

The Bioengineering **ONE HEALTH ALLIANCE IN 2050**

A One-Day Voyage into the Future

27
October
2022

Porto, Hall of Biodiversity
– Ciência Viva Center

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CONTEXT AND OBJECTIVES

2050 is just around the corner. Organizations and scientific experts have been predicting what the world will look like in 2050. Said predictions have addressed a variety of topics like demographic trends, the health impact of ageing, infectious diseases, food availability and quality, and digital technologies.

Bioengineering is a cross-cutting area that interfaces with several scientific domains. Addressing the current global challenges requires an interdisciplinary approach, involving social sciences, ethics, biology, medicine, and engineering. However, the dialogue between experts from different areas is still lacking considering the magnitude and complexity of said challenges.

The symposium **“The Bioengineering – One Health Alliance in 2050: A One-Day Voyage into the Future”** aims to explore these issues, breaking artificial boundaries between scientific domains, and adopting the concept of One Health, perceived as the holistic view on Health, in its components of Human Health, Animal Health and Environmental Health.

The meeting will address four major societal challenges, structured in four panels. Each panel will be moderated by a science journalist and a summary of the discussion will be presented by Rapporteurs at the closing session. Based on the work of the Rapporteurs, a White Paper will later be published and presented to a wider audience, thus fostering public engagement.

AGENDA

8:30 - 9:00

Welcoming of participants

9:00 - 9:30

Opening session: Bioengineering, an ally of the One Health approach

9:30 - 11:00

AGING: LIVING LONGER, HEALTHIER AND SOCIALLY ACTIVE

Chair: Lino Ferreira (University of Coimbra)

Moderator: Teresa Firmino (Jornal Público)

Rapporteurs: Júlio B Santos (i3S) and Begoña Cabezas

GUEST SPEAKERS

Teresa Rodrigues (Nova University Lisbon)
Demographics of aging

Jennifer Elisseeff (Johns Hopkins University)
Regenerative immunology

Tiago Outeiro (University Medical Center Göttingen)
Challenging the brain: aging and neurodegeneration

Bruno Jesus (IBiMED)
Reversing the aging process

11:00 - 11:30

Break

11:30 - 13:00

INFECTIOUS DISEASES: ANTICIPATING, PREVENTING AND TREATING

Chair: Fabíola Costa (SWORD Health)

Moderator: António Granado (Nova University Lisbon)

Rapporteur: Joana Coelho (INESC-TEC)

GUEST SPEAKERS

Aurora Teixeira (FEP-University of Porto)
Social inequality in access to information and medical care

Rogério Gaspar (WHO)
Preparedness and response in a pandemic: how COVID-19 changed the future of regulatory reliance and convergence in anticipation of future public health threats

Maria João Amorim (Gulbenkian Science Institute)
Viral challenges

Raquel Duarte (ICBAS - University of Porto)
Lessons from the COVID19 pandemic

13:00 - 14:30

Lunch

14:30 - 16:00

DIGITAL HEALTH: IMPROVING HEALTHCARE

Chair: Daniel Vasconcelos (INESC TEC)

Moderator: Vanessa Ribeiro Rodrigues (Jornal Observador)

Rapporteur: Isabel Lourinho (ICBAS)

GUEST SPEAKERS

Harro van Lente (Maastricht University)
Sociology of expectations

Ana Sofia Carvalho (ICBAS - University of Porto)
Paradigm shifts in bioethics involved in digital health

Fernando Correia (SWORD Health)
How digital health is changing us?

Carme Carrion Ribas (Universitat Oberta de Catalunya)
"Health will be digital...or it won't be..."

16:00 - 16:30

Break

16:30 - 18:00

FOOD: STRIVING FOR ENVIRONMENTAL SUSTAINABILITY AND SAFETY

Chair: Eduardo Silva (University of California, Davis)

Moderator: Andreia Azevedo Soares (Jornal Público)

Rapporteurs: Bárbara Silva ICBAS) and Sara Amaral (CNC)

GUEST SPEAKERS

Tiago Santos Pereira (Centre for Social Studies; University of Coimbra)
Sociotechnical imaginaries for the food sector: Engaging societal visions with science and technology innovations.

João Pedro Conde (INESC MN; University of Lisbon)
Biosensors for food safety

Lúisa Valente (CIIMAR; ICBAS - University of Porto)
New sustainable protein sources

Joana Silva (Catholic University of Portugal)
Impact of economic policies in employment, well-being and social inequality

18:00 - 18:30

Closing session: Messages in a bottle for the journey
- The kick off for the white paper

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PANELS

The rationale behind each panel and its objectives are the following:

9:30 - 11:00
AGEING:
LIVING LONGER,
HEALTHIER AND
SOCIALLY ACTIVE

Ageing is a triumph of the contemporary society, but it also represents a great challenge for the upcoming generations. Although the life expectancy has grown significantly over the last century, healthy life expectancy, i.e., the number of years spent free of disabilities, has increased much slower than life expectancy. Reducing the gap between healthy life expectancy and life expectancy offers significant potential not only to individual health and well-being, but also regarding economic growth. Recent progress in understanding the biology of ageing suggests that designing interventions that can reduce gaps in healthy life expectancy is now technically feasible. This session will explore the demographics of ageing, ageing biology, and interventions to slow down ageing processes and regenerate tissues affected by age-related diseases.

11:30 - 13:00
INFECTIOUS DISEASES:
ANTICIPATING,
PREVENTING
AND TREATING

As we move into the third year of the global pandemic caused by COVID-19, it's time to leverage this and other disease outbreaks lessons and anticipate and prepare to what lies ahead. For most of human history, infectious diseases have been the leading cause of death, and even the 20th century antibiotics breakthrough is coming to a stall with the rise of antimicrobial resistance. Also, the new challenges brought by increased demographics and climate change have introduced changes into ecosystems, affecting animals and humans alike, fostering the chances for new outbreaks. How can technology be used to monitor and minimize risks (surveillance), to support sanitary processes and policy making (prevention), to treat diseases while enhancing societal equity, and foster homeostasis in a sustainable way (control)?

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PANELS

14:30 - 16:00
**DIGITAL HEALTH:
IMPROVING
HEALTHCARE**

The Fourth Industrial Revolution is digitalising almost everything and health is no exception. Society is rapidly changing by a mutual influence, with many technological solutions deployed in the first decades of the 21st century. Health is a fundamental dimension of life; not only the right to life, but a right to control life. Since health data is highly consequential to a person's life, it's crucial to protect it, in a world where decentralisation enabled by cloud computing and cybersecurity risks are increasing. Conversely, healthcare innovators are reaching major scientific breakthroughs via powerful technologies combining Big Data and Artificial Intelligence, which demand significant health data flows. How can we balance societal risks with potential technological benefits? Can digital health empower patients? Can digital solutions make healthcare more affordable, thus easing access worldwide? Join us on this voyage into the future!

16:30 - 18:00
**FOOD: STRIVING
FOR ENVIRONMENTAL
SUSTAINABILITY
AND SAFETY**

In 2015, the United Nations endorsed a universal call to eradicate hunger, reduce malnutrition and accelerate climate action - The Sustainable Development Goals (SDGs). Making our food systems more sustainable requires leadership and actions from all society's actors, including science. Advances from bioengineering play a critical role. This panel seeks to examine how future Bioengineering efforts and advances could lead the way to increase food quality and nutrition, while protecting against plant and animal pests and diseases, improving and safeguarding agricultural yields, and making alternative food sources.

SHORT BIOS PANEL I

AGEING: LIVING LONGER, HEALTHIER AND SOCIALLY ACTIVE



Lino Ferreira
Chair

Lino Silva Ferreira is Coordinator Investigator (equivalent to Full Professor) at the Faculty of Medicine, University of Coimbra. He holds a PhD in Biotechnology from the University of Coimbra (Portugal), obtained via a sandwich programme between the University of Coimbra and the Rensselaer Polytechnic Institute (New York). He carried out postdoctoral work at INEB (Portugal) and MIT (U.S.A.) in the fields of stem cells and nanotechnologies. He established his research group in 2008 at the University of Coimbra. Since then, he acts as director of the Advanced Therapies research group. In 2012, he was awarded with a prestigious European Research Council starting grant, and in 2016 a prestigious ERA Chair position in ageing at the University of Coimbra. He is the associate editor of Biomaterials Science Journal (RSC), founder of the Collaborative Laboratory Colab4Ageing - that currently integrates 11 associates -, founder of two technology-based companies and board member of the research institute Center of Neurosciences and Cell Biology and the associate laboratory CIBB. His research groups focus on the intersection of ageing with bioengineering.



Júlio Borlido Santos
Rapporteur

Biologist and science communicator. Head of i3S' Communication Unit (since 2015). He led IBMC/INEB Office for Science Communication, worked as life sciences researcher, schoolteacher, and demonstrator at UPorto. He organizes, promotes, and teaches advanced training for scientists and other audiences on "Science, Ethics and Society"; was a member of several Science with Society projects, namely the EU projects NERRI and PARRISE, and third party in the national hub of the EU funded RRI TOOLS project. He is a member of EU funded projects MIRACLE and INTEGRITY (among others) and coordinates the Erasmus+ HYBRID Lab Network. He is a member of the General Council of a Portuguese School cluster; Júlio Santos acts as vice-president of i3S Council Ethics and Responsible Research; he is a member of the Communication Council of UPorto, a former vice-President of Scicom.pt network and a member of other advisory boards.



Teresa Firmino
Moderator

Teresa Firmino licenciou-se em Comunicação Social na Universidade Nova de Lisboa, em 1992. É desde então jornalista no Público e, a partir de 2012, a editora de ciência do jornal. Em 2008-2009, estudou jornalismo de ciência nos Estados Unidos, com uma bolsa da Knight Science Journalism Fellowships no MIT. Em 2017 recebeu o Prémio Ciência Viva Montepio Media. Publicou vários livros de divulgação científica. O último, O Futuro do Planeta – Tanto que está nas Nossas Mãos (2020), editado pela Fundação Francisco Manuel dos Santos. O primeiro, em co-autoria com Filomena Naves, Portugal a Quente e Frio (2009), é sobre as alterações climáticas. Teresa Firmino holds a degree in Social Communication by the Universidade Nova de Lisboa (1992). She's been working as a journalist at Público since then, becoming the Editor of science in 2012. Between 2008-2009, she studied Science Journalism in the MIT (USA), thanks to a Knight Science Journalist Fellowship. In 2017, she received the Ciência Viva – Montepio Media award. She published several books about science communication and dissemination; the latest, "O Futuro do Planeta – Tanto que está nas Nossas Mãos" (2020), was edited by the Francisco Manuel dos Santos Foundation. Her first book, "Portugal a Quente e Frio" – co-authored with Filomena Naves – was published in 2009, and focuses on climate change.



Begoña Pérez Cabezas
Rapporteur

Graduated in Biology in 2007 and got a PhD in Immunology in 2011, both at Universitat Autònoma de Barcelona (ES). From 2012 on, she focused on studying the modulation of the hosts' immune system by pathogens, especially protozoan parasites, with a focus on Leishmania infantum, the etiological agent of canine leishmaniasis in Europe. Her work includes basic and translational studies (pre-clinical trials for drug and vaccine testing), developed at different Portuguese research institutions. She has more than 20 publications in peer-reviewed scientific journals. Currently, she is the responsible for Science Communication at the Instituto de Ciências Biomédicas Abel Salazar (ICBAS) of University of Porto, and the programme officer of the One Health initiative at the same institution. Her research background and previous experience in science outreach are crucial to the management and communication of the One Health approach, both inside and outside the institution.

SHORT BIOS PANEL I

AGEING: LIVING LONGER, HEALTHIER AND SOCIALLY ACTIVE



Teresa Rodrigues
Guest speaker

Is an Associate Professor with tenure in International Relations at NOVA FCSH (Department of Political Studies) and Invited Professor at NOVA IMS, UNED, and Instituto General Gutierrez Mellado (Madrid, Spain). Coordinator and member of national and international projects, funded by the Ministry of National Defence, the Portuguese Foundation for Science and Technology, and other European Community funding mechanisms. Head Researcher and member of national and international projects, most of them on Ageing population, Health, Social Conditions, Foresight Studies, Public Policies. Researcher at CIDIUM - Ministry of Defence, and collaborator of Fundação Calouste Gulbenkian. Member of the Board of IPRI UNL, and coordinator of the Research Line Foresight and Strategic Planning. Author, co-author and editor of 23 books, and 150 papers and book chapters. Her main research areas are Demography, Foresight and Strategic Planning, Migration, Ageing and Health, Security Studies, Public Policies.



Tiago Outeiro
Guest speaker

Prof. Tiago Outeiro graduated in Biochemistry at the University of Porto and did his PhD thesis at the Whitehead Institute for Biomedical research – MIT. He then worked as a Postdoctoral Research Fellow at the Department of Neurology of MGH – Harvard Medical School. Prof. Outeiro directed the Cell and Molecular Neuroscience Unit at IMM (Lisbon) between 2007 and 2014 and is currently Full Professor and the Director of the Department of Experimental Neurodegeneration at the University Medical Center Goettingen, in Germany. Prof. Outeiro holds a joint Professor position at Newcastle University, UK. Prof. Outeiro has authored >270 research papers in international journals and participated in various international boards and collaborative projects, towards identifying the molecular basis of neurodegenerative disorders. He has been awarded multiple prizes and grants in Germany, awarded by the European Union and other international funding agencies.



Jennifer Elisseff
Guest speaker

Dr. Elisseff holds a bachelor's degree in Chemistry from Carnegie Mellon University and a PhD in Medical Engineering from the Harvard-MIT Division of Health Sciences and Technology. In 2001, Dr. Elisseff became an assistant professor in the Department of Biomedical Engineering at Johns Hopkins University. In 2004, Elisseff co-founded Cartilix, Inc., a start-up that translated adhesive and biomaterial technologies for treating orthopaedic disease, acquired by Biomet Inc in 2009. In 2009, she also founded Aegeria Soft Tissue and Tissue Repair, new start-ups focused on soft tissue regeneration and wound healing. Dr. Elisseff is a Morton Goldberg Professor of Ophthalmology and directs the recently established Translational Tissue Engineering Center at Johns Hopkins, in collaboration with Biomedical Engineering. She is part of the Scientific Advisory Boards of Bausch and Lomb, Kythera Biopharmaceutical, and Cellular Bioengineering Inc. Dr. Elisseff has received several awards, including the Carnegie Mellon Young Alumni Award, Arthritis Investigator Award from the Arthritis Foundation, Yasuda Award from the Society of Physical Regulation in Medicine and Biology; in 2022, she was named top innovator under 35 by the Technology Review magazine, as one of the developers of a top-10 technology to change the future. In 2008, Dr. Elisseff was elected a fellow in the American Institute for Medical and Biological Engineering and a Young Global Leader in the World Economic Forum. In 2018, Dr. Elisseff was elected to both the National Academy of Medicine and the National Academy of Engineering.



Bruno Jesus
Guest speaker

My research has been focused on molecular mechanisms driving aging as well as age related diseases. Bruno Bernardes de Jesus holds a PhD in molecular and cellular biology from the University of Strasbourg. He then worked as a postdoc with Maria Blasco at CNIO, Madrid (telomeres and telomerase to tissue homeostasis, regeneration and on how telomeres could be manipulated to decelerate the aging process) and with M. Carmo-Fonseca at IMM-JLA, Lisbon (age-related barriers in the reprogramming of adult somatic cells). In 2018 he joined University of Aveiro as an Assistant Professor at the Department of Medical Sciences / iBiMED, where he's presently developing as principal investigator a research program on aging, cancer and stem cells. In 2022 he was assigned IBIMED's coordinator. His research has been funded by national and international competitive grants, has authored several important research papers in the aging field and participated in international networks and evaluation committees.

SHORT BIOS PANEL II

INFECTIOUS DISEASES: ANTICIPATING, PREVENTING AND TREATING



**Fabíola
Costa**
Chair

Fabíola Costa is Sword Health Clinical Research Manager, overseeing all aspects related to clinical studies to assess the impact of Sword digital care programmes on several musculoskeletal disorders (both in the acute and chronic scenarios), thus supporting clinical validation using real-world data. With a background in Pharmaceutical sciences, she holds a PhD in Biomedical Engineering, awarded Cum Laude at Faculty of Engineering of the University of Porto. Fabíola Costa firstly specialised in the development of antimicrobial coatings through antibiotic-free strategies, namely by exploring polymers with intrinsic antimicrobial properties, or by chemically modifying polymers with Antimicrobial Peptides. As principal investigator of the AntiBioCoat Project (CaixaImpulse programme 2018, from La Caixa Foundation), she led and developed a multidisciplinary team supervising students (PhD, MSc) and engaging with several stakeholders: from regulatory affairs, medical devices subcontracting companies to clinical experts, lawyers, and patients' associations, in order to foster technology innovation. Fabíola received several awards, including the Best Innovation Project Award at RESOLVE 1st Edition, dedicated to AntiBioCoat Project (2018). Fabíola collaborated in more than nine projects, and co-invented two patents; she also authored 26+ peer-reviewed publications (800+ citations).



**António
Granado**
Moderator

António Granado is an associate professor at Universidade NOVA de Lisboa, where he co-directs the MA in Science Communication. For 26 years, he worked as a science journalist, mainly at Público, where he also worked as science editor, sub-editor-in-chief, managing editor and online editor. From 2010 to 2014, he worked as the online editor of RTP, the Portuguese public television broadcaster. He holds a MSc in Science Journalism from Boston University (USA) and a PhD in Communication Sciences from the University of Leeds (UK). As an academic, he has taught at several Portuguese universities, among which the University of Coimbra - where he worked as invited lecturer for 10 years. As a journalist, he has written extensively about science and the environment. He is one of the coordinators of 90 Segundos de Ciência, a daily radio show that aims to present the work of Portuguese scientists, broadcast by Antena 1, the public radio station, since 2016.



**Joana
Coelho**
Rapporteur

Is a member of INESC TEC's Communication Service of INESC TEC since 2015; in June 2021, she became the Head of said Communication Service. Until then, she was responsible for the press relations of the institution (until the end of 2019), while leading work packages of Communication, Dissemination and Exploitation of results within the scope of several European projects in the energy area – actions that she continues to develop nowadays: InterConnect, UPGRID, FEEdBACK, GReSBAS, etc. She holds a bachelor's degree in Communication Science: Journalism, Public Relations, and Multimedia (with specialisation in Press Relations) from the Faculty of Arts of the University of Porto and a master's degree in Marketing and Strategic Management from the School of Economics and Management of the University of Minho. She is currently a PhD candidate in Management (with specialisation in Marketing and Strategy) at the Faculty of Economics of the University of Porto. Before joining INESC TEC, she worked at a communication agency, in research projects at the university and in a pharmaceutical distribution company, as a communication manager.

SHORT BIOS PANEL II

INFECTIOUS DISEASES: ANTICIPATING, PREVENTING AND TREATING



Aurora Teixeira
Guest Speaker

Full Professor and Vice-President of the Scientific Council of the Faculty of Economics of the University of Porto. Holds a PhD granted by Science and Technology Policy Research (SPRU), University of Sussex (UK). She is a researcher at the Center for Economics and Finance at the University of Porto (CEF.UP) and at INESC TEC's Centre for Innovation, Technology and Entrepreneurship (CITE). She has written and/or (co)edited 15 books and published over 100 papers in international scientific journals in the areas of innovation, economy growth, and human capital. She received several research awards, including: the Economic and Social Council Award (1999); the 1st Prize Foreign Direct Investment API-University of Coimbra (2006); two prizes awarded by the Innovation Agency and Ministry of Economy (2018) for two of the four best papers in the Call 'Knowledge-based Innovation'; and the Prize awarded by the Portuguese Economic Journal and the Ministry of Economy (2019) within the scope of the Call "Economic Policy in Portugal - Innovation, competition, and competitiveness and Internationalisation". She was acknowledged by Ciência Viva (National Agency for Scientific and Technological Culture) with her inclusion in the 3rd edition of the book "Mulheres na Ciência" (2021).



Rogério Gaspar
Guest Speaker

Rogério Gaspar (Pharmacist, b. 1961) is the Director of RPQ (Department of Regulation and Prequalification) at the World Health Organization (WHO). He's been working as an academic over the past 36 years, with extensive international regulatory experience during the last 26 years. Previously, and among other positions, he acted as Vice-President of INFARMED and member of the management board of the European Medicines Agency (2000-2002), Vice-Rector of the University of Lisbon (2013-2017) and member of the Executive Committee and Vice-President of the European Federation of Pharmaceutical Sciences (EUFEPS, 2009-2013 and 2016-2020). A researcher in Nanomedicine since 1986, he was also involved in Regulatory Science and Health Systems projects in recent years.



Maria João Amorim
Guest Speaker

She is a virologist and group leader of the Cell Biology of the Viral Infection Laboratory at the Instituto Gulbenkian de Ciência, in Portugal. She started her research group in 2012, following a PhD and three postdoctoral research projects at the University of Cambridge and the National Institute of Medical Research (UK). The main goal of her laboratory is to understand viral-host interactions, identifying host factors and pathways crucial to viral replication, and virulence factors that influence the disease of an evolving virus - for which she has been able to attract international funding, including an ERC grant from the EU. Since the SARS-CoV-2 pandemic started, she also initiated a R&D programme to address critical unknown factors of how the virus interacts with the host and evolves, and she is part of the coordination team of the CIAO project (COVID-19 through Adverse Outcome Pathways). As a virologist, she also acts as a conscientious science communicator, advising and informing the public about the scientific advances and main questions to address when dealing with the pandemic, namely via TV and Radio shows and opinion pieces in newspapers.



Raquel Duarte
Guest Speaker

Raquel Duarte was born in Porto, on October 6, 1967. She works as a Pulmonologist at the Centro Hospitalar de Vila Nova de Gaia/Espinho and holds a Master's in Public Health and a Master's in Healthcare Services Management and Economy. Raquel Duarte also holds a PhD in Public Health. She acted as Director of DGS' National Programme on Tuberculosis and Assistant Professor at the Faculty of Medicine. She also worked as Secretary of State for Health during the 21st Government of the Portuguese Republic (2018-2019). She is also President of "Europe Region Officers of the International Union Against Tuberculosis and Lung Disease", Secretary of Assembly 10 - Infectious Diseases at the European Respiratory Society, Coordinator of the Regional Reference Centre for Multidrug-Resistant Tuberculosis, Coordinator of the ARS Norte Clinical Research Unit, researcher of the Institute of Public Health of the University of Porto, and Associate Professor at the Department of Population Studies (Instituto de Ciências Biomédicas Abel Salazar). Raquel's main interests are Public Health and clinical, academic and research activities.

SHORT BIOS PANEL III

DIGITAL HEALTH: IMPROVING HEALTHCARE



Daniel Marques de Vasconcelos
Chair

Daniel Vasconcelos is the Head of INESC TEC's Technology Licensing Office (TLO), boosting the societal impact of the R&D results generated at the institution. Leading a team of three tech managers, Daniel paves the way for the development and commercialisation of deep tech solutions, bridging the gap between the Labs and the Market. Daniel manages a patent portfolio of 30+ active patent families in ICT and medical technology fields, and is also a strategy and IP consultant for INESC TEC spin-offs. Additionally, he is a European IP Helpdesk Ambassador for Portugal, a pro-bono first-line IP support service for SMEs and partners of European projects. Daniel is also a member of the renowned association of technology transfer professionals ASTP-Proton and invited speaker for IP and Business Strategy, including software and open-source licensing. Daniel is an invited professor at the Faculty of Engineering of the University of Porto, focusing on medical technology development (Biodesign) and Management courses. He holds a PhD in Biomedical Sciences, an MSc in Bioengineering, and an MSc in Innovation Economics and Management, all from U.Porto.



Vanessa Ribeiro Rodrigues
Moderator

Vanessa Rodrigues is a journalist, documentary filmmaker, researcher, and college professor. She holds a PhD in Communication for Development Studies, with a grant from the Foundation for Science and Technology, and a Master's in Information and Journalism. She was awarded a FLAD scholarship for the course "The Elements of Journalism" in Washington (USA). She currently contributes to Observador and is one of the authors of the "Bright Minds" section, dedicated to profiling scientists and communicating science. She focuses on translating what seems complex into engaging and humanised stories, through narrative journalism. She was a correspondent for TSF and DN in Brazil. She is the author of the book "Ala Feminina", about women in prison, and a trainer for the Media Literacy and Journalism project of the Journalists Union, in partnership with the Ministry of Education. Currently, she integrates two scientific projects funded by FCT as a researcher: Glocal feminist movements: interactions and contradictions, and YouNDigital - Youth, News and Digital Citizenship.



Isabel Lourinho
Rapporteur

She is the coordinator of the student's support office at the School of Medicine and Biomedical Sciences of the University of Porto (ICBAS), and head of the ICBAS Communication office since January 2022. She graduated in Psychology, with a specialisation in Clinical and Health, at the University of Minho, in 2005; she obtained her PhD in Biomedicine at the Faculty of Medicine of the University of Porto in 2017. In addition to the activities at the university, she carries out private clinical duties since 2011, and she is a consultant in multidisciplinary projects developed in partnership with private entities. Focused on the prevention of mental health and its effective communication, mainly since she took over the coordination of the ICBAS communication office, she believes that the University should encourage diversified and enriching experiences that contribute to critical reflection; in this sense, the main axes of communication of the office have been Mental Health and Well-Being; Science, Culture and Art; Internationalisation; and One Health. She is also a member of the scientific committee of the Portuguese association for the atopic dermatitis, and she nurtures particular interest in anxiety research and mind-body relationships.

SHORT BIOS PANEL III

DIGITAL HEALTH: IMPROVING HEALTHCARE



Harro van Lente
Guest Speaker

Harro is a Full Professor of Science and Technology Studies at the Faculty of Arts and Social Sciences, Maastricht University (The Netherlands). He was trained in physics and philosophy at the University of Twente, (The Netherlands), and graduated in both disciplines. His PhD research led to the rise of the Sociology of Expectations, which studies how representations of the future shape current socio-technical developments. He published extensively about the dynamics of technology-society interaction, technology assessment, foresight, and the politics of knowledge production. He is a member of the Dutch Health Council and Chair of the Netherlands Graduate Research School of Science, Technology & Modern Culture (WTMC). In 2018, he received the Freeman prize for the co-edited book by Palgrave (with Marianne Boenink and Ellen Moors) on Emerging Technologies for Diagnosing Alzheimer's Disease: Innovating with Care.



Carme Carrion Ribas
Guest Speaker

She holds a PhD in Biochemistry and Molecular Biology (2002), a Master's in biotechnology (1995) and a Master's in Conflictology (2008). She is currently a Health Associate Professor at Universitat Oberta de Catalunya (UOC) and part-time Assistant Professor at the University of Girona (UdG). Previously, she worked as Senior Researcher at the Agency for Health Quality and Assessment of Catalonia (CAHTA) (2012–2016), where she was leading the development of several Clinical Practice Guidelines (CPG) and Clinical Decision Support systems, including the implementation guidelines for the ADHD CPG recommendations. She is teachers the Master's degree in eHealth at UOC's School of Health Sciences, a eHealth centre currently collaborating with the World Health Organization (WHO). Currently, she is the scientific coordinator of the eHealth Centre at UOC, an academic centre whose main goal is to capacitate and empower citizens and professionals using technology, so they can lead the paradigm shift in health. She is the Group Leader of eHealth Lab Research Group, where she is managing several research proposals linked to the implementation and assessment of mHealth interventions.



Ana Sofia Carvalho
Guest Speaker

She is a Full Professor at Instituto de Ciências Biomédicas Abel Salazar (ICBAS), of the University of Porto, and Ethics Consultant at CUF Hospitals. She was an Associate Professor with Aggregation in Bioethics until May 2021, and the Chair holder of the Portuguese UNESCO Chair in Bioethics of Universidade Católica Portuguesa (UCP). She also was the director of the Instituto de Bioética until 2019. She was the coordinator of the Doctoral Programme in Bioethics in UCP (until 2021) and of the Office of Ethical Evaluation and Science Integrity in the Portuguese Foundation for Science and Technology (2012-2018). She was a member of the European Group on Ethics in Science and Technology (EGE) between 2017 and 2022, and a Member of the National Council on Ethics in the Life Sciences (2009-2021). She is an Expert in Ethics Evaluation at the European Commission since FP6, and she is also a member of different European Scientific Associations, H2020 Project Ethics Advisory Boards, ELIXIR Scientific Advisory Board and Member of different Ethics Committees in Portugal.



Fernando Correia
Guest Speaker

Fernando Correia obtained his Master's degree in medicine from the University of Coimbra, in 2009, and a PhD in Medicine from the University of Minho in 2021. He specialised in Neurology and is a Fellow of the European Board of Neurology since 2015. He also holds an Executive Master's in Healthcare Management, from Católica Porto Business School, 2015. He is one of the founding team members at SWORD Health, where he serves as SVP of Clinical Affairs, providing strategic support and subject matter expertise to all teams, ranging from product and operations to sales, partnerships, and customer success. Prior to joining SWORD, he specialised in complex headaches and refractory epilepsies, and was a faculty member of the International League Against Epilepsy.

SHORT BIOS PANEL IV

FOOD: STRIVING FOR ENVIRONMENTAL SUSTAINABILITY AND SAFETY



**Eduardo
Silva**
Chair

Eduardo A. Silva received his Metallurgical and Materials Science Engineering degree from the University of Porto, Portugal. The same year he finished his engineering degree, he received a scholarship through the Gulbenkian Foundation to do his PhD in Biomedicine (Gulbenkian PhD Programme in Biomedicine (PGDB)), becoming the first engineer to receive said grant. During his PhD, he attended the University of Michigan and Harvard University. He received his PhD in Engineering Sciences: Bioengineering in 2008. Upon completion, Eduardo received a Wyss Technology Development fellowship (Harvard Fellow). In November 2011, Eduardo moved to the University of California, Davis, where he is now Vice-Chair and an Associate Professor in the Department of Biomedical Engineering. Eduardo received several honours and awards, including the Metallurgical and Materials Science Engineering “Best Student” from the U. Porto, Hellman Family Fellow, and invited participant in both the Frontiers of Engineering Education and Frontiers of Engineering Symposium, by the American National Academy of Engineering (NAE), Biomaterials Science Journal - Emerging Investigator award. He has seven patents or patent applications, and one of his patents was recently licenced by Novartis. Overall, his long-term research goal is to engineer novel polymer-based systems for controlled delivery of cells, drugs and/or genes in the context of vascularising ischemic tissues.



**Bárbara
Silva**
Rapporteur

Bárbara do Carmo Silva is the responsible for internationalisation and alumni communication strategy at ICBAS, where she also works as events' coordinator. Before that, she worked at a tech start-up as COO, and as a Communication Manager at the School of Psychology at the University of Minho. Bárbara holds a Bachelor's degree in Journalism and Communication, from the University of Coimbra, and a Master's degree in Communication Sciences – Political Communication from the University of Porto. After a few years working as a freelancer, producing digital content and managing social media, she did a specialisation course in Digital Marketing & Strategy from EDIT School.



**Andreia
Azevedo
Soares**
Moderator

She is a science journalist at PÚBLICO newspaper. She graduated in Journalism from the Federal University of Rio de Janeiro in 1997, and earned her PhD in Science Communication from the Imperial College London, in 2012. She also worked for several years as a regular contributor for the “WHO Bulletin”, one of the world's leading peer-reviewed public health journals.”



**Sara
Amaral**
Rapporteur

She is the Head of the Science Communication Office at CNC since 2018. Sara holds a degree in Biochemistry (UC), a Master's in Biochemistry (UC) and a PhD in Biosciences, with a thesis in Science Communication (UC). She has been involved in several projects that aim to establish innovative strategies that promote the appropriate communication between scientists and different audiences, and to foster scientific education in the biomedical fields. These projects include educational projects with a strong interaction with schools, public engagement initiatives, art and science projects, fundraising projects, and impact evaluation studies. Additionally, she was enrolled in science education activities based on hands-on models, namely at the Centro Ciência Júnior (Bicant, Portugal) and at the Centre for Life (Newcastle upon Tyne, UK). Therefore, her interests are science communication strategies, impact evaluation methods, scientific culture and citizenship, public engagement in science, science education, fundraising for biomedical research, and art & science initiatives.

SHORT BIOS PANEL IV

FOOD: STRIVING FOR ENVIRONMENTAL SUSTAINABILITY AND SAFETY



Tiago Santos Pereira
Guest Speaker

Tiago is a Principal Researcher at the Centre for Social Studies of the University of Coimbra (CES), co-directing the Doctoral Programme 'Governance, Knowledge and Innovation', and a Coordinating Researcher of CoLABOR - Collaborative Laboratory for Work, Employment and Social Protection, where he leads research on Work, Employment and Technology. With a DPhil in Science and Technology Policy Studies, from SPRU, University of Sussex, his research has been focusing on the policies and governance of science and technology and how to disseminate knowledge among public sector research, business, and public decision-making entities and society. He also collaborated with organisations in STI policy, namely as Vice-Chair of the OECD Working Party on Technology and Innovation Policy (TIP), and as Head of the Office for Studies and Strategy of FCT (2015-18). He is an avid long-distance runner, having ran over 10 marathons in different cities worldwide.



Luísa Valente
Guest Speaker

She is a biologist with more than 25 years of research experience in fish nutrition and sustainable aquaculture focusing on: Fish robustness; Environmental impact; Muscle growth and flesh quality; Functional feeds; Circular economy, One Health. Luísa Valente is a senior scientist and Associate Professor at ICBAS, University of Porto. She acts as Director of the Animal Science Doctoral programme and Member of the Directive Board of CIIMAR, coordinating the Biology, Aquaculture and Seafood Quality thematic line. She is a member of the Directive Board of B2E-Collaborative Laboratory for the Blue Bioeconomy, and the European Aquaculture Society (EAS). She holds more than 150 publications in international journals and supervised more than 20 PhD theses. She participated in numerous research projects, both national and international, including co-operative projects with industrial partners.



João Pedro Conde
Guest Speaker

He received his PhD in Electrical Engineering from Princeton University in 1989. Between 1989 and 1990, he was an IBM post-doctoral fellow at Yorktown Heights. Since 1990, he has been at the Instituto Superior Técnico, the engineering school of the Universidade de Lisboa, where he is currently working as a Full Professor and Head of the Department of Bioengineering. He is co-responsible for the Thin Film MEMS and BioMEMS research group and the director of INESC Microsystems and Nanotechnologies. His current research interests include novel thin film devices, e.g., thin film silicon MEMS and optical sensors, integrated lab-on-chip microfluidic biosensing microsystems, and cell-chips for biomedical applications.



Joana Silva
Guest Speaker

She is a Professor at CATÓLICA-LISBON, and the Director of PROSPER – the CATÓLICA Lisbon Centre of Economics for Prosperity. She has proven expertise in Applied Economics, with particular focus on development, labour markets, international trade, firm dynamics, and policy evaluation. Joana has over 12 years of experience in empirical work on policy-relevant questions. She spent most of her career at the World Bank, where her research agenda focused on (i) the impact of economic policies on employment fluctuations, welfare, and long-term growth; (ii) international trade and firm performance; and (iii) adjustment to economic slowdowns and crises. In her research, Joana has used granular data from large administrative datasets from developed and developing countries to perform impact evaluations of social programmes and economic reforms, as well as research on globalisation and how it influences growth and inequality. Her research has been published in leading academic journals, including the American Economic Review and the Journal of International Economics. Joana led several large-scale projects on Employment, Poverty, Inequality, and Social programmes. She also co-authored two World Bank Regional flagship reports, and managed lending operations to several countries. She has significant experience advising and supporting countries on the design and analysis of economic reforms, social programmes and monitoring and evaluation systems. Joana holds a PhD in Economics from the University of Nottingham and she is the Academic Director of CATÓLICA Lisbon MSc in Economics.

The Bioengineering ONE HEALTH ALLIANCE IN 2050

A One-Day Voyage into the Future

27
October
2022

Porto, Hall of Biodiversity
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