch?v=gxZDIAGxHwU>

22

IX Conference on Bioethical Aspects in Biomedical Research. Biomédica. <https://repisalud.isciii.es/handle/20.500.12105/15298>

### DECEMBER

01

Call for the incorporation to the State Consortium in Network of Advanced Therapies  
<https://www.youtube.com/watch?v=jMM-KMvuF1o>

13

IMPRESIONA Project Day  
<https://www.youtube.com/watch?v=qNWT42fAWVY>  
 Juan Benito, IIER-ISCIII, research on diagnostic delay in rare diseases in Spain  
<https://www.youtube.com/watch?v=WUnA2yEtATM>

14

FEDER visit to the Institute for Research on Rare Diseases  
[https://www.youtube.com/watch?app=desktop&v=NuSfSDp\\_z9s](https://www.youtube.com/watch?app=desktop&v=NuSfSDp_z9s)

30

Dec Summary of the year 2022 at ISCIII  
<https://www.youtube.com/watch?v=3C1mhJsDnto>  
 Dec ISCIII 2022 Summary: Science Law, PERTE and innovative calls [https://www.youtube.com/watch?v=uW09NqcamQ&t=9s&ab\\_channel=InstitutoSaludCarlosIII](https://www.youtube.com/watch?v=uW09NqcamQ&t=9s&ab_channel=InstitutoSaludCarlosIII)  
 Dec ISCIII 2022 Summary: communication and dissemination [https://www.youtube.com/watch?v=YS7vDEGOltg&ab\\_channel=InstitutoSaludCarlosIII](https://www.youtube.com/watch?v=YS7vDEGOltg&ab_channel=InstitutoSaludCarlosIII)  
 Dec-Summary ISCIII 2022: COVID-19 and M-Pox [https://www.youtube.com/watch?v=57cAUx8kIUo&ab\\_channel=InstitutoSaludCarlosIII](https://www.youtube.com/watch?v=57cAUx8kIUo&ab_channel=InstitutoSaludCarlosIII)  
 Dec Summary ISCIII 2022: Investment, production, and personnel [https://www.youtube.com/watch?v=SMqA7ZVtCoc&ab\\_channel=InstitutoSaludCarlosIII](https://www.youtube.com/watch?v=SMqA7ZVtCoc&ab_channel=InstitutoSaludCarlosIII)









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