

The background of the cover is a complex, abstract composition. It features a marbled pattern with swirling, organic shapes in shades of deep blue, teal, and magenta. Overlaid on this are thin, dark lines that form a circuit-like or network structure, with small circular nodes at various points. The overall effect is one of dynamic, interconnected complexity.

U.PORTO

U.PORTO
RESEARCH
2022

SERVIÇO DE INVESTIGAÇÃO E PROJETOS



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GLOSSARY

| | |
|---------|--|
| CAC | CLINICAL ACADEMIC CENTERS |
| CIC | CLINICAL RESEARCH CENTERS |
| CoLAB | COLLABORATIVE LABORATORIES |
| FCT | NATIONAL FOUNDATION FOR SCIENCE AND TECHNOLOGY |
| LA | ASSOCIATE LABORATORIES |
| RI | RESEARCH INFRASTRUCTURES |
| SDGs | SUSTAINABLE DEVELOPMENT GOALS |
| U.PORTO | UNIVERSITY OF PORTO |





04 **FOREWORD**



U.PORTO RESEARCH 2022

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17 Collaborative Laboratories

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FOREWORD

Year after year, University of Porto (U.Porto) has been consolidating its position at the forefront of the scientific research in Portugal. U.Porto's comprehensive research ecosystem enables the development of R&D activities in almost every area of knowledge. Research staff, funding and infrastructures (including labs and scientific equipment) play a major role in U.Porto's overall research performance.

This brochure provides an overview of the evolution of U.Porto in various research-related dimensions during the year 2022.

The next pages present facts and figures of U.Porto's R&D activities. In the next chapters, we present information related with U.Porto's research, namely: a) ecosystem, b) areas, and c) staff. We also present information regarding our d) flagship initiatives, e) publications and knowledge transfer & valorization, f) research networks and interinstitutional cooperation and, finally, g) research funding.

OUR
LEVERAGE

“
**U.Porto as a
Research University**

*Plano de Atividades e Orçamento 2022
Universidade do Porto*



U.PORTO RESEARCH

2022



1

RESEARCH ECOSYSTEM



U.PORTO

14

SCHOOLS

11

ASSOCIATED
RESEARCH INSTITUTES

48

RESEARCH
UNITS

17

ASSOCIATE
LABORATORIES

22

COLLABORATIVE
LABORATORIES

1

BUSINESS
SCHOOL

2

CIÊNCIA VIVA
CENTERS

9

FUNCTIONAL AND
COMPETENCE
CENTRES

U.PORTO'S R&D ECOSYSTEM

comprises a diverse set of research, development and innovation structures, in which a multifaceted scientific community works daily to achieve the highest standards of excellence.

The research ecosystem includes 14 Organic Units (Schools) and 11 Associated Research Institutes – altogether they host U.Porto's 48 R&D Units evaluated by the Portuguese Foundation for Science and Technology (FCT).

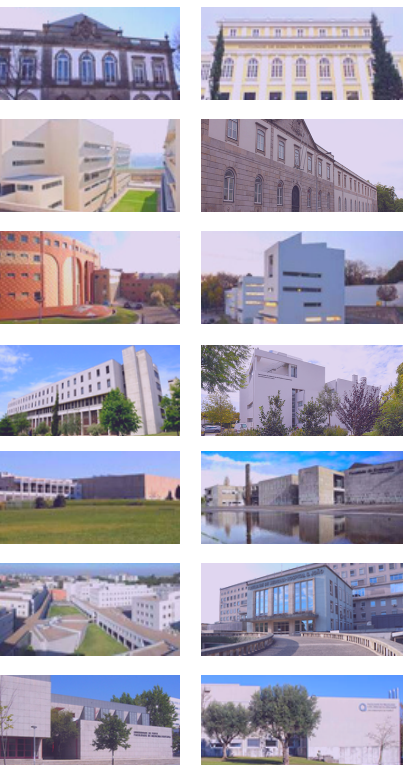
U.Porto participates in 17 Associate Laboratories (LA), 22 Collaborative Laboratories (CoLAB) and currently integrates 24 Research Infrastructures (RI) of the National Roadmap for Research Infrastructures.

U.Porto ecosystem also mobilizes several functional and thematic competence centres, as well as two *Ciência Viva* Centres that are part of the national scientific outreach network *Ciência Viva*.

Continuously committed to supporting and encouraging scientific and technological development, U.Porto's broad ecosystem encourages a multidisciplinary and multifaceted approach, where its various actors collaborate and cooperate in a joint strategy, aimed at ensuring a research, development and innovation activity that responds to societal challenges, within different areas of activity and at national and international scales.

A person wearing a white lab coat and blue nitrile gloves is holding a clear plastic multi-well plate. The plate contains four circular petri dishes. The top-right and bottom-right dishes contain a blue, granular substance. The top-left dish is empty, and the bottom-left dish contains a clear liquid. The background is a blurred laboratory setting with blue and white lighting.

FACULTIES AND RESEARCH INSTITUTES



OUR FACULTIES

14 ^{+1 Business School (PBS)} FACULTIES



CAMPUS 1 CITY CENTER

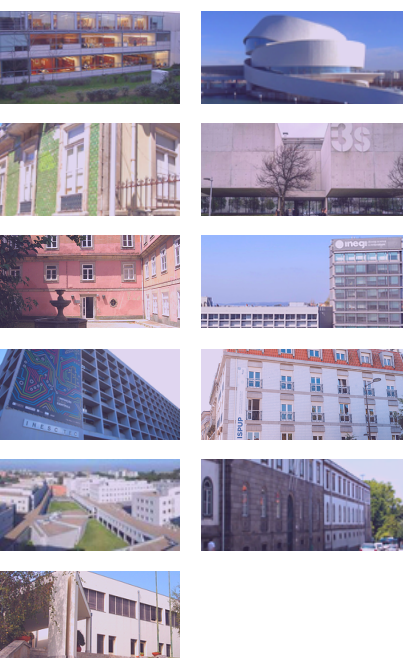
Faculty of Fine Arts (FBAUP)
Faculty of Law (FDUP)
Faculty of Pharmacy (FFUP)
Institute of Biomedical Sciences Abel Salazar (ICBAS)

CAMPUS 3 CAMPO ALEGRE

Faculty of Arts (Humanities and Social Sciences) (FLUP)
Faculty of Architecture (FAUP)
Faculty of Sciences (FCUP)
Faculty of Nutrition and Food Sciences (FCNAUP)

CAMPUS 2 ASPRELA

Faculty of Sports (FADEUP)
Faculty of Economics (and Management) (FEP)
Faculty of Engineering (FEUP)
Faculty of Medicine (FMUP)
Faculty of Dental Medicine (FMDUP)
Faculty of Psychology and Education Sciences (FPCEUP)



OUR ASSOCIATED RESEARCH INSTITUTES

11 ASSOCIATED RESEARCH INSTITUTES



Center for Astrophysics of the University of Porto (CAUP)

Interdisciplinary Center of Marine and Environmental Research (CIIMAR)

Center for Research in Higher Education Policies (CIPES)

Institute for Research and Innovation in Health (i3S)

Institute of Sciences, Technologies and Agroenvironment of the University of Porto (ICETA)

Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI)

Institute for Systems and Computer Engineering, Technology and Science (INESC TEC)

Institute of Public Health of the University of Porto (ISPUP)

Instituto de Telecomunicações (IT)

Chemistry and Technology Network (REQUIMTE)

BIOPOLIS Association (BIOPOLIS)

The background of the page is a close-up, slightly blurred view of several white petri dishes. Each dish contains a dark medium with numerous small, glowing cells. The cells are primarily blue, with some showing red and green fluorescence, suggesting different cellular components or states. The dishes are arranged in a grid-like pattern, with some in sharp focus and others blurred in the background.

RESEARCH UNITS

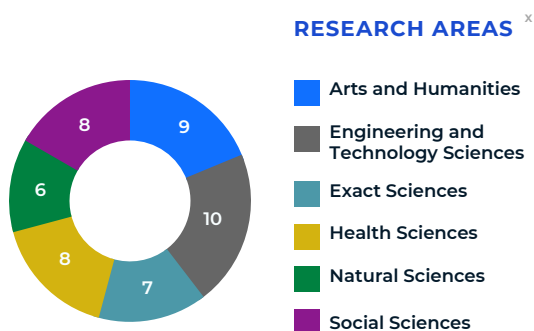
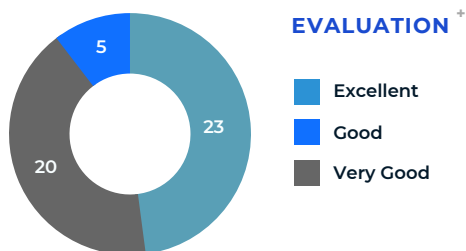
48 RESEARCH
UNITS



U.Porto ecosystem comprehends 48 R&D Units (hosted or co-managed with external entities), which stand out for their competitiveness and excellence. Each R&D Unit is composed of teams of researchers, equipment, and technical infrastructure. These Units form the basis of U.Porto's scientific ecosystem, playing a key role in terms of advanced education, training, and scientific activity.

According to the last evaluation exercise performed by the Portuguese Foundation for Science and Technology (2017-2018), **90% of U.Porto R&D Units were classified with "Excellent" or "Very Good"**.

Find out more about the [Research Units@U.Porto](#) [here](#).



⁺ Source: Results obtained from the evaluation exercise performed by the Portuguese Foundation for Science and Technology - FCT (2017-2018), march 2021.

^x Research Areas according to those listed in the [FCT Atlas of R&D Units \(2022\)](#).

Arts and Humanities

CEAU Centre for Studies in Architecture and Urbanism

FCT Evaluation: Very Good
Coordinator: José Rodrigues
ceau.arq.up.pt

CETAPS Centre for English, Translation, and Anglo-Portuguese Studies

FCT Evaluation: Excellent
Coordinator: Fátima Vieira
cetaps.com

CITTA Research Centre for Territory, Transports and Environment

FCT Evaluation: Excellent
Coordinator: António Couto
citta.fe.up.pt

ID+ Research Institute for Design, Media and Culture

FCT Evaluation: Very Good
Coordinator: Heitor Alvelos
idmais.org

IF Institute of Philosophy of the University of Porto

FCT Evaluation: Very Good
Coordinator: Sofia Miguens
ifilosofia.up.pt

CEAUP Centre of African Studies of the University of Porto

FCT Evaluation: Good
Coordinator: Maciel Santos
africanos.eu/index.php/pt

CITCEM Transdisciplinary Research Centre Culture, Space and Memory

FCT Evaluation: Very Good
Coordinator: Inês Amorim
citcem.org

i2ADS Research Institute in Art, Design and Society

FCT Evaluation: Very Good
Coordinator: Paulo Almeida
i2ads.up.pt

ILCML Margarida Losa Institute for Comparative Literature

FCT Evaluation: Very Good
Coordinator: Fátima Outeirinho
ilcml.com

Engineering and Technology

CEFT Transport Phenomena Research Centre

FCT Evaluation: Excellent
Coordinator: João Campos
ceft.fe.up.pt

CONSTRUCT Institute of R&D in Structures and Construction

FCT Evaluation: Very Good
Coordinator: Álvaro Cunha
paginas.fe.up.pt/~construct/index.html

LEPABE Laboratory for Process Engineering, Environment, Biotechnology and Energy

FCT Evaluation: Excellent
Coordinator: Luís Madeira
lepabe.fe.up.pt

LSRE-LCM Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials

FCT Evaluation: Excellent
Coordinator: Joaquim Faria
lsre-lcm.fe.up.pt

IT Instituto de Telecomunicações - Porto

FCT Evaluation: Very Good
Coordinator: Ana Aguiar
it.pt/ITSites/Index/5

CERENA Centre for Natural Resources and Environment

FCT Evaluation: Excellent
Coordinator: Lurdes Dinis
cerena.ist.utl.pt

LAETA Associate Laboratory of Energy, Transports and Aeronautics

FCT Evaluation: Excellent
Coordinator: Pedro Camanho
laeta.pt/en

LIACC Artificial Intelligence and Computer Science Laboratory

FCT Evaluation: Excellent
Coordinator: Luís Reis
sigarra.up.pt/feup/pt/uni_geral.unidade_view?pv_unidade=351

INESC TEC Institute for Systems and Computer Engineering, Technology and Science

FCT Evaluation: Very Good
Coordinator: José Mendonça
inesctec.pt/en

SYSTEC Research Centre for Systems and Technologies

FCT Evaluation: Very Good
Coordinator: António Aguiar
systec.fe.up.pt

Health Sciences

CIAFEL Research Centre in Physical Activity, Health and Leisure

FCT Evaluation: Very Good
Coordinator: Jorge Mota
ciafel.fade.up.pt/ciafel.php

CINTESIS Centre for Research in Health Technology and Services Research

FCT Evaluation: Very Good
Coordinator: Altamiro Pereira
cintesis.eu/pt/homepage

MedInUP Centre for Drug Discovery and Innovative Medicines

FCT Evaluation: Good
Coordinator: Patrício Silva
medinup.pt

CIFI2D Centre for Sports Research, Education, Innovation and Intervention in Sport

FCT Evaluation: Good
Coordinator: António Fonseca
cifi2d.fade.up.pt

i3S Institute for Research and Innovation in Health

FCT Evaluation: Excellent
Coordinator: Cláudio Sunkel
i3s.up.pt

EPIUnit Epidemiology Research Unit – Institute of Public Health of the University of Porto

FCT Evaluation: Excellent
Coordinator: Henrique Barros
ispup.up.pt/research

UnIC Cardiovascular Research and Development Centre

FCT Evaluation: Excellent
Coordinator: Adelino Moreira
unic.med.up.pt

UMIB Unit for Multidisciplinary Research in Biomedicine

FCT Evaluation: Very Good
Coordinator: Mariana Monteiro
umib.icbas.up.pt

Exact Sciences

CF-UM-UP Physics Centre of the Universities of Minho and Porto

FCT Evaluation: Very Good
Coordinator: Eduardo Castro
cf-um-up.pt

CICGE Centre for Research in Geospatial Science

FCT Evaluation: Good
Coordinator: Dalmiro Maia
sigarra.up.pt/fcup/pt/uni_geral.unidade_view?pv_unidade=489

CIQUP Research Centre in Chemistry

FCT Evaluation: Excellent
Coordinator: Luís Belchior Santos
fc.up.pt/ciqup

CMUP Centre of Mathematics of the University of Porto

FCT Evaluation: Excellent
Coordinator: Samuel Lopes
cmup.pt

IA Institute of Astrophysics and Space Sciences

FCT Evaluation: Excellent
Coordinator: Jarle Brinchmann
iaastro.pt

IFIMUP Institute of Physics for Advanced Materials, Nanotechnology and Photonics

FCT Evaluation: Excellent
Coordinator: João Araújo
sites.google.com/a/ifimup.up.pt/ifimupsite/home

LAQV/REQUIMTE Associated Laboratory for Green Chemistry

FCT Evaluation: Excellent
Coordinator: Baltazar Castro
requimte.pt

Natural Sciences

CECA Centre for Animal Science Studies

FCT Evaluation: Excellent
Coordinator: José Costa
cecaicetaup.wixsite.com/website

CIIMAR Interdisciplinary Centre of Marine and Environmental Research

FCT Evaluation: Excellent
Coordinator: Vitor Vasconcelos
www2.ciimar.up.pt

ICT Institute of Earth Sciences

FCT Evaluation: Very Good
Coordinator: Helena Silva
icterra.pt

InBIO Research Network on Biodiversity and Evolutionary Biology

FCT Evaluation: Excellent
Coordinator: Nuno Ferrand
cibio.up.pt

GreenUPorto Research Centre on Sustainable Agri-food Production

FCT Evaluation: Excellent
Coordinator: Ruth Pereira
fc.up.pt/GreenUPorto

UCIBIO Applied Biomolecular Sciences Unit

FCT Evaluation: Excellent
Coordinator: Luísa Peixe
ucibio.pt

Social Sciences

cef.up Centre for Economics and Finance at the University of Porto

FCT Evaluation: Very Good
Coordinator: Manuel Martins
cefup.fep.up.pt

CEGOT Centre of Studies in Geography and Spatial Planning

FCT Evaluation: Excellent
Coordinator: Fantina Tedim
cegot.pt/pt/Utilidades/Homepage.aspx

CIIE Centre for Research and Intervention in Education

FCT Evaluation: Excellent
Coordinator: Isabel Menezes
fpce.up.pt/ciie

CIJ Centre for Legal Research

FCT Evaluation: Good
Coordinator: Graça Enes
cij.up.pt

CIPES Centre for Research in Higher Education Policies

FCT Evaluation: Excellent
Coordinator: António Magalhães
cipes.pt

CLUP Centre of Linguistics of the University of Porto

FCT Evaluation: Very Good
Coordinator: Rui Silva
cl.up.pt

CPUP Centre for Psychology at University of Porto

FCT Evaluation: Very Good
Coordinator: Paula Matos
sigarra.up.pt/fpceup/pt/web_base.gera_pagina?p_pagina=CPUP_HOME

IS-UP Institute of Sociology of the University of Porto

FCT Evaluation: Very Good
Coordinator: João Lopes
isociologia.up.pt

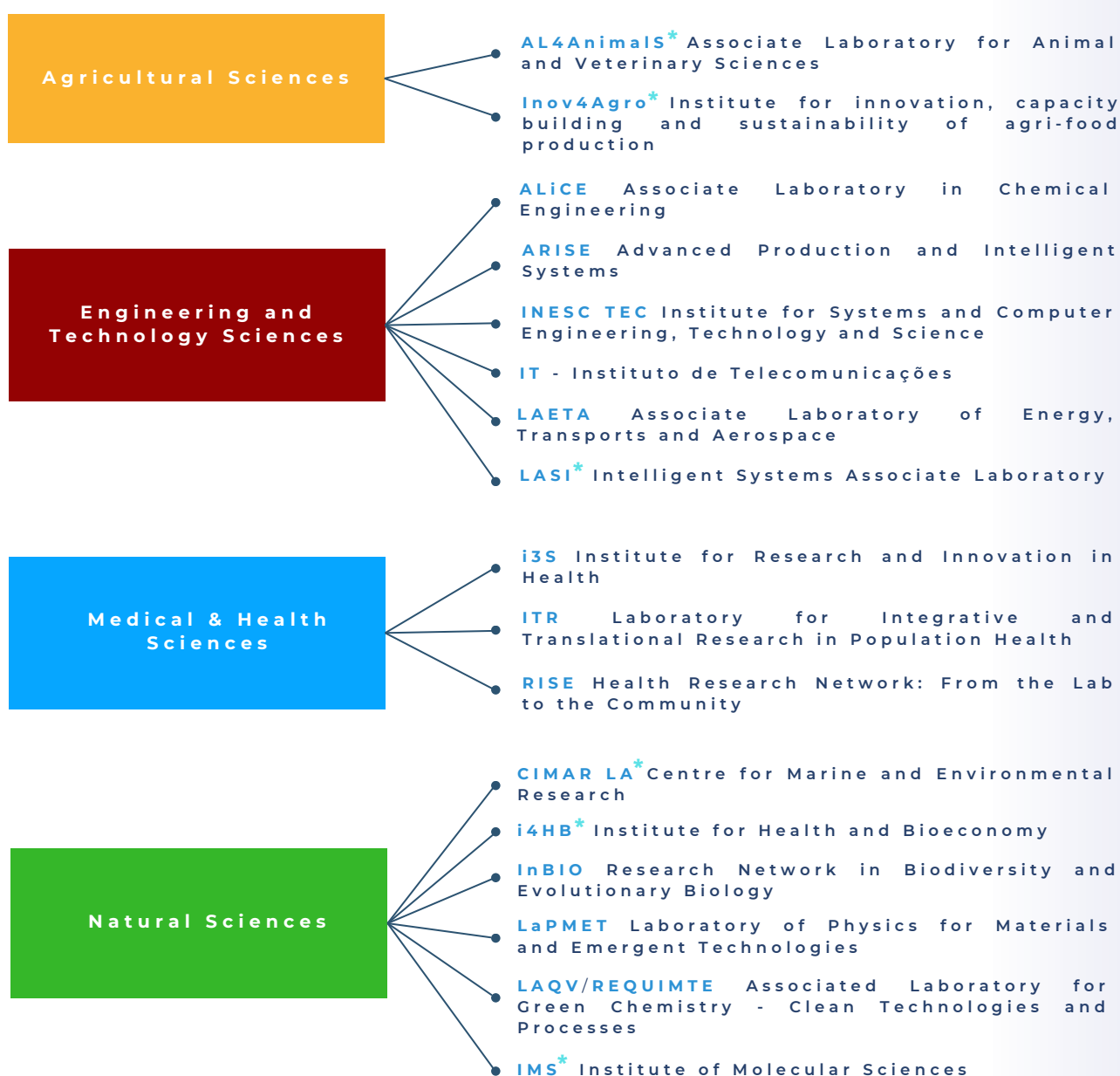


ASSOCIATE
LABORATORIES (LA)



Associate Laboratories (LA) is a national initiative by FCT to encourage the aggregation and organization of human and material resources with the necessary quality and dimension to meet the specific objectives of the national scientific and technological policy in different fields. As a result of the last call for the status of LA

within 2021 - 2025, the U.Porto research ecosystem now integrates 17 laboratories, leading 11 of them. The University sees this participation as an opportunity to enhance synergies between research organizations and research units within and outside the U.Porto. Find out more about the [Associate Laboratories@U.Porto](#) here.



Source: Portuguese Foundation for Science and Technology - FCT, may 2021.

* Labs managed by external institutions - U.Porto participates (total = 6).

Note: The FCT in its Atlas of Associate Laboratories 2022 considers the LA LASI in the area of Natural Sciences. In this publication, it was relocated to the Engineering and Technology Sciences area due to the scope and objectives of the LA.

The background of the page is a photograph of two petri dishes containing microbial cultures. The dish on the left shows a pinkish-red filamentous growth, while the dish on the right shows a blueish-green growth with some darker spots. The entire image is overlaid with a semi-transparent blue filter.

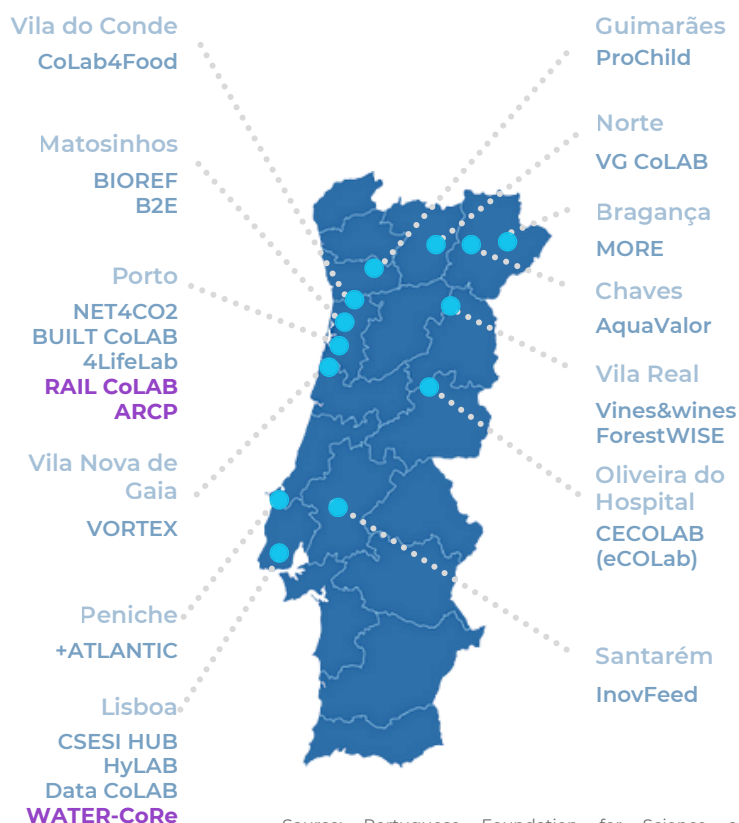
COLLABORATIVE LABORATORIES (CoLAB)

22 CoLAB



U.Porto R&D ecosystem has embraced the governmental initiative to create Collaborative Laboratories (CoLAB), structures that join universities, the business community, technological centres and other institutions, committed to implementing research and innovation agendas aimed at creating economic and social value.

U.Porto currently participates in 22 CoLAB with several thematic areas, being the coordinator of the CoLAB B2E. These structures actively pursue practical, innovative, and sustainable solutions in areas as diverse as agriculture, cybersecurity, food, health, sustainability, environment, circular economy and biorefineries. **In 2022, U.Porto joined 3 new CoLAB: ARCP, RAIL CoLAB, and WATER-CoRe.**



Source: Portuguese Foundation for Science and Technology (FCT) Collaborative Laboratories, 2022.

Agrifood

Vines&Wines



Aims to be the ideal partner in the innovation of products, processes and services of companies in the Portuguese wine sector.
colabvinesandwines.pt

FCUP

CoLab4Food



Aims to develop new products and processes for the food industry and recovery of by-products to reduce waste.
colab4food.com

FCUP
FFUP
FCNAUP
REQUIMTE

FeedInov



Aims to improve safety along the food chain, with an impact on the safety of animal products.
feedinov.com

ICBAS
INESC TEC

Biodiversity & Forests

MORE



Aims to promote the development of mountain regions, with a focus on the Mediterranean.
morecolab.pt

FEUP
REQUIMTE

ForestWISE



Aims to develop research activities, innovation, transfer of knowledge and technology to increase sustainable forest management in Portugal.
forestwise.pt

INESC TEC

Data science

Data CoLAB



Aims to use data to change how we produce, consume and live, from data generation, standardization, analysis, to development of decision support tools.
datacolab.pt

FEP

Climate, Space and Oceans

+Atlantic



Aims at advancing knowledge on the interactions between the Ocean, Atmosphere, Climate and Energy.
colabatlantic.com

FEUP

B2E



Aims to increase the economic and social value of goods and services based on new and existing biological products.
b2e.pt

18 FCUP
ICBAS
INESC TEC

| | |
|--|---|
| <div>WATER-CoRe</div> <div>Collaborative Laboratory focused on Water for Resilient Communities.</div> <div>FEUP REQUIMTE</div> <div>NEW</div> | <div>Energy and Green Hydrogen</div> <div>HyLAB</div> <div>Aims to bring research closer to industrial ecosystems on implementing green hydrogen economy to accelerate energy transition.</div> <div>FEUP INEGI</div> <div>  Laboratório Colaborativo para as Biorrefinarias hylab.pt </div> |
| <div>Energy and Sustainability</div> <div> <div>BIOREF</div> <div>ProBiorefinery</div> </div> <div>Aims to enhance and transfer scientific knowledge, technologies and innovation into the development of biorefineries.</div> <div>FEUP</div> <div>  Laboratório Colaborativo para as Biorrefinarias bioref-colab.pt </div> | <div>NET4CO2</div> <div>  </div> <div>Aims to contribute to the economic and social value of goods and services based on new and existing biological products.</div> <div>FEUP REQUIMTE</div> <div> net4co2.pt </div> |
| <div>VG CoLAB</div> <div>  VASCO DA GAMA COLAB INNOVATION FOR A BETTER WORLD </div> <div>Aims to provide high-tech product services & solutions in electrochemical energy, both to partners and market.</div> <div>FEUP INESC TEC</div> <div> energystoragecolab.com </div> | <div>SeLAB</div> <div>CSESI Hub</div> <div>  </div> <div>Aims to ensure the development, deployment and adoption of new energy downstream solutions.</div> <div>INESC TEC</div> <div> smartenergylab.pt </div> |
| <div>Information Systems</div> <div>VORTEX</div> <div>  VORTEX CoLab </div> <div>Aims to reduce the gap between research institutions, government laboratories, industry, market, economy & society.</div> <div>INESC TEC</div> <div> vortex-colab.com </div> | <div>Social Services</div> <div>ProChild</div> <div>  laboratório colaborativo </div> <div>Aims to develop a national strategy to fight poverty and social exclusion in childhood.</div> <div>FPCEUP ISPUP</div> <div> prochildcolab.pt </div> |
| <div>Materials, Circular Economy & Urban Sustainability</div> | |
| <div>BUILT CoLAB</div> <div>  BUILT COLAB DIGITAL BUILT ENVIRONMENT </div> <div>Aims to promote the digital and climate transition of buildings and infrastructures.</div> <div>FEUP INESC TEC</div> <div> builtcolab.pt </div> | <div>CECOLAB</div> <div>(eCoLab)</div> <div>  CIRCULAR ECONOMY </div> <div>Aims to support the transition from a linear economy model to an economy responsible for resources and people, more efficient in its life cycle.</div> <div>FEUP</div> <div> cecolab.pt </div> |
| <div>RAIL CoLAB</div> <div>RAIL CoLAB</div> <div>NEW</div> | <div>Valorization and Water Technology Transfer</div> <div>AquaValor</div> <div>  </div> <div>Aims to respond to existing needs not met by companies and to create new channels for the transfer of knowledge to the economic fabric.</div> <div>INESC TEC</div> <div> aquavalor.pt </div> |
| <div>Health</div> <div>4LifeLab</div> <div>  4LifeLAB </div> <div>Aims to position Portugal in the global value chain of health markets, contributing to improve the quality of life.</div> <div>FMUP</div> <div> 4lifelab.pt </div> | <div>ARCP</div> <div>  REDE DE COMPETÊNCIA EM POLÍMEROS </div> <div>Aims at being a Centre of Excellence in polymer science and technology, promoting innovation and competitiveness.</div> <div>FEUP</div> <div> arcp.pt </div> <div>NEW</div> |



CLINICAL ACADEMIC CENTERS

2 CLINICAL ACADEMIC CENTERS



Supported by the FCT, the Clinical Academic Centers (CAC) are composed of health care units, research and development units (R&D), and organic units of higher education institutions, with evaluation and multi-year funding oriented towards the development, internationalization, and sustained and cooperative progress of high quality clinical and translational research, as well as biomedical innovation activity.

In 2022, FCT coordinated the first CAC pluri-annual evaluation and funding process, resulting in the establishment of 12 CAC. Of these, **U.Porto currently integrates 2 of them.**



CCHUdSA-ICBAS CLINICAL ACADEMIC CENTRE

Institute of Biomedical Sciences Abel Salazar (ICBAS/U.Porto)
+
Santo António Hospital and University Centre (CHUdSA)



CUME - UNIVERSITY CENTRE OF MEDICINE

Faculty of Medicine (FMUP/U.Porto)
+
São João Hospital Centre (CHSJ)

Source: Portuguese Foundation for Science and Technology (FCT), www.fct.pt/en/financiamento/programas-de-financiamento/instituicoes-de-id/centros-academicos-clinicos.

A laboratory scene with a gloved hand using a pipette near a microscope and test tubes. The image has a blue tint. A hand in a blue nitrile glove is holding a pipette, dispensing liquid into a rack of test tubes. In the background, a microscope is visible. The text "CLINICAL RESEARCH CENTERS" is overlaid in white, bold, sans-serif font, with a horizontal line above the word "CLINICAL".

CLINICAL RESEARCH CENTERS

1 CLINICAL RESEARCH CENTERS



Supported and promoted by AICIB (Agency for Clinical Research and Biomedical Innovation), the Clinical Research Centers (CIC in Portuguese: Centros de Investigação Clínica) carry out clinical studies and can be located in public or private health establishments, laboratories, or other locations.

They aim to stimulate, promote, and develop clinical research projects resulting from researchers, health professionals or industry initiatives.

From 42 at the national level, **U.Porto** currently integrates with 1 of them.



Centro Hospitalar Universitário
São João (CHUSJ)

Faculty of Medicine (FMUP/U.Porto)







RESEARCH INFRASTRUCTURES

24

RESEARCH INFRASTRUCTURES

included in the National Roadmap - FCT



| | | |
|---|--|----|
|  | Energy | |
| | SGEVL * | 1 |
|  | Environment | |
| | C4G | |
| | EMBRC.PT | |
| | EMSO-PT | |
| | PORBIOTA * | 5 |
| | AIR Centre | |
|  | Health & Food | |
| | GENOMEPORTUGAL | |
| | PPBI * | |
| | RNEM | |
| | BioData.pt | |
| | RNCCC | |
| | CRYOEM-PT | |
| | PtCAC | |
| | PtCRIN | |
| | Pt-mBRCN/MIRRI-PT | |
| | PT-OPENSREEN * | 10 |
|  | Physical Sciences & Engineering | |
| | Engage SKA | |
| | NECL * | |
| | TEC4SEA * | |
| | Windscanner.PT * | 6 |
| | PTNMR | |
| | CECOLAB | |
|  | Social & Cultural Innovation | |
| | PRISC | 1 |
|  | Digital Infrastructures | |
| | RNCA | 1 |

Source: Portuguese Foundation for Science and Technology (FCT)'s Portuguese Roadmap of Research Infrastructures 2020 update, June 2020.

* Research infrastructures coordinated by U.Porto (total = 7).



2

RESEARCH AREAS

6 RESEARCH AREAS



Globally, the multidisciplinary teams of U.Porto's R&D ecosystem focus their activity on scientific areas aligned with the scientific domains evaluated by FCT. Taking into account **6 broad Research Areas**, each of U.Porto's research areas bring together a critical mass of

quality and modern research infrastructures that enable the development of research of excellence, based on the R&D Units that make up the U.Porto's R&D ecosystem, and that are committed to providing robust responses to the main global and societal challenges.

9

RESEARCH
UNITS

**ARTS AND
HUMANITIES**

10

RESEARCH
UNITS

**ENGINEERING AND
TECHNOLOGY
SCIENCES**

7

RESEARCH
UNITS

**EXACT
SCIENCES**

8

RESEARCH
UNITS

**HEALTH
SCIENCES**

6

RESEARCH
UNITS

**NATURAL
SCIENCES**

8

RESEARCH
UNITS

SOCIAL SCIENCES

Source: Research Areas listed in the [ECT Atlas of R&D Units \(2022\)](#).

RESEARCH UNITS CONTRIBUTION TO THE SDGs

In all its activities, U.Porto is strongly committed to the Sustainable Development Goals (SDGs) of the **2030 Agenda of the United Nations**. Out of the 17 SDGs, in percentage terms, research unit's scientific activity is mostly aligned with the SDGs *Industry, innovation and infrastructure* (9), *Good health and well-being* (3), *Quality education* (4), *Climate*

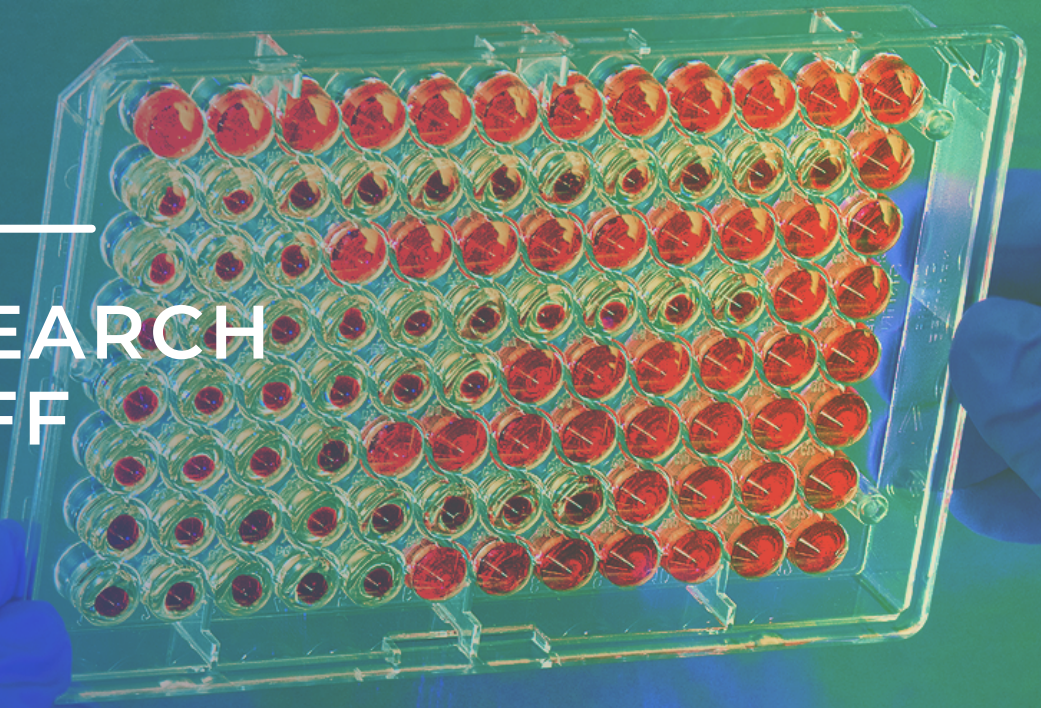
action (13), and with *Sustainable cities and communities* (11). U.Porto's research alignment with the SDGs demonstrates its commitment not only with supporting the sustainable development through teaching, research and the promotion of innovative scientific projects, but also with incorporating these goals in the pursuit of its strategic objectives.



Source: Serviço de Investigação e Projetos, Grupo de Trabalho para a Investigação e Angariação de Financiamento, 2021.

3

RESEARCH
STAFF

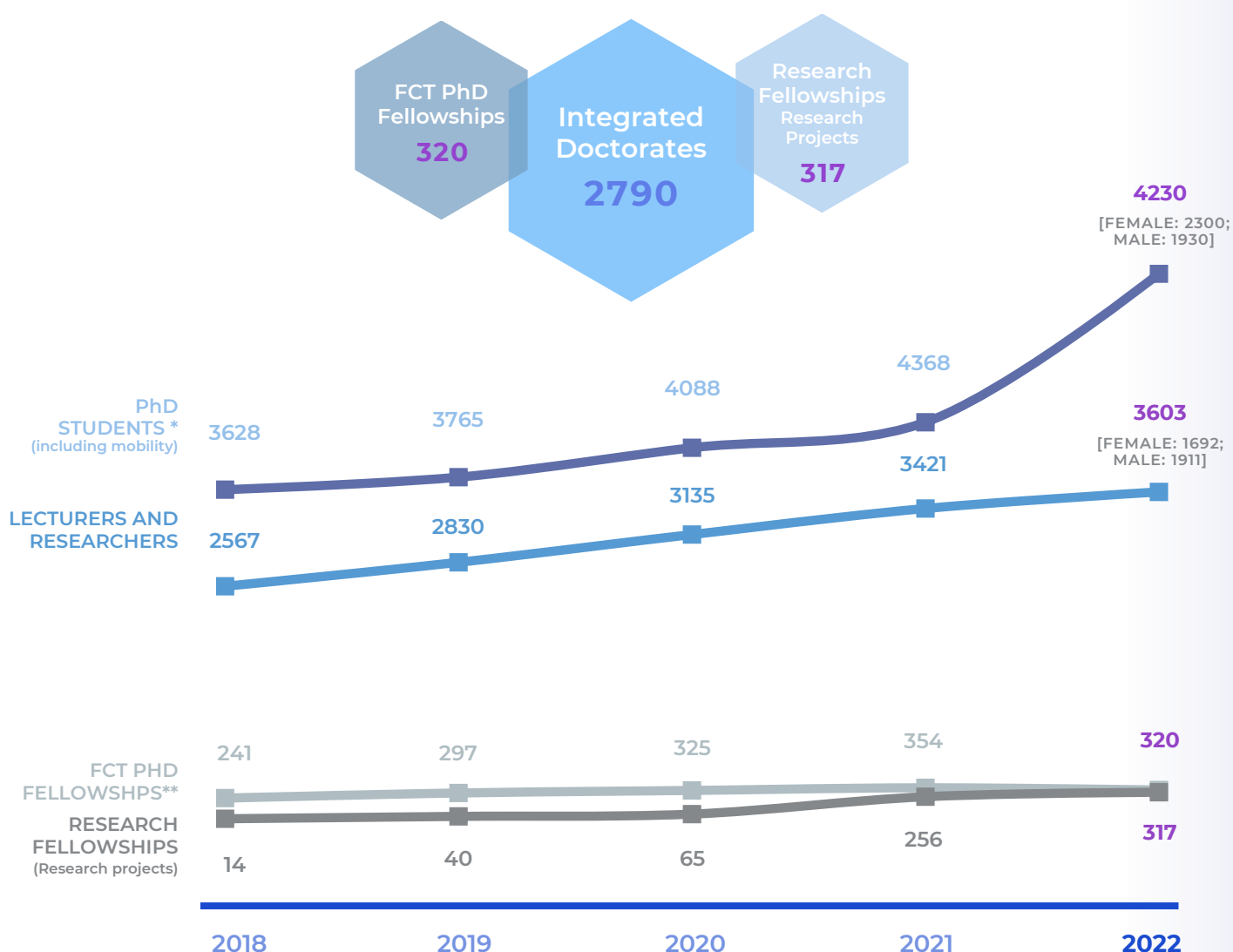


U.PORTO RESEARCH STAFF

The University of Porto is Portugal's second largest university and one of the most prestigious teaching and research institutions in the country, with **more than 3600 lecturers and researchers** [Female: 1692; Male: 1911], and **over 36.000 students** [Female: 16533; Male: 19713] (5% in mobility programmes) (as of 2022). U.Porto's quality and diversified profile guarantees the

fulfilment of its overall mission of creating scientific, cultural, and artistic knowledge, providing higher education firmly rooted in research, valorizing knowledge both socially and economically, actively contributing to the progress of the society.

2022



Source: For Lecturers and Researchers: "Recursos Humanos da Universidade do Porto 2022", Núcleo de Planeamento, 2022.

* In PhD STUDENTS, the total number of students presented for each year corresponds to the total registered students during the academic year (e.g. 2018 corresponds to the academic year 2018/2019).

**Corresponds to the number of fellowships awarded and not to the number of fellowships contracted.

4

FLAGSHIP INITIATIVES

IJUP MEETING OF YOUNG RESEARCHERS OF UNIVERSITY OF PORTO

Held since 2008, the Meeting of Young Researchers of University of Porto is a pioneering initiative in Portugal that seeks to encourage the engagement of U.Porto students / young researchers in R&D activities, as early as possible, in their university education path.

2022: 15th EDITION

1154

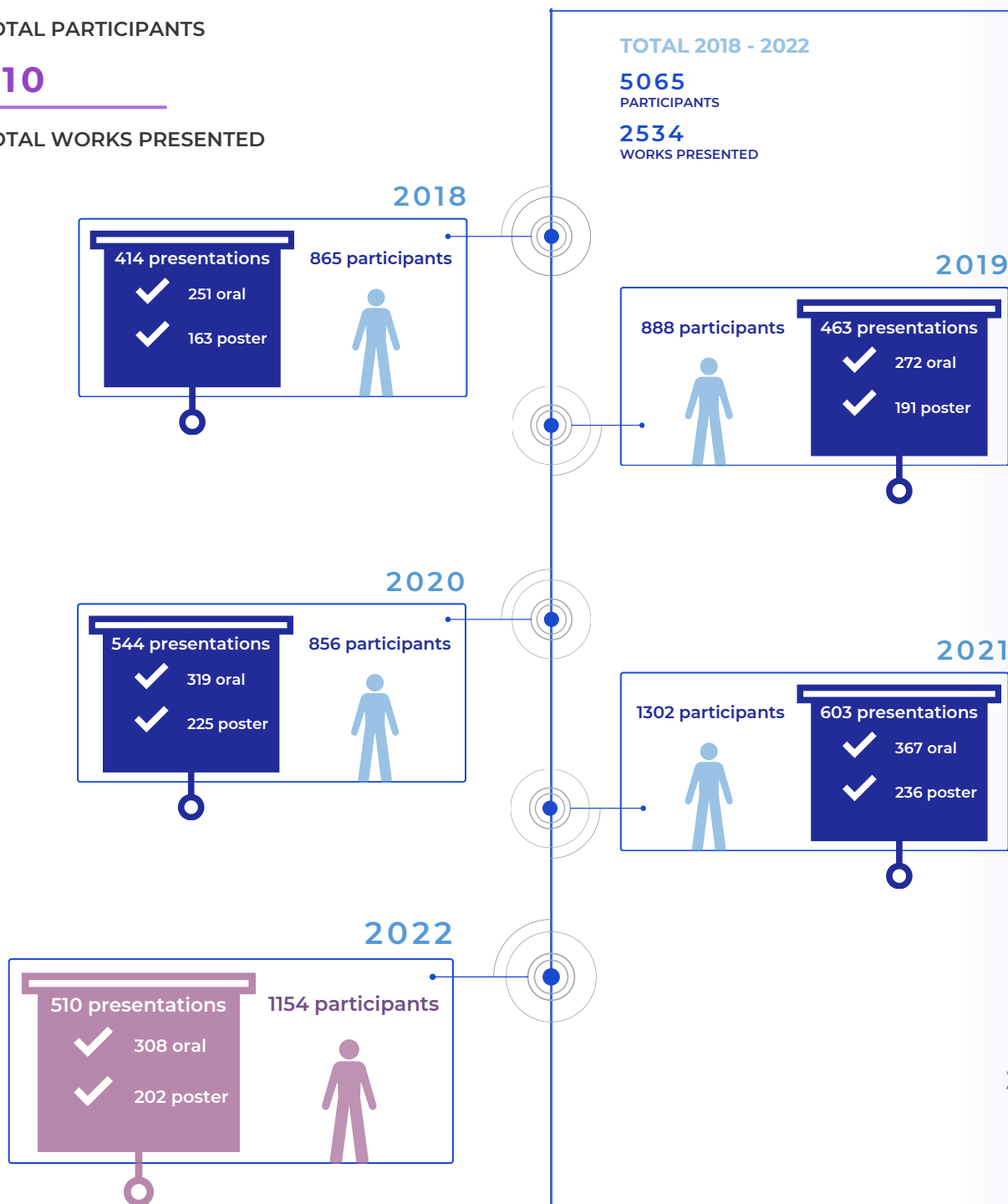
TOTAL PARTICIPANTS

510

TOTAL WORKS PRESENTED



INVESTIGAÇÃO JOVEM
DA UNIVERSIDADE DO
PORTO



U.PORTO THREE MINUTE THESIS (3MT®)

The U.Porto 3MT® is an academic competition for doctoral research students developed and patented by the University of Queensland (UQ) that challenges PhD students to explain, to a non-specialist audience, the importance and significance of their research, in just 3 minutes, and using no more than a single PowerPoint slide as an aid.

School year 2021/22: 1st EDITION

54

[FEMALE: 42; MALE: 12]

TOTAL REGISTERED PARTICIPANTS

21

TOTAL PRESENTATIONS



JOANA OLIVEIRA
FCUP

Winner



DIANA FELIZARDO
ICBAS-FMUP

Runner up



SCHOOL YEAR 2021/22

54 candidates
21 finalists



EMERGENCE@U.PORTO

The Digital Media Science Communication Hackathon - EMERGENCE@U.PORTO - is an initiative that aims to deepen skills in science communication. Through teamwork and in a multidisciplinary environment, the initiative brings together qualified professionals in art, programming, communication and research from U.Porto research ecosystem.

2022: 3rd EDITION

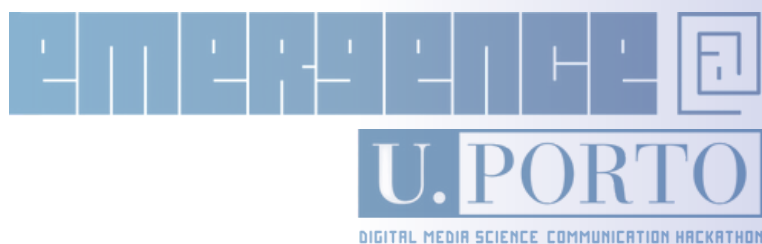
23

[FEMALE: 12; MALE: 11]

TOTAL PARTICIPANTS

6

DEVELOPED PROJECTS



TOTAL 2019 - 2022

70

PARTICIPANTS

18

MENTORS

18

DEVELOPED PROJECTS

2019



2021



2022



SCIENTIFIC EXCELLENCE AWARD

Since 2018, the University of Porto's Scientific Excellence Award aims to recognize and boost the scientific activity and career of the U.Porto research ecosystem, by distinguishing, on an annual basis, outstanding researchers of the university, according to the degree of excellence and impact of their research.



2022 5th edition



Nuno Santos, FCUP / CAUP
Space Sciences

"This award reflects the support I have had from the University of Porto over the years. But despite being an individual award, I also owe it to the excellence of the researchers in the team I coordinate. The prize is theirs too."

Other Awards

- 2022 ERC Advanced Grant
- 2012 SEIVA Award - Sciences
- 2010 Viktor Ambartsumian International Prize
- 2009 ERC Starting Grant

1st edition 2018



Adelino Leite Moreira, FMUP / UnIC
Health Sciences

3rd edition 2020



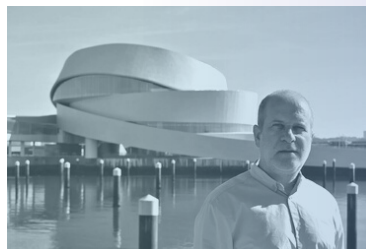
Pedro Camanho, FEUP / INEGI
Engineering and Technology Sciences

2019 2nd edition



Helder Maiato, i3S / FMUP
Health Sciences

2021 4th edition



Vitor Vasconcelos, FCUP / CIIMAR
Marine Sciences

5

PUBLICATIONS AND KNOWLEDGE TRANSFER & VALORIZATION

PUBLICATIONS AND KNOWLEDGE TRANSFER & VALORIZATION

Assuming itself as a research-oriented University, U.Porto's R&D ecosystem is one of the main producers of science in Portugal.

The effort and investment in qualified human resources has been essential to ensure the competitiveness of the scientific production of the U.Porto.

25 249 TOTAL PUBLICATIONS 2016-20 WEB OF SCIENCE (WoS)

| | |
|----------------------------------|---------------|
| 2018 | 4 773 |
| 2019 | 5 332 |
| 2020 | 5 807 |
| WITH INTERNATIONAL COLLABORATION | |
| 2018 | 2 566 (53,8%) |
| 2019 | 2 812 (52,7%) |
| 2020 | 3 226 (55,6%) |

Source: U.Porto, Gabinete de Avaliação e Qualidade, October 2022.



1997 126 SUPPORTED INVENTORS 2003-22 in 2022

| | |
|--------|---------------------------------------|
| 501 | ACTIVE PATENTS in 2022 |
| 410 54 | GRANTED PATENTS 2003-22 in 2022 |
| 85 9 | NATIONAL PATENTS 2003-22 in 2022 |
| 325 45 | INTERNACIONAL PATENTS 2003-22 in 2022 |

Source: U.Porto Inovação, July 2023.

6

RESEARCH NETWORKS AND INTERNATIONAL COOPERATION

RESEARCH NETWORKS AND INTERNATIONAL COOPERATION

To strengthen the internationalization and empowerment of the research "made in U.Porto", the University integrates several research networks. Besides fostering the development of scientific knowledge of researchers, and promoting the integration and relationship of the

scientific community of the U.Porto with other internationally recognized counterparts, the participation of the U.Porto in these research networks is one of the main components of the internationalization strategy of the University.

UNESCO CHAIRS

The UNESCO Chairs Programme, launched in 1992, aims to promote international inter-university cooperation and networking to enhance institutional capacities through knowledge sharing and collaborative work. Within this framework, U.Porto has been assigned **3 UNESCO Chairs**: *Life on Land* (2018), *Heritage, Cities and Landscapes, Sustainable Management, Conservation Planning and Design* (2019), and *Ocean Expert - Science Education of Children for Ocean Stewardship: in Support of the Sustainable Ocean Economy* (2022).



2018

Life on Land



2019

Heritage, Cities and Landscapes.
Sustainable Management,
Conservation Planning and Design



2022

Ocean Expert - Science Education
of Children for Ocean Stewardship:
in Support of the Sustainable
Ocean Economy



COST ACTIONS

COST Actions are interdisciplinary research networks that bring researchers and innovators together to investigate a topic of their choice for 4 years. Typically made up of researchers from academia,

SMEs, public institutions, and other relevant organizations or interested parties. Since 1999, U.Porto's R&D ecosystem has consistently taken part in COST Actions, in several research areas.

IN 2022

30

COST Actions initiated, in which U.Porto is involved

FROM 1999-2022

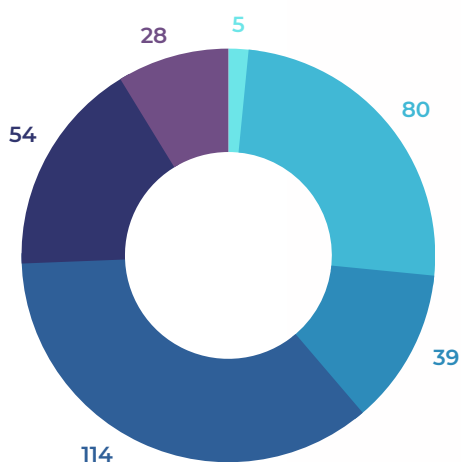
443

[FEMALE: 251; MALE: 192]

Number of U.Porto members involved in COST Actions

320

COST Actions in which U.Porto is or was involved



Research Areas

- Arts and Humanities
- Engineering and Technology Sciences
- Exact Sciences
- Health Sciences
- Natural Sciences
- Social Sciences



EUROPEAN UNIVERSITY ALLIANCE FOR GLOBAL HEALTH

The European University Alliance for Global Health (EUGLOH) is a strategic partnership between the Université Paris-Saclay (UPSaclay), Lund University (LU), Ludwig-Maximilians-Universität München (LMU), Universidade do Porto (U.Porto) and the University of Szeged (UZG), in the context of the European Commission's European Universities Initiative.

IN 2022

399

Students in activities

(138 from U.Porto) [FEMALE: 80; MALE: 57;
NON-BINARY: 1]

12

Research-related activities

(1 hosted by U.Porto)

FROM 2020-2022

1262

Students in activities

(421 from U.Porto)

23

Research-related activities

(1 hosted by U.Porto)

In 2022, 4 more universities joined EUGLOH: University of Alcalá (UAH), Arctic University of Norway (UiT), University of Novi Sad (UNS), and Universität Hamburg (UHH). Within this network, a consortium of researchers and students develop interdisciplinary activities, particularly in education and training, related to global health.



EUROPEAN UNIVERSITY ALLIANCE FOR GLOBAL HEALTH

The EUGLOHRIA project consolidates the EUGLOH Alliance's efforts and achievements towards establishing a European University around Global Health, by broadening its scope to include the 'Research and Innovation' dimension. The coordinated actions within this Alliance

will revolve around following transformational modules on a joint Research & Innovation agenda, sharing infrastructures and resources, and promoting Academia-Business cooperation.

IN 2022

156

Academic & administrative staff
in research-related activities

(35 from U.Porto)

3

Research-related activities

FROM 2021-2022

219

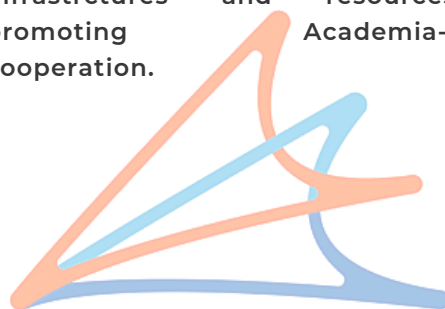
Academic & administrative staff in
research-related activities

(55 from U.Porto)

6

Research-related activities

(2 hosted by U.Porto)



EUGLOHRIA



IACOBUS

The IACOBUS Program encourages cooperation and exchange between staff from higher education entities in the Euroregion Galicia-Northern Portugal, facilitating the sharing of training, research, and dissemination

activities. U.Porto has encouraged and supported the participation of the research ecosystem in the annual calls for funding for 'Research Stays' and 'Scientific Publication Support' (Papers).

IN 2022

STAYS

31

Incoming

[FEMALE: 16;
MALE: 15]

5

Outgoing

[FEMALE: 2
MALE: 3]

ARTICLES

20

Supported articles

8.7 k€

Total funding attributed

FROM 2018-2022

STAYS

93

Incoming

30

Outgoing

ARTICLES

79

Supported articles

38.3 k€

Total funding attributed

PROGRAMA
IACOBUS

7

RESEARCH FUNDING

RESEARCH FUNDING

U.Porto's ecosystem continuously pursues competitive external funding to support research, development and innovation activities, including the protection and enhancement of R&D results. *



NATIONAL FUNDING



Fundação
para a Ciência
e a Tecnologia



RESEARCH UNITS

70.6 M€

Total funding 2020-2023



ASSOCIATE LABORATORIES

33.8 M€

Total funding 2021-2025

FCT: PROJECTS IN ALL SCIENTIFIC DOMAINS

166

851

Total projects 2017-2022

Total projects in 2022

15.4 M€

Total raised funding in 2022

118.5 M€

Total raised funding 2017-2022

* All data presented in this section considers the U.Porto R&D ecosystem.



NATIONAL FUNDING

PORTUGAL 2020



414 *

Total coordinated projects in 2022

* Funding not included: FCT 2017 (SAICT-45-2017-02), Doctoral programs (NORTE-69-2015-15) and Research Units funding FCT (SAICT-45-2015-01)

265

Projects in execution in 2022

PORTUGUESE RECOVERY AND RESILIENCE PLAN (PRR)



36

51

Total projects 2020-2022

Total projects in 2022

50.4 M€

Total raised funding in 2022

96.3 M€

Total raised funding 2020-2022



INTERNATIONAL FUNDING

HORIZON EUROPE



49

Total projects in 2022

51

Total projects 2021-2022

24.2 M€

Total raised funding in 2022

24.8 M€

Total raised funding 2021-2022

EUROPEAN RESEARCH COUNCIL (ERC) GRANTS

6

[FEMALE: 3;
MALE: 3]

ERC Grants in 2022

18







Total ERC Grants 2009-2022

18.9 M€

Total raised funding in 2022

37.9 M€

Total raised funding 2009-2022

| | | |
|--|---|---|
|  SUSANA SOARES LAQV/REQUIMTE Starting Grant |  ANDRÉ TAVARES FAUP Consolidator Grant |  NUNO SANTOS CAUP Advanced Grant |
|  BRUNO LOFF FCUP Starting Grant |  RITA LADO FEUP Starting Grant |  SALOMÉ PINHO i3S Synergy Grant |



European Research Council
Find out more about the
ERC Grantees@U.Porto [here](#).



INTERNATIONAL FUNDING

"la Caixa" FOUNDATION

4

Total projects in 2022

17

Total projects 2018-2022

1.6 M€

Total raised funding in 2022

4.1 M€

Total raised funding 2018-2022



Health
Research Call

7

Impulse
Validate

8

Social
Research Call

2

3.4 M€

480 k€

197 k€

EEA GRANTS *

49

Total projects 2004-2021

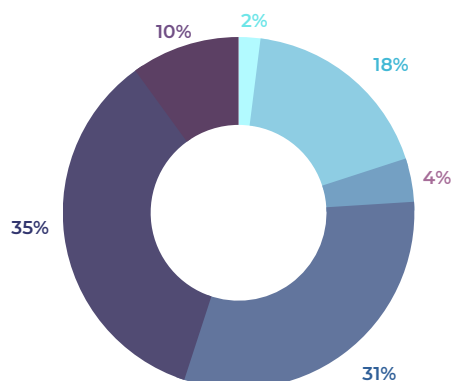
30

Coordinated projects

8.1 M€

Total raised funding 2004-2021

Iceland
Liechtenstein
Norway grants



Research Areas

- Art
- Environment and Climate Change
- Gender Equality
- Health
- Integrated Marine & Coastal Management & Blue Growth
- Social Sciences

48

* No data available for 2022.



INTERNATIONAL FUNDING

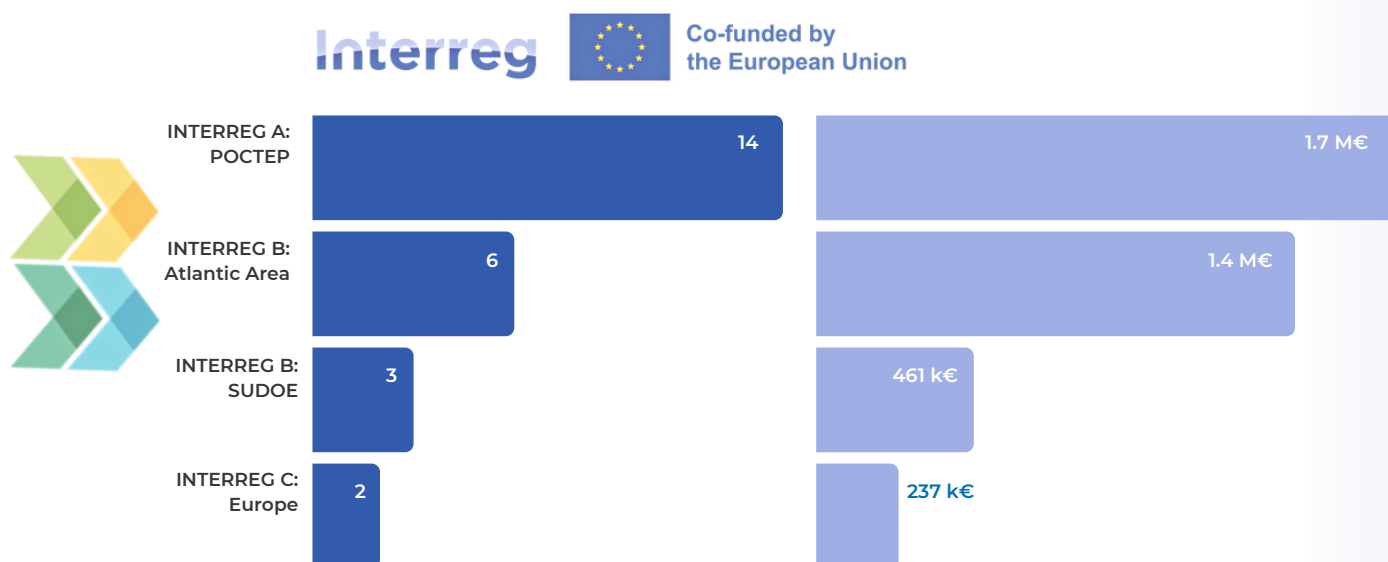
INTERREG *

25

Total projects 2018-2021

3.9 M€

Total raised funding 2018-2021



* No data available for 2022.



U. PORTO