

# NOVA SCIENCE

Talent, Interdisciplinarity and Impact

2024



FACTS AND  
FIGURES

CITIZEN  
SCIENCE

RESEARCH  
IMPACT

INTERDISCIPLINARY  
RESEARCH

PROMOTING  
TALENT

# Content

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SCIENCE**

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**TITLE**  
NOVA Science

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December 2024  
Published Annually

**COORDINATION**  
Research Office  
Communication Office

**DESIGN**  
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www.helloanaventura.tumblr.com

**PHOTOGRAPHY**  
NOVA's Rectorate and Academic Units\*  
Projects' Principal Investigators

**PRINTING**  
IDG - Imagem Digital Gráfica  
ISSN 2184-3775  
LEGAL DEPOSIT 447909/18

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

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# Welcome from the Rector From Knowledge to Impact: NOVA's Commitment to Research that Transforms Society

João Sàágua  
Rector of NOVA University Lisbon

In recent years, excellence in research has evolved beyond the traditional idea of “creating knowledge for its own sake” and become increasingly linked to generating knowledge that directly benefits society. At NOVA University Lisbon (NOVA), we are proud to contribute to this shift. Our research focuses on addressing the most pressing global challenges, whether environmental, social, or economic. From renewable energies to tackling societal inequalities and chronic diseases, our research aims to make a meaningful impact.

These global challenges are inherently deep, broad and complex, requiring diverse expertise and collaborative efforts across multiple disciplines. **At NOVA, interdisciplinarity is at the heart of our research strategy: more than ever, research teams span multiple**

**fields, combining the expertise of biologists, engineers, social scientists, and health professionals to solve real-world problems.** This approach mirrors global and European trends toward collaborative and cross-disciplinary research, which is essential for tackling today's multifaceted challenges.

NOVA's success in interdisciplinary research is evident across several key areas. Not only we championed competitive research funding from Horizon Europe (40.3M), we are actively engaged in 12 Collaborative Laboratories (CoLABs), and, importantly, our participation in the “*Agendas Mobilizadoras*” of the Portuguese Resilience and Recovery Plan (PRR), where we are the university that is involved in more *Agendas*. Our dynamic and diverse Research & Development ecosystem is another evidence of our achievements,



encompassing 39 Research Units—92% of which have been rated “Excellent” or “Very Good” by international panels—10 Associated Laboratories, and 15 Research Infrastructures listed on the national roadmap, 80% of which are integrated into international networks.

At NOVA, research is not only about generating new knowledge but also about nurturing and retaining talent. To support researchers at all stages of their careers, we have implemented a range of initiatives, including our recent success in the national FCT Tenure program, which will stabilize employment for approximately 200 researchers and faculty members. This reflects NOVA's commitment to reducing precarious employment and ensuring long-term career development. By championing excellent research, encouraging interdisciplinary collaboration,

and cultivating a supportive environment for talent development, NOVA is paving the way for a future where innovation and research drive positive societal change.

Thank you all for collaborating!



# Research at NOVA

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# A word from the Vice-Rector Celebrating Achievements, Embracing Growth, and Shaping the Future

Isabel Rocha

Vice Rector of Research, Innovation and Value Creation of NOVA University Lisbon

The last 12 months at NOVA have revealed, once more, extraordinary regarding Scientific Achievements, as can be seen in the Facts and Figures Section. However, given that 2024 is the last full year of this rectorate mandate, it is also relevant to look back and reflect on how NOVA has grown in terms of Excellence and Impact in the past 6-7 years (due to the passage to the Foundation status in 2017, we only have reliable indicators since 2018). It is remarkable how NOVA's researchers were able to almost double the funding acquired, from 33 M€ in 2018 to 65 M€ in 2023, with almost tripling the International funds. This was accompanied by an increase of 36% in the publications validated, while keeping a normalized impact which is 33% above the international average, and with 50% of the publications arising from international collaboration. In what concerns the third mission, the accomplishments demonstrate a clear orientation towards impact in society and the economy. NOVA has engaged in the participation in 12 CoLABs, while the funding from R&D contracts with companies more than doubled in this past 7 years. Now, almost 5000 students engage in entrepreneurship education every year, from 1145 in 2018, while NOVA has received several national

and international recognitions as an entrepreneurial University. The number of patents has significantly increased (30%) and a variety of new agreements for exploitation have been signed, with emphasis to the licensing to BioNTech in 2023 of a patent from FCT NOVA that can contribute to a new disruption in cancer treatment.

However, the performance in Research and Innovation cannot be fully measured by numeric indicators. For that reason, at NOVA we have been implementing a variety of programs to promote Interdisciplinarity and Impact. In the Science and Innovation Day we will know who are the winners of the Research Impact Narratives program for this years' edition. Once again we received tens of very good examples of Research with Impact in the Economy and Society, encompassing projects with impact in local communities, legislation frameworks and public policies, environmental challenges and bringing new technologies to the market. Some of these narratives are featured in the Research Impact section and will be made available for the wide community in NOVA's new website. The program also included sessions to help NOVA's



researchers identify the Impact of research projects and to write research impact narratives and narrative CVs, with attendance of hundreds of researchers.

Interdisciplinarity has long been promoted at NOVA, with NOVA Health being the first formal platform, created more than 10 years ago, which still gathers researchers from all Organic Units (OUs) working in the Health field in a variety of initiatives such as conferences and working groups. Since 2017, four more Interdisciplinary platforms have been created: the NOVA4TheGlobe and NOVA Tourism and Hospitality, gathering all NOVA OUs and addressing Sustainability challenges and Tourism, respectively; the NOVA Institute of Arts and Technology, gathering NOVA FCSH and NOVA FCT; and the NOVA Institute for Medical Systems Biology, which was created in 2024 to implement the new Institute funded by the Teaming for Excellence program from Horizon Europe. With different sizes and complexities, these platforms have been successfully bringing together researchers from a variety of disciplines to tackle complex societal problems. Following an international trend, a new, more flexible Interdisciplinary program based on an internal community was launched in 2023 to promote interdisciplinary research in Sustainable Energy systems. The first pilot projects were recently funded and

will be presented at the Science and Innovation Day, while the Community is now working on a plan of activities for the coming year.

Regarding Talent, the past year has been devoted to the application to FCT-Tenure program, in implementing the evaluation of Researchers and in finishing the needed framework of regulations, all aimed at retaining and attracting talent and reducing precarity. The new regulation for scientific careers is now almost ready, after receiving contributions from all OUs, waiting for the voting and publication of the National legislation on the matter. The evaluation of Researchers was successfully implemented in most OUs, while it is ongoing in the remaining ones, constituting a paradigm change in the management of our talent, and complying with International recommendations. We also recently started the implementation of the Human Resources Strategy for Researchers (HRS4R) for requesting, in 2025, the HRS4R Seal.

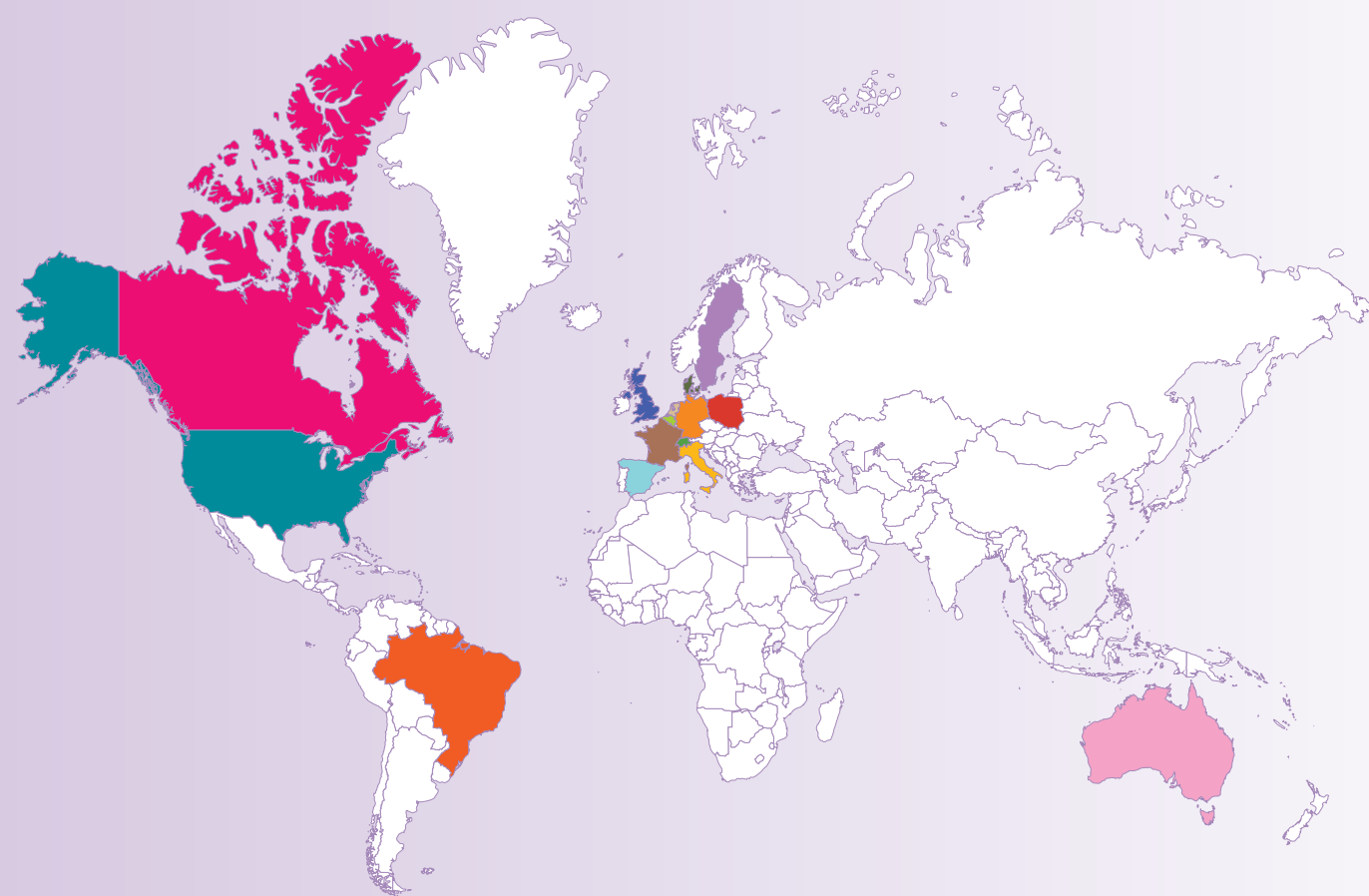
The FCT-Tenure program, launched by FCT, was used by NOVA to make a thorough analysis of our contracts and our possibilities in terms of allocating funds to finance permanent contracts. NOVA applied for 263 funded positions and obtained the extraordinary result of 228 positions funded, illustrating the quality of our proposal and the effort put by all people involved, from the rectorate's and OUs Research and Innovation support staff, to the Strategic Research Council (CEI), the scientific councils and the Directions of the OUs. The tasks ahead of us are substantial, involving the fair and open recruitment of this research staff and the implementation of measures to support the researchers that will not be contracted within FCT-Tenure.

Nevertheless, I am confident that these and the many other challenges will be successfully overcome with the amazing researchers and support teams we have at NOVA.



# Research Facts & Figures

## TOP 15 COLLABORATION PER COUNTRY 2023



SPAIN	1972	BELGIUM	636
UNITED KINGDOM	1813	SWITZERLAND	622
UNITED STATES	1537	DENMARK	602
ITALY	1385	AUSTRALIA	528
GERMANY	1382	SWEDEN	497
BRAZIL	1337	CANADA	484
FRANCE	1198	POLAND	480
NETHERLANDS	969		

SOURCE: SciVal

## Research Facts & Figures

### STAFF 2023

# TEACHING & RESEARCH STAFF	3 053
% TEACHING & RESEARCH STAFF (WOMEN)	51,6%
# Ph.D. STUDENTS	2 335
# GRADUATES	6 925
# MASTER STUDENTS	13 224

### PROJECTS AND FUNDING 2023

TOTAL RESEARCH INCOME 2023 (93% increase since 2018)	€ 65,2 M
COLLABORATIVE R&D AGENDAS FOR BUSINESS INNOVATION (PRR)	20 PROJECTS € 32,5 M
400+ ONGOING R&D PROJECTS 2023	€ 134 M
Active National Projects: 234	€ 126 M
Active European Projects: 138	€ 69,8 M
Other International Projects: 28	€ 5 M
39 RESEARCH UNITS 2020-2023 NOVA Funding 2020-2023	€ 48,1 M
HORIZON EUROPE 2023* New Projects: 47 *includes NOVA's Interface Institutes	€ 20,4 M

### PUBLICATIONS 2023

INDEXED PUBLICATIONS SCOPUS & WEB OF SCIENCE	3314	PUBLICATIONS WITH INTERNATIONAL COLLABORATION	49,6%
NORMALIZED IMPACT SCOPUS PUBLICATIONS 2021 (29% ABOVE WORLD AVERAGE)	1,29	PUBLICATIONS IN TOP 10% OF MOST CITED WORLDWIDE	12,9%



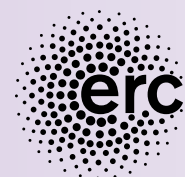
# Research Highlights



## Research Highlights

### NOVA leads nationally and secures funding for 228 new researchers and faculty positions through the FCT-Tenure program

Out of the 1,100 positions provisionally selected for funding, NOVA obtained 100 positions for teaching and 128 positions for research careers, totaling 228 permanent contracts. With an overall success rate of 87% in this competition, well above the national average (50%), this makes NOVA the national university with the highest number of approved positions, strengthening the University's strategy of retaining and attracting talent in various fields of knowledge.



European Research Council  
Established by the European Commission

#### 5 NEW ERC GRANTS IN 2024\* :

- NOVA FCSH Researcher Arturo Zoffmann Rodriguez (IHC) **has won an ERC Starting Grant** (STEXEU project: 1,5M€)
- NOVA FCT Professor Maria Helena Godinho (Cenimat) **has won a Synergy Grant** (ALCEMIST project: 2,34M€ for NOVA), as part of a consortium with two researchers from institutions in the UK and Luxembourg.
- **3 more Proof-of-Concept Grants for NOVA Researchers:** Ana Cecília Roque (NOVA FCT), Cristina Silva Pereira (ITQB), Cláudia Nunes dos Santos (NMS)

**ERC GRANTS 2007-2024: 37 ERCS | € 46,7 M**

\*by November 2024

### ENVISIONING EXCELLENCE: Spotlighting NOVA's Horizon Europe Projects started in 2024 and funded at over 500K€ (NOVA's budget)

#### Missing Links, ERC-CoG € 3 M

Mariana Pinho, ITQB NOVA

#### X-STREAM, ERC-CoG € 2 M

Manuel Mendes, NOVA FCT

#### EUTOPIA\_HEALTH, Widening

EEI € 1,2 M

Isabel Rocha, Rectorate

#### MPS\_NOVA, Twinning € 1,1 M

Sarela García-Santamarina (ITQB NOVA) & Cláudia Santos (NMS/ NIMSB)

#### SusMatEner, MSCA DN € 730 K

Rodrigo Martins, NOVA FCT

#### H2Talent, HORIZON-JU-RIA € 608 K

Rectorate, NOVA FCT

#### NEMESIS, HE Cluster Health € 605 K

Susana Viegas, ENSP

#### NexTCity, Widening CSA € 600 K

Miguel de Castro Neto, NOVA IMS

#### DEPLOYTUR, DIGITAL € 501 K



From 2021 to 2023, NOVA stands out in Horizon Europe as the leading Portuguese University in coordinating Horizon Europe Research projects (per capita) and stands in the top 3 of Portuguese Universities with more funding secured in this program: 76,3 M€ across 153 projects, including 48 (almost 1/3) as project coordinator.



"la Caixa" Foundation

- **8 Active Projects in 2023**, funded by *la Caixa Foundation*, with an associated funding of nearly **€ 2 M**
- Researchers Ana Pina, Mónica Serrano, and Guadalupe Cabral were awarded *la Caixa* *Impulse* Innovation grants to develop promising projects in the fields of health and life sciences
- **2 new Social Research projects in 2023** from Nova SBE researchers João Duarte and Samantha Sim.



In 2024 NOVA recognized **12 impactful narratives** from different scientific fields (6 award-winning narratives + 6 honourable mentions)



### NOVA joins Vitae and offers exclusive resources for researchers

NOVA is now an organizational member of Vitae, a global leader in advancing researchers' professional development. Explore a wealth of resources and recommendations tailored for researchers and plan your career development, by registering on the platform using your NOVA institutional email.

### World's Top 2% Scientists

86 researchers from NOVA among the most quoted scientists in the **World's Top 2% Scientists List 2022**



NOVA has renewed its subscription to CrowdHelix, an innovation platform designed to promote collaborative research and networking.



### NOVA leads in Open Science

NOVA has achieved first place nationally for the first time in the Open Science indicator of the **Leiden ranking**, with **72%** of its entire scholarly output now available in open access.



### The Datasets module in Pure is now available

This module enables the NOVA community to organize and publicly share metadata for this new content type on the NOVA Research Portal.



# Institutional EU-funded projects

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*This section showcases European Commission-funded projects that engage or benefit all NOVA Schools, supporting NOVA's alignment with European recommendations in diverse areas such as research careers, open science, and institutional transformation by enhancing research and innovation (R&I) management capacity.*





## Institutional EU-funded projects



The OPUS project is an EU-funded initiative led by an 18-member consortium, coordinated by The Oceanic Platform of the Canary Islands (PLOCAN). Its primary goal is to develop measures to reform the assessment of research and researchers at Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs). The project aims to create a system that incentivizes and rewards researchers for practicing Open Science.

At NOVA, the project is being piloted by 15 researchers from the MaGIC (NOVA IMS) and GHTM (IHMT NOVA) research centres. Since the project's launch, NOVA has organized four successful workshops focused on key Open Science (OS) topics, such as open access publishing, rights retention, Open Science concepts and tools, data management plans, and the ARGOS system. These workshops, delivered by both internal and external experts, have received strong participation and positive

feedback, underscoring their value to the research community. Future workshops will continue to address essential aspects of Open Science, tailored to the needs and feedback of researchers.

As part of the OPUS project, NOVA is also tracking key Open Science outputs, including open access publications, datasets, software, and citizen engagement activities. To date, NOVA has met or exceeded its targets in all these areas, demonstrating the project's effectiveness.

All activities and lessons learned at NOVA are shared in bimonthly Mutual Learning meetings, where OPUS pilots exchange experiences and develop recommendations to address common challenges based on shared findings.

<https://opusproject.eu/>





The SECURE project is an EU-funded project implemented by a consortium of eighteen organisations, including NOVA University Lisbon as a pilot institution. From January 2023 to March 2025, the project will focus on improving research careers and reducing career precarity.

SECURE is building on existing policies and recommendations for improving research careers. SECURE has been developing coordination and support measures to create, trial, implement, and mainstream a common Research Career Framework (RCF) that offers a suite of options to support organisations in the recruitment, employment, training, development, progression, and mobility of researchers with the aim to improve research careers and reduce career precarity.

In particular, SECURE will deliver:

**State-of-the-Art** of existing literature and initiatives on research career frameworks and tenure track-like models.

**Research Career Framework (RCF)** that integrates existing policies and recommendations on research careers, including the new Council Recommendations on a European Framework to Attract and Retain Research, Innovation, and Entrepreneurial Talents, the revised Charter and Code, the revision to the European Skills, Competences, Qualifications, and Occupations (ESCO) classification, and the new European Competence Framework for Researchers.

**Tenure track-like (TTL)** models that build on existing best practices and offer a range of TTL model options with legal, financial, and administrative recommendations for implementation.

**Consultations** with the stakeholder community to gather feedback and refine the RCF and TTL models.

**Trials** to test aspects of the RCF and TTL models in trials in four **RPOs** (namely Plocan, UCY, UNIRI, and NOVA), one **RFO** (namely UEF), and one **recruitment agency** (namely ADOC).

## Institutional EU-funded projects

**Mainstreaming plan, policy briefs, and a summit and policy roundtable** to mainstream the RCF and TTL models and drive uptake by the stakeholder community.

Some of the SECURE deliverables are already available in the project's website.

In line with the main objectives of this project, NOVA has initiated a revision of its regulations on researcher careers, recruitment, and employment contracts. The institution is also committed to reformulate its researcher evaluation process by introducing modernized research assessment methods – a new regulation of the performance assessment of NOVA researchers was launched in June 2023 (*Despacho* n° 6757/2023). Additionally, SECURE has driven efforts to propose a regulation on science management careers at NOVA (currently under review) and to plan future training initiatives for research managers, further strengthening research support systems.

As part of SECURE, NOVA has joined Vitae, a platform that partners with institutions to offer diverse resources for researcher career development, including tools for assessing research competencies and exploring alternative career paths. By facilitating consultations with various sector stakeholders, including researchers, SECURE has provided valuable recommendations for reforming research careers.

These initiatives align with the European Commission's latest policies and recommendations, such as the Coalition for Advancing Research Assessment (CoARA) agreement. Together, they underscore the impact of SECURE and NOVA's dedication to fostering talent and ensuring sustainable career opportunities for researchers.

<https://secureproject.eu/>



# The EUTOPIA\_HEALTH Project

Challenges in health require integrating knowledge and fostering communication among specialists from various health-related fields to develop effective solutions. Synergies between different disciplines, such as biomedical sciences, medicinal chemistry, public health, mental health, health economics, environmental health, alongside emerging areas such as Artificial Intelligence, are essential for innovation. Institutional and societal support for this inter-disciplinary exchange pathways to novel solutions.

The EUTOPIA\_HEALTH project - *Empowering Widening Universities in EUTOPIA Alliance to foster academic excellence in Health* - is funded by the Horizon Europe program of the European Union. It aims to strengthen institutional capacities in health research development and management. This initiative involves nine universities members of the EUTOPIA Alliance, including NOVA University Lisbon (Portugal), Babeş-Bolyai University (Romania), Vrije Universiteit Brussel (Belgium), Ca' Foscari University of Venice (Italy), CY Cergy Paris University (France), University of Gothenburg (Sweden), University of Ljubljana (Slovenia), Pompeu Fabra University-Barcelona (Spain), and the University of Warwick (United Kingdom). Together, these universities aspire to lead academic excellence and innovation in the health sector. The project focuses particularly on three Widening countries - Portugal,

Romania and Slovenia. By addressing funding and publication disparities, the project aims to spearhead academic excellence and innovation.

The EUTOPIA\_HEALTH project started in January 2024 and with a duration of five years, several tasks and activities are planned to create a framework for integrative institutional management of health-related scientific areas. This project will facilitate changes in the academic landscape within the European research area through a comprehensive institutional transformation.

The concept of the project is to provide a novel, integrative institutional mindset promoting health-related R&I excellence, thus creating the platform for true value creation and meaningful societal impact. By embedding these transformations in the cooperative network of EUTOPIA\_HEALTH and incorporating prior experience from other projects of the alliance, the initiative seeks to enhance R&I capacity across Widening universities and institutions.

The main objectives of the project are to:

- **Empower institutional transformation by strengthening health-related R&I management capacity.** This involves upgrading and adapting R&I management strategies and policies within Widening Higher Educational Institutions.

- **Create a health-focused R&I network through Connected Health Research Communities.** This network will facilitate inter/transdisciplinary trainings, research mobilities for early-career researchers and seed-funding for collaborative research collaborations, aimed at tackling health-related challenges. By employing integrative, transdisciplinary

approaches and implementing flexible academic career pathways in health, the project aims to create a health innovation ecosystem. This will connect health research communities with society, business partners, and policymakers, promoting Open, Citizen, Inclusive and Collaborative Science practices.

Some key strategies for the project include:

- Promoting transdisciplinary thinking in health-related R&I, guided by the principles of the European research assessment reforms.
- Developing flexible academic career pathways through support programs for researchers and research managers to enhance R&I capacity.
- Creating new academic frameworks that better connect research groups and infrastructures, leading to Connected Health Research Communities.

- Providing skills for the efficient transfer of innovation and research knowledge, by establishing a Health innovation ecosystem that bridges universities with society and industry.

- Upskilling and Reskilling researchers in inter- and transdisciplinary fields to enable them to address complex health-related research challenges

- Strengthening newly developed R&I capacities by funding research clusters and researcher mobility.

- Sharing best practices with the Global Partners of the EUTOPIA Alliance and other partners, to further promote academic, economic, and societal transformation.



Photos of the activity – European Researchers Night







## PREVIOUS ACTIVITIES

### Training workshops using the i-ISO approach

Vrije Universiteit Brussel (VUB) organized and led three training workshops using the i-ISO approach across all Widening countries within the consortium. This approach focuses on: (1) identifying new EU funding programmes and calls, (2) informing VUB research groups about these opportunities, (3) stimulating by reducing barriers to applying for EU funding and (4) supporting researchers on the path toward submission. A group of NOVA researchers - Sarela Garcia-Santamarina (ITQB), Sofia Santos Costa (IHMT), Vera Lúcia Raposo (NSL), Filipa Marcelo (FCT) and Ana Isabel Gonçalves Faria (NMS) - attended the three-day workshops in April 2024 that covered all stages of writing a successful EU project proposal. Each researcher was paired with a research manager from VUB, fostering capacity-building not only for the individual researchers but also for the institution as a whole.

The knowledge gained from these workshops will be instrumental for researchers as they prepare to submit their project ideas for upcoming EU calls. According to one of NOVA's researchers: *"This training program was a unique opportunity to gain contact with an experienced pre-award team that is extremely motivated to*

*assist NOVA Researchers in writing collaborative proposals for EU funding schemes."*

### EUTOPIA Health Day

The first EUTOPIA Health Day took place in Cluj, Romania, on the 20th of June 2024, organized by Babeş-Bolyai University (UBB). As part of the broader EUTOPIA Alliance initiative, this event aims to promote open and inclusive scientific practices through transdisciplinary workshops and seminars. Several activities are often available in a hybrid format, allowing both in-person and online participation, ensuring inclusivity and supporting environmental sustainability.

The morning session featured a presentation of the EUTOPIA\_HEALTH project to key stakeholders, followed by a Coffee Break and Networking Panel Discussion on the "State and Vision of the Integration of Health within Universities". In the afternoon, a "Coffee in the Lab" session allowed participants to tour facilities, including the Laboratory of Molecular Biology, Biochemistry and Biophysics and the International Institute for the Advanced Studies of Psychotherapy and Applied Mental Health. This was followed by engaging presentations and demonstrations designed to make health science accessible to the public. Under the banner "Science, Not Magic: Popularization of Science in Health", UBB professors delivered presentations titled "How to Survive a Zombie Apocalypse: The Public Health Approach", "Good Habits for Mental Health" and "Choose Your Lifestyle, Prevent Cancer!".

Future editions of EUTOPIA Health Day will feature presentations, poster sessions, interactive activities, and debates to actively engage participants and foster constructive discourse.

## Institutional EU-funded projects



Researchers, postdoctoral fellows, and PhD students from the EUTOPIA\_HEALTH consortium will have the opportunity to showcase their latest findings, highlighting cutting-edge solutions and best practices across various health-related research domains. Moreover, MSc and BSc students will also be able to interact with research groups within the consortium, fostering early professional relationships and encouraging future collaborations.

The EUTOPIA Health Day seeks to address pressing challenges in health research, focusing on solutions that minimize public, environmental, and mental health impacts. It also embraces the principles of Open Science, promoting the free exchange of ideas and research results within scientific communities. Therefore, this annual event creates an open-access educational environment for budding researchers.

## ANNUAL ACTIVITIES

Annual activities designed to promote best practices and tools for Open and Inclusive Science will take place as part of the Widening initiative, including the European Researchers' Night (ERN) and the Science Café. ERN aims to bridge the gap between EUTOPIA\_HEALTH researchers and the general public, showcasing how their work impacts everyday

life. On September 27, EUTOPIA\_HEALTH participated in ERN held in both Lisbon and Oeiras, effectively communicating the project's objectives to attendees.

Citizen Science, a key component of Open Science, empowers citizens to actively participate in scientific research, innovation, and evidence-based policymaking at local, national, and international levels. To this end, the SeaMic project - an ITQB Citizen Science initiative - will launch in the coming months, with the potential to significantly impact both environmental and public health issues. Details about this project were shared during ERN, and further insights were provided at the Science Café, held on November 16, coinciding with National Sea Day. The event took place at Oeiras Town Hall's Atrium Building.

The Science Café aims to facilitate a dialogue between scientists and the public, providing a relaxed environment where attendees can ask questions, share experiences, and learn about the latest advancements in health research.

Project website: [www.eutopia-health.eu](https://www.eutopia-health.eu)





# Citizen Science

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*Citizen science, bridging academic research and public participation, has emerged as a powerful tool for expanding scientific understanding and addressing societal challenges. By engaging non-professional scientists in data collection, analysis, and even project design, citizen science initiatives democratize knowledge creation and foster stronger connections between universities and communities.*

*This chapter presents the leading citizen science projects developed at NOVA University Lisbon. Through these initiatives, NOVA not only advances academic knowledge but also empowers citizens to actively engage in addressing challenges that impact their daily lives.*





## MEMÓRIA PARA TODOS MEMORY FOR ALL

Memory for All (<https://memoria-paratodos.pt/>) is a research and knowledge-sharing program that integrates multiple projects. With over ten years of activity, it constitutes one of the largest oral history repositories in Portugal, with contributions from other countries, notably from Africa and Latin America, fostering convergence between different heritage types and interdisciplinary dialogue.

The program serves as a repository, an archive, a research infrastructure, and a heritage preservation platform. It includes more than 1,200 published interviews alongside hundreds of photographs and documents, all meticulously organized through a cultural heritage management system, contextualized and georeferenced to reflect the people, communities, and landscapes involved. By documenting memories linked to specific territories and environments, the project enhances our understanding of how people interact with and perceive their cultural and natural surroundings.

This collective, citizen-science initiative brings together public and private institutions, including archives, libraries, municipalities, schools, and local associations, aiming to study, organize, and disseminate historical, cultural, technological, and digital heritage across diverse regions.

As a public history project, Memory for All creates accessible, open-source collections that document individual and community life stories, contributing to a deeper understanding of the cultural and social heritage of Portugal, Africa, Latin America, and other regions. These collections offer rich insights into personal histories while fostering a sense of identity and belonging across borders.

In addition to preserving memories, the program emphasizes long-term knowledge mediation, ensuring that scientific results are accessible to wider communities. Through its participatory approach, Memory for All strengthens the relationship between the scientific community and the public, particularly in supporting social and cultural transitions.

Aligned with Europe's commitment to open science, Memory for All highlights the importance of education, knowledge democratization, and the role of historical archives in fostering a more inclusive and tolerant society, particularly in the face of ongoing digital and AI revolutions.

Memory for All is a program of the 'História, Territórios e Comunidades' group, part of the Center for Functional Ecology – Science for People and the Planet, at the University of Coimbra. It is supported by a large team of researchers dedicated to fostering interdisciplinary collaboration and knowledge-sharing. The program also aims to bridge science and society by making research more accessible and engaging for diverse communities, with a focus on preserving and valorizing the shared heritage of people and places.

## Citizen Science Memory for all



*Memory for All is a program of the 'História, Territórios e Comunidades' group, part of the Center for Functional Ecology – Science for People and the Planet*







Mosquitoes are vectors of pathogens of medical and/or veterinary importance, besides a, sometimes, not neglectable nuisance.

Currently, several *Aedes* mosquito species are expanding their geographic range globally. Among them, *Aedes aegypti* and *Aedes albopictus* are of greater concern – these species are highly associated with humans, readily occupy new territories, and are efficient vectors of several viruses, namely Dengue, Zika, and Chikungunya. Outbreaks have occurred in several European countries where *Aedes albopictus* is established. On Madeira Island, a dengue outbreak took place seven years after the initial detection of *Aedes aegypti*.

On the other hand, climatic and land use changes are expected to promote changes in abundance, geographic distribution and/or behavior of the autochthonous mosquito species.

#### mosquitoWEB

([www.mosquitoweb.ihmt.unl.pt](http://www.mosquitoweb.ihmt.unl.pt)) is a Citizen Science project aimed at:

- the early detection of invasive mosquitoes in Portugal;
- monitoring autochthonous species;
- promoting health literacy, particularly in the area of vector-borne diseases.



Citizens are invited to report mosquito sightings through the platform. Photographs or sent specimens are then identified by the mosquitoWEB team, and feedback is provided to the citizens. New locations of invasive mosquito species are promptly reported to the Health Authority.

To date, the districts of Lisbon, Setúbal and Faro have the highest number of submissions. As expected, *Culex pipiens* is the autochthonous mosquito species most frequently detected by citizens, all over the country and even in the coldest months. This species is a vector of the



West Nile virus and dog heartworm in Europe, including mainland Portugal, and therefore should not be overlooked.

Submissions compatible with *Aedes albopictus* are increasing, namely from Faro district. To date, submissions to mosquitoWEB have enabled the first detection of *Aedes albopictus* in the municipalities of Lisbon and Oeiras. So far, no specimens of *Aedes aegypti* have been detected in mainland Portugal.



PAFSE is a science education project funded by the European Union's Horizon 2020 research and innovation programme, developed in four countries (Cyprus, Greece, Poland, Portugal) by nine partners and coordinated by the National School of Public Health - NOVA University of Lisbon. The project aims to contribute for community preparedness to reduce the risk of disease and epidemics. The partners establish partnerships between schools, universities, research centres, enterprises and civil society organisations, involving them in efforts to enrich Science, Technology, Engineering, Mathematics (STEM) education to address global challenges connected with public health.

PAFSE improves STEM education by introducing a participative model for health education that relies on an open school concept and contributes to the well-being of the community. Novel educational provisions engage students attending secondary schools (aged 12 and older) in research projects, public discourse events, and a blend of formal and informal learning activities using digital tools to develop their competence on project management and collection/analysis/making sense of scientific evidence.

PAFSE creates, maintains and expands science education clusters with the active integration of an increasing number of schools and stakeholders. During the 3 years of funding, the project involved around 114,278 students in project activities, 68 stakeholders that agreed to cooperate with schools and organized professional development workshops for 5,709 teachers.

The project strengthens populations' literacy and mitigates risks, playing students a central role as public health ambassadors, early adopters and spreaders of scientific knowledge.





## PROGRAMA



Ciência + Cidadã (C+C) ([www.ciencia-maiscidade.pt](http://www.ciencia-maiscidade.pt)) is an innovative citizenship program that aims to implement a citizen science approach in scientific institutions and local communities. The program also seeks to promote co-creation and public consultation involving various stakeholders from civil society in a transdisciplinary and intergenerational approach. C+C is coordinated by ITQB NOVA in close partnership with the Oeiras Municipality and in collaboration with other research institutes, non-profit organizations and companies.

Citizen Science is the “public participation in scientific research activities when citizens actively contribute to science, either with their intellectual effort, personal and local knowledge or with their tools and resources” (European Commission, 2014). Citizen Science is a key requirement for Open Science, providing everyone with the opportunity to contribute to scientific research, innovation, and evidence-based policies.

**6 Ongoing Citizen Science projects**  
**25 Scientists**  
**>250 Citizen scientists**

### ONGOING CITIZEN SCIENCE PROJECTS



**Oeiras Experimental Living Lab** | ITQB NOVA, Oeiras Municipality, IMPETUS

Identify alternative climate-smart crops for a more fair and sustainable food production.

Funded by the European Union through IMPETUS Program.



**MicroMundo@Oeiras** | ITQB NOVA, Universidade do Porto, Tiny Earth, Oeiras Municipality

Discover new antibiotics and to map antibiotic resistance in soil samples.



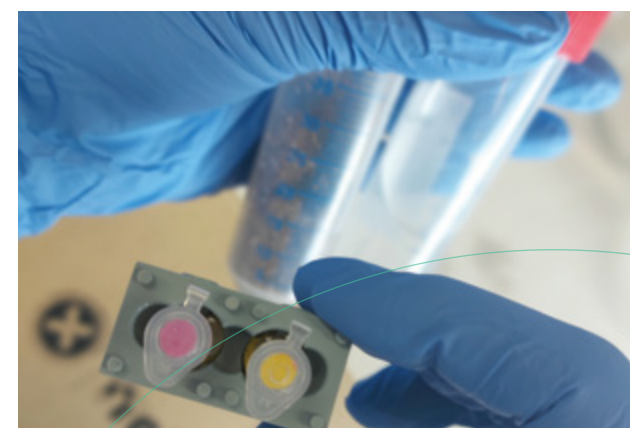
**CARBON TREE** | ITQB NOVA, IST, INES-ID, INOVLABS, Oeiras Municipality

Study Air Quality with DIY low-cost technology in the schools.



**MICROBIOMA COMUNIDADE PORTUGAL** | GIMM, ITQB NOVA, CBR, Oeiras Municipality

Pilot the characterization of the human gut microbiome dynamics.



**SeaMic** | NOVA University Lisbon, ITQB NOVA, Oeiras Municipality, EUTOPIA\_HEALTH

Develop and apply a rapid test to assess the microbial contamination of the waters of Oeiras coast.

Funded by the European Union through EUTOPIA\_HEALTH program.

## Citizen Science Programa Ciência + Cidadã



**FUNGI: FRIENDS OR FOES** | ITQB NOVA, Oeiras Municipality

Harvest airborne fungal spores to evaluate their correlation with pollution levels in Portugal districts, emphasizing thermotolerant opportunistic fungal pathogens.



**SOMBRA PARA TODOS** | EVITA, AOAL, AVÈNE, ITQB NOVA, Oeiras Municipality, VAC, LISBONPH, INOVLABS

Provide communities with freely available shadow and sunscreen protective strategies to prevent skin cancer in long-term contributing for cities healthy sun exposure behaviors.



# Social Prescribing



## Social Prescribing: A person-centred approach to integrated care for health and wellbeing

Social Prescribing (SP) is a person-centred approach to promote integrated health and social care addressing social determinants of health. It connects individuals to community-based, non-clinical support to meet social, emotional, and practical needs, improving overall health and wellbeing. SP places the person at the heart of the care process, focusing on health literacy development, empowerment to promote health and disease management, and strengthening community connections. This approach is grounded in co-created personalized action plans based on each person's unique needs, expectations and motivations. SP began 25 years ago in the UK and has since expanded to over 30 countries. In Portugal, from the beginning of SP, the NOVA National School of Public Health (NOVA NSPH) supported the planning, implementation and evaluation of initiatives through a collaborative approach. There are over 10 SP initiatives being implemented using diverse governance models, in different settings, targeting diverse population groups and across various regions. These initiatives are led by health units, third sector organizations, academia, intermunicipal communities or local authorities. Building on years of SP experience, NOVA NSPH launched the Social Prescribing

Portugal Network, part of the Social Prescribing Knowledge Center. This network emphasizes citizen science by actively involving end-users, patient associations, and stakeholders to co-create solutions, fostering shared ownership of SP initiatives. NOVA also offers training to equip participants with skills for effective implementation. The network continuously refines interventions based on diverse stakeholder feedback, ensuring SP remains adaptive, sustainable, and aligned with community needs while amplifying the voices of those it serves.

Team: Sónia Dias, Louíse Hoffmeister, Cristiano Figueiredo, Andreia Coelho, Ana Margarida Canas, Ana Rita Pedro, Maria João Marques, Ana Gama





# Research Impact



NOVA  
Research  
Impact  
Narratives

*The Research Impact Narratives Challenge has become an essential initiative, equipping NOVA's researchers with the skills and motivation needed to communicate the impact of their work in accessible language for all.*

*This chapter explores twelve compelling narratives from diverse scientific fields, each selected by the jury in the Challenge's second edition for its powerful demonstration of the profound influence of research conducted at NOVA on society.*



# Innovation in Rehabilitation: Social Impact through 3D Printing

Principal Researcher:  
Cláudia Quaresma

Academic Unit:  
NOVA SST/FCT

Main Scientific Area:  
Engineering and Technology  
Sciences

Types of Impact:  
Social Impact

SDGs:  
3 and 10

SDGs Targets:  
3.8 and 3.d; 9.5 and 9.b; 10.2 and  
10.3

The **3D Printing Center for Health**, a non-profit center created by members of the LIBPhys, Unidemi research centers as well as Fablab FCT, has significantly impacted the field of rehabilitation by harnessing 3D printing technology to develop personalized, cost-effective healthcare solutions. Since its launch, the center, coordinated by Cláudia Quaresma, has played a vital role in improving the lives of **46 patients** by creating custom-made prosthetics, orthotics, and assistive devices that greatly enhance mobility and overall quality of life. These personalized devices offer better fit and functionality, directly leading to improved rehabilitation outcomes.

One of the center's major contributions is the democratization of rehabilitation tools. By reducing production costs and accelerating the delivery of customized devices, the center has made these essential tools more accessible to a broader population, breaking down barriers to care. Collaborations

> **3D Printing Center for Health** improved mobility and quality of life for 46 patients through custom 3D-printed prosthetics, orthotics, and assistive devices.

> Democratized access to rehabilitation tools by reducing production costs by 30% and speeding up delivery.

> Enhanced healthcare system efficiency by providing advanced 3D-printed tools and training professionals, integrating innovation into clinical practice.

> Achieved a 90% improvement in patient mobility and a 95% satisfaction rate, with national recognition for social responsibility and innovation.

with institutions such as Curry Cabral Hospital, D. Estefânia Hospital, Santa Maria Hospital, Alcoitão Center for Medicine and Rehabilitation have ensured that these innovations are implemented in real-world settings, leading to a transformation in patient care.

Beyond benefiting patients, the 3D Printing Center for Health has also had a significant impact on the **healthcare system** itself. Healthcare providers now have access to cutting-edge 3D-printed tools that streamline rehabilitation processes and improve patient outcomes. These innovations have been integrated into clinical practice, thanks to the center's emphasis on training healthcare professionals and fostering a culture of innovation. Additionally, the center's contributions to academic research have been substantial, resulting in nine master's theses, one ongoing PhD, and the publication of three research papers. This academic output has advanced the understanding of new materials, myoelectric devices, and cost-effective improvements in rehabilitation.

The center's achievements are backed by strong evidence. Clinical studies show a **90% improvement in patient mobility** and a **30% reduction in**



**production costs for rehabilitation devices.** Patient testimonials reflect a 95% satisfaction rate, with users praising the enhanced comfort and functionality of their devices.

The center's work has gained national recognition, including the Social Responsibility Award from Visão and Exame Informática in 2022, and invitations to speak at multiple conferences.<sup>1</sup>

As the center continues to grow, its impact on rehabilitation care, patient accessibility, and healthcare innovation is set to expand both locally and internationally, marking it as a leader in transforming personalized healthcare solutions.

**"By putting people first, the 3D Printing Center for Health drives innovation in personalized device design, bridging gaps in accessibility and inclusion"**

Cláudia Quaresma

<sup>1</sup> <https://visao.pt/exameinformatica/eventos/premios-os-melhores-as-maiores-do-portugal-tecnologico/2022-11-30-melhores-as-maiores-do-portugal-tecnologico-2022>



# From Science Fiction to Reality: The Success of Transparent Electronics

Principal Researcher:  
Elvira Fortunato

Academic Unit:  
NOVA SST/FCT

Main Scientific Area:  
Engineering and Technology  
Sciences

Types of Impact:  
Economic and/or Technological  
Impact

SDGs:  
9 and 12

SDGs Targets:  
9.c; 12.2 and 12.4

The concept of **Transparent Electronics** emerged with the pioneering INVISIBLE ERC Advanced Grant, an interdisciplinary research project led by Professor Elvira Fortunato. Its goal was to develop a new class of electronic components based on sustainable, non-toxic metal oxide (MO) semiconductors, aimed at producing a novel generation of fully transparent electronic devices and circuits, adaptable to both rigid and flexible substrates.

Recognized by the European Research Council (ERC) as a success story in 2011, the INVISIBLE project was further acknowledged with the Horizon Impact Award in 2020 and more recently, in 2024 as a scientific breakthrough during the ERC's ex-post peer-review evaluation. This cutting-edge research has driven innovative advancements across multi-billion-dollar industries, such as ink-jet printing and medical smart diagnostics, where the potential applications are still unfolding.

> Transparent electronics has impacted scientific, technological, and economic sectors by advancing materials science and enabling applications in UV detectors, biosensors, and integrated on-glass and flexible electronics, with over 34,000 publications solidifying it as a "hot topic."

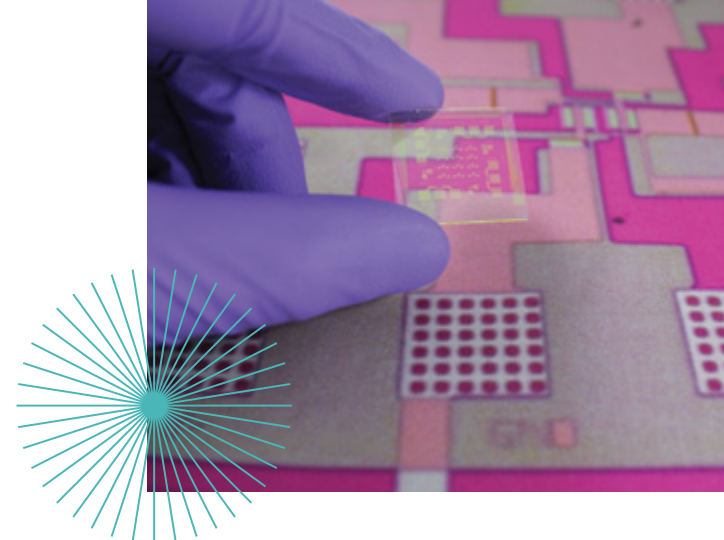
> The market for transparent electronics is set to grow from USD 2.15 billion in 2024 to USD 4.75 billion by 2028, driven by demand for eco-friendly, transparent devices in automotive, medical, and consumer industries.

> Breakthroughs in transparent perovskite solar cells enable smart windows and higher solar energy efficiency, positioning transparent electronics as a transformative technology aligned with global green initiatives.

Most notably, in collaboration with SAMSUNG, the team developed the world's first transparent display, which is now being commercialized by the display companies using organic light emitting diode technology. Some examples are Samsung Electronics (South Korea); LG Display (South Korea); BOE Technology (China); AU Optronics (Taiwan); Universal Display Corporation (US), and Tianma Microelectronics (China).

In fact, the INVISIBLE project led by Professor Elvira Fortunato marks a pivotal moment in the evolution of electronics, transitioning from science fiction to science fact. Over 15 years in the making, this groundbreaking research has set the stage for a more sustainable, efficient, and integrated future, where technology seamlessly blends into everyday life, enhancing safety, performance, and eco-consciousness across industries.

The impact of transparent electronics has been profound across three main areas: scientific, technological, and economic. Scientifically, the project has led to a transformative shift in materials science, offering a deeper understanding



of the structure, physics, and chemistry of MO semiconductors. Nowadays the use of MO semiconductors is crossing different areas with emphasis on energy, biomedical applications and microelectronics. Backed by sophisticated modelling, this knowledge has enabled the creation of innovative material platforms, unlocking their multifunctional properties across various sectors. Beyond display technologies, transparent electronics have paved the way for advancements in UV detectors, biosensors, electrochromic transistors, integrated on-glass electronics, and flexible electronics. These breakthroughs are set to revolutionize sectors like Energy, ICT, Medical, Packaging, Pharmaceutical, Automotive, Food, Security, and Environment. The scientific community's enthusiasm is reflected in the more than 34,000 published papers on transparent electronics, firmly establishing it as a "hot topic." This project allowed the Associate Laboratory i3N research team in this area, to be consolidated, as well as providing the laboratory with scientific equipment. This has allowed the group to project itself internationally in the field of transparent electronics.

Technologically, the promise of MO-based electronics is reshaping industry standards, prompting many companies to invest in these materials and devices. The pursuit of transparency in glass-based integrated electronics, as well as flexibility, wireless connectivity, and self-sustaining electronics in polymers or on paper, is driving innovation. A pivotal factor has been the development of new processing technologies for multifunctional MO semiconductors, enabling a wide range of printed electronic devices. These include smart displays and interactive placards, fuelling the rapid growth of the flexible electronics market.

Economically, the transparent electronics market is poised for explosive growth. Valued

at USD 2.15 billion in 2024, it is projected to reach USD 4.75 billion by 2028, with a compound annual growth rate (CAGR) of 21.6%. This impressive growth trajectory is driven not only by the rising demand for transparent devices but also by a commitment to sustainability. As the world embraces eco-friendly materials and technologies, transparent electronics are positioned to play a critical role in global green initiatives. The automotive industry is a prime example of how transparent electronics intersect with real-world applications. By integrating see-through displays directly into vehicle windshields, manufacturers are enhancing road safety, offering drivers real-time information that could be lifesaving in critical situations. This innovation, unifying electronics with everyday objects, is expected to expand the electronics market tenfold.

In addition, advances in transparent perovskite solar cells (PSCs) are opening new frontiers in energy conversion efficiency. These developments promise to not only boost solar energy efficiency but also enable the creation of smart windows that automatically adjust transparency based on environmental changes like heat or light.

Transparent electronics, with its potential to redefine entire sectors, stands as a beacon of what is possible when innovation and sustainability go hand in hand.

**"The ERC grant was very important to my scientific career as I consolidated a new area with international recognition. This project has also helped to put Portugal on the science map and has given visibility to the role of women in science."**

Elvira Fortunato



## AWARD-WINNING NARRATIVE 2024

# Patient-Driven Solutions: Empowering Health Innovators

Principal Researcher:  
Maria João Jacinto

Academic Unit:  
NOVA SBE & NMS

Main Scientific Area:  
Social Sciences

Types of Impact:  
Social Impact, Economic and/or  
Technological Impact

SDGs:  
3, 4, 9, 10 and 16

SDGs Targets:  
T 3.8; T 4.4; T 9.1; T 9.5; T 10.2;  
T 16.7



The healthcare innovation landscape is undergoing a profound transformation, driven by an inclusive approach that places patients and caregivers at the heart of the innovation process. The **Patient Innovation** project, led by a multidisciplinary team from NOVA School of Business and Economics and NOVA Medical School, has been a trailblazer in this shift, empowering patients and caregivers to take on active roles as creators of solutions that directly address their health challenges. Rather than being passive recipients of care, they are now recognized as vital contributors within the global healthcare innovation ecosystem, helping to shape solutions that cater to real-world needs.

Since its inception 10 years ago in 2014, the Patient Innovation project has evolved into a global platform

> **Patient Innovation project enables patients and caregivers to create and share over 1,800 health solutions, transforming them from passive recipients to active innovators in healthcare.**

> **The platform has attracted a community of 300,000 users from 80+ countries, providing a medically validated portfolio of solutions that can be shared, adapted, or implemented globally.**

> **Through the Patient Innovation Bootcamp, funded by EIT Health, 54 teams have received support to develop and scale their innovations, impacting 132 patients and caregivers across Europe.**

> **By connecting patient-driven innovators with healthcare companies, the project fosters new partnerships and business models, advancing personalized and collaborative healthcare**

([www.patient-innovation.com](http://www.patient-innovation.com)), where patients and caregivers from **over 80 countries** share and develop health innovations, ranging from simple adaptations to complex medical devices. With **more than 1,800 solutions**, this platform ensures that every shared solution is medically validated, guaranteeing safety and effectiveness. The project amplifies these solutions, bringing them to wider audiences and enabling patients to turn their ideas into tangible tools that can be implemented globally.

Platform users can browse a tailored portfolio of solutions through a user-friendly search menu, with filters for symptoms, conditions, or the intended purpose of each solution. Upon finding a suitable match, users have several options: (i) interact directly on the solution page through designated interaction buttons; (ii) follow 'do-it-yourself' instructions (if available) to replicate the solution in their own environment; (iii) explore additional information via reference links, and, if applicable,

purchase the product; or (iv) draw inspiration from others' ideas to develop their own innovations.

Initial dissemination efforts focused on introducing the platform to patient associations worldwide, aiming to encourage the submission of new solutions while offering patients with unmet needs access to valuable resources. Today, dissemination primarily relies on word of mouth within a global **community of 300,000 users**.

A major driver of the project's success has been the Patient Innovation Bootcamp: Boosting Patient Entrepreneurship, the world's first acceleration program for patients and caregivers. Launched in 2020 and funded by EIT Health, this program helps innovators navigate the healthcare sector's regulatory complexities, develop business models, and scale their solutions. With prestigious European institutions such as NOVA University Lisbon, Copenhagen Business School, and IESE Business School as partners, **the bootcamp has supported 54 teams and impacted 132 patients and caregivers across Europe**. This program has provided real impact in the participants' entrepreneurial journeys. For instance, Summed connected with key partners during the bootcamp, which enabled them to secure their first grants and initiate clinical trials led by Dr. Ana Rita Jesus Maria from Nova Medical School. Similarly, Reality Telling pivoted their product's business model during the program, leading to new partnerships and hospital clients, where their innovation is now benefiting hundreds of patients.

The impact of Patient Innovation extends far beyond individuals. By creating a bridge between bottom-up innovators and established healthcare companies, the project accelerates the adoption of patient-driven solutions, offering new sources of innovation for the industry. This dynamic fosters partnerships and new business models that propel healthcare forward, benefiting both patients and healthcare professionals. Professionals gain insights from patient-driven innovations, allowing

## Research Impact Research Impact Narratives

for more personalized, effective treatments and fostering a culture of collaboration.

The Patient Innovation project is transforming healthcare by empowering patients and caregivers to lead innovation, driving solutions that improve lives globally. This patient-driven approach highlights the profound potential of users as key innovators in healthcare, creating a more inclusive, collaborative, and effective system for all.

**"All lectures and workshops, networking, mentoring, sharing experiences, challenges, and successes... Amazing! A Bootcamp that shows that the most innovative solutions come from patients and caregivers. And there is nothing more commendable than this."**

Francisco Neto Nogueira, Co-founder Glooma  
Patient Innovation Bootcamp 2021 participant





# Choroideremia: Twenty Years from Gene Identification to Therapeutic Intervention

Principal Researcher:

Miguel Seabra

Academic Units:

NOVA Medical School

Main Scientific Area:

Medical and Health Sciences

Types of Impact:

Economic and/or Technological Impact

SDG:

3

SDG Target:

T3.4

There are few examples globally where a molecular cell biologist starts by identifying a protein function and ends up developing a **disruptive** therapeutic intervention. The work of Professor Miguel C. Seabra stands out for its extraordinary **impact on both molecular biology and therapeutic interventions**, particularly in the field of **gene therapy for rare retinal diseases**. In 1992, Seabra made a groundbreaking discovery that REP1 regulates Rab GTPases, crucial for intracellular membrane trafficking. This finding was directly linked to **Choroideremia (CHM)**, a rare X-linked **retinal degeneration** that leads to blindness in adulthood.

Through more than 22 years of intensive research and preclinical studies, Seabra and his team led efforts that culminated in a **phase 1/2 clinical trial for CHM gene therapy, demonstrating both the safety and efficacy of this novel treatment**. This trial offered a proof-of-concept for curative therapy, revolutionizing potential treatments for CHM and similar

> Miguel C. Seabra discovered a key protein role that led to a new gene therapy for Choroideremia (CHM), a rare eye disease causing blindness. This therapy has shown promising results, benefiting around 100 patients and paving the way for treating similar eye conditions.

> Co-founder of Nightstar Therapeutics, Seabra advanced CHM therapy to phase III clinical trials, with the company later acquired by Biogen, showcasing the real-world impact of his research.

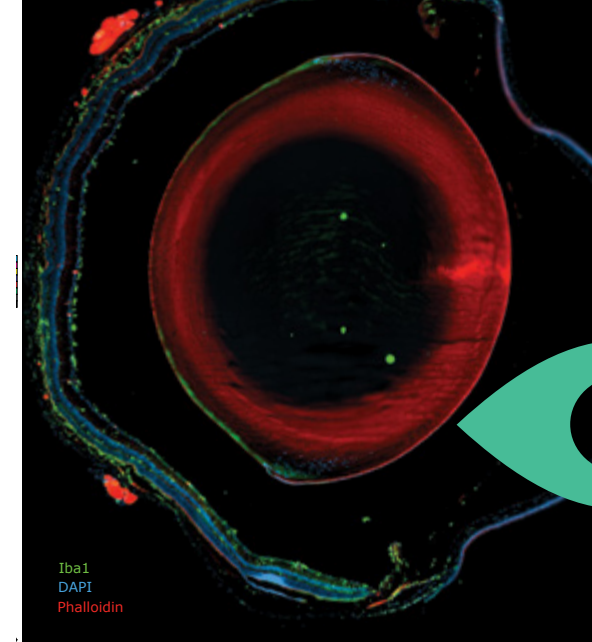
> Seabra has mentored 60+ researchers and secured €13 million from major organizations, driving the next generation of scientists and accelerating research advancements in rare diseases.

retinal conditions, giving **hope to patients and their families**.

Seabra's contributions to innovation also extend into entrepreneurship. In 2014, he co-founded Nightstar Therapeutics, a company that launched a major phase III clinical trial for CHM gene therapy. The company went public on NASDAQ in 2017 and was later acquired by Biogen in 2019, further solidifying the real-world impact of Seabra's research.

Seabra's research has **directly benefited around 100 patients** involved in clinical trials for CHM gene therapy, but his work has broader implications for advancing treatments for retinal diseases worldwide.

Indeed, Seabra's impact reaches far beyond this specific application. His pioneering work in gene therapy has paved the way for broader **advancements in treating rare retinal diseases**, showcasing the potential of Adeno-Associated Virus (AAV)-based therapies. Seabra's contributions have not only reshaped therapeutic strategies but also had a **lasting impact on the fundamental understanding of cell biology**. His



Whole mouse eye stained with three different antibodies to visualize the various structures of the eye

research on Rab GTPases and melanin transport from melanocytes to keratinocytes has become foundational, widely cited and integrated into biological textbooks. Recognized as one of the **world's most cited scientists**, ranking in the top 0.2% according to Stanford University in 2022, Seabra is the highest-ranked biomedical scientist in Portugal, with an h-index of 74 and around **21,000 citations**. His work has been published in prestigious journals such as The Lancet, Nature, and Cell, further highlighting his international standing in science.

Beyond his research and entrepreneurial ventures, Seabra has secured over €13 million in funding from prestigious organizations, including the Wellcome Trust UK, MRC UK, and the Foundation Fighting Blindness USA. His legacy includes the training and mentoring of 23 postdoctoral fellows and 37 PhD students, many of whom have gone on to successful careers in academia, industry, and policy.

Patient associations in the USA, Canada, UK, and France, inspired by Seabra's discoveries, played a crucial role in advancing research and raising funds, expediting the path from preclinical studies to clinical applications. Although the therapy has not yet received FDA or EMA approval, the future is promising for thousands of patients who may eventually benefit from these life-changing treatments.

Miguel C. Seabra's work stands as a **testament to how basic scientific discovery can evolve into transformative therapeutic innovations**, reshaping lives and the future of medical science.

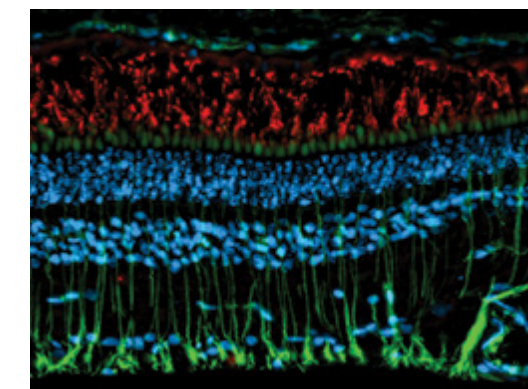
Mouse retina section stained with three different antibodies to visualize the various layers and cell types of the retina



Research Impact  
Research Impact Narratives

"Such achievements are always the result of a team effort, and I must take this opportunity to express my deep appreciation for the dedicated team with whom I have worked throughout the years, as well as for the invaluable contribution of the patients themselves which supported this project at critical times. I am deeply honored to have contributed to making a difference in the lives of patients and advancing this field. I hope this work inspires young scientists to pursue their passions and explore new frontiers in science, as together we continue to turn hope into reality."

Miguel Seabra





# New synthetic small organic molecules to stabilise biopharmaceuticals at the origin of a new startup

Principal Researcher:

Rita Ventura

Academic Unit:

ITQB NOVA

Main Scientific Areas:

Exact Sciences, Medical and Health Sciences

Types of Impact:

Economic and/or Technological Impact

SDGs:

3, 4, 5 and 9

SDGs Targets:

T3.4; T3.8; T3.b; T4.3; T4.4; T4.5; T5.1; T5.5; T9.4 and T9.5

Biopharmaceuticals, such as monoclonal antibodies, vaccines, and therapeutic proteins, have become the most relevant drugs in the pharmaceutical industry. However, the instability of biopharmaceuticals is a significant challenge in their development, manufacture, storage and distribution. Biopharmaceuticals are more complex and sensitive than small molecule drugs. The team of Rita Ventura at the Bioorganic Chemistry Lab at ITQB NOVA synthesized a library of new organic molecules based on osmolytes found in nature that showed significantly improved protein stabilization properties under several stresses. These results led to the creation of the startup **Extremochem** to further develop these new stabilizers for a wider set of applications. Ten years after its creation, Extremochem was sold to the international company Hovione, showcasing the high economic and social impact of the technology by contributing to the development of less

> The startup Extremochem developed stabilizers that protect biopharmaceuticals like antibodies and vaccines from degradation due to temperature, pH, and physical stress, improving drug safety and efficacy.

> Collaborations with companies like MedImmune/AstraZeneca expanded the application of Extremochem's stabilizers across therapeutic areas, diagnostic kits, and biosimilars, demonstrating the technology's versatility.

> Extremochem's work supports greater accessibility to life-saving therapies for conditions like cancer and autoimmune diseases, while fostering job creation and skill development in biopharmaceuticals.

expensive and safer biopharmaceuticals (<https://www.hovione.com/press-room/press-release/hovione-acquires-extremochem-and-its-portfolio-proprietary-sugars-support-customers-stabilization-and-delivery-biopharmaceuticals>).

Extremochem's stabilizers addressed critical challenges faced during the production, storage and transportation of biopharmaceuticals. The compounds developed by the company were designed to protect proteins from degradation under extreme conditions, such as fluctuations in temperature, pH levels and physical stress. By maintaining the integrity and efficacy of biopharmaceuticals throughout these processes, Extremochem's technology reduces the risks of aggregation and loss of potency, which are common and costly issues in the industry. This not only helps to **reduce production costs and decrease development failure but also improves the overall quality and safety of the drugs reaching patients.**

The economic impact of Extremochem's innovations was further magnified through strategic collaborations with key industry

players, such as MedImmune/AstraZeneca and Puratos Belgium, as well as other academic and industrial partners. These partnerships allowed the technology to be applied to a variety of therapeutic areas and settings, including diagnostic kits and biosimilar production, highlighting the flexibility and broad applicability of the stabilizers.

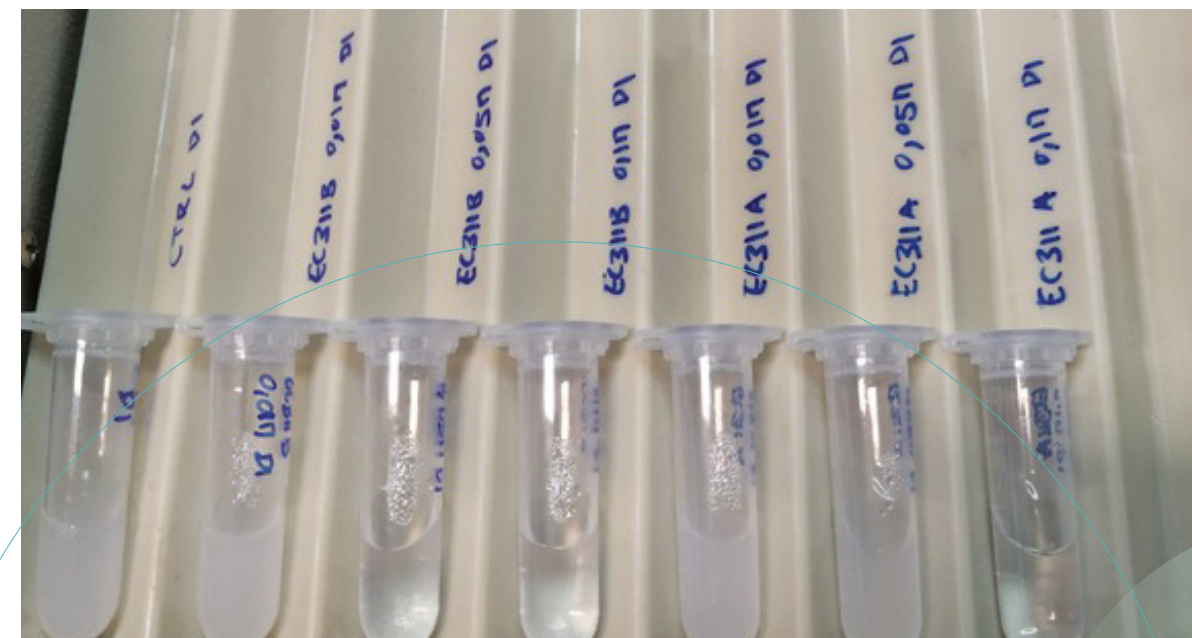
Socially, Extremochem's contributions went beyond cost savings. The startup technology plays a critical role in making biopharmaceuticals more accessible to a wider population by improving the shelf life and safety of these drugs. This directly benefits patients who rely on biopharmaceuticals for life-saving treatments for conditions like cancer, multiple sclerosis and autoimmune diseases. Additionally, the company created job opportunities and trained a new generation of scientists in the field of biopharmaceutical stabilization.

The acquisition of Extremochem by Hovione in 2023 marked a significant milestone, cementing the long-term value and impact of its technology. This transition has paved the way for further expansion of the stabilizers into new markets and therapeutic areas, ensuring

that Extremochem's innovations continue to contribute to the biopharmaceutical industry's growth and success.

Extremochem's development of advanced stabilizers will contribute not only to reduce the cost of biopharmaceutical production but also enhance the safety and availability of vital therapies. The company's work represents a transformative step forward in the biopharmaceutical industry, with a lasting impact on both economic and social fronts.

Shaking stress assay of mAbs in the presence of Extremochem stabilizers. Stabilized mAbs – clear solutions without aggregation





# Obstetric violence - improving the access to justice

Principal Researcher:

Vânia Simões

Academic Units:

NOVA School of Law

Main Scientific Area:

Social Sciences

Types of Impact:

Social Impact

SDGs:

3, 5, 10 and 16

SDGs Targets:

Good health and well-being; gender equality; reduced inequality; peace, justice and strong institutions

In the realm of legal reform, Vânia Simões' work has been instrumental in shaping the discourse around women's rights, particularly in the context of obstetric violence. The researcher, from NOVA School of Law, played a key role in drafting and contributing to several legislative proposals, such as 555/XIII, 872/XIII, 563/XIII, and 1072/XIII. While some of these initiatives faced setbacks due to the dissolution of the National Assembly, Vânia's doctoral thesis, "Obstetric Violence, Women's Rights, and Legal Protections," emerged as a **pioneering legal study, offering a comprehensive framework for understanding and addressing obstetric violence in Portugal.**

This thesis, the first doctoral work in Portugal on this topic, was recognized with the 9th edition Research Work of the Year Award by the Portuguese Victims Support Association (APAV), highlighting its significant contribution

> Vânia Simões' doctoral thesis, the first in Portugal on obstetric violence, offers a foundational legal framework to address and prevent mistreatment in obstetric care, earning the APAV Research Work of the Year Award.

> As a key contributor to Law 110/2019, Vânia's work catalysed the first legal cases on obstetric violence in Portugal. Her training sessions for judges and lawyers have equipped them with essential knowledge to distinguish obstetric violence from medical malpractice.

> Vânia collaborates with parliamentary groups to advance legislation that explicitly defines and addresses obstetric violence, aiming to strengthen legal protections for women in Portugal.

to victimology. Vânia Simões' research also provided vital insights into the proper enforcement of Law 110/2019, the **first piece of Portuguese legislation to address women's rights in obstetric care.**

The impact of her work is multifaceted, spanning the social, legislative, academic, and judicial domains. As a key contributor to Law 110/2019, Vânia Simões witnessed how this legislation catalysed the first legal cases of obstetric violence in Portuguese courts. The training seminars conducted by Vânia Simões in December 2023 for judges and in March 2024 for lawyers equipped these legal professionals with the necessary tools to apply the law accurately, ensuring that victims of obstetric violence gain access to justice. **These professionals (more than 300) are now able to differentiate obstetric violence from medical malpractice,** a critical understanding not typically covered in standard legal education.

Furthermore, Vânia's published work has already begun to inform master's level research, bridging a gap in the academic literature on obstetric

violence. Her contributions have not only benefited women, academics, and the judicial system in Portugal but have also garnered attention at the European level. Notably, her research is referenced in a European Parliament document on obstetric and gynaecological violence\*, further demonstrating the broader relevance of her work across the EU.

As Vânia Simões continues to advocate for legal reform, she is actively collaborating with parliamentary groups to submit a new legislative proposal that would formally recognize obstetric violence in Portuguese law. While Law 110/2019 laid the foundation by focusing on women's rights, this next step aims to explicitly define and address obstetric violence itself, filling a crucial gap in national legislation. Vânia Simões' goal is to ensure that Portuguese law fully protects women from obstetric violence, fostering both awareness and justice at the national and international levels.

\*[https://www.europarl.europa.eu/Reg-Data/etudes/STUD/2024/761478/IPOL\\_STU\(2024\)761478\\_EN.pdf](https://www.europarl.europa.eu/Reg-Data/etudes/STUD/2024/761478/IPOL_STU(2024)761478_EN.pdf)

**"To change the world, we must change the way we are born".**

Michel Odent



Defense of the PhD thesis in Law, specializing in Public Law, titled "Obstetric Violence, Women's Rights, and Legal Protection," in the 2023/2024 academic year.



# SalivaScan: Connecting Researchers and School Communities for the Evaluation of a New COVID-19 Saliva Test

Principal Researcher:  
Catarina Pimentel

Academic Units:  
ITQB NOVA

Main Scientific Area:  
Natural Sciences

Types of Impact:  
Social Impact

SDGs:  
3, 4, and 9

SDGs Targets:  
T3.3; T3.8; T3.d; T4.a and T9.5

**SalivaScan** was a community-driven initiative designed to evaluate a new saliva-based COVID-19 test developed at ITQB NOVA. Conducted in public schools across Oeiras, Lisbon, the project aimed to **address the challenge of testing young children under 12 years old**, who often found the invasive nasopharyngeal swab tests uncomfortable. Schools were chosen for their inclusivity, and the initiative focused on engaging staff, students, and families to encourage participation and gather valuable feedback.

The study saw the participation of over **4,445 students, with 80 asymptomatic cases identified**. The saliva test, based on RT-PCR technology but utilizing a more affordable chemistry, proved to be a non-invasive, cost-effective, and highly accurate alternative to the traditional gold-standard test. Importantly, the test could be performed directly on saliva samples, without the need for pre-processing to extract viral genetic

> **SalivaScan provided a child-friendly, non-invasive COVID-19 testing option for over 4,445 students, addressing a critical gap in accessible testing for young children and reducing reliance on uncomfortable nasopharyngeal swabs.**

> **The initiative identified 80 asymptomatic cases, effectively breaking transmission chains within schools and the broader community during a crucial phase of the pandemic.**

> **Collaborations with Oeiras City Hall and local schools ensured high participation rates and highlighted the value of community-driven public health solutions.**

material, which made it particularly suitable for mass screening in community settings. The ease of use and non-invasive nature of the test made it **ideal for children**, who were just beginning to be vaccinated and were not part of routine testing protocols in schools at the time.

SalivaScan's implementation began with strong support from the **Oeiras City Hall**, which oversees health promotion in local schools. After receiving approval from the Ethics Committee, the project team met with school directors to explain the initiative's goals and logistics. The directors enthusiastically joined the effort and appointed teachers to help coordinate testing. These teachers played a key role in communicating the project's importance to colleagues, students, and their families.

To facilitate testing, **9,500 saliva collection kits** were prepared and distributed across schools. Each kit included an informed consent form and an easy-to-understand flyer that explained the sample collection process. On the designated day, students returned their saliva samples to their schools, where the team

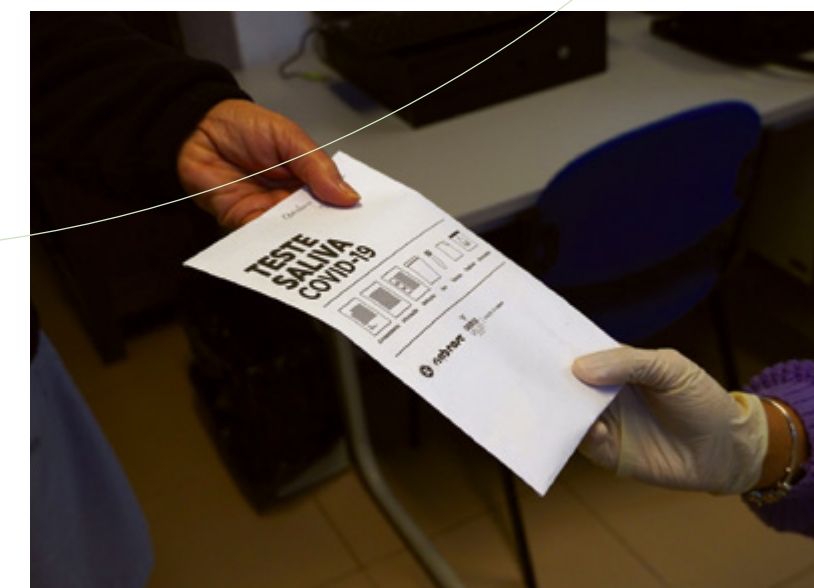
ensured compliance with the established testing protocols. The samples were then transported to ITQB NOVA for analysis. Upon identifying positive cases, the team contacted the students' guardians to confirm results with the gold-standard test and ensured proper reporting to healthcare authorities. Using a similar approach, the saliva test was successfully applied to the ITQB NOVA community showcasing its usefulness across different settings.

SalivaScan's achievements drew attention from the media, with the team sharing their findings through newspapers, radio, and television. The results were also presented at national and international conferences and published in an open-access journal. In January 2023, the team hosted a public presentation at ITQB NOVA, followed by a community event in Oeiras, where the public was invited to engage in discussions about the project and its implications.

The success of SalivaScan demonstrated the importance of **accessible, low-cost testing solutions**. By providing a non-invasive and reliable method for detecting COVID-19, the initiative helped **break transmission chains within schools and the wider community during a critical phase of the pandemic**. As global COVID-19 cases began to decline and the World Health Organization declared the pandemic over in 2023, SalivaScan stood as a key example of how community engagement and innovative testing can play a pivotal role in managing public health crises, offering valuable insights for future pandemic preparedness.

**"The collective effort to bring this project to life was truly remarkable and unforgettable; we were challenged to explore unfamiliar fields, pushing the boundaries of our roles as researchers."**

Catarina Pimentel





# Corporate Sustainability Due Diligence: upholding Human Rights and Environmental standards in Global value Chains

Person responsible for the application:

Claire Bright

Academic Units:  
NOVA School of Law

Main Scientific Area:  
Social Sciences

Types of Impact:  
Social Impact

SDGs:  
4, 5, 7, 8, 12, 13; 14, 15, 16 and 17

SDGs Targets:  
4.4; 4.5; 5.1; 7.1; 7.a; 7.b; 8.3; 8.5; 8.7;  
8.8; 12.5; 12.6; 12.7; 12.8; 12.a; 12.b;  
12.c; 13.3; 13.b; 14.1; 14.3; 14.6; 14.b;  
15.1; 15.2; 15.3; 15.4; 15.5; 16.2; 16.3;  
16.5; 16.b; 17.7; 17.8; 17.18

The awareness of the crucial need to address corporate-related adverse human rights and environmental impacts (including climate change) has increased dramatically in recent years. Surprisingly, still today, there is no legal obligation for companies to respect human rights at the international level, and it is widely considered that existing international instruments only create direct legal obligations for states, and not for companies.

Traditionally, companies' operations have been mostly subjected to the local norms of the countries in which they operate, which are often weak or insufficient or not properly implemented, and therefore unable to uphold international standards. Such regulatory gap led to a permissive legal environment in which human rights and environment abuses proliferated. Examples include the 160 million children (1 child out of 10 at the global scale) who are

> Claire Bright's research helped shape the EU Corporate Sustainability Due Diligence Directive (effective since July 25, 2024), requiring large companies to address human rights and environmental impacts.

> NOVA BHRE influenced legislation in Germany and Belgium and supported the development of Portugal's and Tunisia's first National Action Plans on Business and Human Rights.

> Provided training to companies and government officials on sustainable and responsible practices, including workshops in Portugal, Tunisia, and Mozambique.

> NOVA BHRE serves as a catalyst for transforming companies into sustainability leaders, fostering collaboration across various sectors.

in situation of child labour, with about half of them between 7 and 11 years old and working in hazardous conditions; the nearly 18 million people who are in situation of forced labour in the private sector, and more generally, the widespread issues around the poor health and safety standards as well as the working conditions of workers in global supply chains, amongst many others. In addition, issues around corporate-related pollution and deforestation are becoming more widespread, and the adverse effects of climate change are increasing in frequency intensity. According to the World Health Organization, between 2030 and 2050, climate change will be responsible for the death of around 250 000 people yearly, through more frequent severe weather events.

Against this backdrop, legislative developments have taken place at the national and European levels in order to uphold human rights and environmental standards in corporate activities. These developments have been mainly centred around the concept of corporate sustainability due diligence which requires companies to put in place processes in order to identify and address the

adverse impact that can result from their own activities and the ones of their business partners throughout their global value chains. Claire Bright's research is centred around this concept, and ultimately resulted in the creation of the NOVA Centre on Business, Human Rights and the Environment (NOVA BHRE). Through NOVA BHRE, Claire has implemented a series of initiatives that involved students at different stages and resulted in policy reports and expert studies that have directly influenced the regulatory and policy developments occurring in the field. Specifically, Claire Bright was co-author of a major report for the European Commission on Due Diligence Requirements through the Supply Chains which forms the basis of the Corporate Sustainability Due Diligence Directive which was entered into force on the 25th of July 2024 and will require large companies operating in the EU to put in place corporate sustainability due diligence processes in order to identify and address adverse human rights and environmental impacts with which they can be involved through their own operations and across their global value chains, thereby fostering sustainable and responsible business practices.

In addition to being incremental to shaping the European landscape, the work of Claire and the NOVA BHRE have informed the development of National Action Plans of various countries in Europe and in Africa.

Furthermore, the NOVA BHRE actively contributes to capacity building by helping companies, government officials and civil society organisations understand how companies can fulfil their responsibilities to respect human rights and environmental standards and ultimately transform themselves into sustainable leaders. This is achieved through workshops and trainings that have been delivered by Claire and her team in Portugal, Mozambique, Tunisia, the UK in 3 different languages to hundreds of

companies and civil society organization and dozens of government officials in total.

In addition, the NOVA BHRE places emphasis on awareness-raising activities and research dissemination, hence the 200+ published blog posts on NOVA BHRE and the over 30 podcast episodes, in addition to the high-level events organised featuring government officials, EU policymakers, UN representatives, civil society organisations, business representatives, scholars as well as students.

Overall, the Centre acts as a platform for the exchange of ideas, facilitating strong connections and collaborations between mutli-stakeholders. NOVA BHRE's work is a catalyst of the transformation to turn companies into sustainability leaders, by fostering practices that are more human rights-centred and respectful of the environment.

**"Injustice anywhere is a threat to justice everywhere."**

Martin Luther King Jr.





## HONOURABLE MENTION 2024

# Getting the United Nations to establish an international institution to search for disappeared and missing persons in Syria

Principal Researcher:

Jeremy Julian Sarkin

Academic Units:

NOVA School of Law

Main Scientific Area:

Law, Social Sciences and Humanities

Types of Impact:

Turning research into the creation of an international institution.

SDG:

16

SDG Targets:

T16.1; T16.2; T16.3; T16.5; T16.6; T16.7; T16.8 and 16.10

In Syria, millions of people have disappeared or been arbitrarily detained. However, human rights processes mainly focus on investigating and prosecuting the perpetrators of these crimes. Institutions rarely centre on assessing victims' identities and their whereabouts; as a result, victims and their families are left suffering and in need of reparation.

Since the beginning of the conflict in Syria, there has been a call for action, but it is common for states to lack the political will or the ability to address victims' needs. Still, there is a wealth of material on individuals whose human rights have been violated in Syria, and such documentation can be utilized in humanitarian ways.

Jeremy Sarkin, from NOVA School of Law, recognized this need and conducted a study on this. He firstly conducted a literature review on the enforced disappearances and arbitrary detentions of Syrians. He then conducted a thorough series of interviews and discussions with victims, their families and civil

> Jeremy Sarkin's study shifted international attention to locating Syria's disappeared and supporting their families, rather than solely prosecuting perpetrators.

> The study spurred a UN resolution and led to the 2024 creation of the International Institution on Missing Persons (IIMP), focusing on a humanitarian approach for victims of Syria's human rights violations.

> Sarkin's work encouraged cooperation among Syrian organizations, international bodies, and states, laying groundwork for a coordinated response to enforced disappearances.

society organisations, as well as institutions and individuals with expertise on the topic, such as the International Committee of the Red Cross (ICRC), the IIMM, International Commission on Missing Persons (ICMP), the UN Working Group on Arbitrary Detention (WGAD), the UN Working Group on Enforced or Involuntary Disappearances (WGEID), CIJA, international lawyers and others.

Sarkin also met with a number of states to discuss these issues and to gain their support for the establishment of such a process.

To complement his study, Sarkin gathered information available from Syrian organizations, including the number of people in their records, the types of information available on them, and the methodologies for collecting that information. This assessment also extended to the availability of these resources for the families of the victims.

All this work resulted in an **excellent overview of the protocols these institutions had already put into practice**, shedding light on the limited role that existing institutions have played thus far. More importantly, the study demonstrated how institutions could **cooperate and improve these processes** in the future and offered options for

the creation of a new mechanism dedicated to locating Syria's disappeared and detained.

Jeremy Sarkin conducted this work, culminating in several publications, including the book "The Conflict in Syria and the Failure of International Law to Protect People Globally: Mass Atrocities, Enforced Disappearances, and Arbitrary Detentions" as well as a number of journal articles. This impactful work, in combination with a study he conducted for the "Truth and Justice Charter Syria"—a charter composed of five Syrian NGOs—was recognized by the United Nations as reflecting the importance of creating such a mechanism. This is the first time this has been done.

The study initiated a series of events starting on December 24, 2021, when the UN General Assembly adopted a resolution that noted the widespread practices of enforced disappearance, arbitrary detention, and torture in Syria. In August 2022, the UN High Commissioner for Human Rights recommended such an international mechanism to address these issues. This was followed by an additional report, a meeting with representatives of victims, and a dialogue in the General Assembly, where a resolution was adopted to establish a mechanism for action.

**This mechanism of action was implemented in 2024 with the establishment of the International Institution on Missing Persons (IIMP)**, which welcomed the suggestion and focused attention on the need for a humanitarian approach to deal with the victims of human rights violations in Syria.

**"Through the lens of Syria, Sarkin has provided a compelling and provocative case to prioritize assistance to victims of massive human rights violations. His solutions and proposals for action to address longstanding, intractable problems in international governance deserve urgent attention."**

Leigh Toomey, Former Chairperson (2020-2021) and Member of the United Nations Working Group on Arbitrary Detention (2015-2022)

Research Impact  
Research Impact Narratives

**"The proposed creation of a new mechanism to conduct searches for disappeared and detained people in Syria and find information for their families.... are ambitious proposals, most of which would confront political firestorms by powerful nations and a stubborn U.N. bureaucracy. But Sarkin puts his case on the table forthrightly and with significant evidence and his views are worthy of serious consideration in both the policy and academic worlds."**

David J. Scheffer, former U.S. Ambassador at Large for War Crimes Issues



# Improving data-driven decision-making in public and social impact organizations

Principal Researcher:  
Leid Zejnilovic

Academic Units:  
NOVA SBE

Main Scientific Area:  
Engineering and Technology Sciences/  
Social Sciences

Types of Impact:  
Social Impact

SDGs:  
8, 14 and 16

SDGs Targets:  
8.5., 8.9, 14.4., 14.b, 16.7

The **Data Science for Social Good (DSSG)** Initiative is a powerful example of applied research that has yielded profound direct and indirect impacts across multiple dimensions.

The DSSG was developed to maximise the benefits of data towards the empowerment of social impact organizations. It encapsulates multiple research projects conducted by data scientist and enthusiasts that aim to **address real world questions**, through the **analysis of patterns or algorithm** design.

Recently, the DSSG Europe was established in Portugal transporting its noble purpose to national institutions, in academia through the Data Science Knowledge Center of Nova School of Business and Economics (NOVA SBE), and then in Portugal to broader society through an independent non-profit association DSSG PT. The knowledge centre capitalized on its faculty talent to further applied data science research and implement projects with numerous day-to-day applications.

The accomplishments of DSSG Europe founders were possible because of a

> The **Data Science for Social Good (DSSG)** applies data science for societal benefit, supporting non-profits and public services.

> The initiative created an unemployment prediction tool with IEFP, pioneering AI use in Portuguese public administration.

> The system analyzed small-scale fisheries during COVID-19, shaping supportive policy and developed data-driven insights for tourism management in Italy and Portugal, supporting strategic decision-making.

dedication and passion for impact by a handful of talented researchers and a powerful computational infrastructure capable to store data and run intensive tasks. The DSSG-related work yielded several academic publications (20 conference papers, 5 journal papers, and 1 book chapter) and a **free educational summer program at NOVA SBE**, receiving its well-deserved recognition with the **Golden Award at the 1st SAS Curiosity Data Science Iberian Award as a PI project in the category Data4Good, among other awards**.

One of the most impactful examples of the work was the development and implementation of a long-term unemployment prediction algorithm, created in partnership with the Portuguese Public Employment Service (IEFP). As part of this project, the team implemented advanced machine learning algorithms and incorporated dynamic data, while also redesigning key aspects of the IT infrastructure. This initiative marked a **pioneering use of AI in public administration in Portugal**, and the algorithm has since been adopted by all IEFP counsellors across continental Portugal.

The IEFP project was a result of an extensive collaboration with the various members of the management team, several counsellors at their job site and unemployed citizens. After the initial implementation, DSSG team offered additional support to help IEFP staff re-train the existing

model. It is beyond evident the beneficial outcomes that this initiative granted, besides its enormous achievement for the Portuguese context. This resulted in the selection by the Ministry for Administrative Modernization as one of the **top 4 Portuguese projects for AI for public administration** to be showcased at the European Parliament, in 2020.

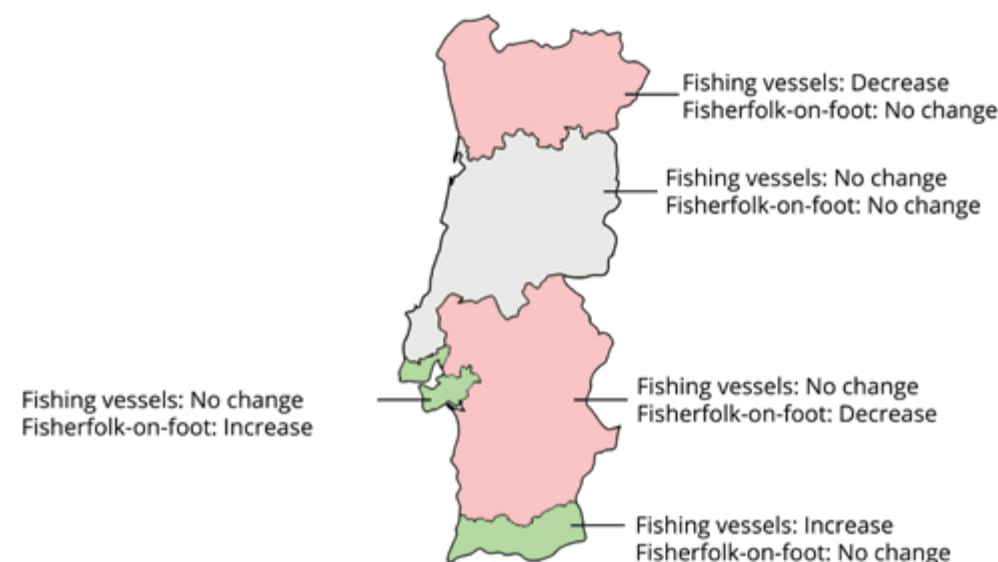
Another great project was the big data analysis of dynamics of Portuguese small-scale fisheries seafood catch during the COVID-19 pandemic, conducted with Docapesca and ANP|WWF. Researchers analysed a unique dataset with data of **5 million first sales of seafood transactions by small-scale fishers in Portugal from 2017 to 2020**. Data showed an overall decline of reported catch and fishers during lockdown, but a significant increase in reported catch volume in Lisbon and Algarve regions when compared with other areas. Reported patterns contributed to the argument that supports small-scale fishing communities and the maintenance of health levels of seafood populations, enriching policy evidence and discussion. This project was awarded a Green Prizes honorable mention from Visão and Águas de Portugal in 2021.

Lastly, it's important to highlight the Tourist mobility studies performed for Italy and Portugal.

Data scientists reutilized tourist mobility data for the Toscana Promozione Turistica, gathering **who are the tourists in Tuscany** - but also when and why they are visiting - and proposed innovative methods to study tourism paths to collaborative municipalities. Their proven expertise in the topic inspired Turismo de Portugal to explore new partnership with telecom operators in Portugal, as a resource for new studies that unveil **new methods to evaluate events or support destination-management-related decisions**.

**"[Collaboration with DSKC] has contributed to improving our infrastructure and has helped us better understand how to integrate AI with our technicians. We can even say that the Data Science Knowledge Center and the team led by Leid Zejnilovic are, in practice, our AI Lab."**

Carlos Santana, IEFP





# Advancing Early Diagnosis and Personalized Treatment in Oncology through Innovative Predictive Models

Principal Researcher:

Leonardo Vanneschi

Academic Units:

NOVA IMS

Main Scientific Areas:

Engineering and Technology Sciences/  
Medical and Health Sciences

Types of Impact:

Health

SDG:

3

SDGs Targets:

T3.4; T3.d

In a collaborative effort with the Champalimaud Foundation (CF), the Faculty of Sciences at the University of Lisbon and the University of Coimbra, the NOVA Analytics Lab from NOVA IMS, led by Leonardo Vanneschi, developed an **AI-based system with predictive capabilities in oncology**. The goal was to leverage artificial intelligence (AI) techniques to enhance radiomics by extracting informative features from available medical images, using precise and robust predictive models.

The newly developed AI techniques from NOVA IMS successfully unveiled previously unknown features that distinguish breast and axillary cancers, significantly **improving early diagnostic accuracy** and contributing to a more tailored diagnostic approach in clinical settings. Notably, the model achieved an unprecedented **87% accuracy in predicting the complete pathological response of axillary tumors**.

This work also had a major impact on the segmentation and detection of prostate

> NOVA Analytics Lab from NOVA IMS developed an AI-based system with predictive capabilities in oncology.

> The AI based system achieved 87% accuracy in predicting responses in axillary cancer, improving early detection for breast and prostate cancers.

> The system helps clinicians to design customized cancer treatments, improving patient outcomes and reducing costs and offers scalable benefits for cancer diagnosis and treatment, with possible application to various cancer types worldwide.

cancer, utilizing the diverse ProstateNet dataset from CF, which includes over **1,000 samples from three different scanners and 14 institutions**, along with the integration of three other independent datasets. The study demonstrated that models trained on large, diverse datasets generalize better, making them more reliable for lesion detection.

Breast and prostate cancers are among the most prevalent types of cancer worldwide. Additionally, axillary cancer, often stemming from complications related to breast cancer, has a significant mortality rate. In most cases, this mortality is due to the late detection of the disease, as many patients remain asymptomatic for long periods. This situation underscores the urgent need to develop reliable predictive models that can enhance personalized therapies by estimating individual treatment responses and forecasting risks associated with tumor lesions. The solution developed by the NOVA team aims to tackle these challenges and overcome limitations of existing models that are often based on limited datasets (usually from a single institution and patient cohort) and rely on pre-existing AI algorithms, restricting their general applicability.

The algorithms and models developed by the



NOVA Analytics Lab were integrated into an innovative software system that has been validated by clinicians at CF and incorporated into their existing framework. The system is in function since approximately three years, and it was used so far for research purposes, with the perspective of using it on patients in the future. This cutting-edge AI-driven system has already shown significant advancements in cancer diagnosis and treatment, leading to **improved early detection rates and more accurate predictions of patient responses to therapies**.

This major project was a collaborative effort, combining powerful computational infrastructure with exceptional talent, resulting in two PhD dissertations, eight master's theses, 17 articles, one book chapter, and numerous presentations at international conferences. As a result of this research at NOVA IMS, oncology clinicians at the Champalimaud Foundation have the potential to design more personalized treatment plans while also reducing costs for the healthcare system.

Ultimately, the true beneficiaries of this research will be the patients, who will be able to receive earlier, more accurate, and less invasive diagnoses, greatly improving their treatment outcomes with fewer side effects and better chances of tumor clearance and survival. This work has the potential to be implemented in medical institutions globally and extended to other tumor types, unlocking access to its benefits for millions of people worldwide.

**"The objective for the future is to establish a vast network of medical institutions to share data, as larger and more diverse data will lead to improved accuracy in the algorithms."**

L. Vanneschi



# Offering authentic travel experiences and genuine cultural exchanges

*Principal Researcher:*

**Maria João Castro**

*Academic Units:*

**NOVA FSCH**

*Main Scientific Area:*

**Humanities**

*Types of Impact:*

**Cultural**

*SDGs:*

**4, 11, 15 and 17**

*SDGs Targets:*

**T4.4; T11.4; T15.5 and 17.14**

“TravelconT, The Crossroads of Contemporary Travel in Postcolonial Tourism” is a collective project whose objective is to map and reflect on tourist traffic from the point of view of Memory Tourism, placing it within a critical discourse whose importance rests on an interdisciplinary methodological approach and research enhancing cross-border value and with a pluricontinental emphasis, transforming tourism into an engine for knowledge, responsible use and principally a driving force for new altruistic behaviours. In one word: commitment. How? Through the creation of a Tourist Alliance Route based on Portuguese colonial cultural heritage, empowering local communities while deeply engaging visitors. This project embodies responsible and regenerative tourism, creating meaningful, intercultural connections that benefit both hosts and guests.

Tourism today is a powerful tool for building culture and shaping identities, serving as a bridge between history and modern-day journeys. One of the most compelling forms of tourism is cultural tourism, which reimagines colonial

> The collective project “TravelconT” uses colonial heritage to foster intercultural dialogue and awareness.

> TravelconT encourages sustainable practices and a deeper understanding of history and creates meaningful connections between tourists and historically significant sites.

> TravelconT sets a new standard for ethical, transformative tourism.

heritage as a distinctive resource, fostering a renewed dialogue between nations that once shared intertwined histories. The Tourist Alliance Route is designed to leverage this heritage as a catalyst for cultural rapprochement, offering an opportunity to build a more altruistic, enlightened society grounded in the lessons of the past.

Centered around an innovative route this initiative highlights lesser-known destinations, offering authentic experiences and genuine cultural exchanges. These locations, tied to the Portuguese empire, are carefully selected for their historical significance and potential to provide memorable, transformative experiences. Examples include Príncipe Island, Namibia, Zanzibar, and Sri Lanka—places that not only serve as legacies of the past but also as vibrant settings for immersive local realities that broaden travelers’ perspectives.

A key feature of the project is its foundation in co-creation with local authorities and institutions. This collaboration ensures tourism becomes a positive force for transformation, enriching both tourists and residents in a sustainable, holistic manner. Through initiatives like educational workshops and heritage preservation, the project aims to empower local communities, developing their skills while fostering cross-cultural understanding.

Ultimately, the Tourist Alliance Route serves as a model of responsible tourism, promoting memory tourism as a means of shaping more enlightened mindsets. By fostering a deeper understanding of the past and encouraging sustainable travel practices, the project not only preserves heritage but also catalyses thoughtful, lasting change in the way we approach travel and cultural exchange.

**“Project of choice for Memory Tourism based on historical, cultural and natural heritage to promote true travel experiences”.**

Filipe Nascimento, President of the Regional Government of Príncipe Island



Project website: <https://www.fcsh.unl.pt/artravel/>



# Interdisciplinary Research

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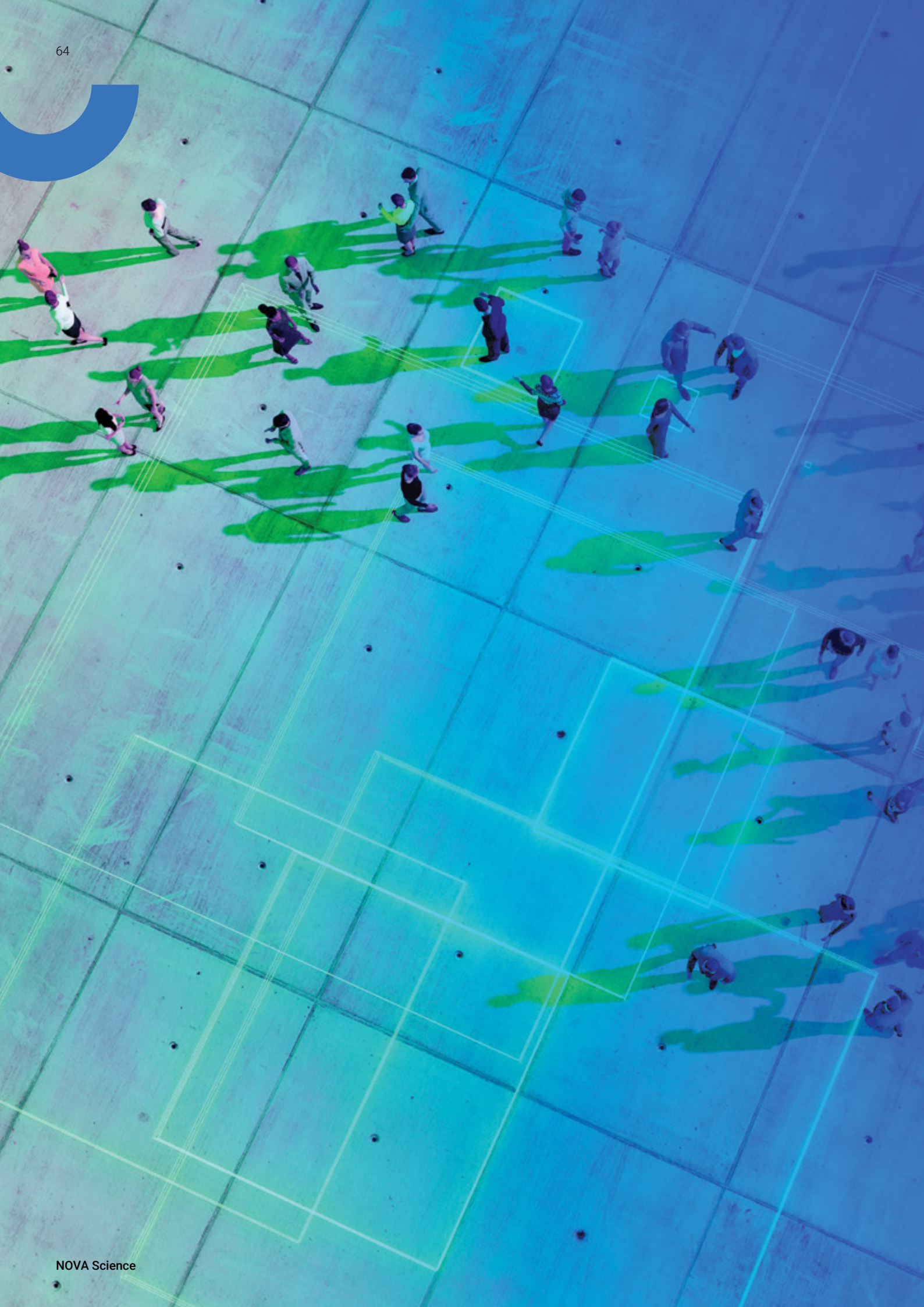
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*This chapter highlights the diverse platforms at NOVA University Lisbon that foster dynamic knowledge exchange. It also explores the EUTOPIA Connected Communities—thematic networks that bring together teachers, researchers, and students across campuses to collaborate on cross-disciplinary knowledge activities.*

*Additionally, it reflects on the first year of the interdisciplinary research community on Sustainable Energy Systems, illustrating how these collaborative efforts are shaping the future of research and innovation.*





# NOVA Interdisciplinary Research Communities

Sustainable  
Energy  
Systems

To address complex and emerging societal challenges, NOVA University of Lisbon (NOVA) has launched its first **Interdisciplinary Research Community (NIRC)** focused on **Sustainable Energy Systems**, with the support of Galp.

## VISION: TOWARDS A SUSTAINABLE ENERGY FUTURE FOR ALL

This community comprises individuals affiliated to NOVA, from different academic disciplines and backgrounds. Its members are committed to tackling the complexity of energy systems and addressing specific challenges through interdisciplinary and sustainability-focused perspectives.

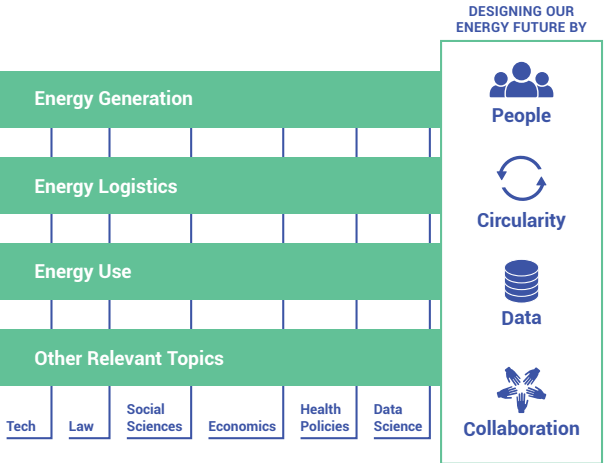
By joining “energy-related researchers” within a single community, NOVA enhances the framing of knowledge, fostering systemic thinking and holistic approaches to complexity. This collaborative environment allows colleagues to easily identify and cultivate synergies, both internally and with external partners.

Research conducted within this community encompasses a broad spectrum of topics, including scientific and technological aspects, social impact, and behaviour, legal and politics considerations related to energy, as well as economy and finance. The aim is to develop innovative and impactful solutions for real-world applications, in alignment with the principles of sustainable development.

## GOALS:

- Promote and accelerate interdisciplinary research in the field of Sustainable Energy Systems through concrete programs and initiatives.
- Cultivate a mindset of interdisciplinary collaboration.
- Generate and support research and innovation opportunities, with higher technology readiness levels (TRLs)
- Support the development of new public policies in the field.

Since its creation, the NIRC on Sustainable Energy Systems has convened researchers from a wide range of disciplines, including environment, engineering and technology, law, social sciences, economy, and data management. Together, they collaborate on research projects aimed at addressing the complex challenges posed by Sustainable Energy Systems. The proposed research areas of this NIRC are illustrated below, with each topic requiring contributions from various disciplines:



\*to be curated by the steering committee of this NIRC



As part of the NIRC on **Sustainable Energy Systems**, researchers are invited to participate in a series of interdisciplinary workshops and seminars, as well as internal and external matchmaking events designed to brainstorm new ideas, create joint publications, and scientific mobilities, all aimed at fostering collaboration and facilitating knowledge exchange.

### FIRST YEAR IN REVIEW

During its inaugural year, four Design Thinking Workshops were organized as part of the NIRC on Sustainable Energy Systems.

These four workshops aimed to foster interdisciplinary collaboration and innovation within Sustainable Energy Systems at NOVA. Organized by the Research and Innovation Support Service, most workshops were led by Professor Guilherme Victorino and his team at the NOVA Innovation & Analytics Lab (NOVA IMS) or at the Galp offices. Each session was attended by an average attendance of 25 researchers, from seven different academic units, including ENSP, NOVA FCSH, FCT NOVA, NOVA IMS, ITQB NOVA, NOVA School of Law and NOVA SBE.

The first 3 workshops promoted in-depth discussions to tailor projects to the requirements of a funding competition - the Interdisciplinary Energy Research & Innovation Initiative. This competition aims to co-create collaborative interdisciplinary projects within the research

community and, with the support of Galp experts, the most promising ideas were selected for financial support, facilitating their transformation into ambitious projects for further implementation or submission to international funding agencies.

Two interdisciplinary research projects were awarded funding: (1) **Energy Complexity Mapping for Pathways to Advance Sustainable Systems (ENCOMPASS)**, proposed by Professor Ian Scott (NOVA IMS), Professor António Vicente (NOVA FCT), and Professor Flávio Pinheiro (IMS), was awarded under the Renewables Value Chain research line; and (2) **Crops to Biomethane Production: A Circular Vision on the Potential of Biomass from Contaminated Sites to Produce Biomethane (BIOCIRCLE)**, proposed by Professor Ana Luísa Fernando (NOVA FCT) and Professor Ricardo Louro (ITQB-NOVA), under the Biomethane Production and Deployment research line.



2<sup>nd</sup> workshop



2<sup>nd</sup> workshop



1<sup>st</sup> workshop



3<sup>rd</sup> workshop

“Participating in the NOVA Interdisciplinary Research Community in Sustainable Energy Systems has been highly valuable for us, connecting researchers across academic units who might not have otherwise collaborated. This approach allows for informal discussion and brings together different perspectives helping us look for new research solutions and collaborations. Initiatives like this are essential for NOVA to make the most of its scientific resources by breaking down disciplinary barriers and uncovering new research paths. We’re excited for the opportunity to put our project into practice. ENCOMPASS aims to strengthen Portugal and Iberia’s role in the sustainable tech value chain, and we hope will have a real impact on policy and industry, fostering both regional growth and sustainable development.”

Ian Scott and team (ENCOMPASS)

“Participating in an Interdisciplinary Research Community helps us to see different visions of the same subject, which brings more balanced solutions to complex problems. Under the umbrella of Sustainable Energy Systems, the scientific and technological approaches are presented together with the socio-economic and environmental impacts, and legal aspects, allowing a better alignment of projects to the principles of sustainable development.

BIOCIRCLE mixes different/complementary disciplines with the aim to create a win-win situation by bringing polluted land back to value, through the production of clean biofuels from selected energy crops. It will promote the UNL collaboration with industry (GALP) and within UNL (NOVA FCT and ITQB), bringing also data towards the Mission Innovation Challenge 4 on advanced biofuels (European Union).”

Ana Luísa Fernando and Ricardo Louro (BIOCIRCLE)



4<sup>th</sup> workshop

To close out 2024, the fourth workshop announced an open call for community-oriented projects, with submissions open to the NOVA community until the year’s end.



# NOVA

## Institute for Medical Systems Biology

NOVA UNIVERSITY  
LISBON

### NIMSB Celebrated its First Anniversary: Establishing the Future of Precision Medicine

The NOVA Institute for Medical Systems Biology (NIMSB) proudly celebrated its first anniversary, marking an important milestone in the establishment of a groundbreaking research institute. As a collaboration between NOVA University Lisbon (NOVA) and the Max Delbrück Center for Molecular Medicine (MDC), NIMSB is supported by the European Union (Teaming for Excellence – Horizon Europe), the Portuguese Government, and the Municipality of Oeiras.

Though still in its early stages, NIMSB is laying the foundation to become a world-leading Centre of Excellence (CoE) in medical systems biology. The institute is preparing to drive innovation in the development of state-of-the-art systems biology approaches that will diminish mortality rates, enhance quality of life, elevate research and innovation intensity, and foster national socioeconomic advancement. NIMSB has the long-term goal of advancing early diagnostics, precision therapies, and delivering real Precision Medicine for patients.

Over the past year, NIMSB has focused on setting up the infrastructure necessary to support cutting-edge research. This included welcoming

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António Jacinto

<https://nimsb.unl.pt/>

the first research groups that will pioneer the institute's scientific work. By bringing together experts from diverse fields and fostering collaboration with national and international stakeholders, NIMSB is positioning itself to become a leader in medical systems biology.

In the near future, NIMSB will work closely with NOVA Institutes, Schools, affiliated hospitals, and key players in the quadruple-helix model (academia, industry, government, and civil society) to develop a robust ecosystem. This will enable the creation of education and training programs designed to prepare the next generation of researchers and healthcare professionals for the challenges of Precision Medicine.

While the journey is just beginning, NIMSB is on the path to becoming a transformative force in medical systems biology and Precision Medicine, both in Portugal and on a global scale.

Interdisciplinary  
Research



# NOVA

## Art & Technology

NOVA UNIVERSITY  
LISBON

Two schools of NOVA – the School of Science and Technology (FCT) and the School of Social Sciences and Humanities (FCSH) – formed a joint venture to create the Institute of Art and Technology (NOVA IAT), working together to foster art-based research and research-based art in different creative fields.

Most of the activities carried out so far were done in the scope of the European project T-Factor. T-Factor is a Horizon 2020 project that seeks to unlock the transformative potential of temporary use in urban regeneration. It gathers cities, universities, businesses and grassroots organizations committed to creating new knowledge, tools and approaches to temporary urbanism that can contribute to inclusive and thriving futures in cities. After four years of work exploring and testing the role and potential of temporary use in urban regeneration, the T-Factor White Paper summarises and proposes 10 key recommendations for endorsing and enabling these practices as integral components of sustainable, inclusive, and dynamic urban development strategies (<https://www.t-factor.eu/roadshow/tfactor-white-paper/>).

IAT carried out activities related to art and technology for community outreach and impact, including podcasts on local themes, seminars, art installations, community kiln, a documentary, and an art+tech residence. These year projects and new initiatives are being continue in a Digital Media Festival.

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**Isabel Rocha**

[www.unl.pt/nova/instituto-de-arte-e-tecnologia](http://www.unl.pt/nova/instituto-de-arte-e-tecnologia)

This event is an initiative of the NOVA IAT, and the City Council of Almada financed by the PRR within the scope of the Comunidades em Ação program which aims to position Trafaria as a reference point for creativity and technological advancement, promoting innovation and the exchange of ideas (<https://trafariacriativa.art/index.html>).

Using a multi-technique approach for image capture and 3D scanning, we have a multidisciplinary team giving a new life to the cultural assets of the museological collections of the national museums and monuments in Portugal, aiming to open new perspectives for the fruition, research, education, and transmission of knowledge. This project, funded and promoted by the Ministry of Culture, through Resilience Program RE-C04-i01, encompasses the partnership with IAT and a direct collaboration with museum partners. The multitude and complexity of the physical characteristics of the objects presents several challenges that we are approaching by combining acquisition techniques as Photogrammetry, Structure Light Scanning and Laser Scanning (LIDAR), to develop innovative object-tailored solutions. Over the course of the project, several thousands of high-quality photographs and 3D models will be produced and released, along with virtual visits of the partner museums. In dialogue with the museums, we are exploring different ways to integrate the digital data into museum practices, such as exhibitions, educational programs, conservation practices, and scholarly research, thereby enhancing the visitor experience and advancing knowledge dissemination. To answer these challenges, different actors are involved in a collaborative decision-making process, to ensure the long-term meaningful impact of the project on the preservation of cultural heritage, research, education, and public engagement.

Interdisciplinary  
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Interdisciplinary projects are increasingly important in addressing the complex and evolving challenges of today's industries, and tourism is no exception. The tourism and hospitality sector is facing unprecedented shifts, driven by rapid technological advancements, environmental concerns, and unpredictable global events. Therefore, NOVA Tourism&Hospitality has been actively participating in numerous sector initiatives, in key events and collaborations, playing a crucial role in driving forward-thinking solutions, promoting innovation and fostering a skilled workforce equipped to meet the evolving demands of the tourism industry. and education to upskill talent on a global scale.

As a response to these challenges, we are proud to announce the launch of a new postgraduate program, "Leading Tourism and Hospitality", designed to tackle issues identified by the sector with a multidisciplinary approach, in partnership and co-creation with relevant external private and public organizations.

This innovative program brings together expertise from more than 20 distinguished professors across eight of NOVA's schools and one international teacher from CY Paris Université, combining knowledge from fields such as economics,

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**Maria Cardeira da Silva & Iva Pires, Ricardo**  
**Leitão, Graham Miller & Alexandra Ventura,**  
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technology, sustainability, management, health, and innovation. By integrating these diverse disciplines, the program equips students with the tools to navigate the complexities of modern tourism and lead the sector into the future.

**This interdisciplinary postgraduate program sets the stage for developing the next generation of tourism leaders, equipped with a holistic understanding of the sector and the ability to drive meaningful change in an increasingly complex and competitive global market.**



NOVA Tourism and hospitality is also proud to announce the extraordinary achievement of over 1,400 students who have successfully completed micro-credentials in the field of tourism in NOVA FCSH, NOVA IMS, NOVA SBE and NOVA FCT schools. These specialized, short-term courses were designed to provide targeted, practical skills, allowing professionals and students to stay ahead in a rapidly evolving industry. NOVA's micro-credentials address the demand for new competencies in areas such as sustainability, digital innovation, and crisis management. By equipping participants with cutting-edge knowledge and practical tools, these programs are helping to shape the future of tourism, preparing professionals to tackle emerging challenges and seize new opportunities.

With over 1,400 graduates from these micro-formations, NOVA continues to demonstrate its impact on the tourism industry, fostering a community of professionals equipped with the knowledge and skills to drive sustainable growth and innovation in the global tourism landscape.

**We invite you to join us in shaping the future of this dynamic industry.**  
 Follow us at [www.turismo.unl.pt](http://www.turismo.unl.pt)







NOVA UNIVERSITY  
LISBON

NOVA for the Globe (N4G) is an interdisciplinary platform with representatives from the nine schools, social services and Rectorate, organized around two councils - academic and operational - aiming to take sustainability into NOVA activities, through a strategic and operational perspective, respectively. N4G adopts a whole-institution approach, considering the integration of sustainability in education, research, innovation and value creation, as well as in infrastructures, services and operations, as approved in NOVA Sustainability Policy.

N4G is the prime platform to discuss and design initiatives transversally to all NOVA schools, from community engagement actions to information system development or to students-oriented impact activities. Since N4G members come from very diverse backgrounds (i.e. technology and engineering, social sciences and law, life and health sciences, data science, and economics and finance), the agenda for sustainability carries under a truly interdisciplinary framework, promoting cross-fertilization of different perspectives and scientific scopes.

During last year, two key initiatives supported in the interdisciplinary nature of sustainability agenda deserve to be underlined. The first refers to the development of a new elective course - Sustainability for All (S4A) - to be offered to undergraduate students to

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provide them with the mindset, fundamentals and curiosity about challenges around interlinked Sustainable Development Goals. Each one of the 12 challenges is being prepared by two or three professors, each one from a different discipline and school. Therefore, each challenge content gains from different yet complementary perspectives, methods and knowledge sources. It is increasingly important students may be exposed to a diverse and interconnected topics aiming to develop their ability to system thinking and complexity understanding. Sustainable development fundamentally requires a multidisciplinary and, most desirably, interdisciplinary arena to design and implement effective solutions. S4A will be launched in 2025.

The second initiative refers to the NOVA Roadmap for Climate Neutrality and Resilience (NOVA Route Zero), to lay down the technical and organizational groundwork to support the commitment to NOVA University becoming a Net Zero and Climate Resilient University, in alignment with the Paris Agreement ambition. NOVA Route Zero project is a two-year project to assess, project, and select cost-effective options to achieve these goals. Route Zero will set NOVA emissions future pathway towards net-zero goal through a detailed roadmap. The project encapsulates NOVA's vision of Higher Education Institutions as hubs of knowledge, innovation, and partnerships for climate action. Through the mobilization of NOVA community, stakeholders, and peers, the project aims to drive systemic transformation across infrastructure, institutional processes, and collective behaviours. NOVA Route Zero and its multiple initiatives have been followed, discussed and decided, through both academic and operational

Interdisciplinary  
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councils of N4G interdisciplinary platform, accommodating the different perspectives and knowledge within a coherent framework.

The topic of sustainability has been increasingly adopted by each NOVA school through specific agendas and supported by own governance bodies. N4G platform works to drive and boost all the schools to get common grounds, milestones and goals.



# NOVA Health

NOVA UNIVERSITY  
LISBON

The NOVAHealth platform - whose mission is to become a knowledge hub in the different areas of health, resulting from the collaboration between the different Schools of NOVA, its Affiliated Institutions, as well as the health sector in general - was reorganized into various strategic Groups, which are led by leading researchers. These Groups and composed of researchers from different NOVA Schools and external partners, have the mission to develop collaborative initiatives in research, education and translation. There are currently Groups on Ageing, Nutrition, Chronic diseases and infection, Health systems and policies, Climate change impact on public health, Organization and management in health, Innovation in digital health and Drug discovery and advanced therapies.

In 2023, two conferences were held: the II International Conference NOVAHealth Systems and Policies - Digital Transition in Health, held on February 28; and the VI International Conference NOVAhealth Chronic Disease and Infection: Challenges of vaccination throughout life, held in October 20, supported by Pfizer.

Within the scope of the collaboration protocol between the NOVA University Lisbon and the Amélia de Mello Foundation, the Alfredo da Silva Research Prize was awarded on June 30. With the scientific curatorship of NOVAHealth, supporting innovative

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scientific research projects developed within the scope of Health Systems Sustainability, the twenty-five thousand euros prize was awarded to the project "Bioengineering living materials for personalized treatment of osteoradionecrosis patients", by Christiane Salgado. This collaboration protocol promotes research and the creation of value in health for Portugal, with the aim of distinguishing and supporting advanced scientific research projects.

At last, in December 2023, NOVAHealth coordinated an application for the Program for the Promotion of Mental Health in Higher Education, which aims at promoting the implementation of projects in the area of mental health and well-being. This program supports the Academic institutions in creating an adequate response to the growing requests from the students in the areas of mental health and well-being. With this program - promoted by the Directorate-General for Higher Education - the aim is also to reinforce the existing responses at the level of higher education institutions (HEIs) in the early detection and monitoring of more serious psychiatric situations that can be articulated with the existing specialized services at the level of the National Health Service. (SNS). This application - resulting from collaboration from the NOVA schools - was approved, with NOVA University Lisbon being one of the institutions with a higher budget.

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# EUTOPIA

## Connected Communities within the EUTOPIA Alliance

The **connected communities within the EUTOPIA Alliance** are central to the initiative's mission, functioning as thematic networks that bring together teachers, researchers, and students from across campuses to collaborate on cross-disciplinary knowledge activities. As the building blocks of EUTOPIA MORE, these communities aim to enhance existing best practices in challenge-based learning and research by fostering interuniversity cooperation at a European scale.

**NOVA University Lisbon** actively participates in seven Connected Communities (CCs), leading two of them. These communities focus on a diverse range of themes, including:

- **Tourism and Experiences**
- **Maintaining International Peace and Security**
- **The Environmental Humanities**
- **Entrepreneurship and Innovation**
- **Global Health**
- **Ocean Challenges and Sustainable Well-being for People & Planet / Caring Communities**
- **Thinking through the Silk Road: Cross-Cultural Exchanges and Mobilities**

Although NOVA's involvement is relatively recent, the university has already initiated several projects as a result of these collaborative efforts. For instance, some CCs are developing joint academic programs. The Maintaining International

Peace and Security CC has scheduled various activities for the 2024-2025 academic year, including inter-university lectures, student-led research through essay writing, and the 5th Student Conference in International Relations at the University of Ljubljana, which leads this community. Additionally, NOVA will host Professor Brian Schmitt from Cergy Paris Université in March 2025 for a guest lecture series at its School of Social Sciences and Humanities (FCSH).

Similarly, the Tourism Connected Community is strengthening academic ties between institutions by incorporating Professor Vincent Marcilhac from Cergy Paris Université into NOVA's postgraduate program. He will co-teach a course on gastronomy as part of the Post-Graduation in Leading Tourism and Hospitality program this year.

The Environmental Humanities CC has also been notably active. This community recently participated in the 'Confluence: Situating the Environmental Humanities' symposium at Warwick University, where participants shared interdisciplinary practices and discussed key methodological, conceptual, and pedagogical issues in environmental humanities.

The Entrepreneurship, Innovation, and Tech Transfer (E&I) Connected Community has showcased a range of impactful activities. These include embedding teaching projects into undergraduate and master's programs, with a focus on prototyping and transferring technology from master's dissertations. A cornerstone of this community's work is its mentorship program, which promotes the transfer of innovative

knowledge in research projects, particularly at the doctoral level. Following the Barcelona Workshop, the EUTOPIA MORE E&I Community has begun developing a proposal to extend its initiatives as part of a joint application to the EIT-HEI funding program.

To commemorate the 700th anniversary of Marco Polo's death, the Thinking through the Silk Road: Cross-Cultural Exchanges and Mobilities CC invited postgraduate students and early career researchers to participate in an autumn school. The program, which explored the theme of Marco Polo and the Silk Roads, encouraged participants to examine how the Silk Road is localized, interpreted, and contested in various national and regional cultural contexts. The school drew on diverse disciplines such as theatre studies, heritage studies, visual arts, history, cultural studies, and geopolitics.

**NOVA's recent involvement in the EUTOPIA MORE initiative** represents a significant step forward in advancing European academic cooperation across multiple fields. By engaging in these Connected Communities, NOVA not only contributes to knowledge exchange but also strengthens its position within the global academic landscape.





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# Talent Attraction, Development and Retention

Reforms in research careers and research assessment are key priorities at NOVA University Lisbon. As an early signatory to the Agreement on Reforming Research Assessment, a member of the Coalition for Advancing Research Assessment (CoARA), and the SECURE (Sustainable Careers for Research Empowerment) project, NOVA is fully committed to improving research careers and mitigating precarity. Establishing a stable workforce with transparent policies for career entry, advancement, and fair promotions is crucial for attracting and retaining talent. Therefore, it is a priority to decrease the percentage of researchers with precarious contracts, decrease the average age when entering Teaching or Research careers, increase career opportunities for young researchers, and implement

transparent and fair systems for promotion and recognition of merit. These priorities are aligned with the recent recommendations of the European Commission and the guidelines of the European Charter & Code for Researchers. In this context, NOVA has made strategic efforts to respond to the first instrument by the Fundação para a Ciência e a Tecnologia (FCT) aimed at supporting the permanent hiring of PhD researchers – **the FCT-Tenure program**. NOVA recognizes the value of its researchers' talent and provides specialized support and training opportunities for their professional and personal development. Committed to promoting sustainable research careers and attracting and retaining talent, NOVA offered several resources to the research community throughout 2024.

The next topics address some of these initiatives, highlighting key achievements of the past 12 months.

## Talent Attraction, Development and Retention

# FCT-Tenure

**NOVA leads nationally and secures funding for 228 new researcher and faculty positions through the FCT-Tenure program**

In 2024, NOVA has secured funding for 228 positions for PhD holders in research and teaching careers under the FCT-Tenure Competition, aimed at supporting the **permanent hiring of PhD researchers**, being the Portuguese University with the best performance in this program.

Out of the 1,100 positions provisionally selected for funding, NOVA obtained 100 positions for teaching and 128 positions for research careers, totaling 228 permanent contracts.

This is a remarkable achievement for NOVA, which achieved an overall success rate of **87%** in this competition, well above the **national average (50%)**, **making it the national university with the highest number of approved positions**.

All of NOVA's academic units which participated in the competition secured funding for the hiring of career researchers and faculty, thereby strengthening the University's strategy of retaining and attracting talent in various fields of knowledge.

The success of this application was the result of a collective effort focused on combating precariousness in

science and enhancing conditions for NOVA's researchers. This achievement was made possible through the dedicated work of teams from the academic units and the Rectorate, under the leadership of the Strategic Research Council and the Vice-Rector, Professor Isabel Rocha.

The provisional results of the FCT-Tenure call were announced by FCT on August 14. In total, 115 institutions from the national scientific and technological system applied, requesting co-funding for 2,211 permanent positions.

With this new model of funding scientific employment, FCT aims to promote the integration of researchers into research and teaching careers through international competitions. Funded by the State Budget and the PRR "RE-C06-i06-Ciência Mais Capacitação", the FCT-Tenure program has a total investment of 197 million euros.



# Career Development

NOVA is focused on the development and support of its researchers and their career prospects, with efforts to enhance their personal and professional value.

This commitment has been reinforced by NOVA's participation as a pilot institution in the SECURE project – Sustainable Careers for Researcher

Empowerment –, which aims to improve research careers and integrate the European Commission's recommendations for talent attraction and retention.

To strengthen the tools and resources available for career development, NOVA became in 2024 an institutional member of Vitae. Vitae is an international platform that supports institutions in the professional development of their students and researchers. NOVA researchers can register on the platform by using their institutional email and access a set of members exclusive resources and recommendations for academic and non-academic careers.

A dedicated webpage in the institutional website was also made available in 2024, providing several recommendations and tools on how to craft a career development plan or self-assessment tools of transferable competences and knowledge.

Learn more here: <https://www.unl.pt/en/investigacao/apoio-a-investigacao/apoiar-o-talento/>

## Talent Attraction, Development and Retention

### RESEARCHCOMP

The European Commission has launched the ERA Talent platform, which includes ResearchComp, a tool aligned with the ESCO classification, designed to help researchers evaluate and develop their transversal skills while increasing awareness of their broad range of competencies. ResearchComp provides a shared language and understanding of researchers' transversal competences, offering benefits to various stakeholders:

- **Researchers** can identify the competences that support interoperable careers across socio-economic sectors. They can assess their proficiency levels, recognize strengths, and pinpoint areas for

improvement, enhancing their career prospects and employability.

- **Universities, research organizations, and training providers** can design or adapt their training programs to equip researchers with essential transversal competences from the outset or through targeted learning opportunities, fostering a lifelong learning approach.

- **Employers** gain insights into the competences researchers bring, simplifying the search for highly-skilled talents.

- **Policy makers** can better monitor researchers' competences and develop targeted policies to support inter-sectoral mobility for researchers.





# Specialized Training and Support

NOVA provides a diverse array of courses designed to enhance core competencies for early-career researchers. For over a decade, the **NOVA Doctoral School** has offered various programs tailored to doctoral students at NOVA University Lisbon. These courses complement their academic journey and foster the development of transversal skills, ensuring a well-rounded and robust education.

Even with a CV filled with experience, securing competitive and stable funding in academia remains a challenge. NOVA's research support offices provide direct and ongoing assistance with funding applications, project and innovation management, science communication, and more. Additionally, throughout the year NOVA has launched several initiatives to provide formative support, including:

- Webinar on Marie Skłodowska-Curie Actions Postdoctoral Fellowships (MSCA-PF Open Days);
- NOVA Research Impact Narratives Challenge, which gives researchers the opportunity to communicate their research project through a narrative competition
- Training workshop for researchers and research managers under EUTOPIA\_HEALTH (see the section dedicated to this project for more information);

- Expert guidance from specialized external consultants on writing ERC grant applications;

- EUTOPIA Doctoral Summer School;

- EUTOPIA Young Leaders Academy.

Further details about some of these initiatives are provided below.

In addition, NOVA has implemented several actions to develop researchers' entrepreneurial skills. Visit the NOVA Innovation portal at [novainnovation.unl.pt](http://novainnovation.unl.pt) and get to know our training offers and specialized support.

NOVA's Research Units also promote several career development opportunities for their own communities of researchers. For more information on how NOVA R&D Units have been supporting talent see Chapter 7.

The same applies to the Associate Laboratories in which NOVA participates. The Associate Laboratory Life Sciences for a Healthy and Sustainable Future (LS4FUTURE) is a unique infrastructure in Portugal dedicated to the study of Life Sciences, at different levels of complexity through fundamental, applied, and translational research. It brings together four research units – MOSTMICRO-ITQB, GREEN-IT, iNOVA4Health and IGC – and five institutions, ITQB NOVA and NOVA Medical School, from NOVA University Lisbon, iBET, the Gulbenkian Science Institute and IPO Lisbon, gathering top-level scientists and critical mass in this area. LS4Future offered many training and coaching opportunities during 2024 that have benefited dozens of researchers from ITQB NOVA and NMS. <https://www.ls4future.pt/events-training/>



# Webinar on Narrative CVs

Many funding agencies, nationally and internationally, are increasingly asking researchers for narrative CVs to support project applications, which marks a departure from traditional formats that emphasize only quantifiable metrics.

A narrative CV transcends the boundaries of a typical academic **CV** and is **aligned with the principles and commitments of the Coalition for Advancing Research Assessment (CoARA), subscribed by NOVA**. It entails a structured written account of an individual's contributions and achievements, providing a comprehensive overview of diverse skills and experiences.

Unlike a standard CV, a narrative CV is adaptable and applicable across various contexts within research and innovation (R&I), serving purposes such as funding applications, recruitment processes, and other roles in the field.

Traditional CVs have come under scrutiny for their exclusive focus on quantitative measures such as grants and publications, thereby overlooking the broader spectrum of a researcher's contributions. They tend to favour individuals with linear career paths and often fail to recognize valuable experiences, both professional and personal.

In response to this paradigm shift, NOVA University Lisbon organized a webinar on February 21st, 2024, aimed at equipping NOVA researchers from all Academic Units with the necessary concepts and tools to navigate this landscape, fostering a more holistic approach to evaluating and presenting their professional journey.

The webinar set a new attendance record, with over 500 registrations and **more than 350 attendees**.





# MSCA-PF Open Days

For the second consecutive year, the Rectorate of NOVA University Lisbon promoted the **MSCA-PF Open Day**, an online session aimed at future MSCA-PF candidates who are exploring the possibility of choosing NOVA and one of its Research Units as their host institution. This initiative was an opportunity to gather valuable information about the MSCA-PF program and to experience NOVA's exceptional research environment.

The **Marie Skłodowska-Curie Postdoctoral Fellowships** (MSCA-PF) fund excellent research and innovation, supporting researchers at all stages of their careers by providing new knowledge and skills through cross-border mobility and exposure to different sectors and disciplines.

MSCA-PF grants promote research excellence and are aimed at PhD holders who wish to **conduct their**

**research abroad, acquire new skills, advance their careers, and gain experience in other countries, disciplines, and non-academic sectors.**

Interested researchers must apply together with a host organization, which can be a university, research institution, company, Small and Medium Enterprise, or other organization based in an EU Member State, or a country associated with the Horizon Europe program. All disciplines are eligible for these postdoctoral fellowships, including research areas covered by the Euratom Research and Training Program.

Talent Attraction,  
Development  
and Retention





# EUTOPIA Young Leaders Academy

The **EUTOPIA Young Leaders Academy (YLA)** program contributes to the research exchange among member universities and global partners integrated in EUTOPIA actions, with a special focus on the **enrichment of the career development of its researchers**. Ambassadors have the exceptional opportunity to integrate a training programme to develop skills such as leadership, supervision or grant writing, and be part of a research network among fellows that might initiate or fortify research collaborations.

The innovative two-year leadership training program, integrated on the EUTOPIA MORE project, brings together a community of promising research leaders, shaping the future of European research by fostering collaborations and interconnecting academic expertise and talent. Cohort 2, which is still in progress and marked

the first participation of NOVA fellows, had its debut on December 2023, at the 8th EUTOPIA Week in Dresden. Ambassadors Nausica Palazzo (NOVA School of Law) and Felipe Conzuelo (ITQB-NOVA) attended the event and have since then expanded their research network through academic visits to EUTOPIA partners and by hosting fellow EUTOPIA researchers.

In 2024, the EUTOPIA Young Leaders Academy (YLA) introduced its Cohort 3, welcoming two new ambassadors from NOVA – Ian Scott (NOVA Information and Management School) and André Marques (NOVA Medical School). This cohort has added 22 new researchers of the EUTOPIA alliance to the YLA network.

In the upcoming EUTOPIA week in Cergy (Paris), all YLA fellows will get together for training and networking activities, another opportunity to strengthen this European research community of young leaders.





# Nausica Palazzo

NOVA School of Law – Cohort 2



Nausica Palazzo is an Assistant Professor and Head of Diversity, Inclusion and Non-Discrimination at NOVA School of Law. Nausica concluded her *cum laude* PhD at the University of Trento, which focused on the legal recognition of non-traditional families in Canada, the US and Europe, for which she received six fellowships and grants.

Before joining NOVA, Nausica worked at Bocconi University and the Hebrew University of Jerusalem. She was also a visiting professor at Reichman University (Tel Aviv) and Western Law (London, Ontario).

She is interested in queer approaches to family law, the relationship between gender and religion in illiberalism, and comparative constitutional law. Her latest work includes several articles in top journals and books, including one on the legal recognition of non-conjugal families.

A YLA ambassador for over a year now, Nausica considers the YLA programme as “an advantage to be able to top up our own travel funds and to have some money to invite colleagues from our partner institutions”, which “strengthen our collaboration with researchers in my field”.

From the many opportunities of the leadership program, the NSL Professor highlights that “the trainings cover very different areas, some of which are closer to home, others a little less so. Overall, however, the training is a good opportunity for people like us - who are early/mid-career researchers - to just stop, sit and acquire skills that we would not normally

have the time or resources to acquire (in areas such as supervision, research communication, etc.)”.

Curiously, Nausica shares that what she has appreciated most is the opportunity for internal networking, “that is, the opportunities that YLA has given us to get to know and work more closely with the central offices of our own university”.

**“The programme is a great opportunity to expand your network and meet people who are doing cutting-edge work in areas different from yours. These can always be a source of inspiration and help you see things from a different angle.”**

Talent, Attraction,  
Development  
and Retention



# Felipe Conzuelo

ITQB NOVA – Cohort 2

Felipe Conzuelo is the head of the Bioelectrochemistry and Electrobiotechnology Lab, at ITQB NOVA. Felipe studied Chemistry at the Complutense University of Madrid (Spain), where he continued to obtain his PhD working on the development of electrochemical biosensors.

He conducted postdoctoral research at the Ruhr-University Bochum (Germany) in the field of electrochemical energy conversion and storage. His current work focuses on the interface between biological entities and electrodes, leading to the implementation of novel biotechnological applications ranging from biosensors to biophotovoltaic devices.

Felipe joined the first cohort with NOVA ambassadors in December 2023, at the EUTOPIA Week in Dresden. Following his experience in the program so far, Felipe tells that “the EUTOPIA Young Leaders Academy is a unique opportunity with a favourable impact on me personally and my career”. This is reached, in part, through “a dedicated training programme, we are offered useful workshops that support our success as Young Leaders”. “My participation in the programme has greatly contributed to my career development, as it has allowed me to expand my network and to get in touch with researchers from the different universities that are part of the alliance”, Felipe adds.

The ITQB NOVA researcher is positive of the impact of YLA on his professional future. “This enriching experience will certainly promote my excellence in research while contributing to a connected and inclusive academic community,

establishing strong international networks of mutual support and cooperation leading to exceptional advances in scientific progress and education”.

**“The productive programme allows to contribute to the promotion, support, and growth of an international network of universities.”**



# André Marques

NOVA Medical School (NMS) – Cohort 3



André Marques is a Senior Researcher at NOVA Medical School. He started his studies at the University of Lisbon, followed by the University of Amsterdam, where he completed his PhD in Medical Biochemistry and investigated the role of lysosomal homeostasis in neurodegeneration.

André had a previous Postdoctoral position at the University of Kiel, where he conducted his research on the most common inherited neurodegenerative disease in children, Batten disease, which resulted in a patent for the treatment of the disease.

In his current position, André was awarded a 6-year contract by FCT to investigate the role of lysosomal dysfunction in atherosclerosis, where he focuses on the interplay between lipid metabolism and organelle dysfunction.

André is now joining the YLA ambassadors' network and is expectant for the opportunities it will bring to his research. "I believe that my participation in the YLA will allow me to broaden the network of international contacts and diversify the scientific tools of our laboratory and the NMS, helping us to face the future challenges in cardiovascular disease research. In addition, I hope to develop the skills necessary to create a prolific working environment that not only fosters scientific advancement, but also enables the personal growth of all members of the laboratory."

For André Marques, being an ambassador will greatly contribute to his career development. "The YLA program offers a unique opportunity for early career researchers to develop the

skills critical to their academic future. Furthermore, this program will allow us to broaden our network of contacts to academics from different fields of knowledge, contributing to a more holistic reflection on issues that affect our society", he states.

**"Personally, it represents an excellent platform for improving the conditions offered to young scientists interested in pursuing a career in research in Portugal."**

# Ian Scott

NOVA Information and Management School (NOVA IMS) – Cohort 3



Talent, Attraction,  
Development  
and Retention

Ian Scott is an Invited Assistant Professor at NOVA Information Management School (NOVA IMS) and the Research Director of the NOVA Blockchain Lab. With a PhD (summa cum laude) from the MIT Portugal Program, Ian's research focuses on using blockchain and data science to address critical challenges in energy, sustainability, and decentralized systems.

Ian's career began in the energy sector, where he worked on developing energy policy and forecasting market outcomes across Europe, the US, and Asia. His interest in data-driven decision-making and decentralized technologies led him back to academia, where he has applied his experience to research that merges technology and public policy.

As a researcher and educator, Ian is passionate about leveraging blockchain and data science to create smarter, more sustainable systems.

Ian Scott's YLA Cohort will have its kick-off in December 2024 in Cergy, and he's hopeful with what's to come afterwards: "I hope the program will provide opportunities to collaborate on innovative projects, further strengthening my ability to deliver sustainable change with my research". For the IMS Professor, this is an excellent opportunity to "learn from leaders from European universities how to grow my academic career."

However, as a YLA ambassador, Ian can also contribute to strengthen the EUTOPIA network, by sharing its expertise in blockchain and data science, and fostering interdisciplinary initiatives. "As a research director at the

NOVA Blockchain Lab, I am committed to building partnerships with both academic and industry stakeholders which I hope will benefit from this program", Ian concludes.

**"The YLA program will significantly enhance my research career and professional development by teaching research leadership skills and connecting me with a diverse network of scholars within the EUTOPIA Alliance."**



# NOVA R&D Units – Promoting Talent

**Agricultural Sciences** 100

**Engineering & Technology  
Sciences** 102

**Humanities** 106

**Medical & Health Sciences** 112

**Natural Sciences** 114

**Social Sciences** 120

*NOVA is focused on the development and support of our researchers and their careers, with efforts to enhance their personal and professional value. This section encompasses the various R&D Units of NOVA, with a focus on the measures implemented in the development of scientific careers.*

*NOVA R&D Units are organized in broad scientific domains, according to the Portuguese Atlas of Research Units written by FCT.*



# Agricultural Sciences

**GREEN-IT**

## **GREEN-IT** Bioresources 4 Sustainability Unit ITQB NOVA

*Coordinator:*  
**M. Margarida Oliveira**

**[www.itqb.unl.pt/green-it](http://www.itqb.unl.pt/green-it)**

Green-it, although financially limited, fully supports the development of scientific careers. Since 2020, Green-it has: (i) Recruited two scientists and encouraged/supported researchers to apply for (Inter/)National projects and prestigious grants (ERC, MSCA, La Caixa). Seven researchers won new CEEC-FCT positions (Junior-2, Auxiliary-2 Principal-3); (ii) Applied for 16 FCT-Tenure researcher positions (ITQB-7, InPP-7, INIAV-2), eight recently awarded (ITQB-7, INIAV-1); (iii) Started preparing the next generation of group leaders by “rejuvenating” group leadership; (iv) Recommended numerous opportunities for Research Training through partner Institutions and Green-it, including: Post-graduation and Ad-hoc courses; Complementary skills through NOVA doctoral school and LS4Future Associate Laboratory; StartUp Research Program (entrepreneurship); Courses promoted by ITQB/iBET PDA (Post-Doctoral Association); and Short-training missions through active COST actions and EMPHASIS/ELIXIR international networks.



# Engineering & Technology Sciences

**CENIMAT**

**CENSE**

**CTS**

**MEtRICs**

**UNIDEMI**

**CENIMAT**  
i3N Institute  
of Nanostructures,  
Nanomodelling  
and Nanofabrication  
NOVA FCT

*Coordinator:*  
**Rodrigo Martins**

**[www.cenimat.fct.unl.pt](http://www.cenimat.fct.unl.pt)**  
**[www.i3n.org](http://www.i3n.org)**

CENIMAT/i3N believes that advancing knowledge and prosperity starts with empowering researchers. The Unit actively encourages and supports researchers in applying for ERC and EIC grants, elevating talents. CENIMAT/i3N actively tracks the progress of research activities, enabling researchers to stay at the forefront of their fields, in close collaboration with the faculty. The Unit also supports revitalizing the academic career path by encouraging top researchers with strong science communication skills to apply for teaching positions, opening the door for the rejuvenation of the teaching career. As part of the FCT-tenure program launched by Former Minister Elvira Fortunato, CENIMAT/i3N applied for 11 tenure-track positions, securing 10 to strengthen areas of research excellence: 4 researcher positions focused on sustainable micro- and nanofabrication, green and clean energy systems, nanomaterials engineering, functional interfaces, and materials for biomedical devices and systems. Additionally, 6 assistant professor positions were secured in these fields to foster generational continuity and ensure excellence remains a guiding principle for the future.

**CENSE**  
Center for Environmental  
and Sustainability Research  
NOVA FCT

*Coordinator:*  
**Nuno Videira**

**[www.cense.fct.unl.pt](http://www.cense.fct.unl.pt)**

CENSE implemented in the last five years a multifaceted approach in articulation with its management institutions and partners. Support to the integration of researchers into permanent career positions was pursued within the scope of CHANGE Associate Laboratory, as well as with applications to the FCT Tenure Program. Other measures included mentoring and coaching in pursuit of funding opportunities (e.g., CEEC), as well as promoting research contracts in the scope of R&D projects. At the PhD level, doctoral students participated in NOVA Doctoral School courses, as well as in seminars and other activities promoted in the scope of PhD Programs. Several cross-cutting initiatives were also implemented to stimulate collaboration among different research areas, including, a collaborative workshop for strategic foresight and research impact planning, advanced training workshops (e.g., CENSE WAT?), launch of internal calls for exploratory projects, and organisation of skills sharing and training seminars for supporting science and policy dialogues. Regarding promotion of scientific culture among younger audiences, CENSE also participated in initiatives such as science fairs and citizen science programs in schools (e.g., Seixal Criativo, eGROUNDWATER project), sparking interest in scientific careers from an early stage.



**CTS**

Centre of Technology  
and Systems  
NOVA FCT

*Coordinator:*  
**Luís Camarinha de Matos**

[www.cts.uninova.pt](http://www.cts.uninova.pt)

CTS has implemented several initiatives to foster scientific career development across different stages: (i) Early career researchers (ECRs) actively participate in national and international research projects, gradually taking task coordination roles. (ii) CTS has promoted the involvement of ECRs in various committees and working groups of IEEE, IFIP, IFAC, and Socolnet, enhancing their professional development and visibility. (iii) Organized 5 summer schools and numerous tutorials at our annual DoCEIS conference for additional training. (iv) Supported the development of numerous PhD and MSc theses. (v) Enabled ECRs to attend numerous conferences, offering opportunities for international exposure and networking. (vi) Organized dozens of seminars and workshops, featuring external speakers, to provide learning opportunities. (vii) Established a mentorship program led by senior researchers to guide ECRs. (viii) Various ECRs have secured positions as Assistant or Adjunct Professors at the participating institutions: 9 at FCT-NOVA, 3 at ISEL, 1 at IPSetubal, 5 at Lusofona, 1 at IPPortalegre. Following CTS's integration into the Associated Lab LASI, NOVA University has committed to opening 2 permanent researcher positions for CTS, creating additional career opportunities. (ix) Conducted awareness initiatives and contributed relevant topics to the PhD program.

**MEtRICs**

Mechanical Engineering  
and Resource Sustainability  
Center  
NOVA FCT

*Coordinator:*  
**Ana Luísa Fernando**

[www.metrics.com.pt](http://www.metrics.com.pt)

MEtRICs supports young researchers to develop their scientific careers guiding them to apply to grants (FCT scientific employment, Marie Skłodowska-Curie postdoctoral grant), encouraging them to participate in international conferences and projects, COST actions, networks, Researchers' Exchange Programmes, advanced courses (e.g. Erasmus+ Blended intensive programmes (BIP)), international internships in academia or industry, which is essential for sharing knowledge, personal growth and networking. These researchers represent an added value to MEtRICs through the introduction of novel technologies, project management, laboratory supervision and support to educational activities within the limits allowed by law, which also contributes to their career opportunities. Furthermore, the center tries to attract new researchers by providing support to innovative ideas and research activities, enabling them to gain valuable experience.

**UNIDEMI**

Research & Development  
Unit in Mechanical and  
Industrial Engineering  
NOVA FCT

*Coordinator:*  
**Rui Martins**

[www.unidemi.com](http://www.unidemi.com)

UNIDEMI developed a program for internal short-term projects (4 projects per year) to provide seed funding. The Unit also opened short-term job positions for PhD holders and fellowships funded by national and international projects. In total, UNIDEMI has supported 4 PhD holders (now employed in universities and companies), 36 PhD students who received fellowships, and 32 BSc/MSc students benefiting from research fellowships. Additionally, UNIDEMI offers PhD students short stays in renowned laboratories such as the National Institute for Aviation Research (USA) and prestigious universities like Cranfield University (UK). UNIDEMI organizes 5 international conferences and 3 summer/autumn schools for young researchers and encourages researchers' participation in NOVA and Iris events, including courses on topics like 'Open Science Policies' and 'Successful Project Proposal Development.' The Unit has attracted 4 young PhD holders in Mechanical/Industrial Engineering to serve as professors in the Department of Mechanical and Industrial Engineering. In collaboration with NOVA Math, UNIDEMI secured a permanent research position through the Individual Scientific Employment Stimulus Competition (CEEC).



# Humanities

- CESEM

IHA
- CETAPS

IHC
- CHAM

INET-md
- CLUNL

CIUHCT
- IELT

VICARTE
- IEM
- IFILNOVA

**CESEM**  
Research Centre for the  
Sociology and Aesthetics  
of Music  
NOVA FCSH

*Coordinator:*  
**Luísa Cymbron**

[www.cesem.fcsh.unl.pt](http://www.cesem.fcsh.unl.pt)

In 2018-2019 CESEM opened competitive calls for 10 Transitional Norm contracts, corresponding to previous postdoctoral fellowships. The CEEC competitions opened by the FCT benefited other researchers: 3 in 2019, 1 in 2020 and in 2021, 2 in 2022 and 4 in 2023. CESEM also created many one-to three-year work opportunities under the umbrella of independently funded research projects. In 2019, CESEM was a founding member of IN2PAST, a new associated laboratory funded by FCT, with one of its primary goals being to ensure long-term labor stability for researchers. CESEM also organises internal information and review sessions, involving staff and both senior and junior researchers, in order to help the latter to be more competitive in calls for work contracts.

**CETAPS**  
Centre of English,  
Translation and  
Anglo-Portuguese  
Studies  
NOVA FCSH

*Coordinator:*  
**Carlos Ceia**

[www.cetaps.com](http://www.cetaps.com)

CETAPS supported career development by helping researchers secure tenure-track positions and better research contracts. The Unit aided junior researchers (JRAAS) in obtaining doctoral fellowships and completing their doctorates. CETAPS also provided diverse scholarship and fostered academic communication skills through conferences and seminars. CETAPS offered mentoring in essential research skills, including workshops on methodologies, digital tools, and publishing strategies, with a recent focus on AI ethics. Training for academic publication was emphasized through JRAAS seminars and other initiatives, with our two SCOPUS journals and international networks serving as international platforms for researchers to be published and recognized.

**CHAM**  
Centre for the Humanities  
NOVA FCSH

*Coordinator:*  
**João Luís Lisboa**

[www.cham.fcsh.unl.pt](http://www.cham.fcsh.unl.pt)

Among 126 integrated doctoral researchers, CHAM has 56 career professors and 34 fixed-term researcher contracts. A strategic option is to pay special attention to the careers of their researchers, from a dual perspective. On one hand, to prepare them for competitive calls, providing tools for the most demanding submissions, establishing seed money for exploratory projects, discussing collectively the proposals. This allows researchers to keep working at CHAM or to find new opportunities abroad, which is also a good result. This is linked with a consistent policy of stabilising teams at CHAM itself, either by valuing researchers or by offering them stable contracts. To this end, CHAM is committed to various programmes that will enable these objectives to be achieved, involving both the preparation of competitive applications and co-responsibility in monitoring all successful applications.



## **CLUNL** Linguistics Research Centre of the UNL NOVA FCSH

*Coordinator:*  
**Rute Costa**

[www.clunl.fcsh.unl.pt](http://www.clunl.fcsh.unl.pt)

CLUNL has consistently supported scientific careers at various stages by implementing clear and transparent Procedures and Criteria for Scientific Productivity, a Code of Conduct, Inclusiveness and Gender Equality and the Ethical Commitments of the Unit. The Unit created a support program for PhD and MA students integrated in CLUNL, allocating 25% of the unit's general budget to fund publications, participation in conferences, and advanced training. CLUNL hired 3 junior researchers through the Unit's Programmatic Funding and regularly integrate early-career researchers into ongoing projects through initiation, MA, PhD and Postdoc grants. CLUNL has actively encouraged Marie Skłodowska-Curie postdoctoral fellow applications, securing one in 2023, and hosts 2 CEEC positions since 2020. Finally, in 2024 CLUNL secured 4 FCT Tenure positions.

## **IELT** Institute for Studies of Literature and Tradition NOVA FCSH

*Coordinator:*  
**Teresa Araújo**

[www.ielt.fcsh.unl.pt](http://www.ielt.fcsh.unl.pt)

The RU collaborated with NOVA FCSH under the FCT-Tenure Programme proposing 3 positions in the field of Interart Studies, Modernisms and French Studies. In order to attract resources for the development of scientific work in 2 projects (RELIT-Rom and Spectrality: Literature and the Arts), the RU hired 2 PhD researchers with indefinite duration contracts and supported the opening of scholarships associated with projects in the 3 thematic areas. IELT also took steps in favour of 3 post-doc fellows, becoming contracted researchers under the DL 57/2016 Transitory Rule. The RU hosted individual national research projects (2 CEECs from FCT) and international projects such as a Marie Skłodowska-Curie Individual Fellowship. IELT also contracted 2 specialised technicians in science management and communication.

## **IEM** Institute of Medieval Studies NOVA FCSH

*Coordinator:*  
**Catarina Tente**

[www.iem.fsch.unl.pt](http://www.iem.fsch.unl.pt)

Developing researchers' careers remains a key goal for IEM. Over the past five years, IEM has: (i) Through its programmatic funding IEM has contracted a trainee researcher and four PhD researchers; (ii) Provided support for building grant applications to competitive national and international tenders; (iii) Provided three internal grants for funding for European grant applications; (iv) Funded MA PHD and Post. PHD scholarships; (v) Supported training programs to equip researchers with essential tools; (vi) Increased funding for publications, missions, and resources; (vii) Awarded prizes for outstanding theses and best article at Medievalista (IEM's e-journal); (viii) Promoted researcher mobility and collaboration; (ix) Set research quality standards and mentoring; (x) Aligned with NOVA's evaluation standards to ensure quality and competitiveness.

## **IFILNOVA** NOVA Institute of Philosophy NOVA FCSH

*Coordinator:*  
**João Constâncio**

[www.ifilnova.pt](http://www.ifilnova.pt)

In 2019–2023, 25 researchers were hired with Assistant Researcher contracts under the programme “Norma Transitória”, 12 researchers have been awarded CEEC positions, 4 researchers were hired with programmatic funding and 6 projects hosted by IFILNOVA hired 1 researcher each for the duration of its activities. Moreover, 2 Assistant Professors were hired for the Philosophy Department and 3 for the Communication Sciences Department. Currently, two positions in the Philosophy department are already open – one for Moral and Political Philosophy, the other for the History of Philosophy – with the commitment that they will be linked to the institute as IFILNOVA Chairs. One of IFILNOVA's main task for 2025-2029 is to implement an ambitious hiring plan that will consolidate IFILNOVA's position as one of the leading European research

## **IHA** Institute of Art History NOVA FCSH

*Coordinator:*  
**Alexandra Curvelo da Silva Campos**

[www.institutodehistoriadaarte.wordpress.com](http://www.institutodehistoriadaarte.wordpress.com)

Through close collaboration with FCSH NOVA's Research Support Division, IHA provides regular training capacity-building events and workshops to strengthen researchers' skills and competencies in planning their research.

Guidance is also provided within IHA inner circles, both via research groups and via training and mentoring offered by senior researchers with any kind of relevant expertise ready to be shared with the IHA team. These coaching sessions can be offered as formal meetings, organized by IHA's Scientific & Management Office, or take place through informal encounters. Formal training encompasses subjects such as abstract submission or academic English writing, conference organizing skills and project submission challenges, etc., while informal encounters usually concern individual initiatives like article submissions and CEEC FCT applications

## **IHC** Institute of Contemporary History NOVA FCSH

*Coordinator:*  
**Luís Trindade**

[www.ihc.fcsh.unl.pt](http://www.ihc.fcsh.unl.pt)

The IHC has been very successful in securing research contracts, namely through FCT's CEEC program. Currently, IHC, has fifty researchers developing projects in a wide range of topics. This success is the result of a proactive policy attracting projects and supporting applications. IHC is aware, however, that this is not a definitive solution to career consolidation. The Unit plan is to hire researchers with permanent contracts also developed in the context of IN2PAST Associated Laboratory and of the FCT-Tenure program. The participation of IHC in IN2PAST involved the creation of permanent positions, the first of which started in 2023. IHC is also active participant in the first call of FCT-Tenure, proposing thirteen profiles that reflect the diversity of our four Research Groups.



**INET-md**  
Ethnomusicology  
Institute – Center  
for Studies in Music  
and Dance  
NOVA FCSH

*Coordinator:*  
**Manuel Pinto Deniz Silva**

**[www.inetmd.pt](http://www.inetmd.pt)**

INET-md offered its team workshops on audio and video transcription and digitisation, database development, event organisation, communication and social media. Acquired skills enable curricular enrichment in technical areas valued in scholarly research and also by non-academic employers. In the meantime, other measures were devised, such as: mentoring of researchers with candidate projects led by peers who were successful in previous calls of the same competitive funding programs; counselling for job and funding search strategies; lobbying for the integration of PhD holders into teaching and research careers within the management institutions that host INET-md's branches; promoting the opening of research careers in public and private institutions by championing for professional profiles with the transversal skills acquired within INET-md's research activities.

**CIUHCT**  
Interuniversity Centre  
for the History of Science  
and Technology  
NOVA FCT

*Coordinator:*  
**Isabel Amaral**

**[www.ciuhct.org](http://www.ciuhct.org)**

Over the past five years, CIUHCT has consistently supported the development of scientific careers at all levels, starting with PhD students. It has prioritized advanced training, coaching, and mentoring within the PhD Program in History of Science, Philosophy, and Heritage of Science and Technology, offered at the Department of Applied Social Sciences (DCSA). CIUHCT has also provided substantial guidance and financial support to postdoctoral researchers through scholarships (BIPD) or direct hiring, enabling them to advance their careers both nationally and internationally. In collaboration with DCSA, CIUHCT secured three positions in the FCT-Tenure 2024 call, reaffirming its commitment to career stability for young researchers and advancing knowledge in its core areas. Through access to research funding, collaborative projects, and expert guidance, CIUHCT aims at fostering scientific progress, talent retention, and long-term career stability for its researchers.

**VICARTE**  
Glass and Ceramic  
for the Arts  
NOVA FCT

*Coordinator:*  
**Márcia Vilarigues**

**[www.vicarte.org](http://www.vicarte.org)**

VICARTE aims to train the next generation of researchers and artists, promoting a supportive environment focused on permanent career opportunities. VICARTE is a collaborative ecosystem where PhD students receive personalized guidance from peers and supervisors, and we support conference participation and training, fostering partnerships and advancing research. We share funding expertise to enhance team success, which is evident in our achievement of five CEEC contracts (three from former PhD students) and a Marie Skłodowska-Curie scholar addition in 2023. To enhance researcher integration into permanent positions, VICARTE secured two CEEC contracts at the LAQV-REQUIMTE in 2024 and submitted two applications to the FCT-Tenure programme. Additionally, one researcher obtained a permanent Assistant Professor position (FBAUL), aligning with the RU's career integration goals.



# Medical & Health Sciences

**GHTM**

**CHRC**

**iNOVA4Health**

**NOVA**  
**R&D Units**

## **GHTM**

Global Health and Tropical  
Medicine  
IHMT NOVA

*Coordinator:*  
**Filomeno Fortes**

<https://ghm.iht.unl.pt/>

GHTM is dedicated to fostering scientific careers through various initiatives, including significant investments in infrastructure such as state-of-the-art BSL-3 laboratories and a biobank housing over 21,000 samples. The unit promotes a stimulating multidisciplinary environment by funding early-stage research projects that encourage collaboration among diverse research groups and by supporting active participation in international networks. In partnership with external organizations, GHTM facilitates idea development, proposal writing, and project implementation. All their activities are guided by the principles of the Research Fairness Initiative. In 2023, GHTM revised the unit performance assessment and promotion regulations in line with CoARA recommendations, emphasizing diverse research outputs and innovative practices to effectively recognize and advance talent.

## **CHRC**

Comprehensive Health  
Research Centre – Research,  
Education and Innovation  
in Clinical Research  
and Public Health  
NMS & ENSP

*Coordinator:*  
**Helena Canhão (NMS)**

[www.chrc.pt](http://www.chrc.pt)

Over the past five years, the CHRC unit (NMS, ENSP, UÉ, LIGMH) has implemented a comprehensive strategy to attract, support, and develop scientific careers at various stages, with a focus on integrating researchers into permanent positions. CHRC has made concerted efforts to secure permanent positions for its researchers, some previously hired as “CEEC”, “DL57 Norma Transitória” or as invited professors. Key measures included training programs, mentoring for early-career researchers, and career progression pathways. CHRC opened 5 staff scientist tenured positions, hired 10 researchers as tenured assistant professors, and promoted 7 assistant professors to associate or full professors. Strategic partnerships with institutions and external funding (ERC, AXA, La Caixa, etc.) have expanded opportunities. In 2024, 8 FCT tenure positions were proposed

## **iNOVA4Health**

Programme in Translational  
Medicine  
NMS & ITQB NOVA

*Coordinator:*  
**Paulo Pereira (NMS)**

[www.inova4health.com](http://www.inova4health.com)

i4H is committed to supporting careers at all stages, from nurturing early talent to integrating researchers in permanent career positions. i4H implemented a comprehensive strategy that emphasizes interdisciplinary collaboration, professional development, and sustainable career growth.

i4H is developing and will implement a Career Development & Advanced Training Platform. Having a dedicated platform will ensure continuous learning and development, by fostering a culture of collaboration.

The i4H strategic efforts in nurturing talent are further evidenced by our commitment to securing permanent positions for their best researchers. I4H and its partners have applied to FCT-Tenure programme, with a remarkable success, securing 23 tenure positions, of which fourteen will be co-funded by i4H for the next four years.



# Natural Sciences

- CEFITEC

NOVA Math

GeoBioTec

LAQV

LIBPhys
- MARE

NOVA LINCS

UCIBIO

MagIC

MOSTMICRO

**CEFITEC**  
Centre of Physics and  
Technological Research  
NOVA FCT

*Coordinator:*  
**Orlando Teodoro**

[www.cefitec.fct.unl.pt](http://www.cefitec.fct.unl.pt)

CEFITEC managed to implement several actions to support the advancement of scientific careers. It promoted leadership on scientific research, encouraging all members to pursue funding opportunities at both national and international levels, as well as the mentoring of PhD and Master students to gain scientific independence. CEFITEC also empowered participation in management and coordination bodies and engagement in international activities. CEFITEC remained vigilant in identifying opportunities to improve the stability of its researchers, facilitate promotions, and attract new members. Thanks to these efforts, in the last five years, two researchers obtained a professor position, another a researcher permanent position, and three more researchers secured 6-year contracts, under the competitive individual CEEC program. Moreover, two FCT-Tenure positions were recently attributed to CEFITEC.

**NOVA Math**  
Center for Mathematics  
and Applications  
NOVA FCT

*Coordinator:*  
**Ana Luísa Custódio**

<https://novamath.fct.unl.pt/>

NOVA Math is fully committed to improving research careers and mitigating precarity, by taking advantage of national programs, such as the FCT-Tenure calls, to secure co-funding for permanent positions. Researchers and post-docs at NOVA Math are accompanied by mentors or committees, actively contributing to the career development and quality of the research. NOVA Math is dedicated to fostering a diverse and inclusive research environment. Attracting and keeping talent requires establishing a stable workforce with open career entry policies, equitable promotion procedures, and merit-based recognition systems. That is reflected in the recruitment practices and the research center's management principles, which include open communication and equitable access to internal financing, equipment, facilities, and administrative



### **GeoBioTec** GeoBioSciences, GeoTechnologies and GeoEngineering NOVA FCT

*Coordinator:*  
**Fernando Reboredo**

[sites.fct.unl.pt/geobiotech](https://sites.fct.unl.pt/geobiotech)

In the last 5 years, two promising junior researchers joined GeoBioTec where they have developed palaeoecological studies published by scientific indexed journals. Furthermore, since these young researchers came from foreign countries, several partnerships and cooperations were strengthened with success. Also, in the scope of the FCT-Tenure, which is now in progress, the recruitment for another junior researcher aligns with the strategic goals of NOVA FCT/ GeoBioTec to advance research excellence in Geology with emphasis on Energetic Geo-Resources. This topic represents a burgeoning area of scientific research with promising applications in renewable resources and sustainable technologies that can minimize the carbon footprint, reflecting the unit commitment to innovation and scientific leadership, and contributing to the refreshment of the team.

### **LAQV** Associated Laboratory for Green Chemistry - Clean Technologies and Processes NOVA FCT

*Coordinator:*  
**João Carlos Lima**

[www.laqv.requimte.pt](http://www.laqv.requimte.pt)

LAQV's vision is a world in which Sustainable Chemistry is used as a powerful and dynamic tool to tackle societal, economic, and environmental challenges. LAQV researchers are key to promoting LAQV in the Portuguese scientific system and to its international recognition, through their active enrolment in interdisciplinary research, networking, training and outreach activities, in the field of Sustainable Chemistry. LAQV impact strategy is sustained on the attraction and retention of talent. Thus, LAQV is strongly committed to transparent recruitment and career development of highly skilled young researchers, providing support of administrative services, internal calls for PhD grants and seeding projects and periodic self-appraisal and evaluation leading to eventual proposal for progression or promotion.

### **LIBPhys** Laboratory for Instrumentation, Biomedical Engineering and Radiation Physics NOVA FCT

*Coordinator:*  
**Ricardo Vigário**

[www.libphys.pt](http://www.libphys.pt)

LIBPhys actively supports scientific careers, focusing on helping researchers transition into permanent roles. It participates in externally funded doctoral initiatives, including the Doctoral Programmes in Applied Physics, Engineering Physics, and Biomedical Engineering: Instrumentation for Health at NOVA, coordinated by LIBPhys members and partnered with industry. LIBPhys' host universities offer training in technical and soft skills, leadership, and mentoring for staff, as well as mobility programs. The research unit has a strong mentoring and coaching system, with senior members actively counseling and guiding junior colleagues through regular informal meetings and assistance with application processes. This guidance covers also broader career development, including research and scientific strategy. As a result of this mentoring program, three young researchers became assistant professors at NOVA University Lisbon, with one promoted to Associate Professor.

### **MARE** Marine and Environmental Sciences Centre NOVA FCT

*Coordinator:*  
**Maria Graça Martinho**

[www.mare-centre.pt](http://www.mare-centre.pt)

MARE has implemented a range of measures to support and develop scientific careers:

(i) "Volunteering Programme", which brings together all existing opportunities for students and young researchers interested in starting their research career; (ii) "Mini Grants Programme", which aims to provide young PhD researchers with experience in writing and managing successful grant applications and financially supports the best candidate projects; (iii) MARE launched an internal call for PhD fellowships and was able to fund a total of 15 PhD fellowships, each for 4 years; (iv) MARE applied to the FCT call "Verão com Ciência" and received funding to employ 23 young researchers; (v) MARE launched an international call for the selection of potential candidates for the FCT PhD Studentships Call 2024; (vi) MARE supports and tracks the application of PhD researchers for more stable and permanent positions within the FCT CEECInd or Tenure programmes.

### **NOVA LINCS** NOVA Laboratory for Computer Science and Informatics NOVA FCT

*Coordinator:*  
**Nuno Correia**

[nova-lincs.di.fct.unl.pt](http://nova-lincs.di.fct.unl.pt)

Computer science hiring is challenging but NOVA LINCS strategically secured tenure-track assistant professor positions with host institutions. The aim is to balance temporary and permanent roles, offering positions for recent PhD graduates and tenure-track roles for strong candidates, aligning with EC recommendations and European research guidelines. Internal project calls fund key projects and emerging initiatives, with 29 of these projects, including 55 student grants, in the last five years. The seed funding projects support early-career goals and inter-group collaboration. NOVA LINCS has a Careers Board that provides early-stage career guidance, project proposal support, and supervision strategies. In the last five years, NOVA LINCS funded 117 conference participations and publications, enhancing researcher visibility and growth.



**UCIBIO**  
Applied Molecular  
Biosciences Unit  
NOVA FCT

*Coordinator:*  
**Cecília Roque**

**[www.ucibio.pt](http://www.ucibio.pt)**

Over the past five years (2018-2023), UCIBIO implemented several scientific career development initiatives targeting all career levels. We actively foster career progression through mentoring, training, and strategic hiring. The unit researchers supervised over 1,500 undergraduate students research internships, 424 MSc and 134 PhD dissertations, and over 150 research internships from international visitors. UCIBIO offered specialized postgraduate courses for academia and industry in a total of 74 courses and workshops, including specialized workshops on career development, leadership, and communication. Regular seminars and retreats, as well as tailored mentoring initiatives, further enhance internal collaboration and knowledge exchange, creating a high-quality, supportive environment for research excellence and career advancement. We secured competitive permanent positions for 16 researchers and attracted 9 new faculty members.

**MagIC**  
Information Management  
Research Center  
NOVA IMS

*Coordinator:*  
**Leonardo Vanneschi**

**<https://magic.novaims.unl.pt/en>**

MagIC offers state-of-the-art facilities and cutting-edge technology, creating a dynamic, international research environment that attracts top talent. Over the past five years, the unit secured two CEEC individual contracts and six through CEEC Institutional support. MagIC PhD program has expanded from 14 to 31 students, with 49 successfully completing their PhD. MagIC PhD students have obtained 88 competitive fellowships, including 6 funded by FCT and others through our Silver Bullet Fellowships program. The unit provides young researchers with extensive career development support, including personalized mentoring via the NOVA IMS mentorship program, funding for international conferences, and opportunities to learn from top international researchers through workshops and webinars on scientific and transferable skills. Additionally, students gain real-world experience through industry collaborations at NOVA Analytics Labs.

**MOSTMICRO**  
Molecular, Structural and  
Cellular Microbiology Unit  
ITQB NOVA

*Coordinator:*  
**Cláudio M. Soares**

**[www.itqb.unl.pt/mostmicro](http://www.itqb.unl.pt/mostmicro)**

MOSTMICRO-ITQB has 267 members, of which 117 are integrated members with PhD. Support for scientific career development is offered in various ways, depending on the career stage. For PhD students, the unit provides structured PhD programs that offer training in scientific and soft skills, meetings and retreats, with additional resources available through NOVA's Doctoral School. Researchers benefit from career development focused workshops, pre- and post-award services to apply and manage grants, and innovation support through the Innovation Unit (service) and Startup Research NOVA (training). Additionally, a mentoring program extends to all career levels. Science communication is a priority, with support provided by our Communication Office. Lastly, the Scientific Advisory Board gives feedback to Lab Heads and their teams regularly.



# Social Sciences

**CICS.NOVA**

**CRIA**

**ICNOVA**

**CEDIS**

**NOVA SBE**

**NOVA**  
**R&D Units**

**CICS.NOVA**  
Interdisciplinary Centre  
of Social Sciences  
NOVA FCSH

*Coordinator:*  
**Helena Serra**

[www.cics.nova.fcsh.unl.pt](http://www.cics.nova.fcsh.unl.pt)

CICS.NOVA is a R&D unit dedicated to critical thinking and research in social sciences, strongly committed to advanced training and career development, as well as to multi-level dissemination of knowledge and its integration into local communities. Over the past 5 years, CICS.NOVA has been deeply committed to recruiting and integrating highly skilled researchers and mitigating precarity in academia within our scope of activities. Therefore, our strategy prioritised: 1) maximising recruitment opportunities opened by FCT and other funding agencies (FCT programmatic funding, CEEC, MSCA, ERC, and others); 2) supporting applications for team projects; 3) implementing a funding policy and other support initiatives promoting outstanding science; and 4) raising awareness in FCSH's governing bodies, of the relevance of implementing sustainable careers towards better working conditions, better work-life balance and better science.

**CRIA**  
Centre for Research  
in Anthropology  
NOVA FCSH

*Coordinator:*  
**Catarina Alves Costa**

[www.cria.org.pt](http://www.cria.org.pt)

Between 2018 and 2023, CRIA promoted scientific careers and research development, securing funding from FCT, MSCA, ERC, and Horizon Europe for Anthropology students. CRIA focused on long-term career stability and progression, aligning with the FCT-Tenure program to support its researchers. The center applied for seven FCT-Tenure positions, all of which were awarded within top rankings. These included one at CRIA, two at ISCTE, and four at NOVA FCSH, shaping a new framework for research careers. This reflects CRIA's commitment to fostering a supportive environment for professional growth, career development, and enhanced research opportunities for its team members.

**ICNOVA**  
NOVA Communication  
Institute  
NOVA FCSH

*Coordinator:*  
**Cristina Ponte**

[www.icnova.fcsh.unl.pt](http://www.icnova.fcsh.unl.pt)

For consolidating scientific careers, ICNOVA took different initiatives: (i) Launched international calls for positions as research assistants (2 were accepted) and postdoctoral grants (6 were accepted); (ii) Launched three internal competitive calls for exploratory projects with a budget of 5.000€ each. A total of 10 were concluded and some evolved to more ambitious projects; (iii) Supported successful submissions to CEEC, FCT Tenure, MSC and other opportunities; (iv) Funded over 350 participations in national and international events, with accepted communications and the compromise that the later should be developed and submitted to peer-review journals; (v) Offered eight PhD grants; (vi) Provided a science/researcher manager who advised on submissions to national and international calls; (vii) Provided financial support for linguistic review of full manuscripts before submission.



**CEDIS**  
Research & Development  
Center on Law and Society  
NSL

*Coordinator:*  
**Soraya Nour Sckell**

**[www.novalaw.unl.pt/cedis](http://www.novalaw.unl.pt/cedis)**

CEDIS / NSL supports scientific careers through reduced teaching loads for professors with strong research profiles or those securing significant international funding. They also offer externally funded chairs. They provide comprehensive support to PhD students, including assistance with publications and research missions, and employ them as teaching assistants. They offer coaching and mentoring, focusing on research cycle support, grant writing, and career development. CEDIS / NSL have also invested in training their staff in best practices in research management. From 2018 to 2023, CEDIS / NSL saw 18 FCT PhD scholarships, 36 doctoral completions, and significant academic contributions from PhD students, including high-ranking articles and awards like the IBFD European Taxation Journal Prize.

**NOVA SBE**  
NOVA School of Business  
and Economics

*Coordinator:*  
**Steffen Hoernig**

**[www.novasbe.unl.pt/en/faculty-research/research/research-unit](http://www.novasbe.unl.pt/en/faculty-research/research/research-unit)**

Nova SBE emphasizes research excellence by recruiting PhD-holding faculty from top universities through an international process. Young, research-active faculty are hired on tenure-track, with reduced teaching loads and no administrative duties in their first year. A mentoring program and holistic assessment process support their development. From 2018 to 2023, we hired 42 tenure-track Assistant Professors, with 4 receiving tenure, and recruited senior faculty. The Promotions Policy emphasizes research output, contributions to Nova SBE and Knowledge Centers, and teaching quality. The FCT Scientific Employment Stimulus Program has been crucial, funding several positions. Faculty development is supported through annual reviews, financial support for conferences, sabbaticals, and training. Nova SBE also promotes gender equality and inclusion, pursuing the HR Excellence in Research certification.





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