



Instituto de Salud Carlos III

ANNUAL REPORT

2021

 Plan de Recuperación, Transformación y Resiliencia



Financiado por la Unión Europea
NextGenerationEU



Unión Europea
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"



Unión Europea
Fondo Social Europeo
"El FSE invierte en tu futuro"



GOBIERNO DE ESPAÑA

MINISTERIO DE CIENCIA E INNOVACIÓN



Instituto de Salud Carlos III



COPYRIGHT / LICENSE FOR USE:



Attribution non-commercial use
-Share alike by-nc-sa.

Commercial use of the original work or any derivative works are not permitted, the distribution of which should be done with the same license that governs the original work.

DESIGN AND LAYOUT:

Editorial MIC

GENERAL CATALOG OF OFFICIAL PUBLICATIONS:

Publication included in the editorial program of the Ministry of Science and Innovation.



Free version (Spanish version) of this report on Internet (PDF format).



EDITED BY:

Ministry of Science and Innovation



ACKNOWLEDGMENTS:

To all staff of ISCIII Centers, Areas and Units, for their active participation and efforts in preparing this report.

NIPO DIGITAL VERSION: 83422013X

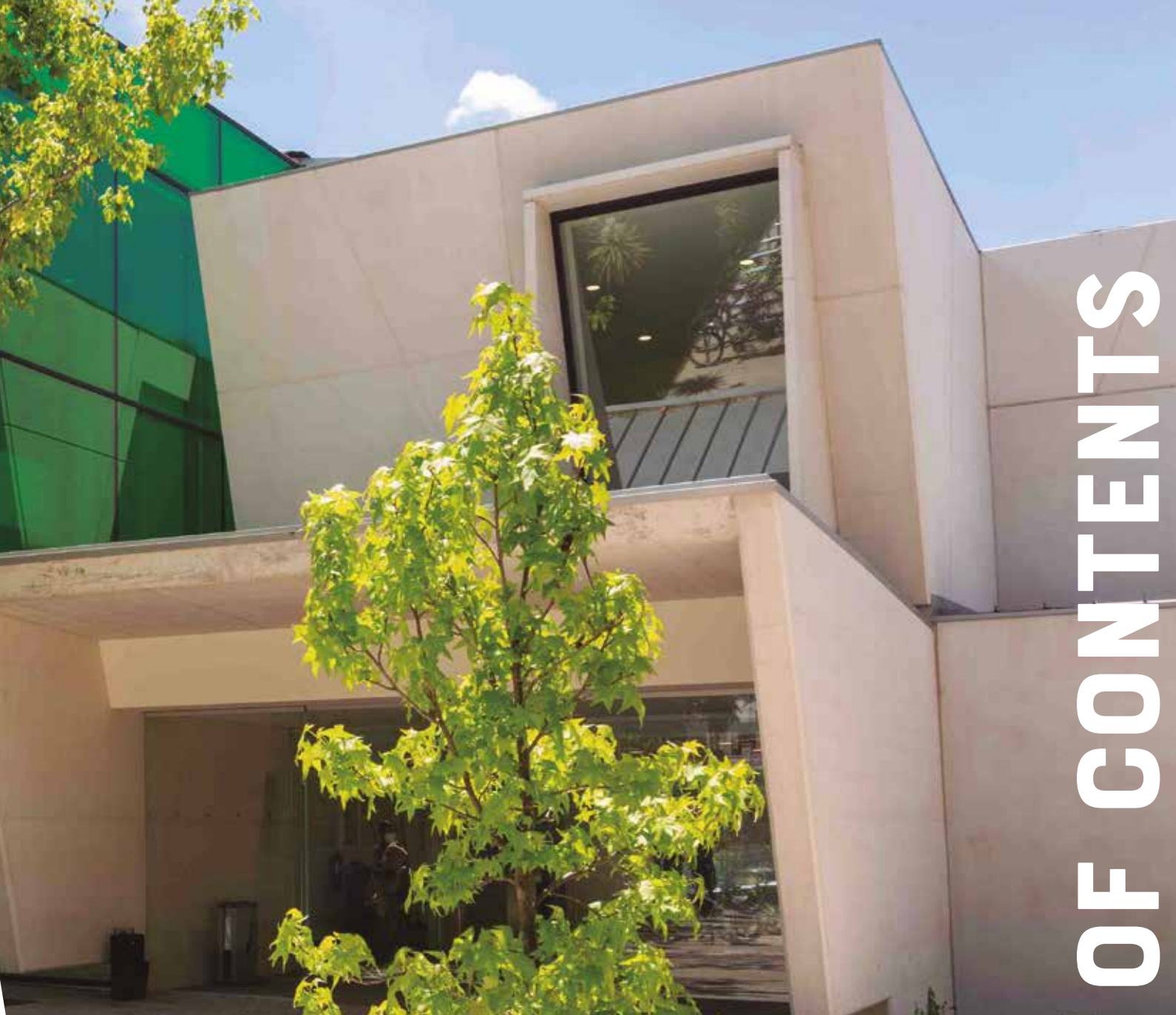


TABLE OF CONTENTS

Presentation by the Director	4
Presentation of the ISCIII	
1. The ISCIII in numbers	10
2. Strategic Projects: PERTE for Cutting-edge Health	14
3. Highlights 2021	21

PRESENTATION BY THE DIRECTOR



THE ISCIII 2021
ACTIVITY REPORT ONCE
AGAIN REFLECTS THE
PROFESSIONALISM AND
COMPETENCE OF THE
MORE THAN 900 ISCIII
EMPLOYEES

F

ollowing 2020, the year in which we discovered and confronted one of the greatest scientific and health crises in our recent history, COVID-19, 2021 was the year in which science as a tool to protect health prompted the development of vaccines that have protected society against the severity of the SARS-CoV-2 pandemic. The Institute of Health Carlos III (ISCIII), as in its more than 35 years of history, has done its part to address this crisis and affirm that science is the way to continue improving the health of society.

The efforts against this pandemic that were initiated and developed the ISCIII throughout 2020 continued in the past year with projects such as the CombiVacs clinical trial on heterologous vaccination, the COSMO-Spain study on the social perception of the pandemic, and the ENE-COVID Senior study on vaccines and immunity against SARS-CoV-2. Apart from COVID-19, the year 2021 was also characterized by other noteworthy issues, such as our Strategic Plan 2021-2025, the novelties in our principal tool for funding biomedical research -the Health Research and Development Strategy-, the continuation of the COSMO-Spain study on the social perception of the pandemic, the presentation of the Strategic Project for Economic Recovery and Transformation (PERTE) for Cutting-edge Health, the study of the volcano on La Palma, and the change in the Board of Directors.

As in 2020, the ISCIII has continued to play an essential role in the research, surveillance, and management of SARS-Cov-2 and COVID-19. The ISCIII 2021 activity report reflects yet another year the professionalism and expertise of the more than 900 ISCIII employees, who have continued to develop multiple projects to protect the health of all citizens through science and the generation of knowledge. If one of last year's milestones should be highlighted here, it would be the CombiVacs clinical trial promoted by the Institute: in May, it provided the first evidence in the world of the feasibility of heterologous vaccination regimens, a combination of several different vaccines. This alternative has already been used in millions of people and is now standard in booster vaccines. The results of this study were published in the journal *The Lancet* and facilitated decision-making on vaccination strategy.

Another of our most prominent studies continues to be COSMO-Spain, which we launched in 2020. Throughout 2021 it published several rounds of surveys to obtain more information on the social perception and knowledge of the Spanish population regarding the pandemic. In addition, in the last quarter of the year we launched two studies on immunity in the elderly (ENE-COVID-senior study) and on persistent COVID, which will offer their results throughout 2022.

LIKE EVERY OTHER YEAR, THE WORK OF
 THE ISCIII LAST YEAR WAS DETERMINED BY
 THE PUSH THAT WE WANT TO GIVE TO OUR
 PRIMARY GOAL: TO DO RESEARCH, TRAIN,
 PROVIDE FUNDING AND OFFER SERVICES
 SO THAT SCIENCE AND HEALTHCARE WILL
 IMPROVE THE HEALTH OF THE CITIZENS

Furthermore, last year the Institute was directly involved in preparing and launching the strategy for integrating genomic sequencing into coronavirus surveillance by coordinating a national network of laboratories that enables SARS-CoV-2 sequencing capacity to be increased and new variants to be studied. In addition, the institute participated in numerous collaborative European projects related to the study of SARS-CoV-2, such as Vaccelerate, which is part of the HERA initiative and seeks to reinforce a platform to facilitate clinical trials in the field of infectious diseases. These two examples show how national research must be coordinated with international efforts to advance scientific progress as much as possible.

The efforts went far beyond the pandemic, however, and placed the service that the ISCIII has been providing for more than 35 years to the scientific and health systems again in the forefront. In 2021 the ISCIII enjoyed the largest budget in its history. The year began with the publication of the ISCIII Strategic Plan 2021-2025, the roadmap to consolidate, improve, and renew the Institute's lines of work, and closed with the publication of all final resolutions of the Health Research and Development Strategy (AES by its Spanish acronym) 2021, the principal funding tool for biomedical and health research in Spain.

Last year the AES was characterized by presenting fundamental new developments such as salary improvements for the research community, a new area of Infectious Diseases in the CIBER, and a renewed model of operation of the Results-Oriented Cooperative Research Networks in Health (Spanish acronym: RICORS). In addition, the call for independent clinical research and the commitment to advanced therapies and personalized medicine have continued to be consolidated. Thanks to these and other contents of the AES 2021, the ISCIII awarded last year more than 193 million euros in grants to the science system of the National Health System (NHS), with the use of recovery funds and two extraordinary calls for proposals playing a leading role: almost 30 million euros for personalized medicine and another 15 million euros for Infrastructures. All these new developments continue to promote collaborative and multidisciplinary research in Spain.

The announcements of prominent infrastructure projects to be developed and completed in the coming years were also of paramount importance in 2021, such as the renovation of the National School of Health (ENS), the construction of a P4 maximum biosafety laboratory, and the construction of new laboratories for the Center for Advanced Therapies at the Majadahonda Campus. Through these and other projects the ISCIII will improve its research and its services to the scientific and healthcare systems.

Another of the most relevant activities of the year was the presentation at the ISCIII of the Strategic Project for Economic Recovery and Transformation (PERTE) for Cutting-edge Health, in the presence of the President of the Government and the Ministers of Science and Innovation, Health, Industry, Trade and Tourism, and Finance and the Civil Service. Furthermore, the ISCIII collaborated in monitoring one of the most impactful natural phenomena of the year: the eruption of the volcano on La Palma, where the National Center for Environmental Health partook in monitoring air quality.

On a more intramural note, I cannot fail to mention that the ISCIII made a change in its Directorate in mid-year. Raquel Yotti, who had served for three years as Director, was appointed Secretary General for Research at the Ministry of Science and Innovation. I had the honor of replacing her and undertaking a task of continuity and consolidation of the immense amount of work she had done. My appointment, together with the incorporation of Rosario Perona and Pilar Gayoso into the General Sub-Directorates of Research Assessment and Promotion and of Cell Therapy and Regenerative Medicine, respectively, completed the reform of the management team initiated in the first half of 2021 with the arrival of Manuel Cuenca and Miguel Calero to the General Secretariat and the General Sub-Directorate for Applied Services, Training, and Research, respectively. People change, but the Institute's work to improve the health of the population remains unchanged.

To mention all innovations introduced in 2021 would entail a very long list, perhaps too long for this introduction. Among the many important developments of the past year, I cannot fail to mention the creation of the Mentoring Program to promote the training of young researchers at the Institute; the creation of a Unit on Climate Change, Health, and Urban Environment; the creation of the Working Group on Equality; the entry of the ISCIII into the European initiative Science Europe; the consolidation of the Health Research Forum with regional heads of R&D and Innovation in health; and the reinforcement of joint work with Health Research Institutes (Spanish acronym, IIS), initiated with a Forum that this year has been renamed the ISS Alliance.

Finally, a few words about another of our key objectives: communication, which allows us to bring science to the people. The year 2021 was also important for the scientific dissemination carried out by the ISCIII. In addition to the three major annual activities in this area (Science Week, European Researchers' Night, and the International Day of Women and Girls in Science), several activities were carried out to bring science closer to society, such as visits to primary and secondary schools by our researchers, as well as the signing of an agreement with The Conversation, one of the most important platforms for dissemination in Spain, which is promoting the publication of articles on current scientific issues by researchers at the Institute.

In short, last year's work of the ISCIII was determined by the push that, like every other year, we want to give to our primary goal: to do research, train, provide funding and offer services so that science and healthcare will improve the health of the public. The work, of course, will continue in 2022.







THE ISCII IN N'JMBSERS



THE ISCI IN NUMBERS 2021

What is the Institute of Health Carlos III working on?
A look at our Chamartín Campus



**ISCI III
STAFF** >

**Total
895**
612 women (69.5%)
268 men (30.5%)



BUDGET
403,200,540 €

**FUNDED BY
THE RECOVERY AND
RESILIENCE FUND**

115,000,000 €



ERDF FUNDS

1,407
certified grants

47,200,000€
declared expenditure



ESF FUNDS

337
certified grants

7,000,000€
declared expenditure



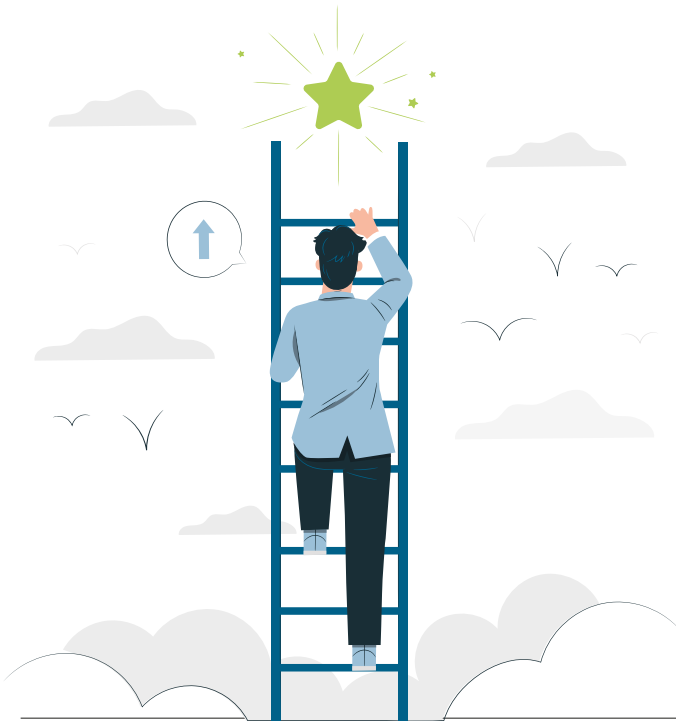
**FINANCING AND
COORDINATION OF
R&D&I IN THE NATIONAL
HEALTH SYSTEM**

1,599
Grants funded

237,795,585.74€



NATIONAL PROGRAM FOR TRAINING TALENT AND ITS EMPLOYABILITY IN R&D&I



512

grants funded

Funding:

49,233,721€

NATIONAL SUBPROGRAM
FOR TRAINING

216 grants funded -

Funding: **18,289,851€**

NATIONAL SUBPROGRAM
FOR INCORPORATION

223 grants funded -

Funding: **29,661,350€**

NATIONAL SUBPROGRAM
FOR MOBILITY

73 grants funded -

Funding: **1,282,520€**

NATIONAL PROGRAM FOR KNOWLEDGE GENERATION AND REINFORCEMENT OF THE SPANISH R&D&I SYSTEM

1,087 grants funded

188,561,864.74€



KNOWLEDGE
GENERATION

796 grants funded -

140,553,951.46€

INSTITUTIONAL
REINFORCEMENT

226 grants funded -

33,016,077.88€

RESEARCH INFRASTRUCTURES
AND SCIENTIFIC AND
TECHNICAL EQUIPMENT

65 grants funded -

14,991,835.40€



COLLABORATIVE RESEARCH AND ACCREDITATION OF HEALTH RESEARCH INSTITUTES (IIS)

7 thematic networks

of results-oriented cooperative research in health

33 Health Research

Institutes accredited

Participation in
4 European
research infrastructures

12 thematic areas
of Biomedical Research
Networking Centers (CIBER)

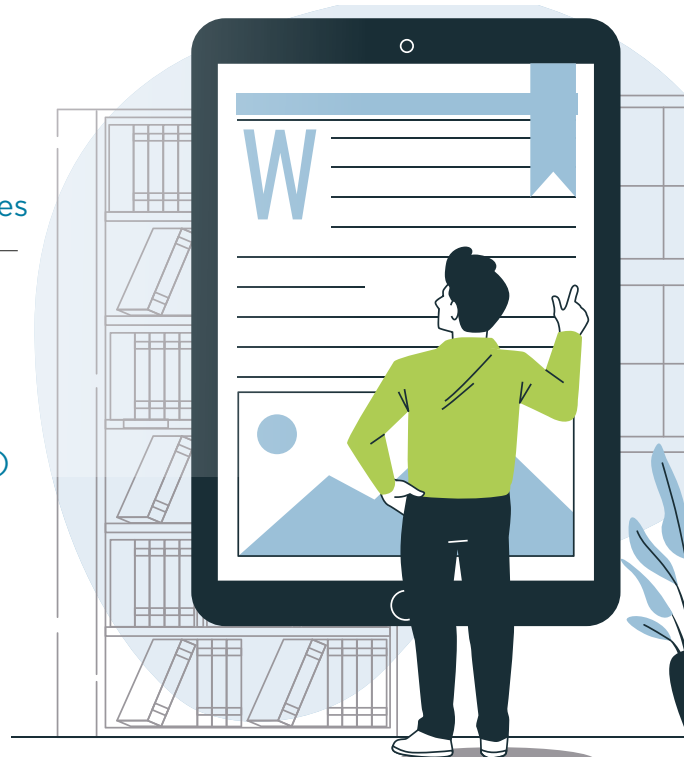
INTRAMURAL SCIENTIFIC ACTIVITY AT ISCIII

546 indexed publications

58 projects awarded with
6,731,801.41 € of funding

24 international projects with
3,323,118.95 € of funding

204 ongoing projects with a total funding
24,744,119.73 € of which 73 international
projects with a funding of
11,121,126.17 €



NATIONAL LIBRARY OF HEALTH SCIENCES

43,054 publications
(bibliographic resources)

166,845 database searches

More than 82.5 million
visits to SciELO España



NATIONAL SCHOOLS OF PUBLIC HEALTH

ENS
468 students
3,769 teaching
hours

ENMT
909 students
1,521 teaching
hours

COMMUNICATION



185 information news releases
5 outreach news releases

More than 5 million
visits to the ISCIII web site



101 press releases sent to
the media

56 videos published, of
which 17 are live events



SCIENTIFIC AND TECHNICAL SERVICES

- ✓ **365 updates** of the COVID-19 panel in Spain
- ✓ **68 reports** on the “COVID-19 situation in Spain”
- ✓ **81 MoMo reports** (Daily Mortality Monitoring System)
- ✓ **915 ENE-COVID reports** for Autonomous Communities
- ✓ **68 national reports** on the demographic, epidemiological and clinical characteristics of COVID-19
- ✓ **53 editions** of the Weekly Epidemiological Bulletin
- ✓ **51 specific** epidemiological reports
- ✓ **3,810 diagnostic** COVID-19 tests
- ✓ **21,891 serological determinations** from the ENE-COVID Senior, COMBIVACS and RESCUESVACS studies
- ✓ **6,114 SARS-CoV-2 strains** detected by genomic sequencing with identification of variants
- ✓ **35,064 microbiological diagnostic assays** within laboratory surveillance programs
- ✓ **102 outbreaks** of pathogenic microorganisms characterized with **5,084 assays**
- ✓ **370 microbiological** analysis techniques with **27,233 assays**
- ✓ **4,419 environmental** toxicology analyses
- ✓ **57,922 measurements** of atmospheric contamination
- ✓ **49,881 tests** carried out by the radiation protection service
- ✓ **468 determinations** related to human prionopathies, including 64 determinations by PCR and sequencing of the PRPN gene
- ✓ **376 genetic** diagnoses of rare diseases
- ✓ **1,262 cases included** in the Rare Diseases Registry and 35 cases of undiagnosed rare diseases





STRATEGIC PROJECTS





PERTE FOR CUTTING-EDGE HEALTH



PERTES (SPANISH ACRONYM OF STRATEGIC PROJECTS FOR ECONOMIC RECOVERY AND TRANSFORMATION) ARE NEW PUBLIC-PRIVATE COLLABORATION INSTRUMENTS FOR STRATEGIC PROJECTS THAT REQUIRE COLLABORATION BETWEEN PUBLIC

ADMINISTRATIONS, COMPANIES, AND RESEARCH CENTERS TO ENSURE THE SCALING-UP OF THEIR OPERATIONS IN OUR COUNTRY.

THE PERTE INSTRUMENT WAS CREATED WITHIN THE FRAMEWORK OF THE PRTR (SPANISH ACRONYM OF RECOVERY, TRANSFORMATION AND RESILIENCE PLAN), BUT IS INTENDED TO BE PERMANENT AND TO GO BEYOND ITS TIME FRAME.

THEY ARE OPEN TO ALL TYPES OF COMPANIES AND BRING TOGETHER THE COMMITMENT OF DIFFERENT MINISTRIES INVOLVED IN THEIR DEVELOPMENT.

THE SIXTH POLICY LEVER INCLUDED IN THE RECOVERY PLAN IS A "PACT FOR SCIENCE AND INNOVATION. STRENGTHENING THE CAPACITIES OF THE NATIONAL HEALTH SYSTEM."

1,469 M€

of investment in 2021-2023



MORE THAN 982 MILLION EUROS OF PUBLIC INVESTMENT ~487 MILLION EUROS OF PRIVATE INVESTMENT

The project is estimated to generate 4,300 million euros of GDP and 12,700 new jobs.

KEY OBJECTIVES

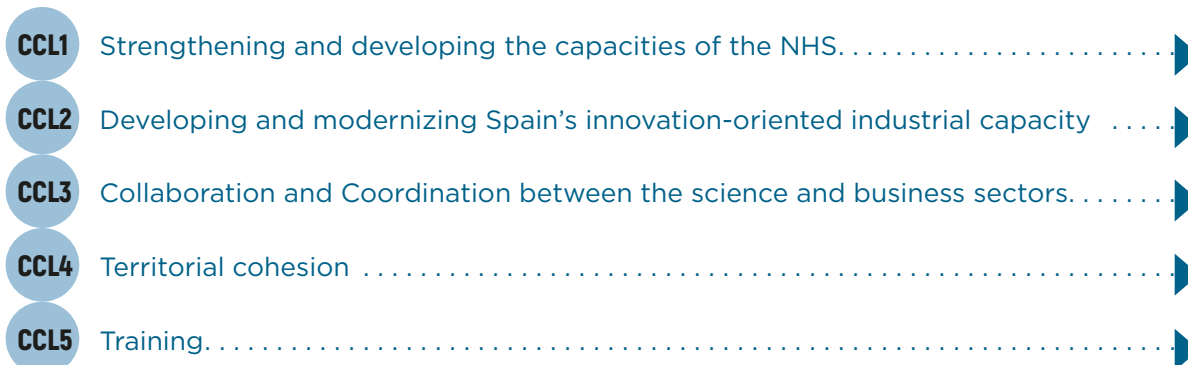
- a) To position Spain as a leading country in the innovation and development of advanced therapies aimed at curing diseases to ensure the provision of state-of-the-art healthcare systems for all citizens and to support research, innovation, and clinical development.
- b) To promote the equitable implementation of Personalized Precision Medicine, favoring the strengthening, development, and creation of competitive companies based on knowledge generation.
- c) To develop a digital NHS with an integrated database to improve prevention, diagnosis, treatment, rehabilitation, and research.
- d) To strengthen digital primary health care with the application of advanced technologies for all activities involving relations with the citizens and management of resources anywhere in the country and in all areas of health care.

At the same time, the PERTE establishes five cross-cutting lines aimed at strengthening and developing the capabilities of the NHS (National Health System) centers

STRATEGIC GOALS



CROSS-CUTTING LINES



INSTRUMENTS

This strategic project encompasses and coordinates two specific investment agendas: one addressing the science sector and the other the business sector, particularly fostering scientific-business alliances. These investment agendas are organized around the following instruments:

- a) Calls for proposals aimed at the scientific and industrial sectors and at collaborative projects that combine the two investment agendas
- b) Creation of a networked R&D and Innovation structure for advanced therapies (consortium) that will allow the existing capacities throughout Spain to be structured
- c) Creation of a public-private investment vehicle for advanced therapies (public-private business partnership) with the participation of companies with production capacity in Spain
- d) Elements for coordination and early identification of capacities and needs of the Spanish Public Health System.
- e) Innovative and pre-commercial public procurement
- f) Agreements with Autonomous Communities and agreements through sectoral meetings
- g) Private initiatives and projects co-programmed within the Alianza Salud de Vanguardia (Cutting-edge Health Alliance) with the leadership of the industrial sector
- h) Public tenders



The ISCIII participates with a **TOTAL BUDGET OF 177,409 M€**,
18% OF THE TOTAL public investment in the PERTE.

ITS ACTIVITIES AND ACTIONS ARE FOCUSED ON:

STRATEGIC GOAL 1



PERSONALIZED PRECISION MEDICINE:

- ISCIII call for R&D&I projects on Personalized Precision Medicine amounting to 111 million euros between 2021-2022

STRATEGIC GOAL 2



ADVANCED THERAPIES AND OTHER INNOVATIVE DRUGS:

- ISCIII call for Independent Clinical Research for a value of 15 million euros (2021-2022)
- Joint ISCIII-CDTI call for innovation linked to Personalized Medicine and Emerging Therapies for 20 million euros (10 million euros contributed by ISCIII in 2022)
- Creation and development of the National Consortium of Advanced Therapies CTA for a value of 22.5 million euros
- Public-Private Business Partnership (CDTI-ISCIII) ISCIII: Provision of scientific and technical content.

What is cutting-edge health?

It is the promotion and protection of health based on the development and incorporation of **innovative products** and **procedures** and **digital solutions** that offer added value to the **prevention, diagnosis, personalised treatment and rehabilitation of patients.**



**Precision
Medicine**



**Advanced therapy
medicines**



**Data Science and
Artificial Intelligence**

What do we want to achieve with the PERTE?



Toward personalized precision medicine

Incorporation of technological developments



Toward an innovative and less technology-dependent industry

Industrial transfer of scientific knowledge and R&D&I generated in the healthcare system (advanced therapies and emerging drugs)



Toward digital healthcare

Incorporation of digital technological capabilities for prevention, diagnosis and treatment



Toward a healthcare system with greater and better capabilities and greater competitiveness

CROSS-CUTTING LINE 1 - STRENGTHENING AND DEVELOPING THE CAPACITIES OF THE NHS

- a) Agreements between the ISCIII and the Autonomous Communities to attract investments in Spain
- b) ISCIII Clinical Research Platform - SCReN
- c) Platform for dynamization and innovation of the industrial capacities of the SNS and their effective transfer to the productive sector ISCIII- ITEMAS for a total value of both platforms of 18 million euros (2021-2022)

CROSS-CUTTING LINE 3 - COLLABORATION AND COORDINATION BETWEEN THE SCIENCE AND BUSINESS SECTORS

- a) ISCIII Clinical Research Platform - SCReN
- b) Platform for dynamization and innovation of the industrial capacities of the SNS and their effective transfer to the productive sector ISCIII- ITEMAS

TWO ACTIONS ARE PURSUED WITHIN THE FRAMEWORK OF THIS PLATFORM:



PORTFOLIO OF HEALTH INNOVATION PROJECTS MONITORING SYSTEM FOR PROJECTS IN PRECLINICAL PHASES

CROSS-CUTTING LINE 5 - STRENGTHENING AND COORDINATING NEW TRAINING PROGRAMS BETWEEN COMPANIES, THE NHS, AND R&D&I CENTERS

- a) ISCIII training grants in health research management for a total of 0.907 million euros between 2021-2022

PERTE (Strategic Project for Economic Recovery and Transformation) **for Cutting-edge Health**



PERTE for Cutting-edge Health (Ministry for Science and Innovation)





HIGHLIGHTS 2021



HIGHLIGHTS OVERVIEW OF THE YEAR 2021



JANUARY

14

Funding opportunities in International Joint Programming 2021/Biomedicine

<https://www.youtube.com/watch?v=kJmK1waj2Do&t=4s>
<https://www.youtube.com/watch?v=pQMvwxgAE7k&t=7827s>

21

Presentation of the Health Research and Development Strategy 2021

<https://www.youtube.com/watch?v=1HjbxsqdKJk>

27

Information day on the 2021 call for proposals of the ERA PerMed initiative on personalized medicine

<https://www.youtube.com/watch?v=Xgle-WcXQN&t=22s>

29

Israel Cruz - World Neglected Tropical Diseases Day

<https://www.youtube.com/watch?v=F6CegVOg6gA>

MARCH

3

Eva Bermejo - World Birth Defects Day

<https://www.youtube.com/watch?v=zksjtkdgBCc>

Information day on Biomedical Sciences Research Infrastructures

<https://www.youtube.com/watch?v=iJVGsQYsmUg&t=1296s>
<https://www.youtube.com/watch?v=eNfzG-sFuWM&t=8944s>

22

ISCIII COVID-19 Fund, one year after its call: biomedical research during the pandemic

https://www.youtube.com/watch?v=ze_2cP_xfp0&t=958s
<https://www.youtube.com/watch?v=TKOwurP5rZg>

MAY

18

Preliminary results. CombivacS clinical trial

<https://www.youtube.com/watch?v=NiH5rt1-SZA&t=175s>

FEBRUARY

28

Ignacio Pérez de Castro World Rare Diseases Day

<https://www.youtube.com/watch?v=15QHL0wvqkE>

APRIL

15

Overview of Horizon Europe

<https://www.youtube.com/watch?v=cjAICqJT6hU>

ISCIII's relationship with Horizon Europe

<https://www.youtube.com/watch?v=qBk1-XHPUSI&t=26s>

Success stories from the third euhealth programme 2014-2020

<https://www.youtube.com/watch?v=8xZ6AhoKnVA&t=686s>

19

Presentation of the CombivacS clinical trial

https://www.youtube.com/watch?v=3DIVX_jL5DQ&t=2s

20

Presentation of the ISCIII21 Mentoring Program

<https://www.youtube.com/watch?v=Bj8rgYN6zMc&t=58s>

21

EURONANOMED webinar

<https://www.youtube.com/watch?v=kECN9NRzXzY&t=1513s>
<https://www.youtube.com/watch?v=jxAYr9MRGjM&t=3s>

JULY

2

Open Science Day in Health Research Institutes
<https://www.youtube.com/watch?v=Qtalbh0Yizg>

7

Presentation of new features in the R&D&I calls of 2021
<https://www.youtube.com/watch?v=-8V7qM9tpJs&t=2479s>

22

Webinar EU4Health WProgramme 2021
<https://www.youtube.com/watch?v=pxOOCp9gzIs&t=5061s>

OCTOBER

1

QASP Study: Adding quality to the years
<https://www.youtube.com/watch?v=8vveGPGp4kc&t=128s>

28

Lecture by Professor Dr. Rafael Nájera Morrondo at the 1st Follow-up Conference of the PhD Program in Biomedical Sciences and Public Health
<https://www.youtube.com/watch?v=KyO64dmvBmk&t=209s>

Course on parasitological diagnosis of tropical diseases
<https://www.youtube.com/watch?v=rTPxQFIFCA4>

DECEMBER

10

Irene Molina, winner of the contest 'Your thesis in 3 minutes' 2021
<https://www.youtube.com/watch?v=xLBNldlPCoM&t=6s>

14

INFODAY ERA PerMed Joint Transnational Call 2022: "Prevention in Personalised Medicine"
https://www.youtube.com/watch?v=_UZWYR6B1m8

20

Rafael Nájera, virologist and first general director of the ISCIII, on his book "Epidemic, disease, pandemic"
<https://www.youtube.com/watch?v=Bad5-rTAXbE>

22

Conference: Funding International Health Projects 2022
<https://www.youtube.com/watch?v=aa4xVuovNQA&t=5607s>

JUNE

21

Spanish CombivacS Study & Vaccelerate
<https://www.youtube.com/watch?v=ajRKn9AGupY&t=1981s>

22

SEMINARS RIs IN BIOMEDICAL SCIENCES
<https://www.youtube.com/watch?v=K78yTeUDLao&t=3131s>

Informative day on Research Infrastructures in Horizon Europe
<https://www.youtube.com/watch?v=s2uUo4a4v2M&t=946s>

SEPTEMBER

6

Cristóbal Belda. General Director Institute of Health Carlos III
<https://www.youtube.com/watch?v=RORRIod2fX4&t=7s>

9

Didactic handbook on climate change and health
<https://www.youtube.com/watch?v=9O34wCiHYao&t=8s>

16

Visit by the Ministers of Health and Science to the CNM (in relation to granting the sequencing project)
<https://www.youtube.com/watch?v=mF7Fi6W2TS8>

29

RRI Awards organized by the ISCIII, ORION Open Science
<https://www.youtube.com/watch?v=oCU2kxsqfuU>

30

First National Conference on Toxoplasmosis
<https://www.youtube.com/watch?v=lZgVou7y2QY>

NOVEMBER

15

The ISCIII hosts the presentation of the **PERTE** program chaired by President Pedro Sanchez
<https://www.youtube.com/watch?v=b11iilHskDzc>

18

Antibiotic Resistance Laboratory at the National Microbiology Center
<https://www.youtube.com/watch?v=ZK9OoTLB7eU&t=1s>

20

Giving visibility to the work of nurses as INVESTEN researchers
<https://www.youtube.com/watch?v=jooG6o-lrZo&t=14s>

23

Saúl García dos Santos-Alvés, CNSA-ISCIII air pollution area - statements on the Cumbre Vieja Dorsal Volcano
<https://www.youtube.com/watch?v=tQt6gGrXIP4&t=18s>

30

CNM respiratory virus laboratory, RTVE documentary on sequencing variables
<https://www.youtube.com/watch?v=zGHQjeonbys&t=8s>



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN

isc

Instituto
de Salud
Carlos III