10 years of eulife

EU-LIFE 10th Anniversary Conference

6-7 June 2023
Calouste Gulbenkian Foundation, Lisbon

Envisioning the research centres of the future

CONFERENCE BOOKLET

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Welcome

Science is at a crossroads. New scientific challenges can only be faced by multidisciplinary teams in environments that promote creativity and empower researchers in their careers. However, scientists encounter a lot of obstacles regarding limitation of funding and operational hurdles. EU-LIFE focuses on improving and designing conditions (operational, cultural, financial, political) to do the best possible research for the benefit of humankind. Our partner institutes strive for excellence not only by identifying and optimising best practices, but also by encouraging discussion and putting new ideas into action.

To celebrate our 10 years of existence and successes we conceive a conference in which we exercise and tease our ability to explore beyond what we can already foresee as the new state-of-the-art for science. We want to rise to the challenge of imagining how the future places of science should be to promote the most ground-breaking discoveries and a stronger engagement with society. We want to think bigger and go beyond best practice into aspired best practice.

At least at the inspirational level, this conference provides the opportunity to imagine an ideal place for research and science. It will also be a space to think about how to be better researchers, more creative, sustainable, fair, compassionate, bold, inclusive, equitable, happy. We expect that the exercise will give us insight into the characteristics and values of such ideal places, and some of strategies to design and implement them.

We invite the scientific community, including researchers, professionals at the interface of science and scientific leaders, as well as policy makers, to dream up the research places of the future with us.

10 years of eulife

Speaking Utopian: A New Language for a New Research Era

Giulio Superti-Furga, CeMM, Vienna
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The scientific community uses an own language, vocabulary and set of metaphors to describe the properties of its research. This changes with time, evolves over the decades, and depends on fashion.

While a slightly different language is used for technical issues and scientific papers, all other documents, such as grants, research reports, reviews of papers and promotions, road maps, press releases etc, use a specific language that attempts to describe reality with objective terms but past and future performance and qualities in positive, advertising terms. For example, in the papers themselves the use of the qualifying word such as first, novel, new is not allowed. In all other documents, it is exactly what is being highlighted. All based on a language convention.

Currently, the community uses terms and language that, as a jargon, notify conformity to the rules and sensitivity to the "zeitgeist". So, the language is a sort of convention with stakeholders, funding agencies, scientific journals but also our peers. However, it is also a kind of trap. Use this language code and you are part of the fundable community. Do not use it and you are outside of the lexical and cultural cloud.

So, language is of fundamental importance for a scientific community. It measures how "at the center" of the cultural discourse the user is. It gauges its ambitions, its "imagery" and even its values. An example: if we define our research, institutes and scientists as "excellent" all the time, from the Latin excellens, "elevated, exalted" (wiktionary) or being pre-eminent. What do we mean? What is the comparative group? Against what does it stick out? If we are all excellent all the time, what is not? Yet we use it as some sort of watermarked paper- by using it, we manifest our ambition to be part of the winners.

Many of the terms used to describe the research endeavour are borrowed from the lingo of 19th century explorations or are martial and violent in tone. Research typically is: cutting-edge, frontier, ground-breaking, exploratory. Campaigns typically are: moonshots, crusades, marathons, tours-de-force, wars, land-grabbing opportunities.

If research is to become part of the central mission of humans to improve the chances of species to thrive in a healthy planet, improve human condition and advance wisdom, new words and metaphors may be required. We need to emancipate from terms and images that we did not chose or were chosen long ago. We need to start using a language that describes research along new paradigms. For example, we may want to get rid of "basic" versus "applied" research concepts. Or find a new way to describe the kind of research that we like compared to the one we like less.

In Utopia, knowledge creation and interpretation are a main responsibility and priority of society. The new words should speak to utopian research properties of being solid, reproducible, trust-worthy but also enlightening, helpful, beautiful, connective, resonating, inspiring, thaumaturgic.

Can we coin new words that reflect the new utopian ethics? Core-some? Intra-valid? Trans-coherent? Explain-ful? Or be more poetic and courageous, like in the 1930s' and the marypoppian "supercalifragilisticexpialidocious"? What are the metaphors that describe the research we aspire to in Utopia? If we are not 19th century (male) pioneers, what sort of new humans are we or do aspire to be? I guess we are also past the space-age/star wars romanticism (extra galactical, supersonic etc).

This manifesto calls for new ideas on how in future we wish to describe ourselves and our research. If we want a future with a new significance, purpose and centrality for research, if we want a new world, we need to be able to describe it. I propose that it is down to the community of researchers to describe the new research era and its attributes. The depth, robustness and, ultimately, success of a new role for research in society and on the planet will depend on our ability to do this.

Conference Programme

Tuesday, 6 June 2023

14.00 - 14.15

Welcome

Chair: Mónica Bettencourt-Dias, Chair of EU-LIFE & Director of IGC

- António M. Feijó, President of Calouste Gulbenkian Foundation
- Elvira Fortunato, Minister of Science, Technology and Higher Education of Portugal

14.15 - 15.00

10 years of EU-LIFE: Joining forces for strong voices in science

Chair: Mónica Bettencourt-Dias, Chair of EU-LIFE & Director of IGC

- Luis Serrano (CRG) & Jo Bury (VIB), Founding chairs of EU-LIFE
- Marta Agostinho, Executive Director of EU-LIFE – The EU-LIFE journey so far
- Manuel Aleixo, Head of Unit for ERA Governance & Implementation, European Commission

15.00 - 16.30

The future of science I

Chair: Giulio Superti-Furga, Co-Chair of EU-LIFE & Director of CeMM

The future of buildings: research institutes that can save the world

- Stefano Boeri, Architect & Professor of Urban Planning at Milan Politecnico

How does art inspire science?

- Alex Jordan, Group Leader at Max Planck Institute of Animal Behaviour

EU-LIFE/Nature Essay Contest: Utopia Institute of Research

Moderator: Jack Leeming, Editor at Nature

- Essay contest awardees: Katherine Ember, Evandro Ferrada & Miles Elliot Lizak
- Members of the jury: Frances Brodsky, Carolina Mangana & Emmy Verschuren

16.30 - 17.00

Coffee break and poster viewing

17.00 - 17.45

The future of science II

Chair: Mónica Bettencourt-Dias, Chair of EU-LIFE & Director of IGC

The future of discovery-driven research

- Maria Leptin, President of the European Research Council (ERC)

AI & Human nature: how much will AI replace researchers? What human traits cannot be replaced by AI?

- Andre Rendeiro, Principal Investigator at CeMM

17.45 - 19.00

The role of creativity in science

Moderator: Anders Lund, Director of BRIC

- Jona Shkurti, Medical Doctor & PhD student at NKI
- Andrzej Dziembowski, Head of Laboratory at IIMCB
- Edith Heard, Director EMBL
- Alex Jordan, Group Leader at Max Planck Institute of Animal Behaviour

19.00 - 19.40

Poster session

Introduction by:

- Paulina Maria Strzelecka, Postdoc at MDC
- Pilar Okenve-Ramos, Postdoc at IGC

19.40 - 19.50

Group picture

20.00

Conference dinner

Wednesday, 7 June 2023

8.45 - 9.00

Arrival

9.00 - 9.30

Collaboration & Multidisciplinarity in science

Chair: Roberta Carbone, Executive Director of IEO

- Henrique Leitão, Senior Researcher & Provost of the University of Lisbon

11.15 - 12.30

The role of collaboration & multidisciplinarity in science

Moderator: Electra Gizeli, IMBB Deputy Director & Group Leader

- Hana Svozilova, PhD Student at CEITEC
- Jan Steyaert, Scientific Director of the VIB-VUB Center for Structural Biology and Founder of ConfoTerapeutics
- Tanja Florin, Science manager at MDC
- Wolf Reik, Scientific Director of Altos Labs Cambridge Institute

10.45 - 11.15

Coffee break and poster viewing

11.15 - 12.30

The role of proactivity in science

Moderator: Giorgia Guglielmi, Science Writer and Communications Manager at FMI

- Caroline Giuglaris, PhD Student at Institut Curie
- Navneet Vasistha, Assistant Professor at BRIC
- Amos Abolaji, Director of Drosophila Research & Training Centre, Nigeria
- Janusz Bujnicki, Group Leader at IIMCB
- Silvia Gomez-Recio, Secretary General Yerun

12.30 - 13.15

Conclusions of the conference

Creativity

- Simone Frascolla, PhD Student at IEO
- Małgorzata Figiel, Postdoc at IIMCB

Collaboration & Multidisciplinarity

- Silke Vanderhaeghe, PhD Student at VIB
- Francisco Paupério, PhD Student at IGC

Proactivity

- Lucrezia Ferme, PhD Student at IGC
- Joana Castro, PhD Student at BRIC

Poster session

- Paulina Maria Strzelecka, Postdoc at MDC
- Pilar Okenve-Ramos, Postdoc at IGC

Legacy of EU-LIFE and vision for the future

- Mónica Bettencourt-Dias, Chair of EU-LIFE & Director of IGC
- Giulio Superti-Furga, Co-Chair of EU-LIFE & Director of CeMM

13.15 - 14.30

Lunch

Speakers' biographies

António M. Feijó

President of Calouste Gulbenkian Foundation

Antonio Feijó is the President of the Board of Directors of the Calouste Gulbenkian Foundation since May 2022. He is a Full Professor in the Department of Anglistic Studies and the Program in Literary Theory at the Faculty of Letters of the University of Lisbon.

He has served as the Director of the Faculty of Letters, Vice-Rector, and Pro-Rector of the University of Lisbon. He has also been the director of the University of Lisbon Press and the University Journal. He has a PhD (English and American Literature) from Brown University (1985) and a Master's from the State University of New York at Albany (1979).

Elvira Fortunato

Minister of Science, Technology and Higher Education of Portugal

Elvira Fortunato was born in Almada in 1964. She has a degree in Physics and Materials Engineering and a PhD in Materials Engineering: Microelectronics and Optoelectronics. She is a Chair Professor at the Materials Science Department at the Faculty of Science and Technology at NOVA University of Lisbon and currently Vice-Dean of this university, where she has coordinated the research area since 2017. She is a pioneer in European research on transparent electronics using sustainable materials and environmentally friendly technologies. In 2008, at the 1st edition of the European Research Council ERC grants, she was awarded an Advanced Grant for the project INVISIBLE, considered by the European Commission to be a success story. In the same year, she showed with her group the possibility of manufacturing the first paper transistor, starting a new field in the area of paper electronics.

With over 800 scientific papers published, in the last few years she has been awarded more than 50 prizes and international distinctions for her work, of which we note the title of Grand Officer of the Order of Infante D. Henrique, bestowed by the President of the Republic in 2010, the Blaise Pascal Medal in 2016, the Czochralski prize in 2017, the Pessoa prize in 2020, the Horizon Impact prize by the European Commission in 2020 with the project INVISIBLE, and the Human Rights Prize granted by Parliament in 2021.

Mónica Bettencourt-Dias

Chair of EU-LIFE
Director of (IGC)

Mónica Bettencourt-Dias is a biochemist and cellular biologist, who is the head of the Cell Cycle Regulation Research Group. In addition, she is the current Chair of EU-LIFE.

Her research involves cell cycle regulation, for which she has been recognized as the recipient of the Pfizer Award for Basic Research, the Keith Porter Prizer from the American Society for Cell Biology and the Eppendorf Young European Investigator Award.

She was also selected as a 2009 European Molecular Biology Organization Young Investigator Fellow and inducted as a member of the EMBO in 2015.

Mónica Bettencourt-Dias is the Director of the Instituto Gulbenkian de Ciência since February 2018.

Luis Serrano Pubull

Director of CRG
Founding Chair of EU-LIFE

Luis Serrano did his PhD at the CBM (Madrid, Spain). Then he spent 4 years in the laboratory of Prof. A.R. Fersht (MRC, UK) working in protein folding. In 1993, he became Group Leader at the EMBL (Heidelberg, Germany) working in protein folding and design. In 2003, he was appointed head of the Structural & Computational Biology programme at EMBL. By the end of 2006, he moved to the CRG (Spain) to lead the Systems Biology programme and became director in July 2011. He is a member of EMBO, and of the Royal Spanish Academy of Sciences. In 2003, he received the Marie Curie Excellence Award, in 2009 the City of Barcelona prize and in 2018 the Francisco Cobos award (http://fundacionfranciscocobos.org/). In recent years, he has won two ERC Advanced Grants and two ERC Proof of Concept grants. He was involved in the creation of one of the first Spanish Biotech Company (Diverdrugs) in 1999. He is co-founder of the companies Cellzome, EnVivo and TRISKEL, and in 2020 of Pulmobiotics. His software on protein design, FoldX, is licensed to Pharma companies and is used by more than 1500 researchers worldwide. He is a founder of the association of European Institutes of Excellence EU-LIFE (https://eu-life.eu/) and of the association of Spanish institutes of excellence (SOMMa, https://www.somma.es/). The mission of these associations is to lobby for Science at European and Spanish levels.

Jo Bury

Director-Emeritus of VIB
Founding Chair of EU-LIFE

Jo Bury is founder and director-emeritus of VIB, the Flanders Institute for Biotechnology (Belgium). He was managing director of VIB in the period November 1995-March 2022. Through its technology transfer activities VIB promotes the translation of its research results into products for the benefit of the consumer and the patient and contributes to new economic activity. This activity results in research collaboration and licence agreements with industry worldwide, based on knowledge, technology and intellectual property, produced at VIB. In addition VIB actively develops technology platforms and asset portfolios as a basis for starting up new biotech companies in the close proximity of its research centers. Since its inception VIB started up 36 companies. These companies employ over a 1.000 employees in Flanders. The growing biotech industry led to the development of a biotech ecosystem in Flanders, which is attractive for foreign biotech companies to integrate into this dynamic cluster.

Jo Bury has a Master's degree in Pharmacy and is PhD in Pharmaceutical Sciences (University of Gent). He obtained an MBA degree at the Vlerick School for Management in Gent. After performing scientific research in the field of atherosclerosis during several years, he has made a career in science policy. Jo Bury was co-founder of EU-Life, an alliance of leading life science research centers in Europe. He was member of the board in 2014-2022 and chair in 2016-2017.

Marta Agostinho

Executive Director of EU-LIFE

Marta Agostinho is the Executive Director of EU-LIFE. Her fields of action include science policy, strategic science management and communication, outreach and public dialogue with science. As Executive Director of EU-LIFE, she oversees the implementation of the strategy of the alliance and leads the science policy area. She is currently based in Barcelona, Spain.

Marta holds a PhD in Cell Biology (2007) and a post-graduation in Science Communication (2009). She has over 15 years' experience in knowledge mediation in international settings, after 10 years' experience of research in life sciences and 5 years as Invited lecturer in Genetic Engineering. She has extensive experience as trainer and teacher (graduate and post-graduate). She was Director of the Communication & Training Unit at Instituto de Medicina Molecular (IMM), Lisbon, Portugal (2008-2012). She also worked as PhD programme manager (2007, IMM) and Project Manager at NOVA Medical School, Lisbon, Portugal (2012-2014), where she was responsible for the coordination of a European Joint Action in Mental Health policy with over 50 partner institutions mandated by the EU Member States Governments from 27 European Countries.

Manuel Aleixo

Head of Unit for ERA Governance & Implementation, European Commission

Manuel Aleixo, Head of Unit of Unit A2 – ERA, Spreading Excellence and Research Careers, in DG Research and Innovation, European Commission; previously assistant to the Director-General of DG R&I, and before that member of cabinet of the Commissioner responsible for Research, Science and Innovation, Carlos Moedas.

Stefano Boeri

Architect & Professor of Urban Planning at Milan Politecnico

Stefano Boeri was born in 1956 in Milan. In 1980 he graduated in Architecture at Milan Politecnico and in 1989 he received his PhD from the Istituto Universitario di Architettura di Venezia (IUAV). A full Professor of Urban Planning at Milan Politecnico, Boeri has been a guest professor at various universities, including Harvard University's Graduate School of Design (GSD), the Strelka Institute in Moscow, the Berlage Institute in the Netherlands and the École Polytechnique Fédérale de Lausanne. Today he is director of the Future City Lab (FCL) at Tongji University in Shanghai, a post-doctoral research programme which explores the future perspectives of global metropolises from the biodiversity and urban forestation perspective.

As an architect and urban planner, Stefano Boeri founded Stefano Boeri Architetti in 2011. Attention to the relationship between city and nature led to the creation of the Milan Vertical Forest, the first prototype of a residential building featuring over 700 trees and 20,000 plants and a model of urban forestation that considers vegetation as an essential element of architecture. Built in 2014, the Vertical Forest has received numerous international awards such as the International Highrise Award (2014) and the Best Tall Building Worldwide, presented by the Council on Tall Buildings and Urban Habitat (2015).

Since 2020, Stefano Boeri is President of the Scientific Committee of Forestami, the project aimed at planting 3 million trees in the metropolitan area of Milan within 2030.

Alex Jordan

Group Leader at Max Planck Institute of Animal Behaviour

Alex Jordan's research group uses quantitative approaches to study the evolution and adaptive value of animal behaviour in natural contexts. Jordan borrows computational approaches developed for model laboratory systems like Drosophila and Zebrafish, and employs them in settings where animal behaviour has evolved. The Jordan Lab has become a pioneer in the underwater deployment of techniques like computer vision and machine learning, automated tracking of behaviour, and 3D reconstruction of environments, aiming for a quantitative assessment of the expression and value of behaviour in the places it naturally occurs. The Jordan Lab seeks to understand how social interactions are modified by current context, how animals perceive and process social cues, and how environments – both social and physical – change and are changed by behaviour. This research program encompasses a range of techniques and disciplines, and Jordan is a leading researcher in animal cognition and is a central figure in the debate around animal consciousness.

Jordan is an active member of the academic community, having held positions as Associate Editor for The American Naturalist and Movement Ecology as well as being on the organising committee of Association for the Study of Animal Behaviour summer conference. Finally, Jordan is active at the interface of science and community engagement, having presented his work at the Venice Art Biennale, Art Basel, DESERTX and KBH.G among others. He won funding for art-science exhibitions from The Geiger Foundation, The Schering Foundation and TBA-21.

Maria Leptin

President of the European Research Council (ERC)

Professor Maria Leptin is the President of the European Research Council (took office from 1 November 2021). Prior to that, Professor Leptin served as Director of EMBO from 2010-2021. She also established a research group in Heidelberg at the European Molecular Biology Laboratory (EMBL). The group studies the mechanics of shape determination during development.

After completing her studies in mathematics and biology at the University of Bonn and the University of Heidelberg, Professor Leptin worked for her PhD at the Basel Institute for Immunology, Switzerland (1979-1983) studying B-lymphocyte activation under the supervision of Fritz Melchers. In 1984 she moved, as a post-doctoral fellow (1984-1987) to the Laboratory of Molecular Biology (LMB), Cambridge, UK, where she started her research on the embryonic development of Drosophila, joining the laboratory of Michael Wilcox.

In 1994, Maria Leptin became Professor at the Institute of Genetics, University of Cologne, Germany, where she still leads a research group. She spent sabbaticals as a visiting Professor at the École Normale Supérieure, Paris, France (2001) and as visiting scientist at the Wellcome Trust Sanger Institute, Hinxton, UK (2004-2005). Professor Leptin is an elected member of EMBO, the Academia Europaea and the German National Academy of Sciences (Leopoldina), and an Honorary Fellow of the Academy of Medical Sciences. She is also Foreign Member of the Royal Society since May 2022.

André Rendeiro

Principal Investigator at CeMM

André Rendeiro is a Principal Investigator at CeMM since June 2022. He leads a group studying how cells interact to generate complex physiology in the human body, and how these interactions changes over the lifespan of individuals and give rise to disease. To do that, his group develops computational methods for the analysis of spatial data (spatial transcriptomics, highly multiplexed imaging, histopathological images)—its integration with various modalities of molecular, demographic, and clinical data of individuals throughout their lifespan.

Prior to starting his group, Rendeiro studied in Portugal, Austria, and Norway and earned his PhD in molecular medicine at CeMM in Vienna. During his PhD he developed methods for high-throughput cellular profiling and perturbation at single-cell resolution, applying them to leukemia, in the lab of Christoph Bock at CeMM. Between 2020 and 2022 he was a postdoctoral associate at the Institute for Precision Medicine and the Institute for Computational Biomedicine at Weill Cornell Medicine in New York. There, in the lab of Olivier Elemento, he developed computational methods for the analysis of highly multiplexed imaging that incorporate expression, morphology, microanatomy, and clinical covariates. He led efforts resulting in the first tissue-level, single-cell resolution maps of lung pathology during COVID-19 and also contributed to the study of cancer, lung development, and disease, as well as COVID-19 immunology.

Jona Shkurti

Medical Doctor & PhD student at NKI

Jona Shkurti is a medical doctor who is currently working as a PhD researcher at The Netherlands Cancer Institute – Antoni van Leeuwenhoek Hospital (NKI-AvL) in Amsterdam, the Netherlands.

Her research at the NKI focusses on improving risk-stratification of patients with locally advanced colon cancer, with the goal of distinguishing colon cancer patients who would benefit from neoadjuvant therapy.

Prior to her PhD research, she has worked as a physician in general practice and as a surgeon's assistant in the operating theatre. She has been involved in research since she was a medical student and has also taught at university level in health sciences.

Apart from medicine and cancer research, Jona is passionate about languages and different cultures, music from all times, arts, sports and nature. If she can incorporate all these elements together and within her work, she can achieve her idyllic environment.

Andrzej Dziembowski

Head of Laboratory at IIMCB

Andrzej Dziembowski is the head of an ERA Chair Group at the International Institute of Molecular and Cell Biology in Warsaw, is a professor at the Warsaw University Faculty of Biology, and holds the Waclaw Szybalski Honorary Chair at the University of Gdańsk. He is also a member of EMBO and Academia Europaea.

He graduated from the Faculty of Biology at the University of Warsaw, where he received his PhD. For several years, he worked at the CNRS Center for Molecular Genetics in Gif-sur- Yvette, France. He then headed an independent laboratory at the Institute of Biochemistry and Biophysics of the Polish Academy of Sciences in Warsaw. In 2019, the laboratory moved to the International Institute of Molecular and Cellular Biology in Warsaw.

Prof. Dziembowski's primary research interest is posttranscriptional gene expression regulation. Currently, the lab studies RNA biology at the organism level, using Direct RNA Sequencing as an experimental approach and transgenic mouse lines as a model system. He is author of more than 100 research articles, many of which have been published in prestigious journals such as Nature, Cell, Nature Structural and Molecular Biology, Genes and development, Molecular Cell, EMBO Journal and EMBO Reports. His research has been supported by numerous national and international grants, including ERC AdG (2022).

Edith Heard

Director General EMBL

Professor Edith Heard was born in London. She was introduced to biology while taking the Natural Sciences Tripos for her Bachelor's degree at the University of Cambridge. Inspired by her teachers at the time, she switched her focus from physics to biology and graduated in Genetics. Edith then went on to obtain her PhD from the Imperial Cancer Research Fund (later Cancer Research UK). Thereafter, she spent 9 years at the Institut Pasteur in Paris, first as a postdoctoral fellow and then as a permanent researcher. In 2001, she set up her own group at Institut Curie and in 2010 became Director of the Institute's Genetics & Developmental Biology Unit. Edith was appointed as a Professor of the Collège de France in 2012, holding the Chair of Epigenetics & Cellular Memory. As part of her professorship, she gives an annual public lectures at the Collège de France, choosing a different scientific theme each year. She is also co-chair of the French national programme PAUSE which helps to temporarily host scientists living in geopolitical crisis zones. In January 2019, Edith started as Director General of EMBL.

The discoveries made by Edith and her laboratory have been recognised by many prizes, most recently the Inserm Grand Prix, the European Society for Human Genetics Award and the Prix René et Andrée Duquesne of la Ligue contre le cancer in 2017. Edith was also awarded numerous other awards including the CNRS Silver Medal, the Prix de la Fondation Allianz, the Science Heirloom for Women in Science, the Grand Prix de la FRM, the Prix Jean Hamburger de la Ville de Paris, the "Otto Mangold" prize for the German Society for Developmental Biology, and the Fondation Schlumberger Award for Education and Research. Edith is an Honorary Fellow of Emmanuel College, at the University of Cambridge, a Fellow of the Royal Society and an EMBO member.

Anders Lund

Director of BRIC

Anders Lund is Director of BRIC and Group Leader of the Lund Group. The aim of his research group is to unveil fundamental biological mechanisms and understand how these become perturbed during diseases, most prominently cancer, with the ambition that our findings may contribute to the development of clinical tools.

Henrique Leitão

Senior Researcher & Provost of the University of Lisbon

Portuguese historian of science, presently chair of the Department for History and Philosophy of Science at the University of Lisbon. After initial studies in theoretical Physics (PhD, 1998), directed his interests to the history of science. Has published extensively in the history of exact sciences in Europe from the 15th to the 17th century and was the head of the scientific committee in charge of the publication of the Complete Works of the sixteenth-century mathematician Pedro Nunes (Lisbon Academy of Sciences and Calouste Gulbenkian Foundation). Also interested in the history of scientific books and ancient scientific libraries, he is member of various learned societies, including the Academia das Ciências de Lisboa (Lisbon Academy of Sciences) and the Académie Internationale d'Histoire des Sciences. Henrique Leitão is one of the most respected and popular scientists in Portugal and as a consequence received in 2014 the Prémio Pessoa, one of the highest prizes a Portuguese can win, and in 2015 was decorated by the President of the Republic with the Comenda da Ordem de Sant'Iago da Espada, for outstanding achievements in science; he received also an ERC Advanced Grant, in 2019.

Roberta Carbone

Executive Director, Department of Experimental Oncology, IEO

Roberta Carbone is the Executive Director of the Department of Experimental Oncology, European Institute of Oncology (IEO) in Milan since 2019. She graduated in 2000 as Master in Biomedical Sciences at the University of Milan. She obtained her PhD from Open University, UK in 2004. After a Patenting Specialization Course, she joined DAC srl as Grants and Technology Transfer Officer and in 2007 Genextra Spa as Grants Office Manager. In 2011 she joined IEO as Scientific Executive Assistant to the Research Director. Since 2011 she is the Secretary of the Technical and Scientific Committee of the IEO-CCM Foundation.

Hana Svozilova

PhD Student at CEITEC

Hana Svozilová graduated from Masaryk University, Brno, Czech Republic, with a Master's degree in molecular biology and genetics, defending a thesis on plant proteomics. She is doing her Ph.D. in Experimental Oncology and Tumor Biology at CEITEC & Faculty of Medicine at Masaryk University and University Hospital Brno, Czech Republic.

In her Ph.D. project, she combines life and material sciences. She was also a stipendiary of the CEITEC Bridge Fund, an intra-institutional program pursuing Ph.D. students in doing research in multiple areas. Hence, she has experienced the benefits and challenges of collaborating across the fields.

Furthermore, Hana is actively involved in a national genomic research project conducted by a consortium of researchers from three universities and two companies. Such collaborative work provides her with experience in communication between academia and industry and teaches her valuable lessons on the diverse priorities of all partners involved.

Outside of her research, Hana is passionate about mentoring students, organizing networking events for the scientific community, and engaging non-scientific enthusiasts in science and genetics through events like Researchers' Night and the Science Festival.

Jan Steyaert

Scientific Director of the VIB-VUB Center for Structural Biology and Founder of ConfoTerapeutics

Jan Steyaert is full professor at the Vrije Universiteit Brussel. He obtained his PhD at Plant Genetic Systems and the VUB, Belgium in 1991. The following years he worked as a postdoc at ILRI in Nairobi, Kenya. He became VIB group leader in 1995, and became director of the VIB-VUB center for Structural Biology in 2017. In 2015 he founded ConfoTeraupeutics.

Tanja Florin

Science manager at MDC

Tanja Florin, PhD is a trained biochemist/microbiologist with a passion for science communication and outreach who joined the MDC in 2019 as a science manager. Since 2022, Tanja has been working as the scientific manager of topic 'Integrative Biomedicine', which represents one of the three pillars of MDC's current research. In addition, she is responsible for the coordination of the Berlin Center for Translational Vascular Biomedicine, a joint research focus of the MDC, Charité and Berlin Institute of Health (BIH). Both research areas are based on interdisciplinarity and collaborative work.

In her role as a science manager, Tanja closely interacts with research group leaders, clinicians, and early career scientists from different disciplines and institutions. This position provides her with a comprehensive understanding of the diverse strengths and challenges of MDC's researchers. Tanja puts emphasis on combining knowledge and experiences to tackle major problems of current day's society. She has experience in and a strong focus on fostering scientific exchange and collaboration through a variety of networking formats, such as workshops, symposia, lecture series etc. In addition to her work as a science manager, she teaches bachelor's degree classes in Life Science Engineering at the University of Applied Sciences for Engineering and Economics (HTW) Berlin.

Wolf Reik

Scientific Director of Altos Labs Cambridge Institute

Dr. Wolf Reik is an MD and Director of the Altos Cambridge Institute of Science. He was previously Head of the Epigenetics Programme and subsequently Director of the Babraham Institute in Cambridge. He is also an honorary Professor of Epigenetics at the University of Cambridge. Dr. Reik's lab works on epigenetic reprogramming in development and ageing. They discovered global epigenetic reprogramming and its mechanisms and impacts on mammalian development. Recently they developed new technologies for single cell multi-omics to understand cell fate decisions during development and how cell fate and function degrades during ageing. Applying epigenetic reprogramming to reset cell age they developed a protocol by which human cells can be substantially rejuvenated without loss of cell identity. Dr. Reik is a Fellow of the Royal Society.

Electra Gizeli

IMBB Deputy Director & Group Leader

Electra Gizeli is currently a Prof in the Univ of Crete, Dept of Biology and Deputy Director at IMBB-FORTH. Before, she studied in Greece to obtain a BSc (Chemistry, NKUA) and the UK to obtain a MSc and PhD (UCL and Cambridge, respectively). As a BBSRC Fellow, she established her group in the Inst. of Biotechnology, Univ. of Cambridge until 2003 when she returned to Greece where she currently is. Her group consists of biologists, biophysicists, chemists, material scientists and biomed engineers conducting multidisciplinary research in biosensors, molecular biology and portable diagnostic platforms. Her group's ambition is to employ novel biophysical concepts for the development of simple and affordable tools for global diagnostics targeting human, plant, food and environmental health threats. Innovations developed in her group have led to two spin-off companies and three IVD-products, currently produced in Greece and S. Africa and distributed worldwide. She is a Fellow of the Royal Society of Chemistry since 2019.

Caroline Giuglaris

PhD Student at Institut Curie

Caroline Giuglaris is currently pursuing a PhD in Biophysics at Institut Curie, Paris, on collective cell migration in presence of topographic constraints. Additionally, she coordinates an internal initiative in her department to quantify the environmental impact of our research, propose and implement actions to reduce these impacts, and measure the associated decrease in our footprint. As scientists, she is convinced of the benefits that research brings to society. She believes that it is also the researchers' responsibility to acknowledge the environmental cost of such discoveries, and to question our habits, in order to do our share in the great societal changes to come.

We will be stronger working together, and it is a great honour and opportunity to discuss this topic at EU-LIFE!

Navneet Vasistha

Assistant Professor at BRIC

Navneet Vasistha is Assistant Professor at BRIC.

Amos Abolaji

Director & Founder of Drosophila Research & Training Centre in Nigeria

Dr. Abolaji Amos Olalekan is a Reader/Associate Professor in the Department of Biochemistry, College of Medicine, University of Ibadan. He obtained B.Sc., M.Sc. and Ph.D. degrees in Biochemistry from Obafemi Awolowo University, Ile-Ife (1998), University of Lagos, Lagos (2003) and University of Calabar, Calabar (2010) Nigeria, respectively.

Dr. Abolaji is currently working on the mechanisms by which certain environmental toxins contribute to female reproductive dysfunctions, neurodegenerative diseases and cancer using rodents and Drosophila melanogaster as model organisms. Accordingly, the focus of his research is to proactively detect health risks associated with these toxins and decode the mechanisms of pathogenesis. In 2014, Dr Abolaji set up Drosophila laboratory at the University of Ibadan from the scratch https://twitter.com/DrosLabUI. The laboratory is currently well-equipped with state-of-the-art equipment and collaborates with scientists in UK, USA, Germany, Spain, and Brazil.

Dr. Abolaji is the Founder of Drosophila Research and Training Centre (DRTC, www.drosophilartc.org), Ibadan, Nigeria, a non-profit organization that facilitates the use of Drosophila melanogaster as a cost-effective, alternative animal model for biomedical research and training in sub–Saharan African countries.

Janusz Bujnicki

Group Leader at IIMCB

Prof. Janusz Marek Bujnicki is a biologist specializing in bioinformatics, structural biology and synthetic biology. He leads a research group at the International Institute of Molecular and Cell Biology (IIMCB) in Warsaw. His interdisciplinary research focuses on combining theory and experiment, particularly to determine and design the 3D structures of RNA molecules and their interactions with other molecules. For example, he was recently involved in determining the RNA structure of the SARS-CoV-2 viral genome. In addition to his research activities, Prof. Bujnicki has been involved in several scientific organizations and committees dealing with science and policy in Poland and in the EU. In particular, prof. Bujnicki was a member of the Group of Chief Scientific Advisors of the European Commission and continues to contribute to the E.C.'s Science Advice Mechanism in the field of science for policy advice.

Silvia Gomez-Recio

Secretary General Yerun

Silvia Gómez Recio is the first Secretary General of YERUN since October 2016, when the network opened its Brussels office. She is responsible for the strategic leadership, networking actions and the implementation of the network's strategy and objectives. Various are the groups that the network has established among its members to support and exchange best practice sharing, one of them being dedicated to the contribution of YERUN universities to the Sustainable Development Goals. The Young European Research University Network (YERUN) is a group of like-minded young research universities in Europe that strengthens and facilitates cooperation in the areas of research, education and services which benefit society.

Giorgia Guglielmi

Science Writer and Communications Manager at FMI

As a teenager, Giorgia Guglielmi wanted to become a journalist. Then, she fell in love with biology. Now, she combines her two passions by writing about science.

A native of Italy, Giorgia obtained a PhD in biology from the European Molecular Biology Laboratory in Heidelberg, Germany, where she studied how sheets of cells fold origami-style to build an embryo. She then decided to swap the pipette for the pen and did a Master's in Science Writing at the Massachusetts Institute of Technology in Cambridge, USA.

After stints as a reporter in the news teams of Science and Nature in Washington, D.C., Giorgia moved back to Europe to work as a freelance writer, covering biomedicine, science policy, and the intersections of science and society. Her stories have appeared in Nature, Science, Scientific American and more.

Since 2021, she is also the communications manager at the Friedrich Miescher Institute for Biomedical Research in Basel, Switzerland.

When not writing about science, Giorgia can be found playing the piano at home, getting sore muscles at CrossFit, or hiking in the Swiss mountains.

Simone Frascolla

PhD Student at IEO

Ever since I embarked on my scientific journey, the fields of molecular oncology, immunology, cancer and basic research have been my driving force, and to this day, my motivation to succeed in these areas continues to fuel my ambition. My enthusiasm, passion, and curiosity have instilled in me a relentless pursuit for knowledge that propels me forward in the world of research.

I am confident that with my motivation, dedication, and thirst for knowledge I could significantly impact our understanding of cancer biology and possibly shed light on the development of new effective treatment options.

Most importantly, I strongly believe that the synergism between colleagues, even better if belonging to different fields, is nowadays mandatory to effectively advance our knowledge in medical science.

Małgorzata Figiel

Postdoc at IIMCB

Structural biologist with major interest in viral enzymes, working as a researcher at IIMCB. Passionate about organizing and getting involved in non-research activities aimed at supporting and strengthening the scientific community. Admirer of nature in all its forms – from the molecular level to exploring the countryside.

Silke Vanderhaeghe

PhD Student at VIB

Silke Vanderhaeghe studied in both Belgium and Norway and is now working as a PhD student in the Lab of Neurobiology at the VIB, Belgium. Her research evolves around the role of mitochondria in Amyotrophic Lateral Sclerosis. She has a passion for science communication and for making the lab a more sustainable place.

Francisco Paupério

PhD Student at IGC

Francisco Paupério is a PhD student at IGC.

Lucrezia Ferme

PhD Student at IGC

Lucrezia Ferme is a PhD student at IGC.

Joana Castro

PhD Student at BRIC

Joana Castro is a PhD student at BRIC.

Pilar Okenve-Ramos

Postdoc at IGC

Pilar is an afrodescendent Spanish woman who did her PhD at the Institute of Molecular Biology in Barcelona. During her thesis, she studied developmental biology with a special focus on actin-cytoskeleton and its role in collective cell migration during embryogenesis, using the Drosophila tracheal system as model.

Then she moved to the University of Liverpool for her first postdoc where she continued working on cytoskeleton, but this time on microtubules (MTs) and their role on neuronal maintenance. By the study of the deterioration of the MT maintenance, Pilar's work focused on characterizing and understanding natural neuronal ageing and pathological neurodegenerative diseases.

In 2019 Pilar joined the Cell Cycle Regulation lab as a postdoc at the Instituto Gulbenkina de Ciencia in Portugal. She continued working on the maintenance of MT, but this time focusing on the cilium. Cilia are cell projections with various essential functions, including fluid movement, cell signalling and mechanosensation.

During her scientific academic career, Pilar actively participated in meetings, conferences and outreach events, as well as on student's supervision and lab management. She is currently volunteering as a IGC Postdoctoral Committee member, where among other collaborative activities such as organizing seminars and events, she tries to promote democracy and to advocate for diversity, equity and inclusion (DEI) in the community, which also includes open science."

Paulina Maria Strzelecka

Postdoc at MDC

In 2013 Paulina Strzelecka received Diamond Grant Fellowship from Polish Ministry of Science and Higher Education for her PhD project investigating the role of theta-defensins in cancer therapy. During her PhD she spent 4 months at Nanyang Technical University in Singapore as a part of SKILLS programme funded by Foundation for Polish Science. Paulina received her PhD in 2016 at the University of Gdansk, Poland. She then moved to University of Cambridge/Wellcome Sanger Institute, UK to start a postdoctoral position. Over the next two years and a half, Paulina's research focused on application of single-cell techniques to study haematopoietic cell differentiation and immune cell heterogeneity. In 2019, Paulina was awarded a Humboldt Fellowship for Postdoctoral Researchers and she moved to Germany to join the group of Prof. Dr. med. Frederik Damm at Charité – University Hospital and Leif Ludwig at MDC. Her current projects focus on application of single-cell multiomics techniques to better understand consequences of disease-associated cell states.

EU-LIFE/Nature Essay Contest
Utopia Institute of Research

Katherine Ember
Author of the best essay

Katherine Ember is currently a research associate at Polytechnique Montreal and the CRCHUM medical research center in Montreal. Here, she is developing rapid ways of detecting diseases using laser light in biofluids like saliva. She was awarded three Quebecois postdoctoral fellowship awards for her work on laser-based COVID-19 and brain cancer detection. During her PhD in optical medical imaging at the University of Edinburgh, Katherine developed a chemical-free method for detecting liver damage. She carried out epigenetic research using fluorescence microscopy during her undergraduate masters in biochemistry at the University of Oxford. Katherine is passionate about communicating science to the general public and gives biophysics lectures at Polytechnique Montreal to graduate students.

Evandro Ferrada
Runner-up

Evandro Ferrada is a computational biologist originally trained in biochemistry and evolutionary biology. He obtained his PhD at the University of Zurich, working on molecular evolution. He carried out postdoctoral work at the Santa Fe Institute in New Mexico, and at the Department of Genome Sciences of the University of Washington, Seattle, USA. In June 2021 he joined the REsolution Consortium where he is contributing to the analysis of human genetic variation and to the functional characterization of solute carriers using large-scale mutagenesis data.

Miles Elliot Lizak
Runner-up

Miles Elliot Lizak dreams of bringing curiosity, daring, and a sense of wonder to science education and research. His passion for science drove him to laboratory research at Moravian College, where he earned a BS in Biochemistry, and then to graduate studies at Lehigh University. Years later, he left feeling like that passion had been utterly wrung out of him.

Returning to academia from a different angle, Miles completed his MSc in Interdisciplinary Studies in Sustainability at Universitat Autònoma de Barcelona. His research focused on imaginative approaches to promoting pro-environmental behaviour, including the use of narrative and immersive experience to facilitate transformative learning in education for sustainability.

Miles has presented his work on live action role-play at several international conferences and Erasmus+ seminars. His most recent project is a roleplaying experience designed for exploratory education on urban metabolism and sustainability.

EU-LIFE/Nature Essay Contest Jury

Frances Brodsky

Professor of Cell Biology at UCL & novelist

Frances Brodsky is Professor of Cell Biology at University College London, recently serving two terms as Director of the UCL Division of Biosciences. Previously, Frances was Professor at the University of California San Francisco. Frances runs a research laboratory at UCL that focuses on fundamental molecular mechanisms of membrane traffic that impact human health and disease in the areas of metabolism, the immune system and cell growth. She has chaired numerous funding advisory boards in the USA (NIH) and EU (HSFSP) and was a founding co-Editor of the journal Traffic (about intracellular pathways). Frances is a Fellow of the Academy of Medical Sciences and, following election to the governing council, served as Interim Vice-President (International) in 2021. She is also an elected member of the European Molecular Biology Organisation (EMBO). Frances is a Commissioner for the Marshall Scholarships from the UK government, having been a Marshall Scholar from the USA in 1976 after completing her undergraduate studies at Harvard University. She is recipient of a Senior Career Recognition Award from the American Society for Cell Biology and has mentored 15 PhD students and more than 40 postdoctoral fellows. With a long-standing commitment to public understanding of science, Frances has published three novels set in the world of bench science.

Carolina Mangana Monteiro

Poet & PhD Student at CeMM

Carolina Mangana Monteiro is a poet and PhD student in immunology at CeMM Research Centre of the Austrian Academy of Sciences. Her background is in molecular biology, which she has studied in Scotland and Germany before moving to Vienna. Alongside her scientific studies, she likes to write and published her first book in 2019.

Jack Leeming

Career Editor at Nature

Jack joined Nature in 2015. He edits careers columns submitted by Nature's global community of working scientists, webinars, Spotlights and Career Guides. He holds a master's degree in chemistry from the University of Hull.

Emmy Verschuren

Group Leader & Strategic Research Coordinator at FiMM

Emmy Verschuren is a cancer biologist interested in understanding how personal, research, as well as sociocultural environments can be optimised to promote health. Her team at the Institute for Molecular Medicine Finland (FIMM) studies a variety of diagnostic lung cancer models, investigating how these can be informative in precision medicine and in preventing disease recurrence. Dr. Verschuren graduated from the University of Groningen in the Netherlands with a Master's in tumour immunology. She trained in notable labs at the ICRF/CRUK, UCSF, Stanford University and Genentech Inc., where she studied how altered cell cycle regulation can affect cancer risk. In 2009, she was recruited as an international EMBL Group Leader to FIMM, an institute with a mission to understand drivers of health and disease and deliver key findings to healthcare in Finland and beyond. Besides her group leader position, she also supports the Director's office in coordinating community activities and international partnerships, serving as FIMM's EU-LIFE Main Representative since 2019.

Giulio Superti-Furga

Co-Chair of EU-LIFE
Director of CeMM

Giulio Superti-Furga, PhD is Scientific Director and CEO of the Research Center for Molecular Medicine of the Austrian Academy of Sciences in Vienna (CeMM), Austria and a Professor of Medical Systems Biology at the Medical University of Vienna. Currently, he is the EU-LIFE co-chair together with Monica Bettencourt-Dias.

He is an Italian citizen and performed studies in molecular biology at the University Zurich, Genentech, and IMP/Vienna. Co-founded biotech company Cellzome and became Scientific Director until 2005. Member of: Austrian Academy of Sciences, German Academy of Sciences, EMBO, European Academy of Cancer Sciences, Academia Europaea. Chair of the EMBL Alumni Association. 2009 Advanced Investigator ERC Grant and Knight Officer Order of Merit of the Republic of Italy. Since 2005 he directs CeMM in the middle of the large general hospital campus in Vienna, where he is trying to bring the genomic and systems-views close to the clinical world to improve medical practice. Among his major achievements to date are the elucidation of basic regulatory mechanisms of tyrosine kinases in human cancers, the discovery of fundamental organization principles of the proteome and lipidome of higher organisms, the characterization of the molecular machinery involved in innate immunity and the development of integrated approach to understand the mechanism of action of drugs at the molecular level. His work on the organization of the eukaryotic proteome is among most highly cited in the field.

Poster abstracts

01 Making Patient Engagement in Academic Research the New Normal

Anne-Charlotte Fauvel, Eliis Keidong / EATG, EATRIS, EPF

In the framework of a Horizon 2020 project (EATRIS-Plus), EATRIS (European infrastructure for translational medicine) and EPF (European Patients' Forum) and affiliated EPF member EATG (European Aids Treatment Group) joined forces to improve responsible research practices in the field of patient engagement and address the multiple barriers currently preventing academic researchers from meaningfully engaging with patients in their research.

Partners dedicated the year of 2022 to understand better how researchers could be further supported and incentivised through the establishment of a multistakeholder taskforce, a public consultation and several focus group meetings including with research funders. As an outcome of this co-creation and bottom-up approach, EATRIS, EPF and EATG jointly co-developed the "Patient Engagement Resource Centre", which will be launched by the end of March 2023.

The Patient Engagement Resource Centre is an easy to navigate platform to help researchers get started with patient engagement. It is a repository of publicly available guidance, training and practical tools that support researchers with every stage of their patient engagement activity: from planning, to conducting and evaluating. The "Fundamentals" section offers a curated list of materials, which are deemed essential to understand the basics of good patient engagement practices. The Resource Centre also features "Stories" from researchers, patients and caregivers, highlighting in short videos how they have collaborated and their recommendations to others who would like to start engaging with patients.

02 Core facility lifecycle - General principles & recommendations by EU-LIFE Core Facilities WG

Mónica Morales Ballús
EU-LIFE Core Facilities Working Group

Core facilities and core technology units are an integral part of life science research institutions and provide centralised access to technological resources and expertise – such as specialized labs, equipment, databases, and sample collections. Operated by teams with specific expertise, they serve research groups that do not have the capacity to operate these specialized resources. Core facilities contribute to the efficiency and quality of the output of research groups and provide continuity of technological expertise as well as institutional training. The centralised operational model also enables organisations to manage the financial, capital and human resources for the research community.

Core facilities and technology units are primarily supported by their host institution and are comprised of multiple specialized units. By providing technological services, expertise, and training, core facilities have a strong impact on the delivery of publications, grant submissions, innovation processes, and academic progress. Their contribution to scientific research and innovation must thus be always state- of-the-art and timely as the scientific agendas and missions of the respective institutions. Central to the mission of providing state-of-the-art support is the development and/or adoption of technologies.

Research institutes should routinely review whether core facilities are relevant to their overall scientific mission, researcher needs and demands. When facility quality, output, return on investment or other KPIs are not sufficient, or new technologies supersede the status quo, institutes need to be prepared to adapt their core facility portfolio accordingly.

To support organisations through these change processes we described the phases and relevant considerations in key life cycle phases of core facilities; from the first idea, through planning, implementing, running, consolidating and even closing a facility or infrastructure. The life cycle of core facilities is a dynamic and complex process; this document sets out the general principles identified by the EU-LIFE Core Facility Working Group.

03

Enabling the research centres of the future - the case of the Platform at the Interface of Science

Margarida Trindade
Plataforma de Interface à Ciência

Plataforma de Interface à Ciência (Platform at the Interface of Science) - PIC is a bottom-up Portuguese informal network developed in 2016 b y research managers and administrators (RMAs). This community reaches out around 770 RMAs. The added value of PIC i n Portugal is based on 1) connecting a broad range of professionals in different areas of specialization, such as science communication, data stewards, knowledge transfer valorization, including pre and post-award, 2) promoting their professionalization, a nd 3) working as a partner directly with policymakers and funders in research and development in proposing suggestions focused on the improvement of research systems.

As a community of practice, PIC in the past has developed several initiatives to empower the community, including national events and online sessions of good practices sharing. Its work providing suggestions of improvements to science policy is done in a co -creation exercise with the inputs of the community, using social platforms. PIC organiz es regular online meetings to discuss the latest topics on research management and organizes national events focused on the importance and centrality of research management and administration in the ecosystem. Community based networks in bottom-up approaches provide the space for professional development and empowerment of professionals contributing to the envisioning of the future of the research ecosystem.

04

The New Era of Research Institutes Governance: Shared-Leadership, Trans- disciplinary, Mission-Driven & AI-powered

David Brena, Glòria García-Negredo, Silvia Tognetti, Alexandros Nikolaou, Olga Millan, Joaquim Calbò, Natàlia Dave, Jonas Krebs
Centre for Genomic Regulation

The governance of research institutes has undergone significant changes over the past 20 years. In 2043, a retrospective analysis of these changes was undertaken, which revealed that the governance structures have evolved to a more liquid-organization approach, fostering creative problem-solving as a cornerstone. The institutes are organized around mission-based objectives, rather than research areas, with a focus on knowledge and development goals in health, food, energy supply, and other macro-fields. Governance has become less hierarchical, adopting the principles of scrum management and encouraging horizontal transdisciplinary teams composed of a wide range of experts from various fields, including science, medicine, engineering, communication, art, philosophy, policy-making, ethics and economics, as well as members of civil society and patients' organizations. These stakeholders, supported by an AI-entity, decide on the scientific and administrative strategy of the institutes acting as the strategy board, which replaces individual-directorship approaches.

Similarly, the traditional individual-led research team system has been replaced with leadership boards based on expertise, with a positive impact on the career prospects of many scientists. The open and collaborative philosophy of the institutes is reflected in the design of their buildings and workspaces, fostering teamwork and innovation. Further advancements in Information and Communications Technologies based on Extended Reality and robotics enabled researchers to use avatars to perform experiments, and other research-tasks while fully working remotely.

AI systems played a crucial role in automating administrative processes and decision-making, streamlining cross-collaboration, and accelerating the adoption of key performance indicators to assess gender balance, diversity, sustainability, and research impact. The institutes have become interconnected through virtual spaces, collaborating on high-level initiatives that leverage technology development and training programs.

In conclusion, the advancement of cutting-edge technologies has paved the way for a more horizontal, inclusive, transdisciplinary, technologically advanced, and efficient present for research.

05

A gender approach to oncology: the three level obstacles of an Italian case study

Camilla Gaiaschi, Camilla Veneri, Paolo Maugeri, Marina Cacace, Luciano D'Andrea, Susanna Chiocca
GENDERS-SPS-UNIMI, K&I Rome, IEO

Since the 1990s, the debate on gender medicine has questioned how to consider sex and gender differences in biomedical practice to ensure more effective and safer diagnoses and treatments for all, men and women (Oertelt-Prigione, Regitz-Zagrosek 2012). While the literature shows how failure to consider the impact of sex and gender in research and clinical practice could produce numerous sex and gender biases (Ruiz, Verbrugge 1997; Hamberg 2008; Risberg et al. 2009), it also proposes a set of tools and guidelines to make the inclusion of a gender lens in medicine effective (Schiebinger, Klinge, 2013; Clayton, 2018).

Based on the data collected at the European Oncological Institute of Milan during the project "Integrating gender in precision medicine", funded by Cariplo Foundation, we will try to propose a reflection on some epistemological, methodological, organizational, and institutional dimensions that make complex or even impossible the application of a gender approach in biomedical research and clinical practice. The analytical structure of the three levels allows us to identify where the individual, organizational and institutional practices that hinder gender medicine are located and how they are reproduced.

06

Centre of Excellence in RNA and Cell Biology – IIMCB of the future

Iwona Pilecka, Dorota Libiszowska
The International Institute of Molecular and Cell Biology in Warsaw (IIMCB)

The International Institute of Molecular and Cell Biology in Warsaw (IIMCB) is an independent research institute which addresses fundamental scientific questions in RNA and cell biology for the benefit of society. Worldwide, scientific discoveries in both fields have contributed to remarkable advancements in medical and commercial applications, whereas in Poland the development of such innovations is still insufficient. The IIMCB aims to close this gap by building the Centre of Excellence in RNA and Cell Biology that will translate fundamental research into clinical applications.

To achieve this ambitious plan, the IIMCB teamed up with two outstanding European centres with complementary expertise: the Medical Research Council, Human Genetics Unit of the University of Edinburgh (UEDIN) and Flanders Institute of Biotechnology (VIB). UEDIN will help to enhance the scope of translational research at the IIMCB. VIB will guide the IIMCB towards professional commercialization of its discoveries. The partnership between IIMCB and VIB is boosted by the supportive culture of excellence within the EU-LIFE alliance, where both members cooperate on various aspects of research management.

Once operational in the new, modern headquarters, by 2027 the IIMCB will embrace 20 scientific groups with complementary expertise; well trained, entrepreneurial researchers; sustainable core facilities cooperating with the industry; a professional incubator for technology transfer; digital administration of science. Combining excellence in research with efficient commercialisation, the IIMCB will strengthen the biomedical sector, which is a key strategic focus area in Poland and Eastern Europe.

The IIMCB's Centre of Excellence will be implemented under the project RNA and Cell Biology - from Fundamental Research to Therapies (RACE), selected for funding in the Horizon Europe Teaming for Excellence programme. The RACE was placed at the top of the funding list with a score of 14.5/15 and was awarded 15 million euro for 6 years.

07 Reducing the Carbon Footprint of Academic Research: A Case Study in a Biophysics Laboratory

Caroline Giuglaris, Jean De Seze
UMR 168 Laboratoire PhysicoChimie Curie, Institut Curie, PSL Research University – Sorbonne Université, UPMC – CNRS

Climate change is a scientifically proven phenomenon caused by anthropic activities, which requires urgent and significant reductions in greenhouse gas emissions. Despite the increasing vocalization of scientists advocating for political action, the issue of the environmental impact of academic research has been neglected for some time. Now, field-dependent initiatives have emerged, such as the non-profit organization My Green Lab, which delivers "green" certifications to biology and chemistry labs, and institute-dependent programs, such as the Max Planck Sustainability Network. In France, an independent collective was founded in 2019 to address the environmental footprint of academic research following the COP 15 Paris Agreement: Labos 1Point5. Building on their resources and methodology, we have quantified the overall carbon footprint of our biophysics laboratory, considering energy consumption, purchases and travel, for the years 2019, 2021 and 2022.

We investigate how this footprint would decrease by 2030 following systemic changes (change in the energy mix, suppliers' improvements…), and we propose scenarios based on additional voluntary initiatives to reach a final reduction of -50% compared to the 2019 baseline, following IPCC targets. We have now formed a group of more than 20 colleagues to achieve this goal, emphasizing the importance of collective action. Finally, we provide advices based on our own experience to assist others in addressing the environmental impact of academic research in their respective laboratories.

08 Training EU-LIFE scientists to share their research through stories

Mari Kaunisto, Anne Rahbek-Damm, Emil Petersen, Eva Zacharioudaki, Laura Alvarez, Giorgia Guglielmi
FiMM, BRIC, IMBB-FORTH, CeMM, FMI, CEITEC, EU-LIFE Science Communications Working Group

Science communication is an important transferable skill, but the way scientists are taught to present science often fails to engage nonacademic audiences. Storytelling is a fundamental aspect of human culture and communication, and it's easier for people to remember stories that resonate

with their imagination and emotions rather than facts and figures. Therefore, many professional science communicators encourage scientists to use storytelling methods.

However, translating science into compelling stories is not easy. To help early-career reserachers develop science communication skills, the EU-LIFE Science Communication Working Group set out to develop a training concept, based on the experience from previous storytelling workshops held at BRIC, one of the member institutes. The project was kicked off in 2019, and a small team of experts worked together through co-creation workshops and online meetings to develop the training package. The goal was to create a one-day training concept targeted at early-career researchers that could be easily implemented across all EU-LIFE institutes.

The outcome of this initiative is a workshop that introduces researchers to the art of storytelling and the narrative model known as the ABT (And-But-Therefore) through lectures and practical exercises. Participants learn how to present their research as a story, experiment with character-building and stylistic devices, and apply storytelling on digital platforms. Due to the interactive nature of the training, the workshop is designed to accommodate 10-12 participants at a time.

So far, the workshop has been delivered twice, concurrent with EU-LIFE meetings at FIMM (Finland) and FORTH (Greece) in 2022. Participant feedback and observations made by the trainers have been used to fine-tune the concept. The third test will take place at BRIC (Denmark) in April 2023. Several members of the EU-LIFE Communication Working Group will attend as observers, with the aim of learning how to train researchers at their respective institutes.

09 A Physician-Scientist a Day Keeps the Bench-to-Bedside Gap Away: A Prescription for the Future Integration of Research & Healthcare

David Brena, Katrine Sonne-Hansen, Elien Vandermarliere, Zeina Chamoun-Morel, Joao Vilhena, Henri van Luenen, Michaela Herzig, Luís Ferreria Moita, Jorge Ferrer, Michela Bertero, Joaquim Calbò
CRG, UPCH-BRIC, VIB, Institut Curie, NKI, MDC, IGC, IDIBAPS, Emerald

Observations: Precision medicine demands a deeper understanding of the molecular basis of diseases, yet the prevalence of specialized physicians and researchers with the skills to bridge the gap between cutting-edge research and clinical practice remains low, partly as a consequence of the lack of specialized training programmes at local, and European-level.

Diagnosis: This has resulted in a comminuted fracture between research and clinical practice, which delays the translation of cutting-edge research into clinical benefits.

Treatment: The prescription for this issue is frequent doses of physician-scientists (MD-PhDs), trained in specialized programmes, that are necessary to equip future physician-scientists with the skills to succeed in a rapidly changing research landscape.

Such programmes should be fostered between institutional alliances to ensure that the latest scientific technology is integrated with the latest clinical needs, and the specialized courses are organized at a wider level. EMERALD, the first European-wide training programme for physician- scientists, was born from the collaborative efforts of EU-LIFE, thus being an excellent trail to develop the tools for establishing wider and more sustainable specialized programmes for physician-scientists.

EMERALD focuses on providing advanced training in research and cutting-edge technologies, as well as mentoring, and career development for MD-PhDs, while embracing diversity, inclusion, and intersectional collaboration, which promotes that the next generation of physician-scientists is prepared to lead the way towards a more equitable and democratic healthcare system.

Conclusion: The future of healthcare demands a new type of medical professionals who feel equally at home in the laboratory and the clinic. The prescription of frequent doses of physician-scientists, in combination with the development of specialized training programs like EMERALD, is the key to bridging the current bench-to-bedside gap. By following this treatment, we can look forward to a future where medicine is truly personalized and the best possible outcomes are achieved for all patients.

10 Designing the "perfect" facility - an interactive experience with the community

Beatriz Tomaz, Ana Laura Sousa, Erin M Tranfield
Electron Microscopy Facility, Instituto Gulbenkian de Ciência

Designing a core facility that serves many purposes is a challenge. Technical Experts will presumably have different points of interest and priority in a facility design than other members of the research community such as the scientific users, the building and maintenance teams, and the equipment vendors. We, the Instituto Gulbenkian de Ciência Electron Microscopy Facility Team, would like to have an interactive exercise with the conference participants to explore what different facility stakeholders identify as the "key" elements of a "perfect" facility.

Our poster will have a blank floor plan and a few focal points (such as equipment and an office). We invite any person attending the meeting to design their version of the "perfect" facility including where the walls should be, and how the equipment should be positioned. Intentionally we are saying very little about what the key elements should be in a facility because we would like to avoid influencing your opinion. We want to know from you what you see as the essential elements to building a productive, enjoyable, and safe work environment. We hope this interactive poster will start an important discussion about how to build rooms, labs and working space to better meet all the needs of the scientific community.

11

Identification of factors involved in double stranded RNA-induced cell death through Genome-Wide CRISPR screen

Deborah Trastulli, G. Vozza, L. Mazzarella
Department of Experimental Oncology at IEO, European Institute of Oncology IRCCS

Double-stranded RNAs (dsRNAs) are potent immunostimulatory nucleic acids of viral origin but also physiologically produced by mammalian cells. Increased levels of dsRNAs, due to viral infection or failure of endogenous repression, trigger an immune response that leads to cytokines production or cell death. The 2',5'-oligoadenylate synthetase (OAS)-RNASEL system is widely thought to be the main responsible for cell death, through mechanisms not fully understood. To elucidate these mechanisms, we employed a candidate-based manner investigation and an unbiased approach. As death-inducing stimulus we used the combination of Polyinosinic-polycytidylic acid (pI:C), a synthetic analog of dsRNA and Interferon-α (IFN-α), which upregulates OAS enzymes thus maximizing the efficiency of dsRNA sensing in IFN- saturating condition. RNASEL-KO cells were, as expected, refractory to IFN-α/pI:C induced cell death; interestingly however, interfering with protein synthesis or RNA transcription with Cycloheximide (CHX) or Actinomycin D (ActD), caused RNASEL-KO cells to undergo apoptosis although CHX/ActD alone had no cytotoxic effect. This form of cell death had a slower kinetics than that elicited by pI:C/IFN-α in WT cells and was associated to Annexin V exposure, Caspase-8 and -3 activation. Importantly, death was cell-intrinsic, since transfer of conditioned medium from IFN-α/pI:C-treated cells had no cytotoxic effect in combination with CHX/ActD, also implicitly ruling out TNF-dependent extrinsic apoptosis (an established CHX/ActD-dependent death mechanism). This finding suggests the activation of RNAseL- independent systems different from those activated by canonical dsRNA receptors. To dissect all these mechanisms, we performed an unbiased large-scale clustered regularly interspaced short palindromic repeats (CRISPR) screen, identifying genes that favour/impair dsRNA- induced cell death. Moreover, we are complementing the above data with a careful study of the transcriptional events associated with dsRNA recognition by conducting RNA-Seq, ChIP-Seq and ATAC-Seq experiments.

12

Establishing a Local Flow Cytometry Network in Lisbon – a Case Study

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FLxFlow is a group of four flow cytometry core facilities (CF) from the Lisbon area, in Portugal, working together since 2016. The CFs, belonging to Instituto Gulbenkian de Ciência, Instituto de Medicina Molecular João Lobo Antunes, Champalimaud Foundation and NOVA Medical School, established a cooperation to locally gather the expertise in flow cytometry with the aim of organizing joint training events and developing protocols and solutions in line with the latest advances in the flow cytometry field, in a time and cost-effective manner.

This poster aims to describe the scope and actions of FLxFlow as an example of a cooperative and well-established technical network operating in a regional setting, illustrating how such a working group may solve individual problems and local limitations. FLxFlow allowed the strengthening each individual CF very quickly and consistently. Users and community training, organization of specialized seminars, troubleshooting, borrowing of spare parts, staff sharing, instrument breakdowns or overbooking, are just some examples of limitations that can be easily mitigated when belonging to a network. This cooperation has been having a clear benefit on the four major biomedical research institutions in Lisbon and beyond.

In summary, belonging to a local technical network, such as FLxFlow, has numerous advantages and, overall, can impact not only the individual CF and their respective institutions, but also the broader scientific community and industry that engage in the promoted activities. We hope that sharing our experience may encourage other small CF to establish synergies and create regional networks.

13

Characterization of NF1 role in microtubule dynamics: rediscovering a tumor suppressor

Eleonora Messuti, Giuseppe Ciossani, Silvia Monzani, Luigi Scietti, Andrea Graziadei, Bruno Achutti Duso, Marina Mapelli, Luca Mazzarella / IEO

Neurofibromin (NF1) is a tumour suppressor, originally identified as the gene responsible for neurofibromatosis type 1 (von Recklinghausen disease), but increasingly recognized as a somatic driver of numerous cancers, including melanoma, ovarian, breast and brain cancer. The best characterized function of NF1 is as a regulator of RAS GTPase activity. Its key GTPase-activating protein-related domain (GRD) has been extensively studied, but comparatively less attention has been devoted to RAS-independent functions. Even recent CryoEM-based studies, which provided a major breakthrough by solving the structure and revealing that NF1 exists in a head-to-tail dimer, are mostly focused on structure-function relationship to RAS. NF1 was found early on to interact with tubulin, and we recently found that somatic loss of NF1 in breast cancer leads to hypersensitivity to maytansinoids, a class of microtubule-targeting drugs. Although tubulin also possess an autocatalytic RAS GTPase activity that is key for its conformation and polymerization kinetics, initial studies suggested that NF1 does not exert a direct promotion of tubulin GTPase as for RAS, but it may still regulate it through indirect interactions. This problem has not found a structural solution to date, also due to intrinsic difficulties in generating recombinant NF1.

To better understand NF1 function, we managed to purify human NF1 from insect cells by taking advantage of a codon-optimized expression vector. In co-sedimentation assays, we find that the NF1-tubulin interaction is maximized upon microtubule polymerization. In vitro tubulin polymerization assays show that NF1, through its binding, promotes microtubule polymerization.

We are currently characterizing the structural basis for the NF1-tubulin interaction using Cryo-EM, mass spectrometry of the crosslinked complex, AlphaFold-based in silico modeling and in vitro mutagenesis.

We aim to provide a missing structural link between a widely mutated tumor suppressor gene and a key cellular function, microtubular dynamics. Providing a better understanding of how NF1 acts to suppress tumor development will potentially open new therapeutic avenues.

14

10 years of Centralized Electron Microscopy Services at the Instituto Gulbenkian de Ciência

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The Instituto Gulbenkian de Ciência (IGC) Electron Microscopy Facility started as a centralized service in October 2013. Over the last decade the aim of the IGC EM Facility has been and continues to be to provide high-quality electron microscopy services, training, and access to specialized equipment for researchers.

The IGC Electron Microscopy Facility team has extensive experience in transmission electron microscopy of biological samples and the Facility is open to both internal and external academic researchers as well as industry scientists.

The working model of the IGC Electron Microscopy Facility focuses on a system of tailoring, optimizing, and developing methods adapted to the unique and targeted scientific questions of each researcher. With time and experience, the facility team has expanded the portfolio of offered services and techniques in a stepwise fashion that has always grown on a foundation of existing knowledge and with the goal of addressing the broadening scientific needs of the research community. Beyond technical expansion, the facility team has aimed to streamline user access to the facility including offering a portfolio of protocols and technical information thereby transforming electron microscopy from an overwhelming technique to an accessible one.

In this poster, we will present the current model of the Electron Microscopy Facility at the IGC and share what has worked and where there are opportunities for improvement.

15 The Preprint Club - A cross-institutional, community-based approach to peer reviewing

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The Preprint Club

Preprints are non-peer reviewed research manuscripts which have gained popularity among researchers due to the fast dissemination and democratization of research information. As such, preprints had a significant impact on the rapid response to the COVID-19 pandemic, allowing researcher to quickly incorporate new findings into their research projects. Nonetheless, preprints require to undergo thorough peer reviewing to ensure the quality and rigor of presented research findings. Most peer review of scientific studies performed today are still managed by journals, each having their own peer review policy and transparency. However, approaches to uncouple the peer review process from journal publication are emerging. Additionally, formal education of early career researchers (ECRs) in peer reviewing is rarely available, hampering the quality of peer review feedback. Here, we introduce the Preprint Club, a cross-institutional, community-based approach to peer reviewing, founded by ECRs from the University of Oxford, Karolinska Institutet and Icahn School of Medicine at Mount Sinai. Over the past two years, we have been discussing, assessing, and providing feedback on recent preprints in the field of immunology. First, we analysed the relevance of our preprint evaluation system and its ability to sort out the best preprints. Second, we collected feedback (i) from the ECRs who participated in this program to analyse its training value and (ii) from the authors of the preprints we reviewed to understand how it was perceived by the research community. Our results suggest that the framework we developed enables an efficient selection of impactful studies at the time they are posted as preprints, while providing important training and first-hand peer-review experience to ECRs, and generating critical feedback strongly appreciated by the authors of the preprints. We believe our experience opens a novel and unique way into approaching the current peer-review system through its community-based educational and scientific values.

16 Co-design with and for quadruple helix stakeholders, science and data journalists for a wide impact

Joanna Magalhaes
Science for Change

The way science and society interact is constantly evolving and new opportunities for dialogue and collaboration continuously emerge. One of the most striking developments at the turn of the century was the growing interest in initiatives aimed at engaging society in scientific activity, a paradigm shift of the new modus operandi of modern science. As such, citizen science (CS) can play a key role, both as an aim and enabler, to obtain reliable scientific data produced with and/or for quadruple helix (4H) stakeholders (civil society, academia, policymakers, industry and SMEs), to address societal, environmental and economic challenges. However, the implementation of CS faces many challenges and barriers, including scientific recognition, citizen engagement, data quality, communication strategies, project sustainability and funding. The NEWSERA project aims to demonstrate the potential of CS to act as a powerful science communication tool to promote critical thinking, to increase trust in science communication and science at large, to promote evidence-informed policies, and strengthen the link between science, innovation and society. For that, NEWSERA engaged 39 CS projects from Portugal, Italy and Spain, as pilots, in the development of communication strategies specifically addressed to each of the 4H stakeholders, science and data journalists, through a series of workshops, entitled the

#CitSciComm Labs. The Labs consisted of three rounds of workshops, where co-design methodologies, participatory and mutual learning activities, were explored within a continuous iterative process of co-creating, implementing and validating communication strategies, considering their effectiveness. Understanding specific contexts in which CS projects operate was key to identify general barriers and opportunities, best practices, recommendations and case-studies, which constitute the basis for a set of blueprints for CitSciComm for and with 4H stakeholders and science and data journalists, as well as a guide for science communication and journalism, to serve and inspire the wider community.

17 Science Fiction becomes (Virtual) Reality: Applications of VR in Research, Training & Networking

Damjana Kastelic, Anna Sole-Amat, Jonas Krebs
Centre for Genomic Regulation

The COVID-19 pandemic and the required physical distancing measures forced employers, including universities and research centres to introduce remote work and activities on a large scale. While team meetings in smaller group sizes and unidirectional lectures could be easily shifted to an online format using video conferencing tools like zoom, more complex interaction formats such as technical training courses and workshops still struggle to be organised in virtual environments.

The authors would like to shed light on novel virtual tools that allow more immersive interactions between participants in networking, communication, research and training than traditional platforms. The focus will be set on virtually reality (VR) assisted tools that also allow the integration of VR headsets. The explicit intention of the poster is to present concepts and application fields of such tools, based on first hands experiences. These include:

i) lab simulations in various scientific disciplines, where trainees can either perform lab exercises on the screen, or enter the lab in virtual reality with VR headsets.

ii) 3D scanned laboratories and technological platforms, which participants can either "enter" on the screen, or again in virtual reality using VR headsets. In the future, this will be a sustainable way to train staff or to visit remote labs, and still have the feeling of entering them. The scans can be combined with videos and teaching material.

iii) meetings and collaborations in VR: many tools allow participants to create personalised avatars and enter a room with VR headsets to have the sensation of proximity, even though they are physically far away from each other. Content (incl. 3D objects) can be imported or directly created in the tools.

vi) immersive VR training to build your professional development skills on relevant workplace topics and practice what you learn in VR exercises, like job interview preparations, counselling, mediation, leadership communication, how to give feedback, active listening,…

18 Youth Science Club for immigrant children: toward diverse colleagues of the future

Alyce Whipp / FiMM

Strong research centers of the future will draw on a diverse and inclusive community of scientists and support staff. EU-LIFE is already involved in shaping related changes through its Gender Equality Working Group, and more efforts for other diversity are needed and important. At FIMM, we are in involved in outreach that aims to improve the diversity of our future colleagues. Despite the University of Helsinki having a sizeable international student/researcher population, people of immigrant background who grew up in Finland are often not represented at the university level. Government reports and research have shown that youth of immigrant background in Finland have higher school dropout rates, lower admission to university, and fewer admissions to STEM programs. FIMM has partnered with the non-profit student-led science communication organization The Science Basement (born from a group of PhD students at FIMM), as well as with the non-profit ThinkAfrica, to host a Youth Science Club with primary-grade children of African descent in Finland to help spark and maintain the children's interest in science and science-related studies/careers. Early-career scientists plan and host monthly science club meetings with the children to give them hands-on experience, knowledge, and encouragement. In addition, monthly field trips to science-related places are also organized (e.g., to laboratories and science centers). The program is child-led, but scientist-guided; thus far we have found the children are engaged and excited, and already talking about future careers in medicine, space science, and beyond. Additionally, the scientists benefit by learning how to simplify their science communication messaging and engage with the lay public. We hope these joint efforts will help lead to more diverse colleagues in the future and contribute to research centers of the future that are able to draw from broader perspectives, to be more flexible, agile, and inclusive than current ones.

19 The IGC Green Team – sustainable actions for greener institutions

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Instituto Gulbenkian de Ciência

The IGC (Instituto Gulbenkian de Ciência) Green Team is a grassroots voluntary group started in 2019 whose mission is to promote awareness of sustainable practices in research, inspiring all members of the institute to contribute to a greener future by reducing their own and the institute's environmental footprint.

To accomplish our mission, we maintain open and transparent communication with the community, providing evidence-based information and advocating for greener practices at the institutional level. Additionally, we are members of national and international networks of sustainability groups in research, sharing resources and information (Green Labs Portugal and SELS).

In this poster, we will highlight some of our recent activities including an artistic partnership to raise awareness about single-use plastics in research and our collection of Green Tips - announcements shared internally that promote greener behavior. The IGC Direction helped us implement a 3-month pilot program supporting the vegetarian option in the canteen. Finally, for the European Mobility Week, we ran a car-free day and launched a mobility survey.

For 2023, we are committed to continue contributing to a greener IGC and focus on the principle of circularity. One of our priorities is the fate of laboratory plastics: we aim to gather data on our plastic consumption (in collaboration with Green Labs PT and SELS), to promote re-usable alternatives to plastic, and to implement resource recovery of non-hazardous plastic waste. We also aim to contribute to reducing energy consumption by awareness actions (e.g., Freezer Challenge). Finally, we would like to build a community garden, which would use in-house compost.

In the EU-LIFE meeting, we would like to connect with interested stakeholders at EU-LIFE Institutions and discuss opportunities to share good practices, resources and collaborate in joint efforts across the EU-LIFE institutes.

20 Technological Innovation and Collaboration as Pathways to Scientific Excellence

Caio Oliveira, Arthur Silva, Lucas Neves, Samantha Palmeira, Marta Agostinho, Inês Barbedo
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Although the search for excellence is common in all spheres of contemporary society, in the scientific production process there is no room for results below excellence. The researchers' work is of paramount importance for current development, impacting all areas of knowledge and requiring constant improvement, evolution and necessary adjustments in ongoing research. Despite their immense social importance, researchers are devalued on several occasions and in countless ways. This devaluation is composed of two main aspects: internal and social, irrevocably leading to a reduction in the quality of their work. Internal devaluation is characterized by a lack of material resources, inadequate work environments, excessive workload, limited perspectives for career growth, absence of a unified system to protect the rights of these professionals, among others. On the other hand, societal devaluation manifests itself through the discredit of scientific productions, the lack of social recognition, the dissociation of the image associated with the research profession, among other related factors. As a way of addressing this problem associated with internal devaluation, there is a proposal to create a platform that promotes the connection between the business fabric, potential patrons and research, enabling greater fundraising and consequently better results. In addition to the structural improvement of the research process, artificial intelligence (AI) and virtual reality (VR) can be used to simulate laboratories and experiments, facilitating and improving the researcher's work. With this, it is shown that it is essential to make new efforts to value researchers, ensuring that their work, one of the most significant in contemporary society, can evolve and develop, ultimately reaching greater excellence in the research process. scientific production and knowledge transfer.

21 ORION Open Science: Co-Creating Engagement

Fergus Powell, Michael Norman
Babraham Institute

ORION (Open Responsible research and Innovation to further Outstanding kNowledge) was a four- year project, funded through the European Union's Horizon 2020 research and innovation programme. The project brought together nine partner organisations from across Europe to explore ways in which research and funding organizations in life sciences and biomedicine can open up the way they fund, organize and do research to trigger evidence-based institutional, cultural and behavioural changes in Research Funding and Performing Organizations (RFPOs).

The Babraham Institute (BI) led a work package on co-creation experiences and experiments. The objective was to work towards institutional changes through interacting and co-creating outputs with multiple stakeholder groups.

Here we present a selection of outputs from the project including:

- A menu of co-creation tools to enable RFPOs to engage different stakeholder groups in research
- Public dialogues held in four countries on the risks and opportunities of genome editing technology
- An action plan to support RFPOs to embed Open Science principles in their organisation
- A report article on "Involving society with science"
- Co-created public engagement activities, such as the Virus Fighter game

We highlight Virus Fighter - an online game that helps people learn about viruses and vaccinations – as a case study of co-creation in public engagement with research. In this resource, players make decisions to contain (or advance) a viral outbreak. The game was co-created in three phases:

a) A kick-off meeting of stakeholder groups including researchers, engagement professionals, games developers, teachers and museums staff. Nominal Group Technique was used to determine the key messages of the game

b) A design workshop in which students designed their own game, elements of which were worked into a beta version

c) A testing workshop in which students provided further revisions and feedback

We will present this process as an example methodology that others can follow, as well as, highlighting the impacts of Virus Fighter since its launch in 2021.

22 Cartas com Ciência: science dialogues without borders to promote the democratization of research

Mariana R.P. Alves, Rafael Galupa
Cartas com Ciência & CIDTFF - University of Aveiro

Cartas com Ciência ("Letters with Science") creates spaces for dialogue between Portuguese-speaking scientists around the world and students in Portuguese-speaking countries. In this presentation, we will share our success story of a multi-continent science communication project that uses science as a vehicle for a more inclusive present and future. Through educational programmes of letter exchanges between students and science professionals over the course of a school year, individual and lasting conversations are created so that students from low-income communities in these countries feel they can have a place in science if they want to. Since its launch in 2020, Cartas com Ciência has already trained over

700 scientists in science communication and outreach techniques, of which almost 500 have exchanged letters with students in 4 continents. For the majority of the pupils, it was the first time they "met" a scientist. By disseminating our experience in designing and implementing programmes according to equitable and socially just practices, based on scientific research, and with close partnerships with research institutions, we hope to contribute to the discussion of how research places of the future can be enhanced. The co-founder of the project will share our experiences and challenges from the last 3 years working for a vision of an equitable future for research.

23 Ciência + Cidadã – An Active Citizenship Program In Scientific Research

Maria João Leão (IGC, ITQB NOVA, Oeiras Valley), António Gomes da Costa (IGC), Renata Ramalho (ITQB NOVA), Maria José Amândio (Oeiras Municipality), Elisabete Brigadeiro (Oeiras Municipality)

The Active Citizenship Program - Ciência + Cidadã (C+C) (https://cienciamaiscidada.pt) is an innovative project in Portugal, launched in a close partnership between Instituto Gulbenkian de Ciência (IGC), ITQB NOVA and Oeiras Municipality.

C+C has three main pillars as mission:

I. Citizen Science projects, developing scientific research projects with the involvement and the active participation of citizens

II. Co-creation, thinking about science with people combining education, art and sport

III. Public consultation in decision-making for science in an open dialogue between citizens, scientists and political representatives.

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). It can also actively contribute to the democratization of science and citizens' confidence in scientific research.

We will present projects that are being developed within the scope of C+C, namely:

- Citizen science projects "Oeiras Experiments at Quinta do Marquês", "Characterization of the human gut microbiome, a pilot study in Oeiras" and "Reducing micro-pollution by antibiotics"
- Actions in partnership with artists and actors
- Microbiome Interactive Quiz
- Partnership with CAIS Association
- Actions with the Portuguese Citizen Science Network
- Participation in European projects: IMPETUS and EUTOPIA

Around 600 citizens of different ages and social backgrounds have been involved, to date, in the activities mentioned above, including around 100 students, 20 teachers and 9 artists.

In summary, C+C aims to create an identity and community values, based on knowledge and science, with impact and return for both the scientific community and citizens, in a multidisciplinary and intergenerational way.

24 Villains or heroes: What Sci-Fi movies are telling us about the scientists of the future

Joan Vives-Tomas
Centre de Regulació Genòmica de Barcelona

We aim to answer the question how we see the scientists of the future? Where will they work? What research will they do?

We may have already have had a glimpse of the research and research centres of the future, we only need to go to the Avengers Compound, a repurposed Stark Industries warehouse used for scientific research, military training, weapons development and the Avengers Program, or travel to Wakanda, beneath the Mount Bashenga where Shuri's Lab is located.

We want to understand better who the Scientists running those Sci-Fi facilities are, their sex, disciplines, their collaborators, their lines of research and, if possible, their funding sources.

Sci-Fi movies have anticipated discoveries in the past. They project how our society see the science that will be done in the future. They play also an important role inspiring young people and reinforcing archetypes.

We will do a descriptive analysis. We are proposing a literature review identifying fictional scientists appearing in post 1980 Sci-Fi movies. We will look for researchers identified as Professor, Scientist or Science student.

25 SymbNET - Genomics and Metabolomics in a Host-Microbe Symbiosis Network

Mariana G. Simões, Luís Teixeira
IGC, Católica Biomedical Research Centre, Universidade Católica Portuguesa

SymbNET is a European network for research on host-microbe symbiosis, funded by the European Union's Horizon 2020 research and innovation programme. The project is coordinated by Instituto Gulbenkian de Ciência (FCG-IGC) in Portugal and brings together the world-leading research institutions EMBL and Kiel University in Germany, University of Lausanne in Switzerland, and another local widening partner, ITQB NOVA.

The project is running for three years (2021-23) with the main goals of capacitating FCG-IGC and ITQB NOVA in the use of Metabolomics and Genomics in Host-Microbe Symbiosis and promote a European network for excellence in this field. To achieve this, SymbNET promotes transfer of knowledge and collaborations through programs of researchers and staff visit exchanges, funding of collaborative projects, scientific meetings, workshops, and courses. It develops actions targeted at early-stage researchers to promote their research, training, mentoring, and networking, ensuring gender equality in participation. SymbNET also aims to empower the management and administrative structure of the FCG-IGC and capacitate the Center for International Collaboration.

Throughout the implementation of the project, we developed specific activities that have been quite successful in establishing research collaborations between researchers of different institutions and a collaborative network, even though the constraints of the COVID-19 pandemic at the beginning. For instance, we established a monthly online seminar series on host-microbe symbiosis that attracts an international audience, even larger than the partner institutes. Also, through small research grants, with competitive calls, several collaborations between research groups of different institutes have been established. We will discuss the successful strategies applied throughout the last two years in the development of SymbNET.

26 Nurturing the career of clinician-scientists in a research institute

Michela G. Bertero, Gemma Llaverias
August Pi i Sunyer Biomedical Research Institute

Clinician-scientists are unique professional profiles combining clinical expertise with knowledge in research, to develop high-quality care that is founded on deep understanding of molecular and cellular mechanisms of the disease. Unfortunately, their number is declining in Europe and beyond. The reasons are multiple, from increasing patient care pressure, high specialization of specific research fields, to demanding professional dedication at the expenses of personal life. Research institutes can contribute to counteract this trend.

The August Pi i Sunyer Biomedical Research Institute (IDIBAPS) was created in 1996 to answer the vision by well-renown clinicians that medicine requires research. The Barcelona Clínic hospital has an historical commitment to research, with physicians donating a fixed percentage of their salary to create a common fund to support research.

Since its foundation, IDIBAPS has been developing original programmes to nurture translational research and the clinician-scientist career path. The IDIBAPS 50/50 programme was the first one, 10 years ago and still running, to allow young specialist physicians from the Barcelona Clínic hospital to dedicate 50% of their working time to research and the other half to patient care. More programmes have followed, in collaboration with the hospital and other research institutes: the PhD4MD, a collaborative predoctoral training programme for medical doctors after specialization; the BITRECS, co-funded by la Caixa foundation and the European Commission, offering 3-year exclusive dedication to research at postdoctoral level; and the 80/20 programme, providing consolidated clinician-scientists with the opportunity to dedicate 80% of their time in the laboratory for 3 years.

"Having this protected time to dedicate to research, without losing contact with the patient, helps to identify scientific questions relevant to clinical practice and to keep in mind bringing back the results to the clinical consulting room or the hospital bed" reflects Gisela Sugranyes, one of the first 50/50 programme beneficiaries.

27

Scientific excellence has no gender: IIMCB's activities on gender equality, diversity & inclusion

Katarzyna Fiedorowicz
IIMCB

The International Institute of Molecular and Cell Biology in Warsaw (IIMCB) is an independent research institute which answers fundamental scientific questions in RNA and cell biology for the benefit of society. Gender equality issues have been important to us for a long time. An institutionalized approach began in 2018 with the formation of a professional human resources management team. They developed a Human Resources Strategy for 2019-2024, in which equality aspects were widely addressed. A turning point in our approach to gender equality was when we joined EU-LIFE (2020), through which we included a European perspective in our approach.

Equality and diversity are values that contribute to the development of science, foster the improvement of scientific condition of individuals and lead to the improvement of research quality. They are also an indispensable condition for innovation and competitiveness. If we respect our diversity, we can manage it effectively for the benefit of the organization and wider society.

Thanks to the culture of support within the EU-LIFE alliance, the exchange of good practices and the opportunity to learn from international partners, the IIMCB published a sustainable four-year Gender Equality Plan in December 2021. Upon its implementation in 2022, thanks to the commitment of the Working Group on Gender Equality Opportunities and the HR Unit staff, many of the initiatives planned in this document were successfully completed.

The professionalization of HR management at the IIMCB has been supported by the project entitled: Molecular Signaling in Health and Disease - Interdisciplinary Centre of Excellence (MOSaIC), that is being implemented under the Horizon 2020 programme in the years 2018-2023 with a budget of 2.5 million euro.

28

CEITEC on Its Way to the Top

Nikola Kostlánová
CEITEC

Becoming a member of EU-LIFE as the first institute from Central and Eastern Europe (CEE) was for CEITEC a great asset that played an essential role in its strategic setting and current prosperity.

CEITEC was founded in 2011 as a research institute for life sciences at Masaryk University in Brno, Czech Republic. Its ambition was to surpass the research standards typical for CEE countries and establish itself on the international scientific landscape. State-of-the-art infrastructure, funding from the EU and complementary national funding have contributed significantly to this ambition. However, the journey to becoming one of the top research institutions required more than that – skilled and motivated employees, an inspiring atmosphere, predictable working conditions, and dedicated management with the capacity to create and implement robust and sustainable strategies.

Joining EU-LIFE was a very fortunate decision that CEITEC exploited effectively. CEITEC's involvement in the LIBRA project had an eminent impact on its HR culture. This project results positively affected many institutional measures and policies, including recruitment policy, career system, leadership policy, and onboarding of employees. Similarly, the integration of Open Science took place naturally and effectively thanks to the joint project ORION. The shared knowledge regarding research evaluation and PR, and communication has helped CEITEC to quickly become a respected institute in the Czech Republic and beyond.

CEITEC is ambitious, and progressing towards the top. Over the decade of its existence, it has already become an internationally recognized institute. In 2022, ISAB rated CEITEC as "the leading life science centre in Central Europe and one of the most advanced institutes in the entirety of Europe" (quotation from the ISAB report). These great results have also been achieved thanks to our determination towards excellence and thanks to the inspiration from EU-LIFE.

29

Building a community of VIB postdocs accross centers by organizing social and scientific events

Raj Sewduth
VIB

The VIB PostDoc Committee (PDC) was founded in 2015 with the aim to bring together postdocto- ral scientists from the geographically dispersed centers of VIB. Our main goal is to build and de- velop a strong community of VIB postdocs by organizing social and scientific events. In this way, the PDC aims to strengthen connections and collaborations between the VIB research cen- ters and with industry. In addition, we aim to support postdocs in their current and future careers through the development of transferable skills and providing a network of mentors and peers in both academia and industry.

Within each VIB centers (in Ghent, Leuven, Antwerpen, Brussels, Hasselt), the PDC representa- tive(s) interacts with the local postdoc committee or liaises directly with postdocs in the department, via email, online via our website and social media platforms, face-to-face chats, and through the distribution of surveys. As such, the PDC representatives offer channels of communication across the community and with VIB HQ. The committee brainstorms on events that are of interest to the wider postdoc community and also continually reaches out to postdocs for suggestions for events of interest to postdocs.

There are many common non-scientific challenges that postdocs face: developing soft skills, plan- ning future career steps, and maintaining work-life balance. By continuing the VIB postdoc commu- nity, we bring postdocs together to integrate and share experiences and create an environment in which we can all flourish. We actively request feedback on our events through surveys and put concerns or suggestions of our fellow postdocs on the PDC agenda.

Our motto: CONNECT TO EMPOWER!

This poster gives an overview of how the PDC operates and reports on the activities of the VIB postdoc community.

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Science communication as a tool to boost the impact of the research

Sara Amaral
CNC

Recognizing the importance of science communication to enhance the institution, CNC have been deeply involved in public engagement activities in order to foster dialogue between scientists and groups of society, to provide public accountability, to spread our findings through media and foster scientific culture. Reach and engage different groups of the society will be one of the most important hallmarks of the research center strategy. Our highly multidisciplinary team brings together people with a broad and well-built expertise, essential for the development of an outstanding science communication strategy. All the CNC community are actively engaged in our outreach efforts. CNC have been strongly committed in public engagement activities with different publics, ranging from seminars and debates at schools, to art&science projects, to collaborations with patient associations, science museums and centres, to hands-on activities in CNC laboratories or public venues, or co-production of scicomm materials. In the last 5 years we engaged more than 25 000 people from different groups of society. At CNC we implemented an advanced course in science communication targeting PhD students that explores topics such as public engagement, societal challenges, citizen science, journalism, ethics, visual communication, career development and technology transfer. Providing tools and inspiring scientists to communicate is crucial to a competitive and contemporary researcher. We believe that is imperative to aware the new generation of scientists about the social impact of science in order to promote a real responsible research and innovation. We expect that our communication efforts will consolidate the institutional image for the scientific system, political decision-makers and funders, promote the engagement of different stakeholders and provide alternative funding opportunities. We believe that our outreach strategy has been fruitful and could represent a valuable contribute to the scientific literacy in Portugal to build up a truly scientific citizenship and a more knowledgeable society.

31

Revolutionizing Medical Research in the Life Sciences with Chemical Biology

Sebastian Muller
Institut Curie

Studying biological systems requires a deep chemical understanding as well as the tools to dissect complicated intricate systems on cellular and organismal levels. Recent Nobel Prizes in Chemistry were awarded for discoveries revolutionizing biology, including CRISPR in 2020 and click chemistry to visualize small molecules in cells and organisms in 2022. Over the recent years Institut Curie, which was founded by the physics and chemistry Nobel laureate Marie Curie in 1909, has built up a strong chemical biology research initiative and structure, recruiting chemists to work side by side with biologists to tackle challenging biological questions. This has led to the development of powerful tools to study biological systems, exciting new drug candidates as well as new biological discoveries that would not have been possible without chemical know-how. Novel biological discoveries from the chemical biology initiative at Curie include iron addiction of cancer stem cells and their selective targeting with anti-ferroptotic molecules leading to reduction of cancer metastases in animal models, as well as a novel copper signaling axis that drives inflammation, which can successfully be exploited to attenuate inflammation and sepsis in mice. Discoveries also include new endocytosis pathways and mechanisms and cell mechanotransduction. In addition, the initiative is integrated with the hospital with access and trials on patient samples helping the development for potential new treatments for cancer, inflammation and organ transplantation. In the near future, there are potential plans to build up an interdisciplinary chemical biology Centre at Institut Curie, housing chemists, biologists and clinicians alike, bringing these disciplines into close physical and intellectual proximity. This unique and growing research environment has the potential to revolutionize fundamental biological and medical research with new discoveries and applications in the waiting.

32

The Researchers Mental Health Observatory (ReMO): Shining light on Well-being in Academia

Simone Lackner
ReMO COST Action

Mental health issues present a significant challenge in the EU. A review across different occupational groups suggests that academics together with teachers are among the groups with the highest levels of common mental health issues, with an estimated prevalence of 37% compared to 19% in the general population. Evidence is increasing that academia is facing a mental health crisis. Some institutes have started to respond with activities addressing researchers' well-being, but there is limited evidence on what constitutes effective practice to address those challenges in academia and capacities are limited to share best practices across the European research community. There is evidence from other sectors regarding mental health in the workplace, however best practice needs to be understood in the context of the unique work environment in which researchers are operating. How can we a) characterize and improve researchers' well-being and mental health? b) measure progress and outcomes across and within this unique workforce? c) build communities of practice for shared learning?

To address this challenge, the ReMO COST Action works on three main objectives:

1. Building an Evidence Hub - a network of academics, researcher managers, practitioners, policy makers, consultants - to develop and implement a systematic evaluation of the current mental health situation in the academic sector by country, organizational and individual levels.

2. Setting up a Training and Dialogue Network - a platform for researchers, practitioners and policymakers alike - to build awareness, engage in dialogue and disseminate strategies around mental health and performance issues in academia.

3. Developing institutional policy and best practice guidelines detailing aspects around assessment, evaluation, intervention and prevention approaches to ensure lasting, impactful institutional policies.

33

Metadata is all you need! CeMM's Effective Data Management Strategy for Excellent Life Science Research Institutes

Stephan Reichl on behalf of CeMM's Data Managers
CeMM

Research has always emphasized the importance of genera5ng meaningful high-quality data. Advancements in high-throughput approaches and data analysis have further highlighted the poten5al for a single dataset to answer multiple future questions, emphasizing the need to ensure FAIR data principles.

Rapid developments in next-generation sequencing, compute-power and AI have led to an unprecedented amount of generated data and its importance in research and beyond. Without an effective data management strategy research institutes find themselves in scenarios where opportunities are missed or data is lost, unfindable, or unusable. Nevertheless, many institutes struggle to implement a data strategy.

In response to these challenges and potential, we focused on a minimal set of required metadata, easy usage not requiring technical background and automation. Furthermore, our approach is easy to share and not complicated to set up.

We developed a metadata format in form of a JSON scheme to annotate all project related data. Additionally, we created a web form hosted on our intranet to ensure correct creation and editing of metadata files, making it user-friendly and impossible to violate the JSON scheme. Finally, we implemented an automated approach to regularly index all metadata files and present them in a concise, search-, sort- and filterable browser.

Our approach successfully addresses the wide-spread obstacle of implementing an institute- wide data strategy including implicit knowledge transfer. This project shows that a user- friendly approach to metadata annotation can lead to increased findability and accessibility of valuable data, directly enabling two of the FAIR principles. By making data more easily accessible and usable, researchers are able to maximize the impact of their research, and contribute to the advancement of science.

34

GreenLabsCiBB: One path for sustainable research

Alarico, S., Afonso M., Alves A., Amaral S., Amorim R., Candeias E., Cardoso M., Cortes L., Cruz T., Duarte S.P., Faria S., Fernandes T., Ferreira A.C., Ferreira M., Girão H., Gonçalves M., Lavoura N., Léger H., Lourenço C.F., Manadas B., Marques C., Mele M., Mendes C., Miranda C., Mota S.I., Ribeiro L.F., Peça J., Pereira E., Pinto I.S., Pinto M.J., Romera L., Roxo I., Santos B., Santiago A.R., Santos D., Sebastião A.I., Simões I.
CIBB, CNC-UC, iCBR, IIIUC

The Center for Innovative Biomedicine and Biotechnology (CIBB), University of Coimbra (UC), joined in March 2022 the greenLabs Portugal Network, a member of Sustainable European Laboratories (SELs). We are committed to foster ecological sustainability transversally through the greenLabsCIBB initiative.

UC is the "most sustainable" University in Portugal and ranked 24th in the world, as per a 2022 international ranking evaluating the fulfilment of the United Nations objectives in sustainability in universities. CIBB aims to further contribute to this success by prioritizing solutions and innovative actions to support daily practices to reduce our research ecological footprint. The first step to implement this initiative was engaging researchers, students, and staff through seminars, and incorporating greenLabsCIBB in formal and informal meetings and training activities, creating a sense of community, and gathering all members around a shared goal. Researchers' motivation is being consolidated through the creation of different teams. The greenCoreTeam coordinates brainstorms and promotes new avenues to sustainable research, and the greenKeepersTeam, representing each research group, is dedicated to sustainable tasks: greenNews, greenTips, RRRplastic, and EnergySaving.

CIBB laboratories are spread across different buildings, where greenLabsCIBB aims to improve waste management procedures, energy saving, and chemical usage. We launched this program by creating "Collection Points", where the CIBB community is encouraged to deposit daily surplus materials that can be either selectively recycled (e.g., styrofoam boxes), reused, or given a second life (e.g., gel ice packs donated to the hospital´ Pharmacy or to schools and sportive clubs). To actively raise awareness among CIBB community we produced short clips on EnergySaving and Reusing/Recycling, disseminated through social media. We are currently implementing metrics to gamify our progress and quantitatively assess it over time.

greenLabsCIBB is embedded with SELs to empower a culture of sustainability that will be at the base of the research centers of the future!

35 Advocating for Change: The ways in which PhD Representatives can help shift the academic culture and environment

T. Perovic, on behalf of MDC PhD Representatives
MDC

The PhD Representatives (PhD Reps) at the Max Delbrueck Center act as a political buffer. Often one of the first contact points for PhD researchers, we collect and consolidate the social and scientific interests of our peers. We work to bring forward these interests to the attention of our Graduate Office and the Directorate and find impactful solutions together.

In the past years, the PhD Reps have worked towards increasing the quality of life of PhDs at our institute in manifold ways: increasing the starting salary contract (from 50% to 65%), encouraging the institute to hire a psychosocial counselor for the rising mental health needs of PhDs, helping the implementation of anti-harassment guidelines and spearheading efforts to change the research culture towards the creation of a supportive, more socially intelligent and inclusive environment. PhD representatives have taken regular part in discussions around mental health, response to the pandemic, equality/diversity/inclusion (EDI) and work-life balance at multiple levels of institutional hierarchy.

At this year's EU-life conference, the MDC PhD Reps would like to showcase our achievements and future ideas towards changing the ever-challenging academic culture and environment towards more emotionally and intellectually sustainable futures. Furthermore, this conference will be a rare opportunity for the PhD representatives to accomplish an incredibly important task of identifying overarching problems among different academic structures, and generating common solutions, as part of the strive for an academic change. We look forward to an intense exchange of ideas, tactics and shapeshifting policies that can be implemented to better the lives of PhD students.

36 Snoopy - the mediation dog at Institut Curie: a team work

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Created by Marie Curie, Institut Curie is a French foundation recognized as being of public utility. Its ambition is centred around 3 missions: research, care, conservation and transmission of knowledge. Institut Curie is a major player in research and the fight against cancer and consists of a Hospital Group (HG) and a Research Center (RC) with more than 3,700 employees. At the initiative of the Wound and Care Research Unit (URPC) of the HG, a new four-legged collaborator named Snoopy has joined the Institute in December 2022. He was taken from the association for the protection of animals.

Integrating a mediation dog into Institut Curie initially had two objectives:

1. To provide the project team and all Institut Curie staff, who so wish, with a happy and friendly presence, in order to lighten the burden of busy days in terms of both work density and emotional load.
2. To intervene on request with patients for whom the presence of a dog could be beneficial.

But Snoopy's presence also allows to put in contact employees who would not have had the opportunity to meet and exchange with each other without it. Bonds are naturally created, employees want to meet Snoopy and volunteer to help with the walk. The URPC works across the HG, so that it can intervene in all departments as soon as necessary, and Snoopy's arrival has given a new vision of this transversality within the Institute. The walls between professions and services, both at the RC and the HG have been broken and have paven the way for new encounters, exchanges and human compassion, thanks to the beautiful presence of a furry companion.

As Lancet accompanied his mistress Marie Curie, 140 years ago, it is now the time for Snoopy to find his place in the Curie family.

37 Is a common European career framework for all professions within the research & innovation ecosystem urgently needed?

Cristina Oliveira, Ana Petronilho, Margarida Trindade
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Human Resources are vital for the functioning of the Research & Innovation (R&I) ecosystem. While Researchers engage in the creation of knowledge1, Research Managers add value to R&D acting upstream, during or downstream scientific research, but not specifically missioned to perform R&D. In addition to Research Managers and Administrators3 or simply Research Managers, the term Professionals at the Interface of Science4 was coined to name these professionals.

Under ERA Policy Agenda Action 45, the EC is drafting a proposal for a new European framework for Research Careers, including full recognition of the profession, equal esteem and reward for different career paths, full interoperability and comparability of research careers across Member States, institutions and sectors. All researchers, regardless of status or sector of employment, should be framed in R1-R4 profiles: R1-First Stage; R2-Recognised; R3-Established; and R4-Leading Researcher6. Now widely used, the profiles were introduced in 20117.

A similar system can be envisaged to Research Managers and Administrators, with great advantages. Of the existing Research Managers career frameworks in Europe8,9,10,11,ARMA's Professional Development Framework for Research Managers and Administrators9 is the most comprehensive and includes 21 functions grouped under 7 broader headings (e.g. Developing Proposals, Postgraduate Researchers, Policy and Governance…). Each function is described from 3 different perspectives – Operational, Management and Leadership, which could easily be converted into R1-R4 levels (R1-First Stage; R2-Recognised; R3-Established; R4-Leading Research Manager), improving recognition and interoperability of research related professions.

Given the most pressing driver for the creation of career frameworks is to facilitate career interoperability across employers, countries or sectors, the creation of a common European career framework for all professions within the R&I ecosystem would facilitate interoperability between careers promoting even further career diversification, and career development across the R&I ecosystem. This poster discusses advantages/implications of a common career framework within the R&I ecosystem.

38 The green and technological research center of the future

Yann Dublanche
CRG

We need to preserve the planet; thus, we need to change the way we do things. However, science does not need to be compromised.

Our proposal is based on technological improvements, many of them already available, which will offer more sustainable ways to interact and work with the research community both locally and around the globe.

Spaces at the Institute will be dynamic, and based on electronic walls. Internally, they will be adjustable to the kind of activity being performed: one day as a dry lab and the next as a wet lab or even as an office!. With automatic installation of equipment as necessary. Externally, the walls will be a tool to interact with society, from scientific information up to interactive scientific video games.

Events and meetings will be based on hybrid technology and virtual reality. Giving the possibility for collaboration with other research centers and usage of scientific equipment remotely all over the world in a sustainable way.

As the personal interactions are very important to enhance collaborations and relationships in science, we envision virtual social activities mixed with real content provided to every participant. Reducing the number of flights of the scientific community, will directly reduce the production of CO_2 sent to the atmosphere and increase the budget that can be dedicated to experiments and research activities.

39

Envisioning the future European Competence Centre for Science Communication

Joanna Magalhaes / Science for Change

There has never been a more significant moment to ensure the effectiveness of and best practices for science communication (scicomm). Responses to the recent COVID-19 pandemic, the climate emergency, misinformation in and about science and more, show a world that - despite ever increasing verifiable knowledge and its access - remains at such a distance from scientific practice and understanding. This is undermining policy responses and amplifying distrust and concern among citizens.

In order to decrease the distance between science and society, COALESCE project will build upon the legacy of the Horizon 2020 SwafS-19 projects and others, to develop, consolidate and mainstream generated knowledge and connections on science communication to establish the European Competence Centre for Science Communication.

It will operate through a centralized virtual platform based on an interdisciplinary approach, pivoting on co-creation and co-design methodologies, building on cooperative relationships with quadruple helix stakeholders, academic scientists, science communication professionals, generalist and science journalists networks, as well as university alliances.

COALESCE will further demonstrate the means for rapid mobilization of science communication in times of crisis whilst fighting misinformation and engendering trust in science, ensuring the effectiveness of and best practices for science communication through a collaborative effort.

Supporting all of this will be an accessible library of critical resources, toolkits, handbooks and training opportunities to R&I actors across the ERA, through the COALESCE SciComm Academy.

To achieve a sustainable strategy and long-term impact of the Centre, the project will operate in relation to international, national, regional and local hubs that will be established in the EU27, the UK and Ukraine, to gather and co-create new knowledge and make it meaningful to relevant actors in each country, adapted to specific contexts, whilst promoting mutual learning, training, and exchange.

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Lab in a Box: Fostering Critical Thinking and Scientific Curiosity in Science Education

Maria João Verdasca, António Gomes da Costa
Gulbenkian Collaborative Centre

Lab in a Box, an educational project of the Gulbenkian Collaborative Centre, develops critical thinking and scientific curiosity through active participation and transformative changes in science teaching. Here we highlight the main features and benefits of the Lab in a Box project.

Lab in a Box provides a comprehensive experimental kit and accredited teacher training, enabling teachers to conduct hands-on experiments aligned with the curriculum and explore current scientific issues. Regular development of new protocols, co-creation of activities with teachers and students, and free online resources for various educational levels enhance the project's impact.

The project creates a community of teachers engaged in experimental approaches, encouraging innovation in science teaching practices and integrating regular experimental strategies in the classroom. This fosters critical thinking among both teachers and students, nurturing a culture of curiosity and exploration.

Lab in a Box goes beyond traditional learning environments by reaching new audiences through lifelong learning approaches. Targeting adult learners and community groups, the project expands its impact and promotes a broader understanding of the relevance of experimental sciences in daily life.

In brief, Lab in a Box empowers teachers and students, fostering critical thinking and scientific curiosity. The project brings about essential changes in science teaching practices through comprehensive resources, teacher training, and collaboration and cultivates a community of lifelong learners engaged in experimental sciences. Lab in a Box serves as a catalyst for innovation in science education, equipping individuals with the skills to tackle future scientific challenges.

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