



NOVA SCIENCE



NOVA UNIVERSITY
LISBON

2021 / 2022

CONTENTS

NOVA SCIENCE

Copyright 2022©
by NOVA University Lisbon

TITLE

NOVA Science

PROPERTY

NOVA University Lisbon
Campolide Campus
1099-085 Lisboa
Portugal
Tel.: +351 213 715 600
E-mail: nova.research@unl.pt
www.unl.pt

December 2022
Published Annually

COORDINATION

Research Office
Communication Office

DESIGN

Carlota Terenas
www.thisiscart.com

PHOTOGRAPHY

NOVA's Rectorate and Academic Units*
Collaborative Laboratories
Associate Laboratories
Projects' Principal Investigators
CML – City Council of Lisbon

PRINTING

Imprensa Nacional Casa da Moeda, S.A.

PRINTING RUN

500

ISSN

2184-3775

LEGAL DEPOSIT

447909/18

* The Coordination team acknowledges the contribution of all Academic and Research Units of NOVA and to the coordinators of all the Collaborative Laboratories and Associate Laboratories that NOVA coordinates or participate, for all the images, figures and schemes provided for this year's magazine edition.

1

04
WELCOME
TO NOVA

2

06
A WORD FROM
THE RECTOR

3

08
MESSAGE FROM
THE VICE-RECTOR
FOR RESEARCH

4

10
RESEARCH

5

16
CAMPUS SUL

6

20
COLLABORATIVE
LABORATORIES
(CoLAB)

7

30
ASSOCIATE
LABORATORIES

8

52
GENDER
EQUALITY PLAN

9

54
NOVA
SMART CAMPUS
LIVING LAB

10

56
INNO
NOVA CENTER FOR
SOCIAL INNOVATION

11

58
SCIENCE DAY
@ SOUTH 2021

12

60
COLLABORATIVE
RESEARCH AWARD
SANTANDER-NOVA



1 WELCOME TO NOVA



BB

With campuses located across the Metropolitan Area of Lisbon and a brand new one now opening in Cairo, NOVA's mission is to serve society locally, regionally, and globally, advancing and disseminating knowledge and understanding across cultures and people.

NOVA University Lisbon has Academic Units in Lisbon, Almada, Oeiras and in Cascais:

- NOVA School of Science and Technology
- NOVA School of Social Sciences and Humanities
- NOVA School of Business and Economics
- NOVA Medical School
- NOVA School of Law
- NOVA Institute of Hygiene and Tropical Medicine
- NOVA Information Management School
- NOVA Institute of Chemical and Biological Technology António Xavier
- NOVA National School of Public Health
- Rectorate

NOVA University Lisbon is a public institution of higher education with internationally recognized research and quality teaching that ensure high professional success to its students.

It is an open and diverse hub of talent that includes over 23,000 students, of which 18% are international, 1,665 faculty and researchers, 1,135 higher education professionals, and an alumni community with over 100,000 members.

Founded in 1973, under the values of democracy, tolerance, solidarity, and freedom, NOVA has been delivering quality teaching, research of excellence and impactful innovation in a wide set of areas ranging from engineering and technology, humanities, medicine, health and life sciences, economics and management, social sciences, law and data, and information science.

With campuses located across the Metropolitan Area of Lisbon and a brand new one now opening in Cairo, NOVA's mission is to serve society locally, regionally, and globally, advancing and disseminating knowledge and understanding across cultures and people.

In order to contribute decisively to building a better future, NOVA's vision is to become an increasingly more global and civic university. For NOVA, this means to be a high international profile, student-centered, collaborative institution that is open to the world, and recognized by reputable organizations. Nevertheless, it also means to address some of today's global and local challenges in impactful ways, through knowledge and interdisciplinarity, with a deep sense of commitment and social responsibility.

2

A WORD FROM THE RECTOR

JOÃO
SÀÁGUA
NOVA UNIVERSITY LISBON



2

SCIENCE AT NOVA – TOWARDS A SUSTAINABLE SOCIETY

Research is one of the fundamental pillars of universities and, as such, represents one of their greatest assets, but constrained public funding for Higher Education and the emphasis placed on university-industry interactions means that universities are increasingly required to compete for funds to support research development.

The main EU funding program for research and innovation, Horizon Europe, is quite ambitious and very much connected to the European Green Deal and to the UN Sustainable Development Goals. It aims to boost competitiveness and the growth of the EU itself, by fostering collaboration and enhancing the impact of research and innovation on development, with a strong emphasis on sustainability challenges.

On the other hand, our national funding for research, mainly provided by the Foundation for Science and Technology, goes exactly in the same direction as the European funding. And, in the current post-pandemic context, the funding outlined in Portugal's Recovery and Resilience Plan for the "knowledge and innovation agendas", for the mobilizing agendas/alliances for business innovation and for the green agendas/alliances for innovation, will naturally bring fundamental research and companies closer together, via innovation based on scientific knowledge.

Hence, it becomes very clear that addressing sustainability, as the main challenge of this century, has to be more than an academic exercise for universities. It is an opportunity to create awareness and recognition of the relevance of HEI in society, including among government officials and policymakers, and to make mission-oriented projects at the top of the research agendas.

NOVA University, as a global and civic university strongly committed to the sustainable development of society, has embraced that mindset and is determined to lead by example.

We have proven to be true providers of knowledge and skills that are necessary to meet and tackle the complexity of challenges at the local, regional, and global level. But we cannot take the responsibility for a sustainable global future alone because the challenges are quite many and very complex. They require interdisciplinarity and smart cooperation within the university as well as between NOVA and all relevant stakeholders.

Also, our contribution to a more sustainable society can and must take place at the local level as well, not only around the areas where NOVA is placed but also in the south and hinterland regions of Portugal. A good example is our partnership with the University of Évora and the University of Algarve in the "South Campus" project, which aims to contribute to the regional cohesion of Lisbon and Tagus Valley, Alentejo and Algarve, using the knowledge and innovation capacity existent in each university. This commitment foresees a strong collaboration with these two institutions, and their partners, at national and international level, in critical areas such as Land, Sea and Heritage. And it is my belief that this mission-oriented approach will make an incremental contribution to the territorial cohesion and resilience of the South of Portugal.

In conclusion, research for sustainability is a major opportunity for NOVA to take on its responsibility as a key player in addressing the problems that affect the present and the future of humankind and, by doing so, to become a driving force for sustainability.

João Sàágua



Addressing sustainability, as the main challenge of this century, has to be more than an academic exercise for universities.

3

MESSAGE FROM THE VICE- RECTOR FOR RESEARCH

**ISABEL
ROCHA**
NOVA UNIVERSITY LISBON



3

LEADERSHIP IN SCIENCE

Research at NOVA has been associated with Excellence and Impact. Excellence is evidenced by the fact that the vast majority of our research centres are classified as Excellent or Very Good by international panels, while impact can be demonstrated by our spin-off companies, participation in CoLABs, our researchers' support for policy making, social innovation or partnerships with industry.

During 2022, the new Associate Laboratories approved in 2021 by FCT IP were launched, involving some of our excellent centres. NOVA leads three Associate Laboratories and participates in seven others, in areas from Life and Health Sciences to Sustainability, Materials Engineering, Intelligent Systems or History and Heritage. This year, the NOVA Science magazine highlights the activities of these Associated Labs. Regarding Impact, we also emphasize in this edition relevant activities in Social Innovation, gathered together in the INNO Technology Transfer and Valorization Center, located in Campolide or the South Campus initiative aiming to create value in a wider region of the country, highlighted in NOVA Science Day 2021.

The topic of NOVA Science Day 2022 – Leadership in Science – is very much related with Excellence and Impact. Leadership in Science is demonstrated in the capacity to have innovative ideas and lead projects to implement those, attracting funding. It is also the ability to lead young scientists, inspiring them to excel and giving them the tools for an independent career. However, it is increasingly about the ability to lead impact creation. Impact refers to the Universities' third mission. In the past, terms such as knowledge transfer or valorisation were more common, but it became clear that those correspond to a somehow limited vision of the mission of Universities, while also limiting the contribution of for example basic research or humanities to our third mission. Therefore, leadership in impact might arise for example from leading science communication programs or contributing to the University's local democratic mission, establishing deep relationships with the community, besides leading knowledge valorisation activities. By inviting our current Leaders in Science to participate in the 2022 Science Day, I hope we can launch an important

“

Leadership in impact might arise from leading science communication programs or contributing to the University's local democratic mission, establishing deep relationships with the community.

discussion on the conditions required to promote leadership, helping to shape our policies and fine-tune investments.

There are many challenges ahead of us, for which everyone's contribution is required. In 2023 we will have to focus more on Open Science policies. We will design and implement new programs to foster interdisciplinarity. We will have another round of evaluation of our research units by FCT IP. But, perhaps, our main challenge will be the implementation of a new assessment system applicable to all researchers with PhD hired by NOVA. The new regulation is being finished with the contribution of the different bodies at NOVA and will be in public discussion in the beginning of 2023. Our ambition is to offer a tool inspired in international best practices, namely the principles elaborated by the Coalition for Advancing Research Assessment, a recently formed European coalition with hundreds of signatories, including NOVA. Those principles embrace the priorities mentioned above regarding impact and leadership, affirming the importance of recognizing the diversity of contributions of researchers and the need to make an appropriate and limited use of quantitative indicators for assessing research, such as number of publications or journal impact factors. The implementation of those principles for assessing research at the different levels, from individual researchers to research centres or universities will be a challenge, but I am convinced that it is an effort worth pursuing for the benefit of our researchers and for a more impactful research. ■ ■ Isabel Rocha

4

RESEARCH

4 RESEARCH AT A GLANCE

Research at NOVA has been thriving both qualitatively and quantitatively: NOVA currently hosts 39 Research and Development (R&D) Units, 23 of which represent partnerships with other national institutions, and 92% were considered units of excellence. This places NOVA in the top 3 of national universities with international recognition.

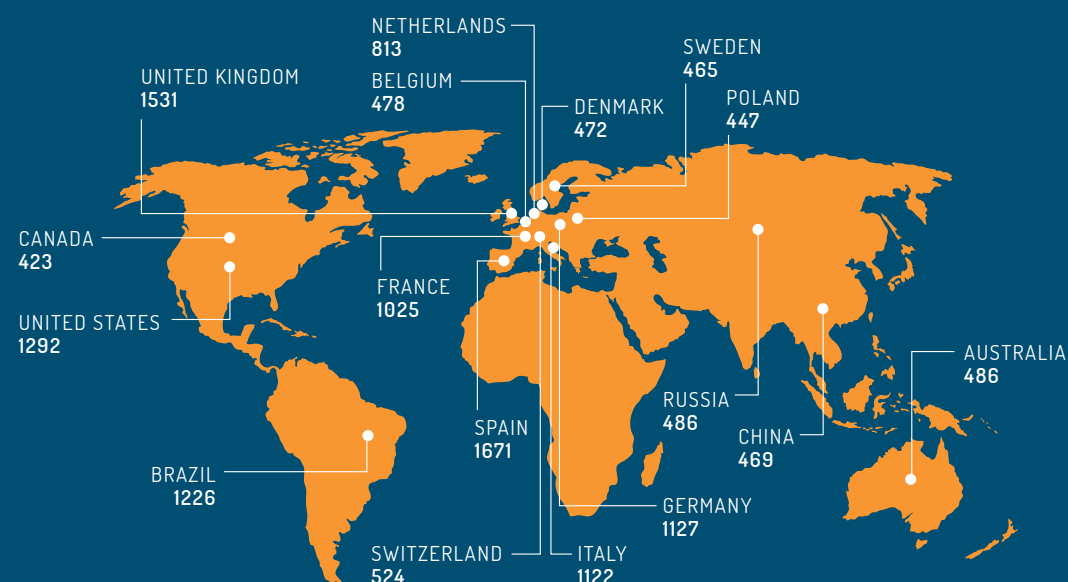
The impact of NOVA's published research is ranked as the highest among Portuguese institutions by the Leiden ranking and NOVA is responsible for approximately 10% of the national research papers indexed to the Web of Science. NOVA has been committed with inclusiveness, equality and non-discrimination. Through a gendered lens, NOVA has the highest proportion of publications by female authors (50.1%) nationally, and the ninth worldwide.

NOVA is ranked as the second Portuguese university in terms of absolute funding volume, but the first in terms of funds per capita under the Horizon 2020 Framework Programme, reaching around 100M€ of funding in this programme. NOVA's researchers were awarded a total of 27 ERC grants, which places NOVA as one of the top national institutions. In 2022, the first ERC Starting Grant in the field of Economy, in Portugal, was awarded to a researcher from NOVA. Aligned with the national Science and Technology policies prioritising the technological and scientific system growth and consolidation, NOVA strives to attract significant resources from different funding mechanisms to be more competitive on a national and international level. Therefore, NOVA has integrated already around 500 highly qualified and internationally competitive researchers in its R&D Units based on national funding. Currently, NOVA coordinates three of the ten Associate Laboratories (LA), in which it participates, and these represents 25% of the total number of existing LA at national level. Moreover, NOVA is involved in 15 Research Infrastructures recognized in the National Roadmap coordinating five of them.

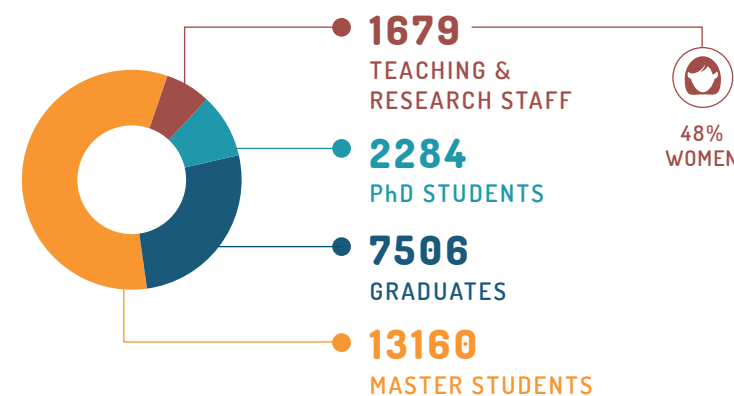
Over the years, the performance of NOVA in terms of Research it has been assessed by the main international rankings (Leiden, Times Higher Education, etc.) among Young Universities led to the inclusion of NOVA in YERUN as well in other renowned international networks.

For NOVA, Research is a strategic priority that aims to tackle societal challenges by combining fundamental research with collaborative agendas, and that is based on quality and excellence. This way, NOVA invests in actions in which the role of its community is fundamental for strengthen institutional growth and respect. ■■

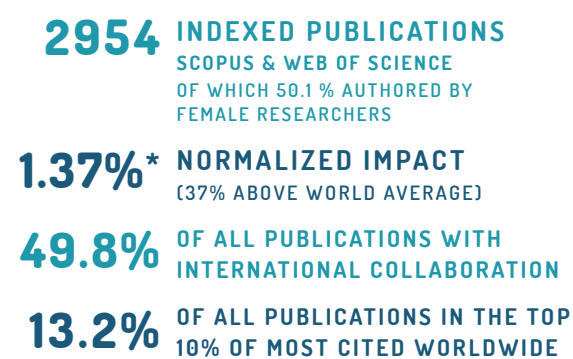
TOP 15 COLLABORATION PER COUNTRY 2021



STAFF 2021



PUBLICATIONS 2021



*SCOPUS PUBLICATIONS 2020



10 AL ASSOCIATE LABORATORIES FUNDED IN 2021

11.5M €



55M€ OF TOTAL RESEARCH INCOME 2021



PROJECTS AND FUNDING

35.5 M€
27
ERC GRANTS
2007-2022

46 M€
39
RESEARCH UNITS
2020 - 2023

R&D PROJECTS

91
ACTIVE
EUROPEAN
PROJECTS

310
ACTIVE
NATIONAL
PROJECTS

2021

RESEARCH HIGHLIGHTS



The first ERC Starting Grant in the field of Economy, in Portugal, was awarded to a researcher from NOVA.



NOVA was one of the most successful universities in the latest Call for Associate Laboratories, funded by the Portuguese Foundation for Science and Technology.



Two projects developed by NOVA researchers, totaling 1,98 million euros, were distinguished by the CaixaResearch Contest on Health Research 2022, promoted by "la Caixa" Foundation.



76 researchers from NOVA among the most quoted scientists in the World's Top 2% Scientists List 2022 (+37,5% compared to 2021)



NOVA Research Portal has a new feature that allows labeling publications in the 17 Sustainable Development Goals (SDGs) of the United Nations.



- Results above the national average for NOVA research in the FCT contest 2022, corresponding to 50 projects as leading institutions and around 4.5 million euros in funding.
- 87 new Individual CEEC (Scientific Employment Stimulus) positions in 2021-2022 (26.3 M€)

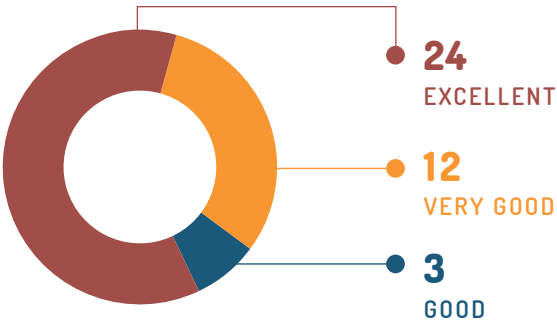
RESEARCH UNITS

RESULTS OBTAINED FROM THE EVALUATION EXERCISE PERFORMED BY THE PORTUGUESE FOUNDATION FOR SCIENCE AND TECHNOLOGY (2017-2018)

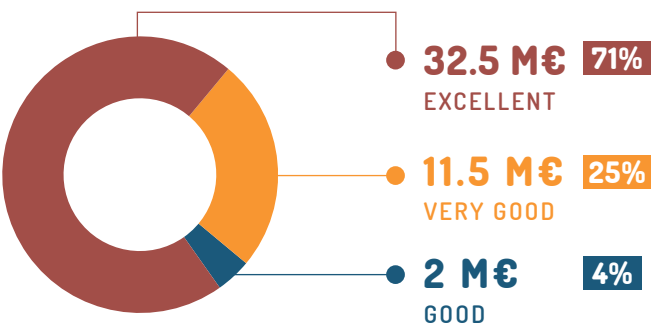
39 R&D UNITS



EVALUATION



FUNDING



NOVA SCHOOL OF SCIENCE AND TECHNOLOGY | FCT NOVA

| | |
|---------|--|
| CEFITEC | NAME Centre of Physics and Technological Research COORDINATOR Orlando Teodoro WEBSITE www.cefitec.fct.unl.pt EVALUATION Good |
| CENSE | NAME Center for Environmental and Sustainability Research COORDINATOR Rui Ferreira dos Santos WEBSITE www.cense.fct.unl.pt EVALUATION Excellent |
| CIUHCT | NAME Interuniversity Center for the History of Science and Technology COORDINATOR Isabel Amaral WEBSITE ciuhct.org EVALUATION Excellent |
| CTS | NAME Centre of Technology and Systems COORDINATOR Luís Camarinha de Matos WEBSITE cts.uninova.pt EVALUATION Excellent |

| | |
|-------------|---|
| GeoBioTec | NAME GeoBioSciences, GeoTechnologies and GeoEngineering COORDINATOR Fernando Lidon WEBSITE sites.fct.unl.pt/geobiotec EVALUATION Very Good |
| CENIMAT i3N | NAME Institute of Nanostructures, Nanomodelling and Nanofabrication COORDINATOR Rodrigo Martins WEBSITE www.cenimat.fct.unl.pt www.i3n.org EVALUATION Excellent |
| LAQV | NAME Associated Laboratory for Green Chemistry – Clean Technologies and Processes COORDINATOR João Paulo Crespo WEBSITE laqv.requimte.pt EVALUATION Excellent |
| CMA | NAME Center for Mathematics and Applications COORDINATOR Ana Luísa Custódio WEBSITE www.cma.fct.unl.pt EVALUATION Very Good |

| | |
|-----------|--|
| MARE | NAME Marine and Environmental Sciences Centre COORDINATOR Maria Graça Martinho WEBSITE www.mare-centre.pt EVALUATION Excellent |
| METRICs | NAME Mechanical Engineering and Resource Sustainability Center COORDINATOR Ana Luísa Fernando WEBSITE www.metrics.com.pt EVALUATION Very Good |
| NOVA LINC | NAME NOVA Laboratory for Computer Science and Informatics COORDINATOR Luís Caires WEBSITE nova-lincs.di.fct.unl.pt EVALUATION Excellent |
| LIBPhys | NAME Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics COORDINATOR Ricardo Vigário WEBSITE www.libphys.fct.unl.pt EVALUATION Very Good |

| | |
|---------|--|
| UCIBIO | NAME Applied Molecular Biosciences Unit COORDINATOR Maria João Romão WEBSITE www.ucibio.pt EVALUATION Excellent |
| UNIDEMI | NAME Research & Development Unit in Mechanical and Industrial Engineering COORDINATOR António Grilo WEBSITE www.unidemi.com EVALUATION Excellent |
| VICARTE | NAME Glass and Ceramic for the Arts COORDINATOR Márcia Vilarigues WEBSITE www.vicarte.org EVALUATION Excellent |

NOVA SCHOOL OF SOCIAL SCIENCES AND HUMANITIES | NOVA FC SH

| | |
|-----------|---|
| CESEM | NAME Research Centre for the Sociology and Aesthetics of Music COORDINATOR Manuel Pedro Ferreira WEBSITE cesem.fcsh.unl.pt EVALUATION Excellent |
| CETAPS | NAME Centre for English, Translation and Anglo-Portuguese Studies COORDINATOR Carlos Ceia Website www.cetaps.com EVALUATION Excellent |
| CHAM | NAME Centre for the Humanities COORDINATOR Cristina Brito WEBSITE www.cham.fcsh.unl.pt EVALUATION Very Good |
| CICS.NOVA | NAME Interdisciplinary Centre of Social Sciences COORDINATOR Helena Serra WEBSITE www.cics.nova.fcsh.unl.pt EVALUATION Good |
| CLUNL | NAME Linguistics Research Centre of the UNL COORDINATOR Rute Costa WEBSITE clunl.fcsh.unl.pt EVALUATION Very Good |

| | |
|----------|---|
| CRIA | NAME Centre for Research in Anthropology COORDINATOR Sónia Almeida WEBSITE www.cria.org.pt/en EVALUATION Very Good |
| ICNOVA | NAME NOVA Communication Institute COORDINATOR Cristina Ponte WEBSITE www.icnova.fcsh.unl.pt EVALUATION Excellent |
| IELT | NAME Institute for Studies of Literature and Tradition COORDINATOR Teresa Araújo WEBSITE ielt.fcsh.unl.pt EVALUATION Very Good |
| IEM | NAME Institute of Medieval Studies COORDINATOR Maria de Lurdes Rosa WEBSITE iem.fcsh.unl.pt EVALUATION Excellent |
| IFILNOVA | NAME NOVA Institute of Philosophy COORDINATOR João Constâncio WEBSITE www.ifilnova.pt EVALUATION Excellent |

IHA

NAME Institute of Art History
COORDINATOR Joana Cunha Leal
WEBSITE institutodehistoriadaarte.wordpress.com
EVALUATION Excellent

INET-md

NAME Ethnomusicology Institute - Center for Studies in Music and Dance
COORDINATOR João Soeiro de Carvalho
WEBSITE www.inetmd.pt
EVALUATION Excellent

IHC

NAME Institut of Contemporary History
COORDINATOR José Neves
WEBSITE ihc.fcsh.unl.pt
EVALUATION Very Good

IPRI

NAME Portuguese Institute of International Relations - NOVA University Lisbon
COORDINATOR Nuno Severiano Teixeira
WEBSITE www.ipri.pt
EVALUATION Excellent

NOVA SCHOOL OF BUSINESS AND ECONOMICS | NOVA SBE**NOVA SBE**

NAME Nova School of Business and Economics
COORDINATOR Pedro Vicente
WEBSITE www2.novasbe.unl.pt/en/faculty-research/research/research-unit
EVALUATION Excellent

NOVA MEDICAL SCHOOL | NMS**CINTESIS**

NAME Center for Health Technology and Services Research
COORDINATOR Conceição Calhau
WEBSITE cintesis.eu
EVALUATION Very Good

CHRC

In collaboration with ENSP

NAME Comprehensive Health Research Centre - Research, Education and Innovation in Clinical Research and Public Health
COORDINATOR Helena Canhão
WEBSITE <https://www.chrc.pt/en>
EVALUATION Excellent

iNOVA4Health

In collaboration with ITQB

NAME Programme in Translational Medicine
COORDINATOR Paulo Pereira
WEBSITE www.inova4health.com
EVALUATION Excellent

ToxOmics

NAME Centre for Toxicogenomics and Human Health
COORDINATOR José Rueff
WEBSITE cigmh.fcm.unl.pt
EVALUATION Good

NOVA SCHOOL OF LAW**CEDIS**

NAME Research Center on Law and Society
COORDINATOR Luís Duarte d'Almeida
WEBSITE <https://novalaw.unl.pt/cedis>
EVALUATION Very Good

NOVA INSTITUTE OF HYGIENE AND TROPICAL MEDICINE | IHMT-NOVA**GHTM**

NAME Global Health and Tropical Medicine
COORDINATOR Miguel Viveiros
WEBSITE ghm.iht.unl.pt
EVALUATION Excellent

NOVA INFORMATION MANAGEMENT SCHOOL | NOVA IMS**Magic**

NAME Information Management Research Center
COORDINATOR Tiago Oliveira
WEBSITE <https://magic.novaims.unl.pt/en>
EVALUATION Very Good

NOVA INSTITUTE OF CHEMICAL AND BIOLOGICAL TECHNOLOGY ANTÓNIO XAVIER | ITQB NOVA**GREEN-IT**

NAME Bioresources 4 Sustainability Unit
COORDINATOR Margarida Oliveira
WEBSITE www.itqb.unl.pt/green-it
EVALUATION Excellent

MOSTMICRO

NAME Molecular, Structural and Cellular Microbiology Unit
COORDINATOR Cláudio Soares
WEBSITE www.itqb.unl.pt/mostmicro
EVALUATION Excellent

NOVA NATIONAL SCHOOL OF PUBLIC HEALTH | ENSP-NOVA**CHRC**

In collaboration with NMS

NAME Comprehensive Health Research Centre - Research, Education and Innovation in Clinical Research and Public Health
COORDINATOR Sónia Dias (Polo ENSP)
WEBSITE <https://www.chrc.pt/en>
EVALUATION Excellent

5

CAMPUS SUL



CAMPUS SUL

ASSOCIAÇÃO
INTERUNIVERSITÁRIA
DO SUL

LISBON METROPOLITAN AREA

Sede CITY21
Polo SPHERA
Polo SAGRES

ELVAS

Sede MASSA

ÉVORA

Sede SPHERA
Polo CITY21
Polo MASSA

SINES

Polo SAGRES

OURIQUE

Polo SPHERA

MÉRTOLA

Polo Sphera
Polo CITY21

VILA DO BISPO

Polo SAGRES

FARO

Sede SAGRES
Polo CITY21
Polo MASSA
Polo SPHERA



Support the creation of solutions that respond to the most critical social, economic, and environmental challenges in the regions of Lisbon and Tagus Valley, Alentejo and Algarve.

5 CAMPUS SUL

On April 26, 2021, NOVA University Lisbon, the University of Évora, and the University of Algarve joined forces to create the South Campus–Interuniversity Association of the South, in what is an unprecedented initiative aimed at contributing through knowledge to the social and economic development of the regions of southern Portugal.

The fulfillment of this ambitious mission will be achieved through the following actions: by carrying out research with an impact on the challenges of resilience, territorial cohesion and sustainability of these regions; by supporting advanced training in strategic areas of capacity building of local human resources; and by designing innovative projects, based on the knowledge produced and the multiple competences already existent in the universities of the South Campus Association, in close partnership with entities that promote regional development and other national or international entities.

The core strategic value of this consortium is based on the knowledge of the universities that integrate it, as well as on their respective partners, and which is materialized in the existing infrastructures, whether they are collaborative laboratories or centers for the valorization and transfer of technology. Some of these infrastructures include the INNO – NOVA's Social Innovation Center, the InnovPlantProtect and S2AQUAColab Collaborative Laboratories, and several Associate Laboratories [CHANGE – Institute for Global Change and Sustainability, IN2PAST – Research and Innovation in Heritage, Arts, Sustainability and Territory, or REAL – Translation and Innovation Towards Global Health].

NOVA intends, therefore, to support the creation of solutions that respond to the most critical social, economic, and environmental challenges in the regions of Lisbon and Tagus Valley, Alentejo and Algarve, embracing the Sustainable Development Goals, the European Green Deal and the Strategic Vision for the Economic Recovery Plan of Portugal 2020–2030 as main guidelines. This process will be carried out through training, research and innovation developed within the scope of the South Campus.

More specifically, and through the South Campus, NOVA will focus on:

- the creation of a common and innovative educational offer, which will be broadband or specialized, and focused on global challenges and their regional impact, as well as capacity building programs and microcredentials for the acquisition of emerging and transversal skills, targeting institutions and human resources in the region, but also international students;
- the design of a transversal research and innovation strategy, oriented towards solving pressing problems in the territory, and in partnership with entities promoting regional development. There will be a special emphasis on the following areas: Contemporary Urban Challenges, Sustainable Agriculture, Heritage and Cultural Entrepreneurship, and Blue Growth.

Specifically with regards to research, it is important to highlight that the three universities of the South Campus Association already develop joint scientific activity, having produced +300 co-authored articles over the last five years, 47% of those articles in international partnership and 33% indexed in the Top10% of the journals with the best CiteScore. Most of these articles belong to the areas of Agricultural and Biological Sciences, Social Sciences, Medicine, and Environmental Science.

In order to stimulate scientific research targeting the challenges of the South of Portugal, the South Campus Association foresees the creation of Centers of Applied Knowledge and Innovation for Sustainability, which consist of permanent structures, supported by physical infrastructures, dedicated to the design and implementation of innovative projects relevant to a specific area of sustainable development in the South.

These Knowledge Centers seek to support the development of the regions through collaborative and interdisciplinary research agendas and intervention programs in the territory and in the community, aimed at guaranteeing the impact of that research. This impact should be the creation of scientific jobs in connection with the economic and social fabric of the regions and the response to their most pressing challenges.

In an initial phase, the following four Knowledge Centers should start operating:

CITY21 | Knowledge Center for Sustainable Cities and Communities

Its aim is to contribute to the development of sustainable cities and communities committed to the future through the adoption of practices aimed at improving the quality of life in cities, protecting the most vulnerable populations, and promoting diversity and cultural inclusion.

CITY 21 will focus on the following main thematic lines: Sustainable and Inclusive Neighborhoods and Communities; Populations at Risk; Memory, Youth and Employment; Culture, Gender, and Diversity.

Based on the INNO – NOVA Center for Social Innovation, in Lisbon, this Knowledge Center aims to develop its activity in partnership with Santa Casa da Misericórdia, Gebalis, Gulbenkian Foundation, Healthy Neighborhoods Program, Municipalities of the Metropolitan Area of Lisbon, CIMAC (Intermunicipality Community of Central Alentejo), AMAL (Intermunicipality Community of Algarve), CCDR (Algarve, Alentejo, Lisbon), and SIDAC (General Directorate for Intervention on Addictive Behaviours and Dependencies).

MASSA | Knowledge Center for Sustainable Agricultural Modernization and Food Security

Its aim is to promote a sustainable-based agriculture model with maximum efficiency, while preserving the quality of resources (water, soil, biodiversity), promoting consumption of products with quality and safety and preventing their scarcity, and based on close urban–rural relations, thus contributing to the development and cohesion of the southern territories and the Iberian hinterland.

MASSA will focus on the following main thematic lines: Promotion of the Mediterranean Diet; Valorization of Endogenous Natural Resources; Innovation applied to Agricultural Production.

Based on the InnovPlantProtect Collaborative Laboratory, in Elvas, this Knowledge Center aims to develop its activity in partnership with Municipalities, CCDR (Algarve, Alentejo, Lisbon), INIAV (National Institute of Agricultural and Veterinary Research), Bayer Crop Science, Syngenta Crop Science, Eugénio de Almeida Foundation, Fraunhofer Institute, AJAP (Association of Young Farmers of Portugal), and Academic Partners at Iberian and International level.

SAGRES | Sea Center for Blue Growth and Conservation of Marine Biodiversity

Its aim is to create a center for the valorization of marine resources that produces wealth and well-being among local populations and marine ecosystems, stimulating the creation of transversal networks that include fishing, aquaculture, recreational and tourist activities in cooperation with regional and international companies with an interest in the area of blue growth/economy.

SAGRES will focus on the following main thematic lines: Innovation of technology-based marine products 4.0; Biodiversity preservation in the South.

Using the infrastructures of the S2AquaColab, in Faro, the Marine Sciences Laboratory of the University of Évora – CIEMAR, in Sines, and another one to be developed in Sagres (Vila do Bispo), this Knowledge Center aims to develop its activity in partnership with Municipalities (particularly Vila do Bispo), CCDR (Algarve, Alentejo, Lisboa), Cascais Ambiente, IPMA, OLSPS, DOCAPESCA, NAUTIBER, MARTRAIN, the Administration of the Ports of Sines and Algarve, SEA4All, APA–ARH Alg, and Ciência Viva Centers.

SPHERA | Southwest Park for Heritage and Arts

Its aim is to combine knowledge with know-how (how to do, how to be, how to occupy, how to enjoy and how to optimize for the general well-being), stimulating the creation of transversal networks that include aesthetics, art and artistic creation in a territorial perspective that promotes the economic welfare of communities through cultural and heritage education.

SPHERA will focus on the following main thematic lines: Sustainable use of Heritage; Valorization of Cultural and Natural Heritage; Innovation and Creative Entrepreneurship.

Based on the Monastery of São Bento de Cástris, in Évora, with hubs at the Mértola Archaeological Field (Mértola), Caetano de Mello Beirão Archeology Center (Ourique), NOVA Institute of Arts and Technology (Trafaria) and Research Center in Arts and Communication (Faro), this Knowledge Center aims to develop its activity in partnership with the Regional Directorate of Culture of Alentejo, the Directorate General for Cultural Heritage, the Polytechnic Institute of Portalegre, CIMAC, Municipalities, ERIHS, pt, the Eugénio de Almeida Foundation, the Ciência Viva Center of Estremoz, and CCDR (Algarve, Alentejo, Lisbon).

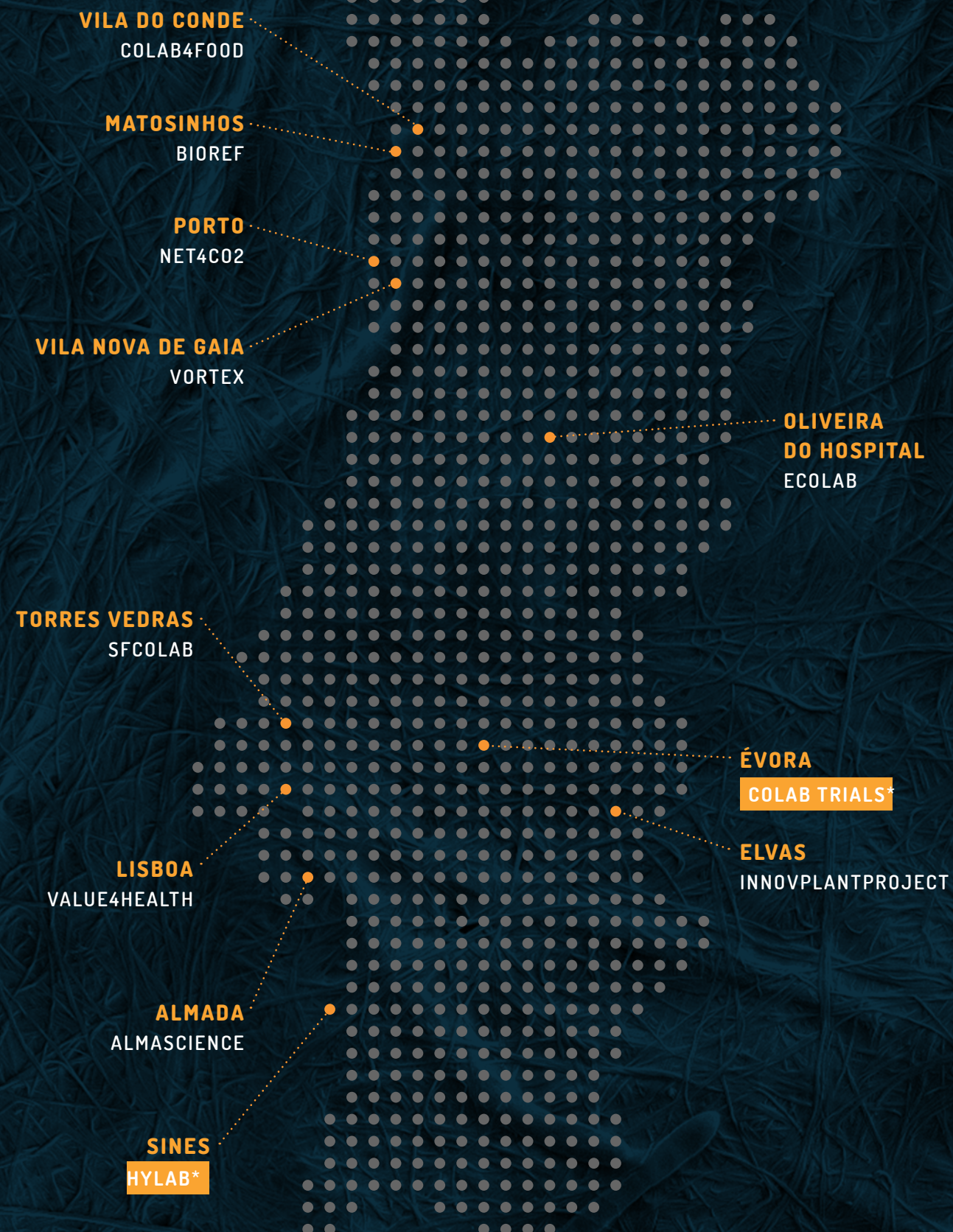
For greater effectiveness and efficiency in achieving its mission, the South Campus Association consortium considers the possibility of:

- Contracting shared human resources, both academic and non-academic;
- Optimizing resources between the partner higher education institutions through resource sharing, including laboratories, analytical and computational resources, among others;
- Creating an online platform of material and analytical resources from the different institutions that allows the development of network initiatives in the territory and their use by third-party institutions.

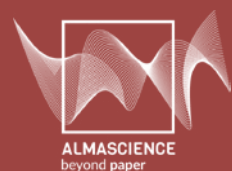
Soon, it is expected that the South Campus will develop new areas of joint and mission-based research, aligned with the model developed for the Horizon Europe Program, in addition to reinforcing the extensive collaboration and cooperation already existing between the three Universities. That will help create qualified employment in the southern regions and enhance the activity of the South Campus beyond national territory, through the development of new partnerships abroad, namely in the Mediterranean region, on the Atlantic front and in Portuguese-speaking countries.

6

CoLAB COLLABORATIVE LABORATORIES



*New CoLABs formally recognized by FCT, IP in 2021



ALMASCIENCE Cellulose for Sustainable Smart Applications
> www.almascience.pt

CONSORTIUM

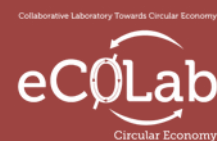
The NAVIGATOR Company
INCM - Imprensa Nacional da Casa da Moeda
NOVA University Lisbon
Clara Saúde
Fraunhofer Portugal
RAIZ - Forest and paper Research Institute
NOVA id FCT



BIOREF Collaborative Laboratory for Research and Innovation on Biorefineries
> www.bioref-colab.pt

CONSORTIUM

FCUL - Faculty of Sciences, University of Lisbon
IPP - Polytechnic Institute of Portalegre
IST - University of Lisbon
LNEG - National Laboratory of Energy and Geology
RAIZ - Forest and Paper Research Institute
University of Aveiro
University of Minho
NOVA University Lisbon
University of Porto
UTAD - University of Trás-os-Montes and Alto Douro
A4F - ALGAFUEL, S.A.
Bio Dourogás - Produtor de Gás, S.A.
GALP
Biotrend
BLC3 - Technology and innovation Campus
SilicoLife
SOLVAY Portugal
SYSADVANCE
Tap Air Portugal
TRATOLIXO



eColab Collaborative Laboratory for the Circular Economy
> www.cecolab.pt

CONSORTIUM

NOVA University Lisbon
AQUITEX
BLC3 Evolution
Lipor - Intermunicipal Waste Management Service of Greater Porto
MOTAENGIL Engenharia
RAIZ - Forest and Paper Research Institute
TMG
LNEG - National Laboratory of Energy and Geology
ISQ - Welding and Quality Institute
University of Aveiro
UCP - The Catholic University of Portugal
University of Coimbra
University of Minho
University of Porto



InnovPlantProtect Innovative Bio-based Solutions for Crop Protection
> www.iplantprotect.pt

CONSORTIUM

NOVA University Lisbon
INIAV - National Institute of Agrarian and Veterinarian Research
Syngenta Crop Protection
Bayer - Crop Science
City Council of Elvas
CEBAL - Centre of Agronomic and Agro-Industrial Biotechnology of Alentejo
FNOP - National Federation of Fruits and Vegetables Producers Organizations
Casa do Arroz
ANPOC - National Association of Cereal, Protein Crop and Oil Seed/Fruit Producers
ANPROMIS - National Association of Corn and Sorghum Producers
University of Évora
FERTIPRADO



SFCoLAB Smart Farm CoLab

> www.sfcolab.org

CONSORTIUM

| | |
|--|--|
| City Council of Torres Vedras | Escola Profissional Agrícola Fernando Barros Leal |
| Luís Vicente | FCUL - Faculty of Sciences, University of Lisbon |
| Optimize Planet | Impact Wave |
| COTHN - Centro Operativo e Tecnológico Hortifrutícola Nacional | ISCTE - University Institute of Lisbon |
| TOMIX | Paulo Duarte Transportes |
| Adega Cooperativa de São Mamede da Ventosa | FCT NOVA |
| SGS | INIAV - National Institute of Agrarian and Veterinarian Research |
| STAGRIC | IPL - Polytechnic Institute of Leiria |
| Quinta do Pinto | INESCTEC |



VOH Colab Portuguese Value-based Healthcare CoLab

> www.vohcolab.org

CONSORTIUM

| |
|---------------------------|
| NOVA University Lisbon |
| José de Mello Saúde, S.A. |
| Vodafone |
| Fraunhofer Portugal |



VORTEX CoLab in Cyber-Physical and Cyber-Security Systems

> www.vortex-colab.com

CONSORTIUM

| |
|--|
| Capgemini Engineering |
| ISEP - School of Engineering of the Polytechnic Institute of Porto |
| NOVA University Lisbon |
| INESC-TEC |
| beta.i collaborative innovation |



CoLAB4Food* Collaborative Laboratory for Innovation in the Food Industry

> www.colab4food.com

CONSORTIUM

| | |
|--|---|
| Portugal Foods | University of Porto |
| Sumol+Compal | UCP - The Catholic University of Portugal |
| Frulact | University of Aveiro |
| Sensetest | UTAD - University of Trás-os-Montes and Alto Douro |
| Grupo Primor | University of Coimbra |
| Casa Mendes Gonçalves | REQUIMTE Rede de Química e Tecnologia |
| Super Bock Goup | IPVC - Center for Research and Development in Agrifood Systems and Sustainability |
| Cerealis | INL International Iberian NANOTECHNOLOGY Laboratory |
| Vieira | Universidade Lusófona |
| INIAV - National Institute of Agrarian and Veterinarian Research | Instituto Nacional de Saúde Doutor Ricardo Jorge |
| University of Minho | Tagus Valley - Parque de Ciência e Tecnologia |
| University of Lisbon - Higher Institute of Agronomy ISA | Arcadia Internacional |



NET4CO2* Network for a Sustainable CO2 Economy

> www.net4co2.pt

CONSORTIUM

| |
|---|
| Galp Energia, S.A |
| Change Partners, SCR, S.A. |
| University of Porto |
| IST - Instituto Superior Técnico |
| REQUIMTE, Rede de Química e Tecnologia (LAQV) |
| INL - International Iberian Nanotechnology Laboratory |

* Participation of NOVA via researchers affiliated to REQUIMTE/FCT NOVA

In 2022, the **InnovGastronomy CoLAB** - Innovation for value creation in Portuguese Gastronomy - was also approved by the Portuguese Foundation for Science and Technology. The application was coordinated by NOVA University Lisbon and the consortium consists of 10 initial partners, aiming to reinforce the creation of value in food products and tourism and gastronomy services, by improving the knowledge about their historic and regional roots, their nutrition, and by improving the quality of training and education in gastronomy. This CoLAB is expected to officially start its activity in the beginning of 2023.

CoLAB TRIALS

> NAME

COLLABORATIVE LABORATORY
FOR THE INNOVATION IN
CLINICAL TRIALS

> ACRONYM

CoLAB TRIALS

> COORDINATOR
OF THE COLAB

Catarina Madeira
Executive Director

> COORDINATOR
AT NOVA

Nélia Gouveia
Member of CoLAB TRIALS'
Administration Board

> CONTACTS

nelia.gouveia@nms.unl.pt
catarina.madeira@nms.unl.pt

> WEBSITE

Coming soon



STRUCTURE

CoLAB TRIALS was legally constituted in August 2021 as non-profit association with headquarters in Escola Superior de Enfermagem São João de Deus at University of Évora. CoLAB TRIALS will also have an office at NMS and allocated human resources.

The commitment with Fundação para a Ciência e Tecnologia as a Collaborative Laboratory was signed in September 2021. The General Assembly is constituted by one representative of each founding member: President of the General Assembly – Germano de Sousa (CML-GS), 1st Secretary – César Fonseca (UÉ), 2nd Secretary – Inês Alves (EUPATI). Other members, representatives of the shareholders at the General Assembly are: Maria Emília Monteiro (UNL), Rita Perez (CHLO), Ana Curado (GLSMED LH) and Miguel Ginestal (APIFARMA).

The Executive Board is constituted by one representative of each founding member: President – Carlos Galamba (CHLO); Vice-President – Francisca Leite (GLSMED LH). Other members of the Administration board are: Nélia Gouveia (UNL), Manuel José Lopes (UÉ), Maria José de Sousa (CML-GS), Maria Filipa Mota e Costa (APIFARMA), Elsa Frazão Mateus (EUPATI). An advisory Board will be invited until the end of 2022.

The Executive Director is Catarina Madeira (NMS/UNL). Legal, Accounting and Branding were subcontracted. Each of the 5 operational offices (Dissemination/Innovation/Capacitation/Digital Transformation/Projects) are under the responsibility of the executive director and will be headed by a qualified human resource to be hired. An operational team of 14 highly qualified human resources is expected to be hired until the end of 2023.

MISSION

CoLAB TRIALS' mission is to leverage the clinical research and health products development to **increase innovation in the health sector**, in strategic areas as medical devices, in vitro diagnostic devices, biomarkers validation, advanced therapies and personalized medicine.

OBJECTIVES

1. Strengthen and promote knowledge and specialization in trials methodologies
2. Exploit and optimize stored health information
3. Provide innovative solutions to conduct clinical research
4. Disseminate clinical research relevance and results

Strategic Activities VS Health Technology Products' TRL

Pre-clinical ← Clinical Evaluation → MA/CE mark

TRL 5 TRL 6 TRL 7 TRL 8 TRL 9

Innovative Trial Designs

Capacitation of Clinical Teams

Trial Literacy & Dissemination

Trial Digital Transformation

PRINCIPAL/STRATEGIC ACTIVITIES

Strategic activities are divided into 4 main inter-related pillars, and related to each of the objectives:

1. Innovative Trial Designs – by facilitating the clinical development of new health technology products from SME
2. Trial Digital Transformation – by producing real-time, real-world data to increase new opportunities for clinical trial projects;
3. Capacitation of Clinical Teams – by developing new tools useful for industry and investigator initiated experimental studies, while empowering clinical teams in clinical trials;
4. Trial Literacy & Dissemination – by disseminating clinical trials relevance and results throughout the community, tailored to specific group characteristics.

Our ecosystem makes us as a critical partner in projects aiming at:

- The clinical evaluation of health technology products (medical/ in vitro diagnostic devices, chemicals and biologicals), since an early development phase (TRL 5) and/or;
- The community literacy in clinical trials and/or;
- The capacitation of clinical teams in trials' project management and/or;
- The access to real time and real-world clinical data for sharing and reuse according to FAIR principles and the GDPR.

INFRASTRUCTURES AND FACILITIES

In the current implementation phase (until 2025) of the CoLAB TRIALS, only office facilities are needed to host the operational team. CoLAB TRIALS' team will be hosted by 3 of the associates: UNL/NMS, University of Évora and CHLO.

UN Sustainable Development
Goals commitment

SDG 3. Good Health and Well-being

- Ensure healthy lives and promote well-being for all at all ages
- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



SDG 5. Gender Equality

Achieve gender equality and empower all women and girls



SDG 8. Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



SDG 9. Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

> SCIENTIFIC AREAS

- Safety Assessment
- Clinical Research Management & Regulatory Affairs
- Data & Information Management
- Trainings and Literacy

> STARTING DATE

30TH SEPTEMBER 2021

> FUNDING AWARDED
FOR 5 YEARS

1.173.930,00€
BY MISSÃO INTERFACE – PRR
(JULY 2022)

> TEAM/CONSORTIUM

Proposal Coordination:

NOVA University Lisbon /
NOVA Medical School

Participant Institutions (Associates):

- NOVA University Lisbon / NOVA Medical School
- University of Évora / ESE São João de Deus
- Centro Hospitalar Lisboa Ocidental
- Grupo Luz Saúde – Learning Health
- Centro de Medicina Laboratorial Germano de Sousa
- APIFARMA
- EUPATI – Portugal

> NAME

GREEN HYDROGEN
COLLABORATIVE LABORATORY

> ACRONYM

HyLAB

> COORDINATOR
OF THE COLAB

EDP

> COORDINATOR
AT NOVA

Inês Cardoso Pereira
ITQB NOVA

> CONTACTS

geral@hyllab.pt

> WEBSITE

<https://www.hyllab.pt>



HyLab

STRUCTURE

The HyLab involves valuable national and international R&D institutes, academia, industry companies, small and medium-sized enterprises (SMEs), start-ups, and hydrogen-related technology manufacturing industries. Shareholders include EDP, REN, GALP, BONDALTI, Universidade Lisboa (IST), University of Porto (FEUP), NOVA University Lisbon (ITQB), INEGI, INESC TEC, CEIIA, LNEG and INL.

MISSION

The main goal of the HyLab is to enable the Portuguese swift implementation of green hydrogen production, storage, transport and utilization at competitive costs. The development of competitive technologies will contribute to the global energy transition and decarbonization.

OBJECTIVES

The final goal of the HyLab is to create a worldwide reference Research, Development and Innovation (R&D+I) cluster with a strategic agenda focused on strengthening hydrogen competitiveness and creation of new products and services. Through its operation, the HyLab aims to anticipate by 6 years (2024 vs 2030, reference year of international studies) the breakeven cost between fossil and green hydrogen. This should allow the HyLab and the Portuguese industry to have the robustness necessary to be established as a reference player within the green hydrogen international market.

The HyLab also will support the development of a large European project (connection with IPCEI – Important Projects of Common European Interest) with the objective to produce green hydrogen in Sines, Portugal, to support the national and European efforts to decarbonize the economy, leveraging on endogenous renewable resources, existing infrastructure, and skilled workforce. The production of green hydrogen in Sines aims at satisfying local and national demands and to export it to northern Europe, namely to Netherlands and neighbouring countries.



PRINCIPAL/STRATEGIC ACTIVITIES

The innovation agenda of the HyLab is aligned with both the European priorities, the National Energy Climate Plan (NECP) and the National Strategy for Hydrogen following three lines of action:

- Green hydrogen value chain: aiming at reducing technologies' cost and at improving performance (e.g. efficiency, reliability, lifetime, etc.) across the value chain. The R&D+I focus will include socio-economic impact components, such as training and public acceptance angles.
- Electrolyzer industry: aiming at supporting the developments in the electrolyzer industry ecosystem and at improving the manufacturing process.
- Enabler: aiming at supporting the creation of the hydrogen value-chains across Europe and the related industrial scaling up and R&D+I partnership ecosystem.

Thus, the Research and Innovation (R&I) agenda is structured in four Pillars:

- Minimize hydrogen production costs and technological challenges
- Minimize costs and ensure the security and efficiency of H2 R&I + Export
- Promote new hydrogen end uses (e.g. H2 to power, mobility, industry)
- Promote partnerships and new business models within the H2 economy



UN Sustainable Development
Goals commitment



SDG 7
Affordable and Clean Energy



SDG 13
Climate Action

> SCIENTIFIC AREAS

Energy

Green Hydrogen

> STARTING DATE

23RD MARCH 2021

> FUNDING AWARDED

3.400.000,00 €

TEAM/CONSORTIUM

EDP

REN

GALP

BONDALTI

University of Lisbon (IST)

University of Porto (FEUP)

NOVA University Lisbon (ITQB)

INEGI

INESC TEC

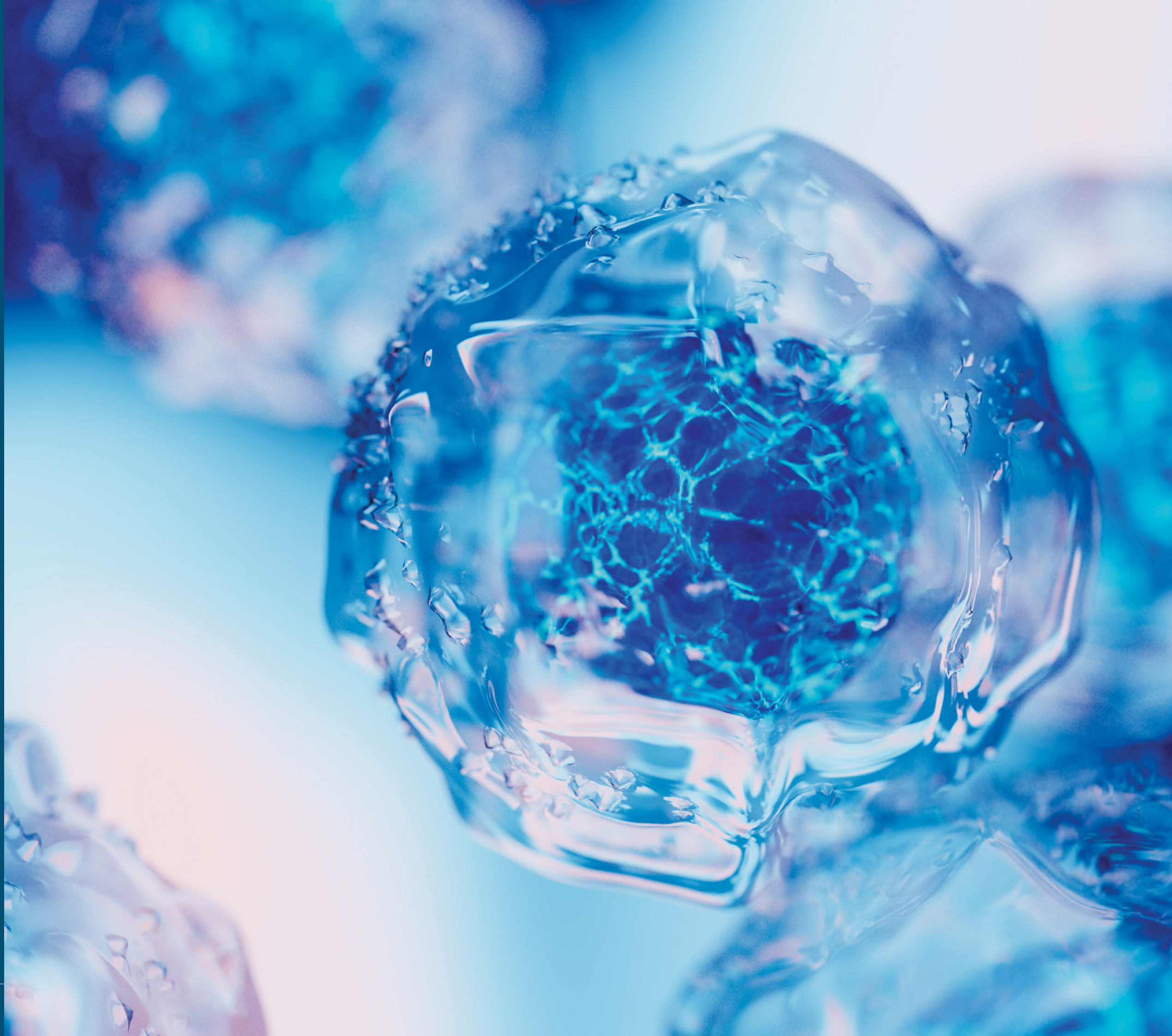
CEIIA

LNEG

INL



**ASSOCIATE
LABORATORIES**



ARNET

> NAME

AQUATIC RESEARCH
INFRASTRUCTURE NETWORK

> ACRONYM

ARNET

> LA

COORDINATOR

Pedro Raposo de Almeida

> COORDINATOR

AT NOVA

Graça Martinho

> CONTACTS

mgm@fct.unl.pt

> WEBSITE

www.mare-centre.pt



STRUCTURE

ARNET is a nationwide multi-institutional network composed by three multidisciplinary R&D units: MARE – Marine and Environmental Sciences Centre, Centre for Marine and Environmental Research (CIMA) and Centre of Molecular and Environmental Biology (CBMA).

MARE is ARNET's largest R&D Unit, characterized by a multipolar nature whose institutions have made, in previous decades, significant scientific contributions to the understanding and awareness of the Ocean and Environment. Presently, MARE has seven poles, six of them located at higher education campus in Portuguese mainland, respectively University of Coimbra, Polytechnic of Leiria, University of Lisbon, NOVA University Lisbon, ISPA and University of Évora, and an additional pole in the Madeira archipelago.

The Centre for Marine and Environmental Research (CIMA) is a leading multidisciplinary Research Unit at the University of Algarve focused on deepening the scientific knowledge of marine and environmental systems. Finally, the Centre of Molecular and Environmental Biology (CBMA) is a Research Unit located at the School of Sciences of University of Minho, northern Portugal, and delivering excellence in research and postgraduate training in Biological Sciences.

MARE, CIMA and CBMA have long been collaborating with higher education institutions, other R&D institutions, local and central administrations and other public or private institutions of public interest, contributing to the general objectives of national scientific and technological policy. In particular, the three R&D units have supported the national framework for achieving the Sustainable Development Goals (SDGs) adopted by all UN Member States in 2015 as part of the 2030 Agenda for Sustainable Development.

ARNET's vision is to be an Associate Laboratory of reference in aquatic sciences based on a holistic and integrated approach from river basins to deep sea ecosystems, contributing to strengthened national and European scientific and technological policy instruments, while establishing itself as a leading driver on the role of Science and Innovation for social and economic development and wealth.

ARNET combines expertise in biologic and environmental sciences, allowing approaching scientifically and technologically all types of aquatic systems, from river basins to estuaries, coasts, and the open ocean, in a context of global and regional changes and cumulative anthropogenic pressures, applying ecosystem- and methodologically-oriented approaches. ARNET will benefit from the multi-institutional structure in a large geographic distribution with research facilities across Portugal mainland and Madeira Island.

ARNET skills and capabilities, international scope, geographic coverage and research themes development makes this Associate Laboratory to stand out within the Portuguese scientific system and place itself as a key player within the European context.

MISSION

ARNET's mission is to enable Science-policy-action exchanges, providing the best available scientific knowledge based in aquatic ecosystems for policy and management decisions with respect to blue and green growth. ARNET will continue to be focused on the implementation of several European policies and Directives, the Atlantic Strategy and the scientific and societal aims of European Union Research and Innovation Programs.

OBJECTIVES

The objectives of ARNET are as follows:

1. Support the development of scientific and technological approaches towards the sustainable use of marine and freshwater ecosystems.
2. Advance the knowledge on the functioning of marine, estuarine and freshwater ecosystems, addressing changes threatening ecological resilience and environmental sustainability.
3. Promote the environmental health of seas and oceans, estuaries and river basins.
4. Explore biotechnology and nature-based solutions to encourage better stewardship of aquatic resources.
5. Promote participatory governance models and stimulate the emergence of an Ocean literate society.
6. Drive international cooperation to advanced education and training resulting in a new generation of scientists and professionals prepared for the Blue Economy.
7. Build upon an international identity strategy based on dissemination, mobilization, funding and networking.

PRINCIPAL/STRATEGIC ACTIVITIES

ARNET's strategic plan will support the achievement of the National Scientific and Technological Policy objectives, in particular the response of public policies to scientific, environmental, sanitary, economic and social challenges, making contributions and developing activities under **five (5) Thematic Lines (TL)**:

TL1 – Novel Approaches in Aquatic Exploration and Monitoring.

TL2 – Environmental Sustainability under Global Change,

TL3 – Assessment and Management of Environmental Risks,

TL4 – Biotech- & Nature based Solutions for Blue Economy,

TL5 – Governance, Citizen Science and Ocean Literacy.

These five Thematic Lines will contribute to several public policies and are timely aligned and integrated with the National Strategy for the Sea 2021-2030.

INFRASTRUCTURES & FACILITIES

ARNET benefits from the existing nationwide facilities and infrastructures, from its R&D Units (MARE, CIMA and CBMA), such as the Research Infrastructures (CoastNet and PORBIOTA) included in the National Roadmap of Research Infrastructures, the knowledge transfer centres of MARE (MAREFoz and CIEMAR) and several laboratories and offices in located mainland and Madeira island.

> SCIENTIFIC AREAS

Marine and Environmental Sciences

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

1 051 280,00 € / 5 YEARS

> TEAM/CONSORTIUM

ARNET is composed by three multidisciplinary R&D units:

- MARE – Marine and Environmental Sciences Centre (Coordination)
- CIMA – Centre for Marine and Environmental Research
- CBMA – Centre of Molecular and Environmental Biology

ARNET's management institutions:

- University of Algarve
- University of Coimbra
- University of Évora
- NOVA University Lisbon
- University of Minho
- Polytechnic Institute of Leiria
- ISPA,CRL
- Agência Regional para o Desenvolvimento da Investigação Tecnologia e Inovação – Associação (ARDITI)
- FCiências.ID – Associação para a Investigação e Desenvolvimento de Ciências
- NOVA.ID.FCT – Associação para a Inovação e Desenvolvimento da FCT



ARNET contributes to 17 SDGs with major inputs for achieving goals:

SDG 12. Ensure sustainable consumption and production patterns;

SDG 13. Take urgent action to combat climate change and its impacts;

SDG 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development;

SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



CHANGE

> NAME

GLOBAL CHANGE AND
SUSTAINABILITY INSTITUTE

> ACRONYM

CHANGE

> LA

COORDINATOR

Teresa Pinto Correia

> COORDINATOR

AT NOVA

Rui Ferreira dos Santos

> CONTACTS

Teresa Pinto Correia
mtpc@uevora.pt

Cristina Máguas
cmhanson@fc.ul.pt

Rui Ferreira dos Santos
rfs@fct.unl.pt

> WEBSITE

Coming soon



CHANGE

Instituto para as Alterações Globais e Sustentabilidade

STRUCTURE

- a) Scientific Council: all CHANGE integrated researchers
- b) Board of Directors: the coordinators of the R&D Units that made up CHANGE. R&D Unit coordinators may delegate their participation in the CD/CHANGE (and inherently also in the Executive Committee) to another researcher from their R&D Unit, on their behalf;
- c) Executive Committee;
- d) Support Services.

MISSION

CHANGE mission is to deliver realistic, cutting-edge and innovative research, synthesis and knowledge/technology transfer as required for Portugal to meet several of the policy and societal challenges that will come with full implementation of the European Green Deal. CHANGE vision is to become the go-to R&I hub for developing, evaluating and operationalizing innovative and improved public policies with impacts on Global Change and Sustainability.

OBJECTIVES

CHANGE has the following general objectives:

1. Develop scientific research that contributes to the advancement of the state of the art;
2. Contribute to the implementation of national scientific policy in the fields of environmental, agricultural, economic and social sciences in an integrative perspective of sustainability;
3. Promote and develop collaboration with other research and technological development institutions, namely through scientific exchange, positioning itself in relevant national and international networks and consortia;
4. Collaborate with partners from the private, public and cooperative sectors, in order to better adapt research results to issues identified in practice, and to enhance the societal impact of the knowledge produced.
5. To promote the dissemination, interest and recognition of scientific and technological knowledge among students at different levels of education and the general public.

PRINCIPAL/STRATEGIC ACTIVITIES

CHANGE activities are organized in five thematic lines:

- TL1 - Maintain and restore biodiversity** – climate adaptation strategies, ecological restoration, protecting key ecosystem services, nature-based solutions;
- TL2 - Transform agro-food and forestry systems** – resilient food systems, food safety and quality, high-nature value farmlands, digital transformation in agriculture and rural areas;
- TL3 - Manage natural resources** – diversified water sourcing and recovery systems, water-use efficiency and management, air pollution, mitigating soil degradation;
- TL4 - Promote circular economy and carbon neutrality** – long-term strategy for carbon neutrality, energy consumption management plans, water and carbon footprints and food production, enhancing uptake of circular economy thinking;
- TL5 - Strengthen territorial cohesion** – balanced territorial development and water use, governance mechanisms for sustainable agriculture, environmentally aware and sustainable tourism, cross-border cooperation in fire-fighting.

INFRASTRUCTURES & FACILITIES

CHANGE provides access to a significant area of experimental fields with already established Mediterranean relevant crops and also extra field space to develop new test plots. Permanent plots are a key component of (long-term) agronomical and environmental research programs, and due to its scarcity within R&I units, an asset of CHANGE and hence a point of high attractiveness. CHANGE has privileged access to the University of Évora's Herdade da Mitra, a scientific-pedagogical experimental farm whose exploration is aligned with research and teaching as well as providing services to the community. CHANGE will also have access to Herdade da Ribeira Abaixo (HRA), the field station of cE3c – FCUL.



UN Sustainable Development
Goals commitment



SDG 2
Zero Hunger



SDG 6
Clean Water and Sanitation



SDG 7
Affordable and Clean Energy



SDG 11
Sustainable Cities and
Communities



SDG 12
Responsible Consumption
and Production



SDG 13
Climate Action



SDG 14
Life Below Water



SDG 15
Life on Land



SDG 16
Peace, Justice and
Strong Institutions

> SCIENTIFIC AREAS

- Agro-food and forestry systems
- Sustainability of natural resources
- Circular economy and carbon neutrality
- Governance and territorial cohesion

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

1 087 180,00 € / 5 YEARS

> TEAM/CONSORTIUM

- Mediterranean Institute for
Agriculture, Environment
and Development
(Coordinator)
- Centre for Ecology, Evolution
and Environmental Changes
- Center for Environmental
and Sustainability Research

> NAME

INSTITUTE OF NANOSTRUCTURES,
NANOMODELLING AND
NANOFABRICATION

> ACRONYM

CHANGE

> LA

COORDINATOR

Rodrigo Ferrão de Paiva Martins

> COORDINATOR

AT NOVA

Rodrigo Ferrão de Paiva Martins

> CONTACTS

Rodrigo Ferrão de Paiva Martins
rfpm@fct.unl.pt

Secretariado do CENIMAT
cenimat.secretariado@fct.unl.pt

Florinda Costa
flor@ua.pt

> WEBSITE

www.i3n.org

i3N

INSTITUTE FOR
NANOSTRUCTURES,
NANOMODELLING AND
NANOFABRICATION

RESEARCH, INNOVATION AND
ENGINEERING APPLICATIONS

STRUCTURE

Since its creation i3N is a cross-interdisciplinary institute built on existing institutional strengths, and offers world class, in development and innovation at leading-edge of research and education. i3N integrates chemists, physics, materials science, electronics, bioengineers, among others, from University of Aveiro and NOVA University Lisbon being organized in 6 research groups to address the challenges of i3N strategic research fields. The i3N staff is constituted by 122 PhD members and supports 83 master students. Besides the staff with direct contracts (33 from NOVA and 30 from Aveiro), i3N got from FCT through the Scientific Employment Stimulus Programme 17 Science Fellows and 11 through the Contracts established under the transitional rule of Decree Law 57/2016. Besides that, hired 16 PhDs under European and FCT projects. i3N is a truly international institute and in 2021 the researchers came from 23 different nationalities, being Portugal the country with more representation, followed by India, Brazil, and Germany. Presently, i3N is supported by 7 highly qualified technicians, 6 administratives and 3 project managers.

MISSION

The i3N mission is to serve open science to citizens' comfort and welfare, by exploiting green and sustainable technologies and materials to be incorporated into products and systems, serving multidisciplinary fields, aligned with the 19 goals of OCDE, the public policies and societal needs, besides capturing, and promoting science talents. To do so, i3N activities are focused in 4 Thematic Lines (Sustainable Micro and Nanofabrication; Green and Clean Energy Systems; Nanomaterials Engineering and Functional Interfaces; Biomedical Devices and Systems) that cover in part some of these UN objectives, and each one focused on a critical societal issue.

By doing so i3N is contributing to a more efficient innovation transfer in Europe, by decreasing the "Valley of Death" that is today widened, due to the slow innovation process for turning R&D results into innovative products, considering, sustainability, processes environmental impacts, safety, energy, and cost.

As key performance indicators, i3N identified the following ones:

- To have scientific papers at the front edge of research, published in high-ranked journals;
- Balance between national funds and externally funds, especially through European Projects and Contracts with industry. The team raised around 72 M€ in the 2015-22 period (FCT + EC+ Industry), from which 82% connected to industry and/or EU funding projects.
- To create a top environment for international scientific talent;
- To create strong multidisciplinary cohesion within the infrastructure;
- To be a national leader and international key player in Advanced Materials and Nanotechnology.



UN Sustainable Development
Goals commitment

SDG 3. Good Health and Well Being

SDG 7. Affordable and Clean Energy

SDG 11. Sustainable Cities and Communities

SDG 12. Responsible Consumption and Production

SDG 13. Climate Action

OBJECTIVES

The main objectives of i3N are to promote the research, innovation, development, and deployment in a horizontal cross cutting of fields enabled by the exploitation of conventional and novel multifunctional materials at a micro and nanoscale (1D and 2D).

To reach these objectives, activities/projects are developed in a matrix-like structure that crosses horizontally the 6 existing Research Groups in both hubs (Structural Materials; Soft and Biofunctional Materials; Advanced Functional Materials for Micro and Nanotechnologies; Nanophotonics and Optoelectronics; Theoretical and computational Physics; Physics of Advanced Materials and Devices) with the 4 vertical Thematic Lines above defined. Each R&D project is connected to a TL and resources from one or more RG are pooled together to maximize the performance of the research and the impact of the project.

PRINCIPAL/STRATEGIC ACTIVITIES

The principal research activities have been above defined, whose goals and targets are a clear encouragement to use all possible routes to cut CO2 emissions, reduce waste, foster circularity, and strengthen the symbiosis concept by exploiting the materials functionalities up to the nanoscale range, where societal demands must be taken in the front row of any of our tank thinking.

Therefore, sustainable materials (natural abundance, low toxicity, economically affordable and versatility in terms of physical and chemical properties) are the activators to serve our thank-thinking for a solid grounded prosperity. This involves the design and development of novel materials able to be used in plethora of applications such as: food, medicine; electronics, security, and energy, using green technologies at a micro and nanoscales, driven by a novel knowledge repository powered by Artificial Intelligence (AI) methods.

As a strategy, i3N aims to have their researchers involved in the front line of a scientific breakthrough as well as in defining the scientific policies, at National and International levels. Since 2007, i3N have achieved excellent scientific results, recognized by the 9 ERCs grants, 2 EIC pathfinder projects, more than 155 national and international projects and 91 patents, along the scientific papers published at high impact factor journals, like Science, Nature, Progress in Materials Science and Advanced Materials, which places i3N as the leading research institute in Portugal in Materials Science and Nanotechnologies. Since 2007, i3N has published 3541 scientific papers, having an accumulated h-index of 86, with a number of citations of 62,076 and 44,955 citing articles (@WoS, September 2022).

INFRASTRUCTURES & FACILITIES

As far as infrastructures are concerned, i3N integrates state of the art facilities as required by high level research groups having as objective to be in forefront edge of research, technological development, and innovation in the demanded areas of advanced micro/nano materials, nanotechnologies and nanosciences, and being responsible for boosting all known industry/applied research. This involves the use of high powerful computing tools; sophisticated labs for characterization and processing activities, such as clean rooms; use of sophisticated equipment's, in some cases highly expensive, such as SEM/FIB, XPS, TEM/STEM and ultra-high vacuum units to process materials and devices, such as atomic layer deposition, nanoimprinting and 3D laser processing; use of raw materials, special gases and components, among others.

> SCIENTIFIC AREAS

Materials Engineering
Nanotechnology
Physical Sciences

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

6.259.850,00 €

From 01/01/2021 to 31/12/2025

> TEAM/CONSORTIUM

NOVA University Lisbon (NOVA FCT)
(Coordinator)

University of Aveiro

Association for Innovation and
Development of FCT (NOVA.ID.FCT)

Institute for the Development of New
Technologies (UNINOVA)



> NAME

INSTITUTE FOR HEALTH
AND BIOECONOMY

> ACRONYM

i4HB

> LA

COORDINATOR

Joaquim Cabral

> COORDINATOR

AT NOVA

Maria João Romão

> CONTACTS

info@i4hb-la.pt

> WEBSITE

i4hb-la.pt

STRUCTURE

The Institute for Health and Bioeconomy i4HB is a strategic partnership between 3 leading research units in the Portuguese R&D landscape, that thrive on fundamental and applied science in the Biomolecular and Biological Sciences, Biotechnology, Bioengineering and Micro- and Nanotechnology fields: UCIBIO – Applied Biomolecular Sciences Unit (NOVA University Lisbon and University of Porto), iBB – Institute for Bioengineering and Biosciences (IST, University of Lisbon) and INESC-MN (Institute for System Engineering and Computers – Microsystems and Nanotechnologies – a non-profit R&D Institute). There are 211 integrated researchers in the i4HB associate laboratory (73 from NOVA).

MISSION

The i4HB mission is to become a leading interdisciplinary Institute, to address societal demands and provide knowledge and sustainable technological solutions to improve the wellbeing of the population. Through world class R&D, i4HB fosters the development of integrated knowledge to support innovation in Public Policies at the leading-edge of research and education with major impact in the Health and the Bioeconomy sectors. To meet this goal, i4HB is organized along 4 Thematic Lines (TLs) that address the challenges of strategic research fields and effectively support the implementation of public policies. These TLs are supported by synergic activities in Biomolecular Science, Integrated Systems for Advanced Therapies, Medical and Environmental Devices and in Biotech 4 Bioeconomy:

TL1 Platforms for Drug Development and Discovery**TL2** Advanced Diagnostics and Therapies**TL3** Human Health and Environmental Safety**TL4** Bioresources Valorisation and Bioproducts Production

OBJECTIVES

The i4HB vision is to translate the exponential growth of R&D in Portugal into effective solutions to society needs. The i4HB objectives and strategic plan were thus defined based on three action axes: Human Resources, Institutions and Activities. The strategic plan is supported by 3 Strategic objectives towards the effective support to Public Policies with impact in the Health and Bioeconomy sectors:

Objective 1 – Promote and SECURE SCIENTIFIC EMPLOYMENT, actively support the ADVANCED TRAINING of human resources with a global impact, attracting TALENT to Portugal.

Objective 2 – Contribute to the INTERNATIONALIZATION of the scientific base and increase the DIVERSIFICATION OF FUNDING, in particular from EU R&D programs and other International Entities.

Objective 3 – REINFORCE EXCELENCE in R&D in collaboration with the private sector, and public or private institutions to continue to support PUBLIC POLICIES

INFRASTRUCTURES & FACILITIES

NMR, X-ray, Biolab, Portuguese Yeast Culture Collection, Stem Cell Engineering and Regenerative Medicine Laboratory and Pilot plant for bioprocesses development.

PRINCIPAL/STRATEGIC ACTIVITIES

i4HB is anchored in strong scientific and technological competences in Health and Bioeconomy and committed to make a difference and leverage National and International policies in these emergent priority areas. i4HB defined 4 Thematic Lines (TL) of research, considering that the foremost global challenges related to Health or Sustainability require interdisciplinary solutions in scientific areas where i4HB has expertise, infrastructures and the network to lead internationally.

TL1 – Platforms for Drug Development and Discovery

TL1 aims to organize the research conducted at i4HB into a platform of services, highly trained personnel, facilities and knowledge in Basic Research, Non-clinical and pre-clinical development to address the challenges of the early stages of the drug discovery and development pipeline process, focusing mostly on three main Health areas that are critical for the European population in the next decades: 1) neurodegeneration, due to the observable aging of the population; 2) infection, as we must brace for a near-future reality where the available antibiotics will not work due to acquisition of antibiotic resistance; 3) cancer, the second leading cause of death in the world, fostered by an aged population. The activities of TL1 are focused on two major Topics: Basic Research for the first phase of Drug Discovery and Development and Non-clinical and pre-clinical Research for Drug Discovery and Development.

TL2 – Advanced Diagnostics and Therapies

The aim of TL2 is to foster the development of new diagnostics and therapeutics for human diseases, with a focus on aging-associated conditions (e.g. cancer, neurodegenerative and cardiovascular diseases) and rare (neuro)developmental and haematological disorders. It relies on Biomolecular Sciences, Cell Biology, Engineering and Nanotechnology approaches to translate knowledge of molecular and cellular mechanisms and technological developments into efficient solutions with impact on health and biopharmaceutical industries. The activities of TL2 are focused on two major and interconnected Research Topics: Advanced Diagnostics and Novel Therapeutics for Regenerative and Precision Medicine.

TL3 – Human Health and Environmental Safety

TL3 focuses mainly on the application of standard and new approach methodologies to the evaluation of xenobiotic toxicity, improvement of environmental or human health conditions, as well as to the identification of drivers of antimicrobial resistance in a One Health perspective, while increasing the knowledge on safe and health-supportive microbes. The understanding of the mechanisms underlying microbe-human host interactions is also crucial to improve the therapeutic control of pathogenesis and the course of disease. The activities of TL3 focus on three major Research Topics: Safety Assessment of Chemicals, Antimicrobial Resistance and Microbe-Host interactions in human diseases.

TL4 – Bioresources Valorisation and Bioproducts Production

The objective of TL4 is to establish efficient and eco-friendly transformation and purification bioprocesses that add value to our country's abundant bioresources by transforming them into sustainable and biodegradable materials and bioproducts (e.g. biofuels, bulk chemicals, biopolymers). Key bioresources include residues from pulp and paper industries, agro-food industries (breweries, fruit, vegetables, dairy), marine macroalgae and municipal residues. Activities are geared towards making our industry more competitive, by driving innovation and transferring technological solutions to the market, while at the same time addressing public concerns. In particular, TL4 aims to 1) Reduce waste accumulation; 2) Valorise wastes (including CO₂) into bioproducts; 3) Break the plastic wave; 4) Develop marine bioresources; 5) Develop and implement sustainable bioprocesses. The activities of TL4 are focused on four major and interconnected Research Topics: Yeast cell factories, Marine bioresources, Sustainable biopolymer technologies for a Circular Economy and Advanced biomanufacturing.

> SCIENTIFIC AREAS

Biological Sciences
Industrial Biotechnology
Nanotechnology
Health Sciences
Medical Biotechnology

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

2.152.153,00 € / 5 YEARS

> TEAM/CONSORTIUM

iBB – Institute for Bioengineering and Biosciences (IST, University of Lisbon)

UCIBIO – Applied Biomolecular Sciences Unit (NOVA University Lisbon & University of Porto)

INESC-MN – Institute for System Engineering and Computers – Microsystems and Nanotechnologies

UN Sustainable Development
Goals commitment**SDG 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture**SDG 3.** Ensure healthy lives and promote well-being for all at all ages**SDG 6.** Ensure availability and sustainable management of water and sanitation for all**SDG 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**SDG 9.** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**SDG 12.** Ensure sustainable consumption and production patterns

IN2PAST

> NAME

LABORATÓRIO ASSOCIADO
PARA A INVESTIGAÇÃO E
INOVAÇÃO EM PATRIMÓNIO,
ARTES, SUSTENTABILIDADE
E TERRITÓRIO

> ACRONYM

IN2PAST

> LA

COORDINATOR

António Candeias

> COORDINATORS
AT NOVA

Joana Cunha Leal

José Neves

Manuel Pedro Ferreira

Sónia Almeida

> CONTACTS

in2past@fcsh.unl.pt

> WEBSITE

<https://cria.org.pt/pt/in2past>

STRUCTURE

IN2PAST have the following thematic Lines:

TL1 – Science and Technology for Cultural Heritage. Preserve and debate the authenticity of cultural heritage's various expressions and enhance these legacies, underlining their role in the cultural identity of the territories and projecting them as a basis for economic activities. Heritage research must be based on multi- and transdisciplinary approaches that create dynamics and synergies between the humanities, social sciences, and natural sciences. Moreover, the preservation and the valorisation of cultural heritage are fundamental issues that require the implementation of integrated strategies vis-à-vis the production of new knowledge, the transfer of knowledge to make it socially useful and relevant, and the dissemination to raise awareness and value such knowledge.

TL2 – Landscapes, Territories and Cultural Heritage. This thematic line of research and action revolves around a common interest for the study of the territory, its landscapes and heritage, which are understood as the material, spatial and cultural expressions of societies over time. Interpreting cultural heritage as a proactive resource, IN2PAST articulates heritage with development through innovative geographical methodologies towards the territory.

TL3 – Museums, Monuments and their Collections. Individual and collective research projects developed by IN2PAST's researchers have contributed to the making of policies, governance, curatorship, management and conservation of tangible and intangible heritage in all forms, as well as timely scientific advancement and education that will secure future generations' awareness of the need to care for and preserve heritage.

TL4 – Archives, from Preventive Preservation to Digitalisation. Research within this TL will address the pressing concerns about memory institutions stemming from transversal problems related to both preservation — including the crucial selection of memory objects, conservation (especially preventive conservation) and restoration of materials and contents — and access, in order to advise on criteria for public policies and ethics in this area.

TL5 – Cultural Circulation, Public Policies on Memory and Inclusive Citizenship. Encompassing diplomatic, scientific, and artistic undertakings, this TL seeks to support, accompany, and implement the development of memory policies leading to a more active and renewed global positioning of Portugal and to more inclusive and creative societies.

MISSION

IN2PAST is dedicated to the preservation, study and promotion of cultural heritage, generating intensive collaborative relations between: 1) academic, laboratory-based, theoretical and empirical research; 2) public policies concerning the domains of cultural heritage, arts and civic memory; 3) an important set of Portuguese cultural institutions and facilities, namely monuments, museums, archives, archaeological sites and natural parks.

OBJECTIVES

The vision driving IN2PAST is to make heritage a central player in the sustainable development of our society by making it meaningful, sustainable, and accessible, in a multicultural and ever-changing world, for the benefit of the wider population. IN2PAST set out the following strategic priorities, taking into consideration the consortium's unique combination of skills and resources: – Preventive conservation and risk assessment.; – Massive digitalisation to protect, preserve and enhance collections, artefacts, archives, and monuments and increase accessibility to cultural goods; – Expand heritage preventive conservation to new areas, from traditional to contemporary materials and sound, following initiatives such as the creation of the National Sound Archive; – The establishment of a strong relationship between cultural heritage and tourism; – The creation of a permanent state policy regarding the production of Portuguese and European civic memory; – The making of a pluralistic collective memory.

PRINCIPAL/STRATEGIC ACTIVITIES

- **VALE DO AVE** | Develop the 'cartography' of the industrial Ave valley landscape, requiring a multidisciplinary approach to find innovative solutions for the sustainable development of the region.
- **Museums of Resistance** | Scientific support and cooperation with the new Museu Nacional Resistência e Liberdade (Peniche) and the Municipal Museum of Aljube.
- **Banco de Arte Contemporânea** | Development of the Bank of Contemporary Art (BAC), that aims at cataloguing and study, preserve and digitally display disregarded and, therefore, endangered small archives and personal estates of 20th-century artists, art historians, art critics and galleries (BAC is currently run 10 by the Municipality of Lisbon through EGEAC Cultura, IHA remaining a key research partner).
- **Colonial Collections** | The inventory and study of the origins of the colonial collections, engaging with archives and photographic collections deposited in museums such as the National Museum of Ethnology (including the estates of Jorge and Margot Dias, Ruy Cinatti and Michel Giacometti).
- **Portuguese Early Music database** | The development of online, open-access interoperable databases for the description, correlation and display of textual and graphical objects and their contents, expanding ongoing projects, such as the Portuguese Early Music database – a resource that offers high-resolution images handled through an IIIF server, descriptions, and full indices of Medieval and early modern chant and polyphonic manuscripts preserved in Portugal and neighbouring Spanish locations, already interoperating within a global network of similar resources.

INFRASTRUCTURES & FACILITIES

The nature of some cultural heritage makes imperative the inclusion of the methods and technique of physical and live sciences in the interdisciplinary study of material cultural heritage. In IN2PAST Lab, this can only be possible by the contribution of its unique laboratory hubs, namely HERCULES Laboratory, Laboratory of Construction and Technology at the School of Architecture (LAB2PT), and the emerging Digital Humanities Lab (IHC, NOVA), among others, namely the Human Osteology Lab (CRIA, NOVA) and the Paleography and Musical Edition LAB (CESEM, NOVA).

> SCIENTIFIC AREAS

Cultural Heritage

Heritage Sciences

Arts

Collective Memory

> STARTING DATE

1ST JANUARY 2022

> FUNDING AWARDED

565 125,00 € / 5 YEARS

> TEAM/CONSORTIUM

Main Management Institution:
University of Évora

Other Management Institutions:
NOVA University Lisbon
University of Minho
ISCTE – IUL
University of Coimbra
CRIA

Research Units:
HERCULES
IHC
IHA
CHAIA
CRIA
CESEM
LAB2PT



UN Sustainable Development
Goals commitment



SDG 11
Sustainable Cities and Communities

LAQV/REQUIMTE

> NAME

ASSOCIATED LABORATORY FOR
GREEN CHEMISTRY – CLEAN
TECHNOLOGIES AND PROCESSES

> ACRONYM

LAQV/REQUIMTE

> LA

COORDINATOR

Baltazar de Castro

> COORDINATOR

AT NOVA

João Paulo Crespo

> CONTACTS

NOVA School of Science
and Technology Associated
Laboratory for Green Chemistry
Campus de Caparica,
2829-516 Caparica, Portugal
+351 212 948 575

> WEBSITE

<https://laqv.requimte.pt>

STRUCTURE

LAQV is managed through a simple and efficient governance structure, with well defined responsibilities and clearly allocated tasks, which has ensured the smooth implementation and successful execution of its activities since 2001. The model includes a Board of Directors, composed of a director (University of Porto) and two vice-directors (Universities of Aveiro and NOVA University Lisbon). The inclusion of representatives from the different poles of the research unit ensures the overall executive management of LAQV. The Board of Directors is elected by the Scientific Council, which comprises all integrated PhD holders of LAQV. The Board of Directors nominates two Research Committees to support the management of LAQV at a scientific level: the Multidisciplinary Lines Committee and the Research Groups Committee, composed of the coordinators of each Multidisciplinary Line and Research Group, respectively. The Board of Directors are also supported by the External Advisory Board, constituted of 6 renowned specialists in Sustainable Chemistry. The governance of LAQV is also supported by administrative services, which manage both human resources and financial aspects of the R&D projects, and a Science Management & Communication Office, whose many activities rely on science dissemination, communication, and outreach activities; support on grants and awards applications; and IT support.

MISSION

The mission of LAQV is to initiate, advance, and promote the principles of Sustainable Chemistry through a multiplicity of research, networking, training, and outreaching activities. For that, the thematic Lines of LAQV were aligned with the Research Agenda of the European Technology Platform for Sustainable Chemistry (SUSCHEM), the United Nations (UN) Sustainable Development Agenda, and the priorities of Horizon 2020 and Horizon Europe. LAQV is focused on increasing the awareness of different stakeholders for the importance of Sustainable Chemistry.

OBJECTIVES

LAQV objectives are aligned with Public Policies Framework. Its activities, namely scientific, academic and technological are focused on areas of social and economic relevance. As such, LAQV members aim to contribute with their expertise to the definition of public policies, and to maximize the impact of these policies. With this purpose and with Chemistry as the underlying theme, LAQV set the following objectives:

- Create and develop sustainable procedures and technologies towards a circular and climate-neutral exploitation of natural resources – land and sea.
- Boost a cooperative research strategy towards a valued, healthy, and safe water and food supply.
- Provide processes and methodologies for Energy Transition and Sustainability.
- Converge and integrate top-notch research and expertise towards an effective improvement of healthy life expectancy and wellbeing.
- Use green and innovative processes towards the protection, enhancement, and conservation of Cultural Heritage.

PRINCIPAL/STRATEGIC ACTIVITIES

LAQV has a two-way connection with (inter)national public policies: its objectives are established according to public policies, and also participates in management and leadership positions of associations, societies, and professional orders, which articulate with policy makers towards the definition of new public policies, covering the different fields of expertise of LAQV members, namely, Chemistry, Food Science, (Bio)Chemical Engineering, Health and Preservation of Cultural Heritage. LAQV has already been committed to complying with several strategies proposed by the Government, and its objectives cross several topics of public policies: i) urban science and cities for the future; ii) sea; iii) health and clinical; iv) industry and manufacturing; v) agri-food, forests and biodiversity; vi) science and culture. LAQV also contributes to the following national agenda: climate change, cultural heritage, circular economy, sustainable energy systems, and job qualification in Portugal.

INFRASTRUCTURES & FACILITIES

In the present configuration, it spreads out from the two main national metropolitan areas of Lisbon and Porto to integrate Aveiro, Coimbra, Évora, and small sites all over the country.



> SCIENTIFIC AREAS

Energy – Clean and Renewable
Environment – Monitoring & Analysis
Food & Nutrition
Functional Materials
Health & Wellbeing
Resource efficiency – Sustainable
Processing

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

843 255,00 € / 5 YEARS

> TEAM/CONSORTIUM

University of Aveiro
NOVA University Lisbon
Catholic University of Portugal
University of Porto
University of Évora
UTAD

LAQV
requimte

LABORATÓRIO ASSOCIADO
PARA A QUÍMICA VERDE



UN Sustainable Development
Goals commitment



SDG 3
Good Health
and Well-being



SDG 7
Affordable and
Clean Energy



SDG 12
Responsible
Consumption and
Production



SDG 13
Climate
Action

> NAME

LABORATÓRIO ASSOCIADO
DE SISTEMAS INTELIGENTES

> ACRONYM

LASI

> LA

COORDINATOR

Paulo Novais
University of Minho
(ALGORITMI)

> COORDINATORS

AT NOVA

António Grilo
UNIDEMI
Luís Camarinha-Matos
CTS

> CONTACTS

sec@lasi-research.pt

> WEBSITE

https://lasi-research.pt

STRUCTURE

The LASI involves 13 research units. It involves research units settled in different cities of Portugal, namely in Aveiro, Barcelos, Braga, Coimbra, Guimarães, Lisboa and Porto covering a wide range of the territory of Portugal, characterized by dynamic cities and innovative eco-systems.

MISSION

LASI will promote the generation, dissemination, exploitation and retention of knowledge that is in line with the present and future scientific and technological challenges. We will promote in each member of LASI the competence and passion to work for the benefit of society with creativity, motivation, strict ethical commitment, and respect for human values.

OBJECTIVES

LASI is a reference laboratory for Artificial Intelligence and Data Science in Portugal. It intends to create sustainable and inclusive innovation for our society, improving applications/materials/products and using advanced intelligent systems technologies, providing high levels of precision, performance and adaptation over time. It will, therefore, enable new business models and processes in industry, services, community and improve the way we interact with everything around us.

PRINCIPAL/STRATEGIC ACTIVITIES

Five inter-disciplinary research thematic lines make the focus of LASI:

Such thematic lines aim to research and make important progresses in the fields of:

TL1 - Innovative and Sustainable Industries, with a strong focus on Industry 5.0

TL2 - Smart Cities, Mobility and Energy, allowing cities of the present to develop multiple IS over their ecosystem

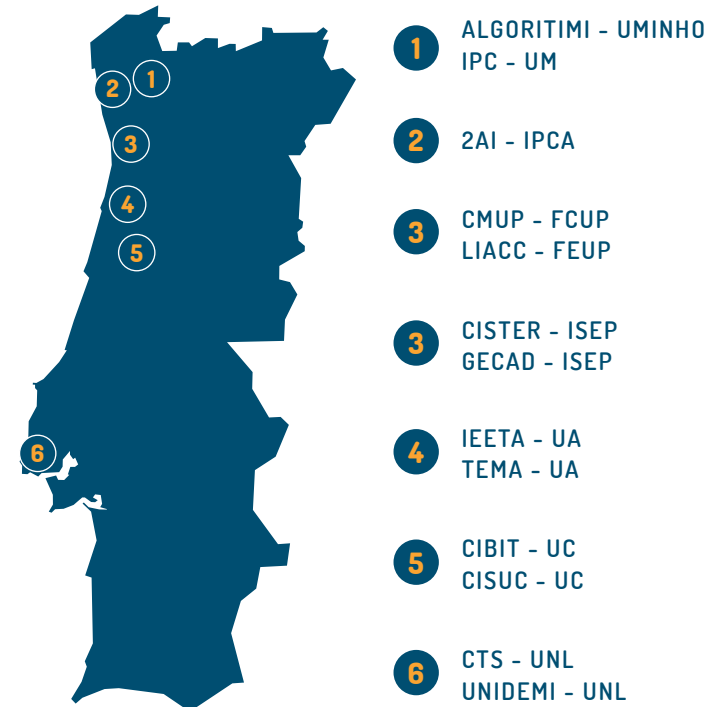
TL3 - Health and Well-being, with a focus on improving the quality-of-life of every individual

TL4 - Infrastructures and Highly Connected Society, focusing on the inclusion of people as active and proactive actors of the technological ecosystem

TL5 - Public Administration and Governance, accelerating the digital evolution of governments and municipalities

INFRASTRUCTURES & FACILITIES

LASI encompasses thirteen R&D units, spread across the country, firmly consolidated in the Portuguese scientific panorama with a rich history and a structuring relationship with artificial intelligence and data science domains. LASI is headquartered at the Centro Algoritmi, University of Minho in Guimarães. The thirteen R&D units are:



> SCIENTIFIC AREAS

Artificial Intelligence and Data Science

> STARTING DATE

1ST NOVEMBER 2021

> FUNDING AWARDED

135.742 € / 5 YEARS

> TEAM/CONSORTIUM

Coordinator:
University of Minho (ALGORITMI)

Participants:

- University of Minho (ALGORITMI, IPC)
- NOVA University Lisbon (UNIDEMI, CTS)
- Instituto Politécnico do Cávado e do Ave (2AI)
- University of Porto (CMUP, LIACC, CISTER, GECAD)
- University of Aveiro (IEETA, TEMA)
- University of Coimbra (CIBIT, CISUC)



RoboCup 2022 (<https://2022.robocup.org>) took place in Bangkok, Thailand, from 13-17th July.

The Portuguese participation in RoboCup 2022 was constituted by the FC Portugal teams from LASI, in particular from the University of Porto (FEUP/LIACC) and University of Aveiro (UA/IEETA), in the 3D Simulation league.

UN Sustainable Development Goals commitment



LS4FUTURE

> NAME

LIFE SCIENCES FOR A HEALTHY
AND SUSTAINABLE FUTURE

> ACRONYM

LS4FUTURE

> LA

COORDINATOR

Inês Cardoso Pereira

> COORDINATOR

AT NOVA

Inês Cardoso Pereira
ITQB NOVA

> CONTACTS

ls4future@ls4future.pt

> WEBSITE

www.ls4future.pt

STRUCTURE

The Laboratório Associado Life Sciences for a Healthy and Sustainable Future (LS4FUTURE) is a partnership of four Research Units (RU), MOSTMICRO-ITQB, INOVA4HEALTH, IGC and GREEN-IT (Figures 1 and 2), which are all rated as Excellent by the Fundação para a Ciência e Tecnologia (FCT MCTES). These RU belong to five institutions, the Instituto de Tecnologia Química e Biológica António Xavier (ITQB NOVA), the Instituto de Biologia Experimental e Tecnológica (iBET), the Instituto Gulbenkian de Ciência (IGC), the Centro de Doenças Crónicas (CEDOC) of the NOVA Medical School, and the Instituto Português de Oncologia de Lisboa Francisco Gentil (IPOLFG). The ITQB NOVA and the NOVA Medical School are two organic units of the NOVA University Lisbon, and the IGC is part of the Fundação Calouste Gulbenkian (FCG).

MISSION

To create knowledge, innovate and translate research in Life Sciences towards a Sustainable Future for humankind and our planet.

OBJECTIVES

LS4FUTURE works at various levels of complexity in fundamental, applied and translational research within a global One Health concept, with research targeting Human, Animal and Environmental Health in an integrated approach with the following objectives:

- i) increase our ability to create knowledge, innovate and swiftly translate novel findings to society in the areas of Health and Sustainability;
- ii) train scientists and implement a recruitment plan to attract and retain top level PhD holders;
- iii) increase our capacity to secure international funding and be part of global networks;
- iv) support public policies and respond to societal challenges, through strategic research and services able to give a rapid response to expected and unexpected threats.

The societal challenges that LS4FUTURE will address include:

- Disease prevention and understanding of disease mechanisms
- Discovery and development of advanced therapeutics
- Ensuring food safety and security and enhancing agriculture productivity
- Designing solutions towards sustainable ecosystems, grounded in knowledge and biotechnology



UN Sustainable Development
Goals commitment

SDG 2. Zero Hunger

SDG 3. Good Health and Well-being

SDG 6. Clean Water and Sanitation

SDG 7. Affordable and Clean Energy

SDG 12. Responsible Consumption and Production

SDG 13. Climate Action

SDG 14. Life Below Water

SDG 15. Life on Land

PRINCIPAL/STRATEGIC ACTIVITIES

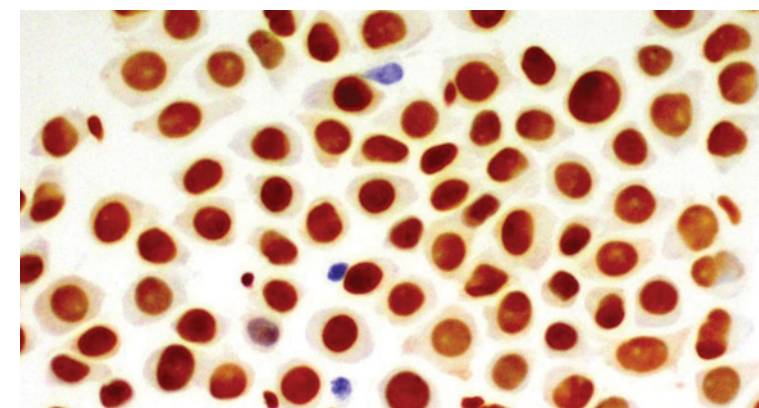
LS4FUTURE has a strategic plan anchored in four Thematic Lines (**TL1 - From Molecules to Ecosystems; TL2 - Mechanisms of Disease for Precision Medicine; TL3 - Advanced Therapeutics: Discovery and Development; TL4 - Biotechnology for a Sustainable World**). Its activities will be centered around:

- Implementing a programme to develop scientific and technical careers of PhD holders within the framework of HRS4R;
- Developing an integrated approach to attract, empower and retain internationally competitive researchers and staff, from the level of PhD student to the level of PIs, increasing the capacity of Portugal to attract and retain the best scientific talent;
- Performing top quality fundamental and applied research in Life Sciences, embracing its openness and digital transformation, and following the scientific programme of its four Thematic Lines;
- Translating knowledge into healthcare, products, services and processes, directly addressing societal, environmental and economic needs, and aligned with National and European priorities;
- Achieving a high level of internationalization of teams, projects and funding that can compete with top world performers in R&D;

LS4FUTURE will translate its research to society by working closely with multiple partners from Health (hospitals, healthcare centres, clinicians), Industry (Pharma, Biotech companies, Centres of Competence, Collaborative Labs), Education (Schools, Polytechnics and Universities), Government and Municipalities, and other stakeholders (Agro-Industry partners, Private Foundations, etc).

INFRASTRUCTURES & FACILITIES

The research infrastructures and facilities of its five institutions, ITQB NOVA, iBET, IGC, FCM, and IPOLFG are devoted to LS4FUTURE.



> SCIENTIFIC AREAS

Life Sciences

Precision Medicine

Biotechnology

Food Security

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

8.501.051,00 € / 5 YEARS

> TEAM/CONSORTIUM

NOVA University Lisbon
(Coordinator)

Calouste Gulbenkian Foundation

Instituto de Biologia Experimental
e TecnológicaInstituto Português de Oncologia
de Lisboa Francisco Gentil, EPE

REAL

> NAME

ASSOCIATED LABORATORY IN
TRANSLATION AND INNOVATION
TOWARDS GLOBAL HEALTH

> ACRONYM

REAL

> LA

COORDINATOR

Helena Canhão

> COORDINATOR

AT NOVA

Helena Canhão

NOVA Medical School

> CONTACTS

helenacanhao@nms.unl.pt

> WEBSITE

www.nms.unl.pt/pt-pt/
investigacao/laboratorios-
associados/real

STRUCTURE

REAL brings together 3 R&D Units: the Comprehensive Health Research Centre (CHRC) and the Global Health and Tropical Medicine (GHMT), both classified as Excellent by *Fundação para a Ciência e Tecnologia* (FCT), and the Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics (LIBPhys), classified as Very Good by FCT.

REAL's mission is organized into 5 thematic lines: I) Health promotion through life course, health trajectories and transitions, behavioral insight, and inequalities; II) New therapies, biomarkers and personalized medicine in high burden and high mortality diseases; III) Global health in One Health; IV) Health policies, universal coverage, patient-centered and efficient healthcare; V) Digital health, Medtech, health technology assessment and access to the market.

REAL also benefits and capitalizes from a strong and organized administrative department that provides support in financial and project management, legal and regulatory affairs, internal and external communication, and institutional and international relationships.

REAL builds research capacity through its career development department, responsible for talent recruitment and retention, research exchange partnerships, and identifying training opportunities offered by REAL's consortium. Plus, REAL has partnerships with primary care centers/ hospitals, patient associations, companies, NGOs, and Portuguese Governmental Agencies, which help in the accomplishment of REAL's mission.

MISSION

REAL is committed to stimulating research of excellence and new discoveries - vaccines, health literacy tools, biomarkers (digital, genetic, serologic), and novel treatments - and successfully identifying opportunities for technology transfer with the promotion of joint ventures between academia and private/public institutions. REAL aims at supporting the development of a most sustainable and best-integrated health system, based on robust researcher careers, translational science and digitalization, and a strong network of knowledge easily available to experts and health stakeholders who can optimize the decision-making process.

OBJECTIVES

REAL is committed to bringing together government, business, media, higher education institutions, patient associations, and NGOs to improve people's lives in Portugal and in Europe by 2030. REAL will invest in a policy-making effort by working with national and international health authorities to effectively implement the discovered solutions in communities and in healthcare systems. REAL is focused on providing more efficient patient-centered healthcare and equal access to innovative treatments. Also, through telemedicine, REAL aims to improve access to physicians and other health professionals.

PRINCIPAL/STRATEGIC ACTIVITIES

To bridge the gap between science and population needs, REAL will encourage and increase R&D activities, being involved with strategic national/international partners, thus seeking to increase the impact on global health, based on the distinct existing funding opportunities. Furthermore, REAL intends to act in the emerging areas of public health, with a direct response to public policies of government order, privileging the whole society equally. REAL's target is to enable new knowledge in network science to undertake core challenges such as New therapies, Biomarkers and Personalized Medicine, Health Promotion Life Course, Health policies, and Digital health.

INFRASTRUCTURES & FACILITIES

R&D Units integrating **REAL** are long-lasting and established participants in scientific infrastructures included in the National Roadmap for Research Infrastructures 2020, such as **VIASEF** (In Vivo Arthropod Security Facility - coordinated by GTHM, is a unique infrastructure for researchers to develop in vivo studies with arthropod vectors); **BIOBANCO.PT** (National Biobanks Infrastructure); **PtCAC** (Portuguese Network of Clinical Academic Centers (CACs)); **PtCRIN** (Portuguese Clinical Research Infrastructure Network); **CCAL** (CAC promoted by NMS-CHRC, with primary care centers and hospitals, and ENSP-NOVA); **Pt-mBRCN/MIRRI-PT** (Portuguese microBiological Resources Center Network/Microbial Resource Research Infrastructure); Pt-OPENSREEN (Network of chemistry&biology research institutes bridging chemistry-based research areas and molecular&structural biology); **TRIS-HCP** (Translational&Clinical Research Infrastructures Specialisation Platform); **MIA-Portugal** (Multidisciplinary Institute of Ageing (UCoimbra)); **Biodata.pt** (Portuguese Biological Data Network); **GenomePortugal** (National Facility for Genome Sequencing and Analysis).

NMS-CHRC hosts the clinical trial unit NOVA-CRU, which along with PtCRIN are very important tools to promote and support clinical research performed at REAL.

In all, REAL takes advantage of these infrastructures to leverage the potential to attract national/international funds, to increase the quality of research outcomes and response to public policies.



According to the 2030 Agenda for Sustainable Development, REAL's researchers pretend to mobilize its action to secure greater leadership, more resources, and smarter solutions for the UN's SDGs. Concretely:



SDG 3. Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages.



SDG 4. Quality Education



SDG 5. Gender Equality: Achieve gender equality and empower all women and girls.



SDG 9. Industry, Innovation, and Infrastructure
Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.



SDG 10. Reduced Inequalities: Reduce inequality within and among countries.

> SCIENTIFIC AREAS

MEDICAL AND HEALTH SCIENCES

Clinical Medicine
Health Sciences
Medical Biotechnology

ENGINEERING AND
TECHNOLOGY SCIENCES

Medical Engineering

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

675.393,00 € / 5 YEARS

> TEAM/CONSORTIUM

Principal Management Institution
NOVA University Lisbon

Participating and Management
Institutions

University of Évora
University of Coimbra
University of Lisbon

Main R&D Unit and Proponent Institution
Comprehensive Health Research Centre
NOVA University Lisbon

Other AL R&D Units

Global Health & Tropical Medicine
Laboratory for Instrumentation,
Biomedical Engineering and Radiation
Physics (LIBPhys)

RISE

> NAME

CLINICAL MEDICINE, HEALTH SCIENCES AND BASIC MEDICINE

> ACRONYM

RISE

> LA

COORDINATOR

Fernando Schmitt

> COORDINATOR

AT NOVA

Conceição Calhau

Coordinator of the Thematic Line 5 (TL5) (CienciaID 2110-0420-1717)

NOVA Medical School

> CONTACTS

rise@med.up.pt

> WEBSITE

https://rise.med.up.pt

STRUCTURE

FMUP hosts RISE, with 6 local management poles at 5 universities (ULisboa, UAveiro, UNL-NOVA, UAlgarve, UMadeira), 1 polytechnic school (Nursing School of Porto – ESEP), and 1 healthcare institution (Instituto Português de Oncologia do Porto).

RISE relies on a well-structured Governance Model designed to ensure effectiveness in pursuing its scientific, technological, and third-mission goals while supporting its strategy for scientific career development and for international promotion and attraction of international funding.

RISE is based on 5 interrelated Thematic Lines (TL): **TL1 – Clinical and Translational Research in Cardiovascular Sciences**; **TL2 – Clinical and Translational Research in Oncology**; **TL3 –Clinical and Translational Research in Inflammatory and Degenerative Diseases**; **TL4 – Healthcare Policy, Technology, and Digital Transformation**; **TL5 – Community Health and Societal Challenges**. The first three TLs focus on preclinical, clinical, and translational research on a wide range of relevant diseases, articulating with the remaining two TLs, which focus on how to improve healthcare and how to address important health societal challenges incorporating the most adequate scientific pieces of evidence.

MISSION

RISE's mission is to strengthen Health Research, from the preclinical and clinical stages to the community level, by connecting universities to healthcare providers, in the scope of the Portuguese policy for Science and Technology.

OBJECTIVES

RISE focuses on fostering clinical and translational research, accelerating digital transformation, and promoting the effectiveness, efficiency, quality, and sustainability of healthcare services. Thus, RISE will fill a current gap in Portugal, allowing the perfect blending of scientific knowledge and innovation produced in R&D institutions and universities with the concrete, daily life of patients, healthcare professionals, healthcare institutions, health authorities, decision and policymakers, entrepreneurs, and companies in the healthcare sector. In all, RISE aims to be a major player and catalyst in changing the landscape of clinical, translational, and community research in Portugal.

RISE-integrated researchers have solid expertise and an extensive record of data analysis, evidence synthesis, health technology assessment, economic evaluation in healthcare, and decision analysis. These domains are key to several stages of policy implementation, including the identification of health problems, evidence gathering and synthesis, policy design and evaluation, development of alternatives, and cost-effectiveness weighting.

RISE IN NUMBERS



+ 220

PHD RESEARCHES



+ 120

PHD STUDENTS



15

MEUROS IN COMPETITIVE RESEARCH GRANTS



16

MEUROS IN PHD TUITION FEES



7

MEUROS IN RTC



Health Research Network
From the Lab to the Community



UN Sustainable Development Goals commitment

The vision and goals of the proposed AL are aligned with the most relevant global and national strategic plans currently defining short- and long-term developments in health and healthcare technology, innovation, and science in Portugal and worldwide: the SDGs adopted by the UN as part of the 2030 Agenda for Sustainable Development; the Strategic Plan for Horizon Europe – the European Union Framework Programme for Research and Innovation 2021-2027; the Health, Clinical and Translational Research Thematic Agenda for Research and Innovation of the Portuguese FCT; the Portuguese National Health Plan 2021- 2030 of the General Directorate of Health; and the social and economic strategic plans of the Portuguese Government for the decade 2020-2030.

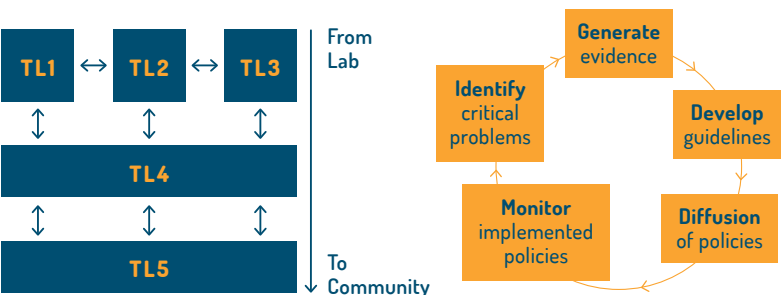
PRINCIPAL/STRATEGIC ACTIVITIES

RISE is set to support and monitor public policy through the identification and introduction of critical problems onto the political agenda in the fields of health and healthcare; the generation of evidence and information; the provision of a robust infrastructure to monitor and evaluate implemented policies, and the proposal of alternative solutions for identified problems.

INFRASTRUCTURES & FACILITIES

RISE research units integrate several entities of the National Roadmap for Research Infrastructures 2020, which offer state-of-the-art conditions to support their research activities. It includes **PtCRIN** (Portuguese Clinical Research Infrastructure Network – promotes the more efficient implementation of multicentric investigator-initiated trials; **TRIS-HCP** (Translational and Clinical Research Infrastructures Specialisation Platform – brings together research and healthcare institutions, promoting their collaboration and making them more accessible to other researchers and companies; **PtCAC** (Portuguese Network of Clinical Academic Centers – promotes collaboration between Universities and Healthcare Institutions; **RNCCC** (National Network of Comprehensive Cancer Centers – promotes best practices and integration of research and clinical care in Oncology; **CONGENTO** (Consortium for Genetically Tractable Organisms – supports research with animal models; **PPBI** (Portuguese Platform of Bioluminescence Imaging – provides access to a broad range of imaging techniques, supporting bioimage analysis); **BIOBANCO.PT** (National Biobanks Infrastructure – promotes national and international collaborative research projects using human samples and the respective clinical information; **GenomePT** (National Laboratory for Genome Sequencing and Analysis – provides access to large-scale genome testing).

Taking into account its expertise, infrastructure, and other assets, RISE will be able to take particular advantage of its participation in the aforementioned scientific infrastructures.



> SCIENTIFIC AREAS

Clinical Medicine

Health Sciences

Basic Medicine

> STARTING DATE

1ST JANUARY 2021

> FUNDING AWARDED

375.000,00 € / 5 YEARS

> TEAM/CONSORTIUM

Principal Management Institution

Faculdade de Medicina of University of Porto

Participating and Management Institutions

Associação para Investigação, Desenvolvimento da Faculdade de Medicina

Instituto de Ciências Biomédicas de Abel Salazar

Faculdade de Ciências of University of Porto

University of Aveiro

NOVA University Lisbon

University of Algarve

University of Madeira

Escola Superior de Enfermagem do Porto

Instituto Português de Oncologia do Porto, EPE (IPO- Porto)

Principal I&D Unit and Proponent Institution

Center for Health Technology and Services Research (CINTESIS)

Other I&D Units

Cardiovascular Research Unit (UnIC)

Cardiovascular Centre at the University of Lisbon (CCUL)

IPO Porto Research Center (CI-IPOP).

8

GENDER EQUALITY PLAN



GENDER EQUALITY PLAN



NOVA GENDER WORKING GROUP

Clara Gomes (FCT)

Ana Santos Pinto (FCSH)

Susana Peralta (SBE)

Paula Macedo (NMS)

Helena Pereira de Melo (LAW)

Manuela Aparício (IMS)

Isabel Craveiro (IHMT)

Ana Petronilho (ITQB)

Sónia Dias (ENSP)



8

GEP GENDER EQUALITY PLAN



NOVA COMMITMENT TOWARDS GENDER EQUALITY

NOVA University Lisbon implemented, in all its Organic Units, a **Gender Equality Plan (GEP)** for the period 2021-2025, reaffirming its alignment with the 2030 Agenda and the Sustainable Development Goals. The GEP was developed under the project *SPEAR - Supporting and Implementing Plans for Gender Equality in Academia and Research* (<https://gender-spear.eu/>). This project was created to support and implement gender equality plans in academia and research. Funded by the European Union, SPEAR is coordinated by the University of South Denmark and joins eight European universities with the aim to develop institutional changes to increase women's participation in Research and Innovation and to improve their career prospects.

NOVA's **Gender Equality Plan** consists of 10 measures, which aim to achieve a set of 44 objectives that are distributed over five dimensions, in particular:

1. **Work-life balance and organizational culture;**
2. **Gender balance in leadership and decision-making;**
3. **Gender equality in recruitment and career progression;**
4. **Integration of the gender dimension into research and teaching content;**
5. **Measures against gender-based violence, including sexual harassment.**

The **Gender Equality Plan** also provides for a continuous monitoring process of its implementation and activities aimed at its sustainability, so that it continues beyond the lifetime of the project within it was developed.

NOVA aims to be a global and civic university contributing to a vision of the future and the global transformation through local actions and in its structural and strategic priorities, has proximity policies based on the principles of inclusion, equality and diversity.

NOVA'S COMMITMENT

NOVA's vision of the future clearly calls for everyone's participation, in a "leave no one behind" approach, which incorporates an essential requirement that integrates institutional policies and undoubtedly contributes to a global transformation through local actions. The University has contributed towards a more equal and inclusive society, with a specific emphasis on GE:

- 01 **NOVA offers the first and only PhD in Gender Studies in Portugal**, which aims to acknowledge Gender Studies as an autonomous scientific area of research and advanced training.
- 02 NOVA founded the **National Observatory of Violence and Gender**, which is the first of its kind in Portugal and which produces scientific-based knowledge on the different social dimensions of violence against women, serving the academic community and providing support for decision-making and intervention in fighting this terrible phenomenon.
- 03 NOVA has emerged as the Portuguese institution with the **best performance** in «gender studies, gender equality policies and commitment to recruit and support women careers», the **15th best worldwide** and **2nd best among young European universities**, according to the Times Higher Education Impact ranking 2021.
- 04 NOVA performs well in terms of gender parity within our academic and research staff, and women are the large majority of our non-academic staff. But there is still a lot of work to be done, because when we look at the roles they play, we get a totally different picture, as it becomes clear that our female academic and non-academic are **under-represented in leadership job positions**.
- 05 Integrated in the Interdisciplinary Centre for Social Sciences (CICS.NOVA), NOVA has a multidisciplinary research team dedicated to women studies – **Faces de Eva**. Their goal is to identify new working areas and trying to articulate with stakeholders the search, sharing and dissemination of scientific knowledge.
- 06 **ANTÍGONA – Clinic For Equality and Discrimination Law** is one of the NOVA Law Knowledge Centers based on the development of activities related to the promotion of legal counselling, training and research in the areas of Equality and Discrimination Law.
- 07 **NOVA WOMEN in BUSINESS** is an academic club based at Nova School of Business and Economics that targets the existing gender gap in our society, specifically focusing on the business and academic world.

9

NOVA SMART CAMPUS LIVING LAB

NOVA SMART CAMPUS LIVING LAB



NOVA smart LIVING campus LAB



[www.unl.pt/en/innovation/
nova-smart-campus-living-lab](http://www.unl.pt/en/innovation/nova-smart-campus-living-lab)



UN Sustainable Development
Goals commitment



SDG 8.
Decent Work and
Economic Growth



SDG 9.
Industry, Innovation
and Infrastructure

BRIEF DESCRIPTION

NOVA Smart Campus Living Lab is one of NOVA's instruments for innovation in products and services for Smart and Sustainable Spaces. Its mission is to provide the entire space of the Campolide Campus with a technological infrastructure, communications, and data aggregating platform on various aspects of the Campus, and to put this infrastructure at the service of society for the testing and creation of new products and services for Smart and Sustainable Spaces.

This **Technology Transfer and Valorization Center** intends to turn the Campolide Campus into a technologically advanced space and, in collaboration with NOVA researchers, place it at the service of the community, as a true living laboratory for testing and developing solutions that improve the experience and sustainability of the space.

Being an open and interactive system with the community and society in general, creating innovative solutions, with impact and capacity to generate value, are some of the goals of the NOVA Smart Campus Living Lab, which, in the context of its lines of action, constitutes an effective response to companies and the market, enhancing the development of the country's economy.

MISSION & VISION

NOVA Smart Campus Living Lab is a **Technology Transfer and Valorization Center** of NOVA University Lisbon, constituting a hub for the creation of added value and knowledge transfer in the area of Smart and Sustainable Spaces, as well as a laboratory of experimentation and use of territorial-based intelligent services that facilitate the emergence of new businesses and data governance. It is open to national and international researchers, companies and society in general.

- Contribute to make the country and the region in which it operates a European reference in its strategic technological areas, favoring the development of emerging sectors and the incorporation of technologies of general use in traditional sectors for the diversification and improvement of the competitiveness of business companies
- Acting on the basis of a commitment of collaboration and coordination with the other agents in the area of management and information technologies, to optimize the existing capacities in the territory and, together, form a comprehensive and excellent scientific-technological offer that drives the evolution of the economy, increasing its added value
- Support the development of teaching, professional training and research activities, as well as participation in international cooperation actions in the various domains that integrate Smart and Sustainable Spaces

FUNDAMENTAL GOALS & OBJECTIVES

- Ensuring the relevance and excellence of the research carried out on the laboratory infrastructure for society in general and its business partners in particular
- Promote partnerships with institutions of international reference, in order to guarantee their integration in European and global scientific networks and, in this way, guarantee access to scientific funding
- Promote advanced training in the area of information management, very lacking in specialized human resources, capable of guaranteeing the good use of information as a resource
- Promote the experimentation and development of innovative products in Smart and Sustainable Spaces with business and institutional partners in the region
- Increase the excellence and international competitiveness of research and development
- Increase the capacity to produce basic knowledge to innovative solutions to social problems in diverse areas
- Align the research produced in a flexible and adjusted way with the needs of the market

10

INNO NOVA CENTER FOR SOCIAL INNOVATION

INNO NOVA CENTER FOR SOCIAL INNOVATION



COORDINATOR
Luís Baptista



TEAM
Miguel de Castro Neto, Paulo Nuno
Vicente, Rita Calçada Pires, and
Rui Pedro Julião



STARTING DATE
4TH AUGUST 2016



FUNDING AWARDED
699.583,07 €



CONTACTS
c.inovacaosocial@unl.pt



WEBSITE
www.unl.pt/en/innovation/inno-nova-center-social-innovation



BRIEF DESCRIPTION

In the Lisbon region, but also all over the country, there are many vulnerabilities and social needs that demand an urgent response, particularly in terms of inclusion, crime and violence prevention, access to basic services and infrastructure, cultural and social inclusion of minorities, just to mention a few.

As a result, NOVA University has decided to launch the INNO - NOVA Center for Social Innovation with the aim of bringing together in one physical space the knowledge and resources that exist at NOVA, particularly in three of its Schools - NOVA School of Social Sciences and Humanities, NOVA Information Management School and NOVA School of Law. The idea is to use that knowledge and resources to develop and improve both social structures and processes that contribute to the promotion of social equity and to the development of a sound and sustainable society.

Based on the Campolide Campus, in Lisbon, this Social Innovation Center will be open to society at large in order to create real value and

impact on the community through three different ways: by designing and implementing social innovation projects; training and qualification of companies, institutions, and entrepreneurs; and sharing knowledge in workshops, training actions and lectures.

Research units, as well as labs and other infrastructure, are INNO's driving force, as many of the activities to be promoted result from the innovative research in various domains of the social sciences, humanities, arts and information management, and from the close interaction with external entities, such as municipalities, companies and civil society organizations.

Education also plays a fundamental role in the development of this Social Innovation Center, given that the Campolide Campus, and in particular the Almada Negreiros College, not only houses research and innovation activities in its connection with society, but also has spaces for training, namely advanced training in which the incorporation of innovative components is of the greater relevance.

UN Sustainable Development Goals commitment



SDG 3
Good
Health and
Well-being



SDG 4
Quality
Education



SDG 5
Gender
Equality



SDG 8
Decent
Work and
Economic
Growth



SDG 9
Industry,
Innovation
and
Infrastructure



SDG 10
Reduced
Inequalities



SDG 11
Sustainable
Cities and
Communities



SDG 14
Life Below
Water



SDG 15
Life on
Land



SDG 16
Peace,
Justice
and Strong
Institutions



SDG 17
Partnerships
for the Goals

MISSION & VISION

Its mission is to address multiple social problems that affect society today through an interdisciplinary approach. Focused on achieving society's sustainable development, INNO - NOVA Center for Social Innovation aims to become a national reference as an interface between the University, companies, and social organizations for the promotion of projects and activities related to Social Innovation.

By doing so, this Center supports NOVA's strategic vision of becoming an increasingly more global and civic university, that adds value to society through a set of actions and attitudes associated with social participation and civic responsibility, which is paramount to the success of democracy.

FUNDAMENTAL GOALS & OBJECTIVES

INNO - NOVA Center for Social Innovation aims to develop a social innovation network within NOVA that allows tackling several social needs present in cities like Lisbon but also in the metropolitan area and other areas in the national territory, as well as abroad.

It will create synergies that are critical to enhance knowledge transfer and carry out social and technological activities that will promote social development and job creation. INNO also aims to actively contribute to the development of public policies and innovative solutions to great social challenges, thus delivering a significant impact in society.

11

NOVA SCIENCE DAY 2021

SCIENCE DAY@ SOUTH

NOVA SCIENCE DAY 2021

SCIENCE DAY@SOUTH

In 2021, NOVA SCIENCE DAY took place in the South, at the University of Évora, following the presentation of South Campus, the unprecedented inter-university association that brings together the NOVA University Lisbon, the University of Évora and the University of Algarve.

SCIENCE DAY@SOUTH was the first event organized under the agreement signed between the Universities, where the various research and innovation projects of each of the institutions in the most diverse scientific fields were made known, combining the resources and skills of each one of them.

The then Vice-Rector for Research at NOVA University Lisbon, Elvira Fortunato, opened the session where she congratulated the South Campus, reinforcing the aggregating and global role of science and technology in solving today's most complex problems.

The main goal of this SCIENCE DAY@SOUTH was to disseminate the initiatives of the identified thematic areas: Heritage, Land and Sea, which, as mentioned by Elvira Fortunato, are the lines that connect part of the research between the Universities in the South.

The afternoon was divided into three presentation sessions:

In the first session, dedicated to the area of Heritage, Nuno Bicho, from the University of Algarve, spoke about the Interdisciplinary Center of Archeology and Evolution of Human Behavior; this was followed by the presentation of the Institute of Contemporary History of the NOVA University Lisbon, by José Neves. To end this block, Milene Casal, from the University of Évora, spoke about Cultural Heritage, Studies, and Safeguarding.

In the second session, dedicated to the field of Land and Social Innovation, Luís Baptista presented the Social Innovation Center (INNO) of NOVA University Lisbon, followed by the presentation of the Mediterranean Institute of Agriculture, Environment and Development (MED) of the University of Évora by José Rafael and, finally, to end the session, Pedro Fevereiro from NOVA University Lisbon, presented the "Innovative Bio-based Solutions for Crop Protection".

The last and third session was dedicated to the Sea, introduced by the Vice-Rector for Research at the University of Algarve, Alexandra Teodósio. Then, Carlos Ribeiro, from the University of Évora, spoke about the Institute of Earth Sciences, followed by Ester Serrão, from University of Algarve, who presented the Center of Sea Sciences, and finally, Paula Sobral from NOVA University Lisbon, presented the Center for Marine and Environmental Sciences (MARE-NOVA).

On this SCIENCE DAY@SOUTH, the Scientific Research Awards were revealed, supported by Santander Universities and Caixa Geral de Depósitos, rewarding excellence and talent in Portuguese Universities.



Professor Elvira Fortunato, together with the representative of Santander Universities, Marques Soares Ribeiro, delivered the Santander-NOVA Collaborative Research Award to the researchers João Coelho, from the Faculty of Sciences and Technologies, and Inês Couto, from NOVA Medical School. This award aimed to distinguish the research project focused on the development of "Intelligent graphene bandages for monitoring diabetic foot ulcer". The research representatives were called to the stage to collect the prize.

Then, the Vice-Rector of the University of Évora, António Candeias, together with the representative of Santander, Marques Soares Ribeiro, handed the Applied R&D Prize to the Researchers Felismina Mendes and Teresa Caldeira, both professors at the University of Évora, representing the Covid-19 Test Unit. This was a recognition for the work carried out internally as service to the local community by all the professionals who have been part of it since the beginning of the pandemic.

Before the third session, dedicated to the Sea, the "Ideias em Caixa"

Award was announced. This award promotes entrepreneurship and entrepreneurial initiatives through the creation of new companies in different fields of specialization. The winners of the Caixa Geral de Depósitos Award, in the category of R&D, were researchers from the Faculty of Science and Technology of the University of Algarve, Maria de Lurdes Cristiano, Joana Leal and Patrícia Amado, for the research work "Sun in Water – Solutions for a Sustainable and Safe Aquaculture". The Rector of the University of Algarve, Paulo Águas and the representatives of Caixa Geral de Depósitos, Francisco Costa and Rodrigo Mouzinho, took the stage to award the distinctions.

SCIENCE DAY@SOUTH was closed by the Vice-Rector for Research and Development, António Candeias, from the University of Évora, who highlighted the quality and excellence of the research carried out in the Universities, valuing the South Campus as a great promoter of synergies and territorial cohesion.

Given the pandemic conditions at the time, the event was broadcast live on Campus Sul YouTube channel. ■■

12

SANTANDER- NOVA COLLABORATIVE RESEARCH AWARD



12

SANTANDER-NOVA COLLABORATIVE RESEARCH AWARD 2021

The winner of the 14th edition of the Santander/NOVA 2021 Collaborative Research Award was the project “Intelligent Graphene Bandages for Diabetic Foot Ulcer Monitoring”. The multidisciplinary team in charge involved researchers from two organic units of NOVA University Lisbon: João Coelho, from CENIMAT/I3N – NOVA School of Science and Technology and Inês Couto, from NOVA Medical School.

The main goal of this project is to develop a flexible platform that allows the continuous monitoring of diabetic foot ulcers in a non-invasive and comfortable way for the patient, resulting in better care and health outcomes over time, decreasing visits to the hospital and shortening hospital costs.

The project aims to launch the necessary technological platforms for the future development of intelligent bandages with wireless communication capability for better training of patients and their monitoring by health professionals.

Diabetes is a systemic disease that requires high complexity integrated health care and diabetic foot ulcers, affect 25% of people with diabetes, representing high costs and considerable pressure on health systems.

With this project it will be possible to monitor the evolution and

healing of the ulcer in real time and to manage the treatment in a more adequate way, without resorting to a constant change of bandages. The sensors will be manufactured in flexible materials such as paper, in a sustainable way, by laser irradiation. This technique results in the production of graphene, an ultrafine structure based on carbon.

The award was delivered to the winning team, João Coelho, and Inês Couto, during the SCIENCE DAY @SOUTH at the University of Évora, following the presentation of Campus Sul.

The then Vice-Rector for Research of NOVA University Lisbon, Elvira Fortunato, together with the representative of Santander Universities, Marques Soares Ribeiro, handed the award to the researchers.

The Santander/NOVA Collaborative Research Award aims to distinguish pioneering research projects developed by young researchers from NOVA, involving at least two Organic Units of the University.

This distinction, in the amount of 15.000 €, contemplates research projects within the areas of Life Sciences, Exact Sciences and Engineering or Social Sciences and Humanities. In 2021 it was dedicated to Life Sciences. ■■

(PT) O projeto ATLAS, em parceria com a Universidade de Nova de Lisboa, foi o vencedor da 2ª edição do prémio IN3+, tendo arrancado no início de 2019.

O ATLAS insere-se num esforço de modernização da fábrica da INCM, mais concretamente a área de personalização de documentos. A modernização da fábrica responde às necessidades do novo paradigma da indústria 4.0, com o objetivo de construirmos a fábrica do futuro, num ambiente colaborativo entre os trabalhadores e trabalhadoras e os modernos robôs.

Os principais objetivos do projeto ATLAS incluem a total automatização do processo de expedição do Cartão do Cidadão e do Passaporte Eletrónico Português, desde a saída das máquinas de personalização até à sua expedição na área logística. Esta automatização permitirá uma grande redução dos custos de expedição, visto que o processo poderá ser totalmente otimizado, agrupando os envios por destino, possível através dos algoritmos de inteligência artificial desenhados para este fim.



ATLAS

Imprensa Nacional-Casa da Moeda | Universidade NOVA de Lisboa

Este processo implica armazenar os produtos num moderno armazém automático que terá inteligência capaz de dispensar os produtos na altura certa, com os agrupamentos adequados.

Além de todas estas inovações ao nível da expedição, os robôs inteligentes do ATLAS circularão entre áreas de alta segurança, cumprindo os exigentes requisitos impostos pelas certificações de qualidade da norma ISO14298.

A fábrica de documentos de segurança da INCM ficará, já a partir de 2023, equipada com tecnologia de ponta, tornando a INCM como uma empresa pioneira em Portugal, e mesmo na Europa, na modernização dos processos e do ambiente produtivo.



(ENG) The ATLAS project, developed in partnership with NOVA Lisbon University, was the winner of the 2nd edition of the IN3+ Award, started at the beginning of 2019.

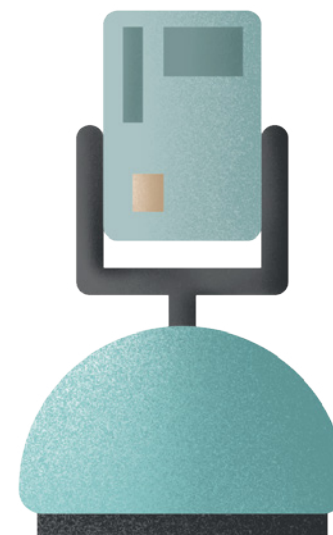
ATLAS is part of an effort to modernize the INCM factory, more specifically the security documents personalization area. The modernization of the factory meets the needs and objectives of the new paradigm of Industry 4.0, aiming to build the factory of the future, in a collaborative environment between workers and modern robots.

The main objectives of the ATLAS project include the full automation of the process of shipping the Citizen's Card and the Portuguese Electronic Passport, from the output of the personalization machines to its effective shipment in the Logistics area. This automation will allow a large reduction in shipping costs, since the process can be fully optimized, grouping shipments by destination, which is performed by artificial intelligence algorithms designed for this purpose.

This process involves storing the products in a modern automated warehouse that will have intelligence capable of routing the products at the right moment, with the appropriate groupings.

Besides all these shipping innovations, the ATLAS intelligent robots will circulate between high security areas, complying with the demanding requirements imposed by the ISO14298 standard.

As of 2023, INCM's security documents factory will be equipped with state-of-the-art technology, making INCM a pioneer company in Portugal, and even in Europe, in the modernization of processes and of the productive environment.



NOVA SCIENCE

2021 / 2022

NOVA

NOVA UNIVERSITY
LISBON



www.unl.pt



www.facebook.com/UniversidadeNOVAdeLisboa



www.linkedin.com/school/universidade-nova-de-lisboa



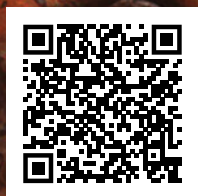
twitter.com/NovaUnl



www.instagram.com/universidade_nova_lisboa



Campus de Campolide | 1099-085 Lisboa | Portugal



POWERED BY

INCM
IMPRENSA NACIONAL CASA DA MOEDA