



Encounters



EMBO at 60

Fiona Watt looks at the past, present and future of EMBO in its sixtieth anniversary year

Stipends for science journalists

Launch of the Maria Leptin | EMBO Science Journalism Fellowships

EMBO Lab Sustainability Award

Recognizing pioneers of environmental sustainability in life science research



The magazine of EMBO

#48

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Welcome to Encounters #48

Editorial from the EMBO Director



I am delighted to welcome you to this anniversary issue of the Encounters magazine. In 2024, EMBO is celebrating 60 years of excellence in life sciences. Therefore, we are not only looking back over the past year, but also reflecting on the six decades of continuous development that have shaped the organization that EMBO is today.

The past achievements and current activities of EMBO have been made possible thanks to the ongoing funding of EMBO Programmes by EMBC, an intergovernmental organization of 31 countries. EMBC is celebrating its fifty-fifth anniversary in 2024 and has recently welcomed Latvia as its newest member state ([page 13](#)).

In this anniversary issue of Encounters, I reflect on the past, the present and the bright future of EMBO ([pages 18–19](#)). We also highlight two schemes launched in 2024: the Maria Leptin | EMBO Science Journalism Fellowships ([page 17](#)) and the EMBO Lab Sustainability Award ([pages 24–25](#)). These initiatives address the contemporary challenges of communicating research to the public and the environmental impact of life science research.

In an interview, historian Francesco Cassata considers the history of EMBO from an external perspective, and shares his insights into science diplomacy in Europe and the development of molecular biology as a distinct field ([pages 4–5](#)). The history timeline we include tells the story of the development of EMBO, its achievements and its impact over 60 years ([pages 4–25](#)).

We also provide our regular report on news from members of the EMBO communities. It features some of your exciting stories, including one that explores a historical connection to EMBO, as well as books, awards and publications ([pages 26–34](#)).

I hope you will enjoy this anniversary issue of Encounters. We will continue to inform you about the latest news from EMBO over the coming year and look forward to any feedback you may have.

Fiona M. Watt
Director, EMBO

From EMBO to ERC

A historian's perspective on establishing molecular biology as a field and science diplomacy in Europe

Interview conducted by Astrid Gall

Francesco Cassata is a Professor of Contemporary History at the University of Genoa, Italy. From 2022 to 2025, he is working on the early history of EMBO, EMBC and EMBL as a Fellow in Residence at the Accademia Nazionale dei Lincei - Centro Linceo "B. Segre" in Rome.

How have you become interested in the history of EMBO?

I started from the establishment of the International Laboratory of Genetics and Biophysics in Naples by Adriano Buzzati-Traverso, who was also one of the founders of EMBO. I discovered that the EMBO history was more complex than I expected. It was not just a British story; it was a European story. It was also important for me to explore biology as a form of European integration on the political level.

Why were both the scientific and political levels important for establishing molecular biology in Europe?

The creation of an intergovernmental structure was considered a crucial means to secure international and political legitimacy for molecular biology at the European level, to ensure the survival of EMBO itself

and to establish it as the representative of the field in Europe. The value of molecular biology for understanding life was still unclear and challenged by traditional disciplines of biology. In contrast, the role of high-energy physics, the focus of the European Organization for Nuclear Research (CERN), was unquestionable among physical scientists.

Where has the analogy with CERN worked?

CERN was an important reference for the first steps of EMBO. It was a symbolic, diplomatic and political resource to be exploited. It provided facilities and technical support for EMBO and EMBC meetings before the establishment of the Heidelberg



The meeting at CERN

1962

The meeting in Ravello

1963



The agreement establishing the European Molecular Biology Conference (EMBC) was signed at CERN, Geneva, on 13 February 1969.

offices. It was also a source of acronyms. In official documentation, EMBC (the European Molecular Biology Conference) was long called CEBM (Conférence Européenne de Biologie Moléculaire), and EMBL was called CERB (Conseil Européen de la Recherche Biologique).

EMBO registered as a non-profit organization

1964



Where has it not worked?

The analogy emphasizes the connection between big equipment and an intergovernmental laboratory as the only institutional framework for international cooperation in science and technology. But the institutional architecture of molecular biology in Europe was not just a mere replica of CERN. It was an original three-dimensional model: a scientific organization (EMBO) made proposals to an intergovernmental organization (EMBC) funding its activities, and the laboratory (EMBL).

What have EMBO/EMBC meant for the establishment of the European Research Council (ERC)?

Three organizations, EMBO, EMBL and the Federation of European Biochemical Societies (FEBS), were fundamental for the discussion and creation of the ERC. It was an institutional collaboration, and part of a personal relationship between three figures at the time: Frank Gannon, Executive Director of EMBO; Fotis Kafatos, Director of EMBL, who became President of ERC; and Julio Celis, President of EMBC and FEBS. The organizations were crucial for establishing the *European Life Sciences Forum* in 2000 and the *Initiative for Science in Europe* in 2004, two arenas in which the ERC took shape.

Did you come across anything surprising in the history of EMBO?

It was amazing to explore the importance of language and translation in science diplomacy. The signing of the EMBC Agreement was delayed by the request from West Germany to include German as the third official language. When this was raised, Italy and Greece asked for their own languages to be recognized as official languages. It took several months to find a compromise. I quote a letter from an exhausted Max Perutz, Chairman of the EMBO Council: "International agreement is a difficult business even when all the interested parties are agreed on what they want to do!".



Francesco Cassata (2024): *A 'heavy hammer to crack a small nut'? The creation of the European Molecular Biology Conference (EMBC), 1963–1970.* *Annals of Science*, DOI: [10.1080/00033790.2024.2351511](https://doi.org/10.1080/00033790.2024.2351511)

Raymond Appleyard appointed first Executive Secretary

1965

Navigating change and fostering excellence

A recent survey offers insights into the evolution and impact of the EMBO Fellowship Programme

By Giorgia Guglielmi

Thousands of early-career researchers have benefited from the EMBO Fellowship Programme, which since its establishment in 1966 has given life scientists the opportunity to carry out their research projects abroad for up to two years. Over time, the programme has risen as the EMBO flagship initiative, largely fulfilling its mission of supporting talented researchers in Europe and beyond.

The results of a recent survey that collected feedback from more than 3,500 life scientists testify to the success of the EMBO Fellowship Programme. Current and former EMBO Fellows, along with their supervisors, agree on the programme's value in contributing to scientific advancement, the survey revealed. What's more, recent improvements to the programme have led to a more equitable distribution of fellow-

ships, further affirming the EMBO commitment to fostering research excellence.

Changing with the times

EMBO Postdoctoral Fellowships offer the opportunity to conduct research projects in laboratories worldwide to applicants from member states of EMBC, the intergovernmental organization that provides most of the funding for EMBO Programmes and activities. The fellowships are also available to applicants from non-EMBC Member States who seek postdoctoral training within an EMBC Member State.

The fellowships are granted to candidates who have demonstrated their potential to advance scientific knowledge through their doctoral research and publications in peer-reviewed journals. The evaluation process also considers the quality of the host laboratories and institutes to ensure that awardees receive top-notch training opportunities.



Support secured from the
Volkswagen Foundation

First fellowships awarded:
21 short and nine long term

+ Germany
+ Sweden
+ Switzerland

1966

1969



Several recent changes to the EMBO Fellowship Programme have led to increased fellowship opportunities for applicants across the globe. For example, the programme now accepts preprints with public in-depth peer reviews as equivalent to peer-reviewed publications, broadening eligibility criteria. And in 2020, EMBO introduced a contract system within EMBC Member States, whereby EMBO Fellows receive their salary directly from the host institution. The transition from stipends to contracts has improved social security for fellows.

EMBO has also been proactive in addressing the challenges posed by unforeseen circumstances. During the early stages of the COVID pandemic, EMBO was one of the first organizations to offer extensions to postdoctoral fellows to mitigate the impact of disrupted research activities.

Helping researchers to thrive

Since its inception, the EMBO Fellowship Programme has sought feedback from the life sciences community. The most recent survey, which took place in 2021 and 2022, gathered insights from 634 current or former EMBO Postdoctoral Fellows, revealing the programme's global reach and the impact of the fellowships on career trajectories.

The main reasons for junior researchers to apply for an EMBO Fellowship include the programme's reputation, the opportunities for career progression and the availability of appropriate funding, the survey revealed. Networking, soft skills training and mentorship opportunities were reported as additional factors for applying.

The survey also delved into the professional journey of current and former EMBO Fellows, revealing that nearly all respondents work in science-related fields—with the majority currently holding positions as postdoctoral researchers and 37% having advanced to assistant/associate professors or full professors.

These findings underscore the programme's ongoing success in nurturing excellence in the life sciences while creating an environment that allows fellows to thrive.

+ Austria
+ Belgium (observer)
+ Denmark
+ France
+ Israel
+ The Netherlands
+ Norway
+ Spain
+ United Kingdom

+ Greece
+ Italy

1970

1972

Scientific exchange and training since 1966

The EMBO Courses & Workshops Programme has consistently supported life scientists and evolved with changing times

By Astrid Gall



EMBO Courses & Workshops have had a profound impact on tens of thousands of life scientists, especially early career researchers. The programme provides opportunities for exchanges about the latest developments in the life sciences and training in new techniques, equipping researchers in Europe and beyond with knowledge and skills essential for their careers. Established in 1966 with a first workshop and three courses, the EMBO Courses & Workshops Programme has grown significantly since then. In recent years, it has funded more than 80 meetings with more than 12,000 participants each year.



The EMBO Courses & Workshops Programme supports scientific interactions and training on an amazing breadth of topics across the molecular, cellular, organ, organismal and population scales. It is a privilege to support such a diverse community and participate in the development of early career researchers.

Nicolas Tapon, Chair of the EMBO Course Committee



© The Francis Crick Institute/Dave Guttridge

John Tooze appointed
Executive Secretary

1973

+ Ireland

1974



The generous support we have received from EMBO has allowed us to offer two courses, Small brains, big ideas, an EMBO Global Lecture Course, and Developmental Biology, an EMBO Practical Course, and to cover all costs for students and participating faculty. Both courses have been offered every two years since 2010 and have trained approximately 150 students from all over Latin America.

John Ewer, course organizer and professor at Universidad de Valparaiso, Chile

Several unique features make the EMBO Courses & Workshops Programme stand out. Its bottom-up approach—courses and workshops organized by scientists for scientists—meets the evolving needs of the community. It also aims to enhance scientific progress rather than profit, provides funding for practical training and has broad eligibility criteria. Organizers can be of any nationality and based in any country, but the meeting must take place in an EMBC Member State or Associate Member State, in countries and territories covered by a cooperation agreement, or in countries eligible for support by EMBO and The Company of Biologists.

Over the decades, changes to the programme have widened access. As more member states and cooperation partners joined EMBC and EMBO, courses and workshops became available in more locations.

Ewer notes that there are no similar courses in Latin America, so students would otherwise have to apply to courses in the US or Europe, which are difficult to get into and expensive. Further initiatives to improve access are childcare grants, travel grants, accessibility grants and registration fee waivers.

Partnerships have played a crucial role in the success and widened reach of the programme. The Federation of European Biochemical Societies (FEBS), a co-sponsor since 1966, co-funds lecture courses today; The Company of Biologists co-funds workshops, practical and lecture courses in Brazil, Canada, China, Japan, Mexico and South Korea; and the DBT/Wellcome India Alliance is a partner for lecture courses in India.

The EMBO Courses & Workshops Programme has supported the life sciences community by fostering interactions and providing training that meets the evolving needs. With its flexible approach it will remain a cornerstone of exchange and training in the life sciences for years to come.

embo.org/conferences-training

Statement on recombinant
DNA technology published

1976

+ Finland

1977

Competencies for career success

PhD students from labs of the EMBO Young Investigator Network complete training

By Helen Sitar



An intensive training course for PhD students of members of the EMBO Young Investigator Network took place from 17 to 28 March. The course offered opportunities to strengthen personal and professional competencies critical to career success. Focus was placed on communicating science to different target audiences. Participants practised writing abstracts, giving presentations, creating posters and drafting grant proposals. The interpersonal communication training, based on the curriculum of the EMBO Lab Leadership Course, dealt with resolving interpersonal conflicts and providing constructive feedback.

Sreesa Sreedharan, PhD student in the lab of EMBO Global Investigator Sunil Laxman, is currently completing the final year of her PhD. For her, the *Night Science* workshop, which focused on creative approaches to scientific questions, was particularly impactful. “This session changed my perspective of the scientific process. It was about how people come up with new ideas or new scientific questions. It was eye-opening. We have a new recipe for how to break down the process of scientific thinking,” she said.

The 40 participants travelled to the EMBL campus in Heidelberg from all over Europe and from as far away as India, Singapore, Taiwan and Chile for the first week of training. The second week took place online and covered scientific integrity, peer review of manuscripts and applying design principles to figures. Special sessions were dedicated to mental health and gender in academia. Scientific talks and career talks provided insights into the breadth of career options in academic and non-academic environments.



+ Iceland

1978

The EMBO Journal
launched

1982

© EMBL Photolab/Massimo Del Prete



EMBO Gold Medal awarded to Elvan Böke

Recognition for her pioneering research on mechanisms that enable oocytes to stay healthy over decades of dormancy

By Tilmann Kiessling

EMBO awarded the EMBO Gold Medal 2024 to Elvan Böke, group leader at the Centre for Genomic Regulation (CRG) in Barcelona, Spain. The award recognizes researchers under the age of 40 for outstanding contributions to the life sciences in Europe. The awardee receives a gold medal and a bursary of 10,000 euros.

Early-stage oocytes are exposed to biological and environmental factors for decades, which can make them susceptible to cumulative damage. At the same time, the growth phases associated with oocyte maturation could cause defects due to exposure to harmful substances or lifestyle factors.¹

“Elvan Böke’s work has yielded ground-breaking insights into a key mechanism used by oocytes to reduce free radical damage,” said Anthony Hyman, EMBO Member and director at the Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany. “She has built a unique research direction in the few years of her independence as a researcher.”

Elvan Böke was an undergraduate student at Middle East Technical University, Ankara, Türkiye, and a graduate student at Cancer Research UK Manchester Institute, UK, before becoming a postdoctoral researcher at Harvard Medical School, Boston,

USA. Since 2017, she has been leading a group in the quantitative cell biology programme at the CRG. She is also an EMBO Young Investigator.

She will give an award lecture at Cell Bio 2024, the ASCB | EMBO meeting taking place in San Diego, USA, from 14 to 18 December 2024.

1. [crg.eu/en/news/when-do-oocytes-begin-experience-effects-age](https://www.crg.eu/en/news/when-do-oocytes-begin-experience-effects-age) (retrieved 19 June 2024)

EMBO Gold Medal launched

1986

+ Hungary

1992

EMBO | Türkiye: Connecting life scientists

An event promoting scientific networking

By Tilmann Kiessling

In June, the Pera Museum in Istanbul hosted the *EMBO | Türkiye: Connecting life scientists* event, which brought together researchers from Türkiye and various European countries to foster collaboration and knowledge exchange. The event aimed to support life scientists in Türkiye and Europe, connect researchers across scientific fields, and promote networking as well as an interdisciplinary approach to life sciences. It provided detailed information about the EMBO Programmes that support life scientists in Türkiye and across Europe. Additionally, the event featured research accomplishments of Turkish scientists from the EMBO communities and highlighted their contributions to the global scientific community.

The EMBO communities in Türkiye are growing: seven scientists working in Türkiye are EMBO Members, 33 have received Installation Grants since the launch of the scheme, and one is an EMBO Young Investigator. Two EMBO Courses & Workshops have been conducted in Türkiye in recent years, more than 800 researchers from Türkiye attended EMBO events throughout Europe over the last five years and more than 30 EMBO Scientific Exchange Grants supported Turkish life scientists during their research stays abroad.

The event was organized by Canan Atilgan from Sabanci University, Özlem Keskin-Ozkaya and Elif Nur Firat-Karalar from Koç University, Mehmet Somel from Middle East Technical University and the EMBO Fellowship Programme. A total of 160 participants attended, including life scientists from several European countries. Speakers included Hasan Mandal, President of TÜBİTAK, members of the EMBO Fellowship Committee, further Turkish EMBO Members, Young Investigators and Installation Grantees.



Frank Gannon appointed
Executive Director
+ Czech Republic
+ Portugal

Türkiye

1993

1994

Latvia joins EMBC

The country becomes the 31st member state following approval of the accession agreement

By Adam Gristwood

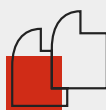
Latvia has joined the intergovernmental funding body of EMBO, the European Molecular Biology Conference (EMBC). Latvia is the 31st country to join EMBC as a member state, enabling scientists in the country to benefit from the full suite of EMBO Programmes and strengthening the life science community in Europe and beyond.

Latvia's accession as an EMBC Member State, concluded on 17 November 2023, was agreed unanimously by the EMBC following presentations from representatives of the Ministry of Education and Science of Latvia and the Latvian Biomedical Research and Study Centre. The preceding step to the accession was an approval procedure in the Cabinet of Ministers in Latvia, which was completed on 17 October.

"Latvia's membership of EMBC marks a significant milestone in our commitment to advancing scientific research and innovation," said Jānis Paiders, Director of the Department of Higher Education, Science and Innovation at the Ministry of Education and Science of Latvia.

Major life science centres in Latvia include the Latvian Biomedical Research and Study Centre, the University of Latvia, Rīga Stradiņš University, the Latvian Institute of Organic Synthesis, the Latvia University of Life Sciences and Technologies, and the University of Daugavpils, amongst others in both the public and private sectors. Latvia has three university hospitals active in various fields of translational research.

Life scientists working in Latvia can now apply to EMBO Programmes, including postdoctoral fellowships, scientific exchange grants, courses and workshops, and the EMBO Young Investigator Programme.



Broadening the EMBC community to include Latvia benefits biology and biomedical research across Europe.



Leszek Kaczmarek, EMBC President

EMBO Lectures launched
EMBO Members' Meeting established

1996

+ Slovenia

1997

New EMBO Members 2024

As EMBO marks its sixtieth anniversary, 120 outstanding scientists are elected to the EMBO Membership

By Adam Gristwood

120 scientists from across Europe and beyond have been elected to the EMBO Membership, an honour that celebrates research excellence and outstanding achievements in the life sciences.

The new EMBO Members and Associate Members have been recognized for accomplishments that cover the spectrum of life science research, including work that has advanced understanding of how infectious disease spreads, the in-

tricacies of ocean nutrient cycles, the mysteries of cellular signalling networks, the secrets of how plants survive in desert environments, and the links between the biology of our brains and our emotions.

To celebrate the sixtieth anniversary of EMBO, EMBO Council invited the EMBO Membership to elect 100 new EMBO Members and 20 EMBO Associate Members this year. The newly elected members and associate members reside in 37 countries/

territories. 49 of the 120 new members and associate members are women (41%), and 71 are men (59%).

The first EMBO Members were elected in 1964. That initial group of 169 life scientists has now grown into a community of more than 2,100 EMBO Members and Associate Members. 92 Nobel laureates are amongst those who have previously been elected to the EMBO Membership.



Elected to the EMBO Membership in 2024 are:



>37
countries/territories



100
EMBO Members
+
20
EMBO Associate Members



EMBO Members

David J. Adams
Asaph Aharoni
Ariel Amir
Pavel V. Baranov
Wendy S. Barclay
Allison J. Bardin
Eduard Batlle
Oded Béjà
Pedro Beltrao
Oliver Billker
Valérie Borde
Joshua M. Brickman
Silvia Bulgheresi
Megan R. Carey
Susana M. Coelho
Lucia Colombo
Alessandro Costa
Vincenzo Costanzo
László Csanády
George Davey Smith
Christos Delidakis
Ádám Dénes
Stefan Diez
Guillaume Duménil
Myrielle Dupont-Rouzeyrol
Arnaud Echard
Maria Falkenberg
Elif Nur Firat-Karalar
Uri Frank
Jonathan Gershenson
René Geurts
Angela Giangrande
Sebastian Glatt
Nadine Gogolla
Nick Goldman
Inbal Goshen
Nir S. Gov
Ita Gruic-Sovulj
Ilona C. Grunwald Kadow
Georg Halder
Olivier Hamant
Ricardo Henriques
Martin W. Hetzer
Susan P. Holmes
Martin Howard
Juha Huiskonen
Denis Jabaudon
Martin Jínek
Marko Kaksonen
Ewelina Knapska

Lumir Krejci
Nick Lane
Claudia Langenberg
Zdeněk Lánský
Tuuli Lappalainen
Melissa H. Little
Ingrid Lohmann
Sally Lowell
Wenbo Ma
Ivan Matic
Zoltán Molnár
Anna Moroni
László G. Nagy
Kathy K. Niakan
Mats Nilsson
Ruth Nussinov
Snezhana Oliferenko
Rui F. Oliveira
Isabel M Palacios
Philippe Pasero
Silvia Pastoreková
Nenad Pavin
Arturas Petronis
Corné M.J. Pieterse
Benjamin Podbilewicz
Gabriele Procaccini
Britta Qualmann
Emma L. Rawlins
Jochen C. Rink
Asya Rolls
Owen J. Sansom
Mikhail M. Savitski
Paola Scaffidi
Mónica M. Sousa
Maria Grazia Spillantini
Tanja Stadler
Ulrich Technau
Aleksandra Trifunovic
Leoš Shivaya Valášek
Jacco van Rheenen
Teva Vernoux
John Vontas
Steven West
Jonathan R. Whitlock
Joachim Wittbrodt
Emre Yaksi
Karina Yaniv
Leonie S. Young
Peijun Zhang
Alena Ziková

EMBO Associate Members

Karen Adelman
Dominique C. Bergmann
Helen M. Blau
Miguel L. Concha
Rodrigo A. Gutiérrez
Luis Herrera-Estrella
Oliver Hobert
Erika L.F. Holzbaur
Gou Young Koh
Rong Li
James C. Liao
Tak Wah Mak
Moustapha Mbow
Hozumi Motohashi
Zihe Rao
Aviv Regev
Shubha Tole
Pablo Wappner
Zhenbiao Yang
Alpha S. Yap

EMBO Reports launched
EMBO Young Investigator
Programme launched

Permanent offices
established in Heidelberg

2000

2001

Artificial Intelligence in the life sciences

EMBO hosts a workshop on landscapes, limits, opportunities and concerns

By Astrid Gall

The production of synthetic but realistic data by generative Artificial Intelligence (AI) methods has made extraordinary progress in recent years, and applications of generative models in biomedical research are numerous. On 8–9 February, 22 key stakeholders, including biologists, AI developers, funders, experts in the governance of emerging technologies and publishers, met at EMBO in Heidelberg, Germany, for a workshop on generative AI and foundation models in the life sciences.

While the extent of the capabilities of generative AI is not yet fully understood, it is already clear that the potential for accelerating scientific discovery is considerable. At the same time, the capabilities are raising concerns about potential misuse, including production of erroneous data or misleading results, development of biological agents of concern and loss of human oversight.

The aims of the workshop included mapping areas of the life sciences where AI is used, highlighting opportunities, exploring current limits and potential consequences of overcoming them, and identifying potential risks and concerns.

The workshop was organized by Thomas Lemberger, head of Open Science Implementation, and Sandra Bendiscioli, senior policy officer, at EMBO; Filippa Lentzos, associate professor in science & international security at King's College London; and Oliver Stegle, head of the computational genomics and systems genetics division at the German Cancer Research Center and visiting group leader at EMBL Heidelberg.



A recent editorial covered generative AI in scientific publishing: Thomas Lemberger (2024): *AI to publish knowledge: a tectonic shift* EMBO Reports 25:1687-1689. DOI: [10.1038/s44319-024-00119-4](https://doi.org/10.1038/s44319-024-00119-4)



Molecular Systems Biology launched
EMBO Laboratory Management
Courses launched

Installation Grants launched
+ Estonia

2005

2006

Stipends for science journalists

The Maria Leptin | EMBO Science Journalism Fellowships support science journalists and life scientists entering careers as science journalists

By Tilmann Kiessling

© EMBL Photolab/Massimo Del Prete



© Austin Distel on Unsplash

In March 2024, EMBO launched the Maria Leptin | EMBO Science Journalism Fellowship scheme supporting science journalists across Europe. The fellowships are intended for life scientists who wish to pursue a career in science journalism and journalists who wish to deepen and broaden their knowledge of the latest research fields and technologies.

“Science journalism plays a key role at the interface between scientists and the public,” says Fiona Watt, Director of EMBO. “The Maria Leptin | EMBO Science Journalism Fellowship scheme aims to promote high-quality, evidence-based science journalism in the life sciences.”

Fellows will receive stipends for a duration of three to twelve months to fund stays in media outlets of any type, editorial offices or research institutions of their choice to help advance their careers.

Applicants must reside in one of the 31 EMBC Member States. Scientists can apply for opportunities to gain journalism experience, and journalists can apply for funds to be embedded in research institutions. There is no age restriction for applicants. Applications can be submitted throughout the year, with three selection rounds per year.

The scheme was made possible by a generous donation from Maria Leptin, former Director of EMBO.

Hermann Bujard appointed Director
+ Belgium (ratification)
+ Luxembourg
+ Slovakia

2007

FEBS | EMBO Women in Science
Award launched
EMBO Molecular Medicine
launched

2008

EMBO at 60



The future of life sciences looks bright

By Fiona Watt

Celebrating 60 years of EMBO, and of excellence in the life sciences, is a great opportunity to reflect on achievements and look forward to what the future holds.

EMBO was founded in 1964, driven by the vision of eminent scientists to establish the first European organization representing molecular biology. In the following years, they obtained financial support from their national governments. This led to the establishment of the EMBC, the intergovernmental organization that has 31 member states today and currently funds the major EMBO Programmes.

As an EMBO Member since 1999 and EMBO Director since 2022, I've seen the EMBO Membership grow to more than 2,100 leading life scientists and thousands of postdoctoral fellows being funded. I've witnessed the immense impact of our networks, courses and workshops, and EMBO Press publications on scientific exchange. I've observed how EMBO fosters a research environment in which scientists can thrive.

An organization the size of EMBO can be agile and flexible. We are not afraid of exploring diverse ideas and starting "experiments", such as new funding schemes, training activities or Open Science initiatives. EMBO identifies challenges through constant communication with members of the EMBO community, whether they are EMBO Members or Scientific Exchange Grantees, and strives to respond quickly.

To address two contemporary challenges—environmentally sustainable life sciences research and communication of research outcomes to the public—EMBO has launched two initiatives in its sixtieth anniversary year: the EMBO Lab Sustainability Award and the Maria Leptin | EMBO Science Journalism Fellowships. We are also hosting discussions about Artificial Intelligence (AI) in the life sciences with key stakeholders.

Many parts of the world are currently experiencing political and financial instability. During this turbulent time, EMBO holds firm to its mission to promote excellence in life sciences in Europe and beyond. It supports life scientists and scientific exchange regardless of nationalities.

Looking ahead, I hope that the EMBO community will continue to diversify, reflecting the ongoing changes in the world. We will also need to ensure that trust in science is maintained despite the challenges ahead.



Watch the anniversary movie:
youtube.com/@EMBOcomm

The EMBO Meeting launched

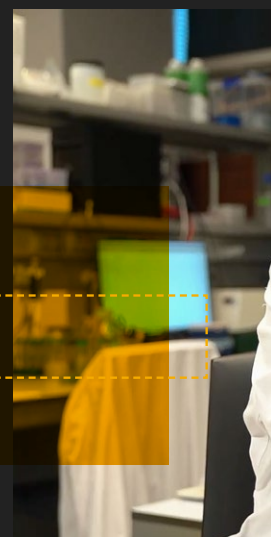
Transparent Peer Review
introduced by EMBO scientific
publishing

Maria Leptin appointed Director

Publication of source data
introduced by EMBO scientific
publishing

2009

2010





EMBO is a wonderful organization, and I feel honoured to lead it. EMBO is 60 years young, and its future looks as exciting and full of promise as it did back in 1964.



EMBO Science Policy Programme
launched
+ Singapore
(cooperation agreement)

2011

+ NTSC of Taiwan
(cooperation agreement)

2012

The cost of scientific publishing

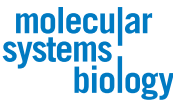
Transparent finances of the EMBO Press journals

By Astrid Gall

For the fourth time after 2019, 2021 and 2022, EMBO made the finances of its scientific publications public to provide transparency about the cost and the revenue from publishing the high-quality, selective journals The EMBO Journal, EMBO Reports, Molecular Systems Biology and EMBO Molecular Medicine. A fifth journal, Life Science Alliance, published in partnership with Rockefeller University Press and Cold Spring Harbor Press, is not included in this chart providing an overview of the cost and revenue structure of the four journals.

EMBO Press generated a total revenue of 5.92 million euros in 2023, mainly from subscriptions (2.78 million euros) and article processing charges (2.34 million euros). The total costs were 4.62 million euros. These consisted of office costs (2.54 million euros), mainly representing staff salaries, benefits and insurance, as well as costs for outsourced publishing services and digital platforms (2.08 million euros).

The surplus of 1.29 million euros is entirely reinvested into activities supporting life scientists, namely the EMBO Programmes and publishing innovations, e.g., Review Commons or the Open Science platforms SourceData, SDash and Early Evidence Base.



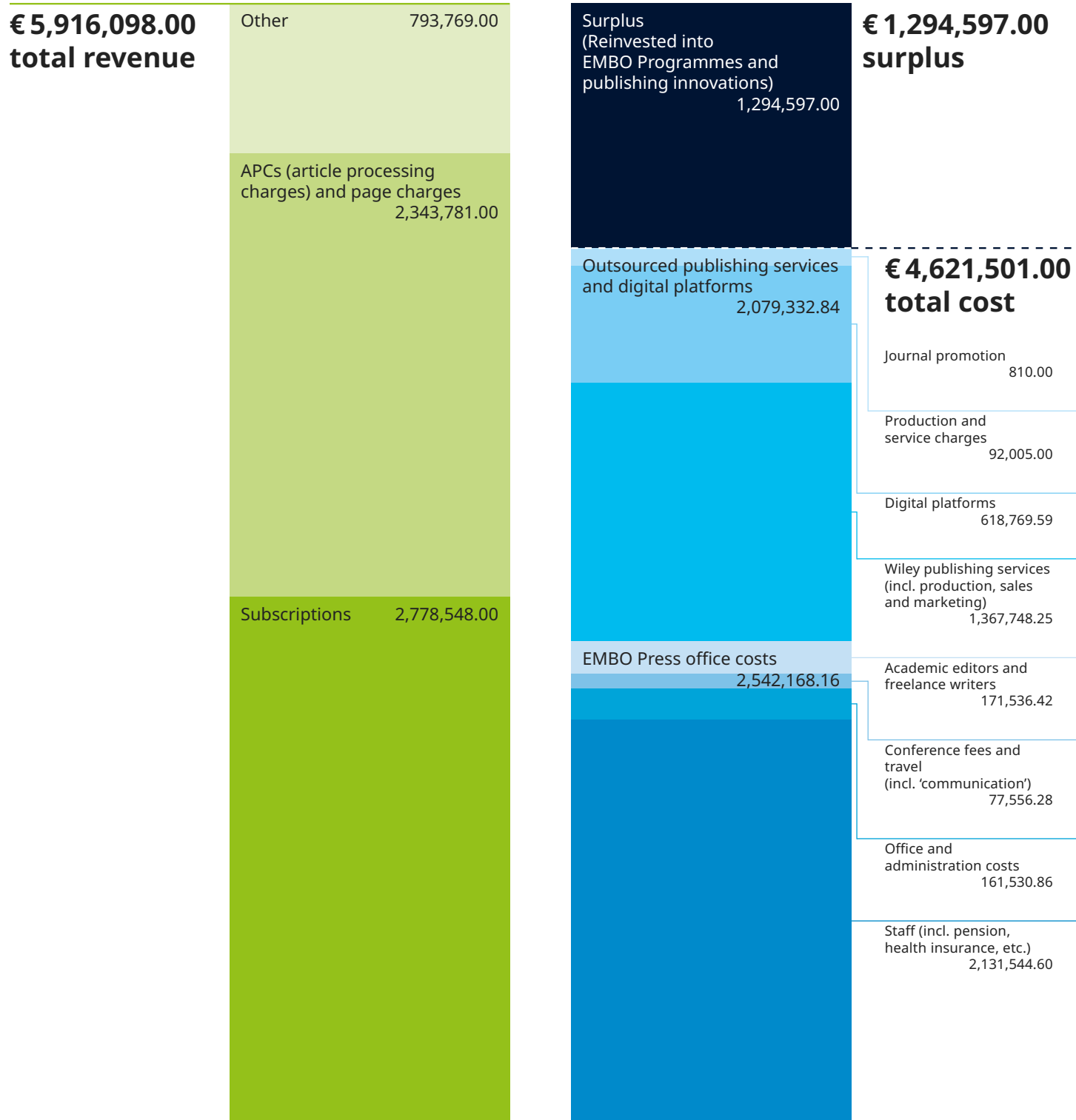
EMBO Press launched

Founding member of the San Francisco Declaration on Research Assessment (DORA)

EMBO Membership expanded to the fields of neuroscience and ecology & evolution

2013

2014



Cooperation in the life sciences between Europe and Japan

The Japan Science and Technology (JST) Agency becomes an EMBC/EMBO cooperation partner

By Astrid Gall



EMBO and the Japan Science and Technology Agency (JST) have signed an implementation agreement to the memorandum of cooperation that had been agreed between the two organizations in July 2023.

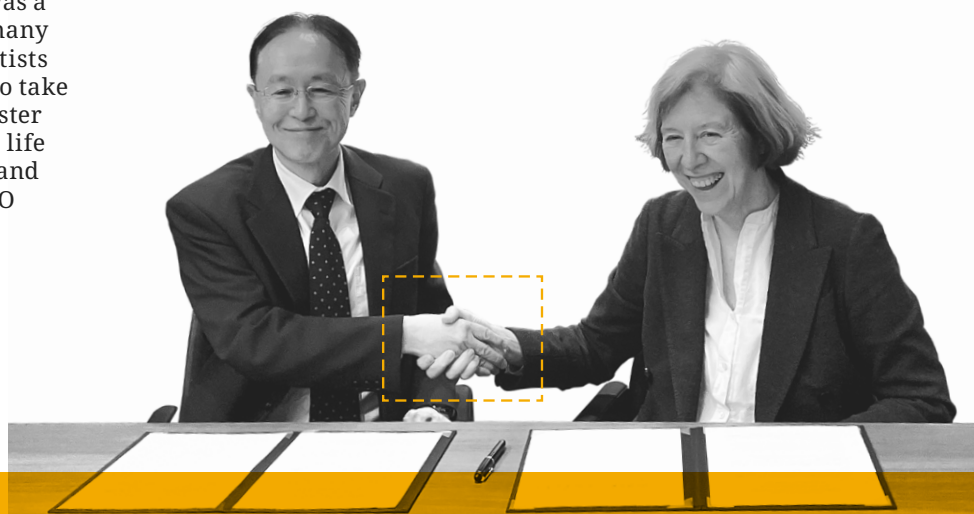
The formal signing procedure was embedded into the *JST | EMBO Match-making Workshop* that took place at the Miraikan National Museum of Emerging Science and Innovation in Tokyo, Japan, from 13 to 15 March 2024.

"I am grateful for being able to participate in the signing of the joint implementation arrangement which will pave the way for future collaborative activities between JST and EMBO," comments Shigeo Morimoto, Vice President of JST.

Scientists funded by several JST programmes are now eligible to apply to EMBO Scientific Exchange Grants and the EMBO Young Investi-

gator Programme through the implementation agreement. All eligible scientists wishing to move between Japan and an EMBC Member State can apply to EMBO Postdoctoral Fellowships. Funding for EMBO Workshops, Practical Courses and Global Lecture Courses for scientists in Japan is available through an agreement with The Company of Biologists.

"The joint workshop with JST was a great success and stimulated many connections between the scientists who attended. We are excited to take the cooperation further and foster even stronger ties between the life science communities in Japan and Europe," said Fiona Watt, EMBO Director.

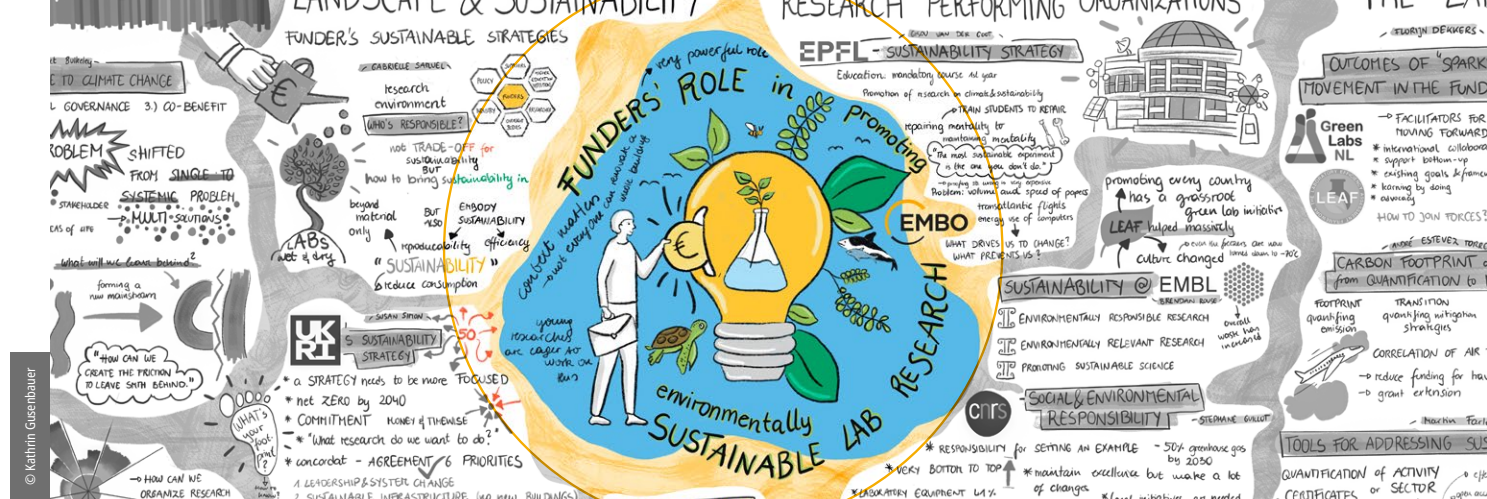


First joint meeting with the
American Society for Cell Biology

Life Science Alliance launched by
EMBO Press, Rockefeller University Press
and Cold Spring Harbor Laboratory Press
+ Montenegro
+ ANID of Chile
(cooperation agreement)

2017

2018



Funders on the case for sustainability

EMBO launches Lab Sustainability Award

The new award recognizes pioneers of environmental sustainability in life science research

By Astrid Gall

The EMBO Lab Sustainability Award recognizes new and significant contributions to the development of sustainable wet and dry labs with a focus on their environmental impact. The award is made to an individual representing an initiative or project. The awardee will present their initiative or project at the Meeting of the EMBO communities, in Heidelberg, Germany, 29 October–1 November 2024, and at Cell Bio, the ASCB |

EMBO meeting in San Diego, USA, 14–18 December 2024. The winning project is supported with a grant of 10,000 euros.

Applications are assessed by the Lab Sustainability Award Advisory Board, which applies criteria inspired by the UN 2030 Agenda. These include the direct and indirect impact of the project on environment, institutional culture and

community; the diversity of stakeholder groups involved in or affected by the project; and evidence of creative and visionary thinking that offers new perspectives.

The EMBO Lab Sustainability Award is one of the activities to support life scientists in Europe and beyond that EMBO has launched to celebrate its sixtieth anniversary.

Shortlist 2024

Nikola Čanigová



PhD student, Institute of Science and Technology Austria (ISTA), AT

Upcycling science: transforming non-recyclable lab waste into awareness through fine art

Scientists at ISTA collaborate with Saki the Artist to transform used lab plastics into functional art pieces to raise awareness of sustainability challenges.

sakitheartist.com

Florijn Dekkers



Scientific coordinator, Circular Safe Hospitals, University Medical Centre Utrecht, NL

Green Labs NL Foundation for a just and sustainable science transition in the Netherlands and beyond

The foundation run by 11 individuals focuses its activities on lab practices, education and the funding landscape.

greenlabs-nl.eu

Loïc Lannelongue



Research associate, University of Cambridge, UK

Green algorithms

The project promotes environmentally sustainable computational science by building tools for carbon footprint estimation and raising awareness.

green-algorithms.org

Fiona Watt appointed Director

+ Latvia

2022

2023



Awardee 2024

Martin Farley

Associate director of Environmental Sustainability Programmes, UK Research and Innovation, UK

LEAF and driving sustainable labs globally

Farley received the award for his pioneering work in driving lab sustainability across the sector, including developing tools to promote and incentivize sustainability in laboratories. He founded the Laboratory Efficiency Assessment Framework (LEAF) at University College London. LEAF provides standardized guidelines to enhance efficiency and sustainability, featuring an online tool which contains actions regarding reducing single-use plastic, energy and waste as well as calculators to quantify environmental, energy and financial impacts.

ucl.ac.uk/sustainable/take-action/staff-action/leaf-laboratory-efficiency-assessment-framework



Benoit Nicolet

Postdoctoral researcher, Netherlands Cancer Institute, NL

Bringing a systematic data-driven approach to laboratory sustainability

Nicolet is conducting two collaborative studies on the footprint of biomedical research: comparing single-use and reusable plastic (or glass), and investigating the impact of irreproducible findings.

DOI: [10.1371/journal.pone.0283697](https://doi.org/10.1371/journal.pone.0283697)



Saroj Saurya

Postdoctoral laboratory manager, Sir William Dunn School of Pathology, University of Oxford, UK

Eco-friendly science: advancing laboratory sustainability at the Sir William Dunn School of Pathology, University of Oxford

The team implements protocols for cleaning and reusing plasticware, specifically for *Drosophila* research, amongst other projects.

dunnschoolgreengroup.wixsite.com/insights/initiatives



Bianca R. Schell

PhD student, Sustainable Labs, TU Darmstadt and University of Konstanz, DE

Development and realization of active measures to cut down the environmental impact of life science laboratories

Schell's PhD project focuses on energy optimization, waste reduction and evaluation of green lab programmes to make laboratories more sustainable.

EMBO Lab Sustainability Award
launched

Maria Leptin | EMBO Science
Journalism Fellowships launched
+ JST of Japan
(cooperation agreement)

2024

Learning bioinformatics in the midst of war



Wolfgang Huber and Fyodor Kondrashov set up an in-person summer school in Ukraine

It was the second time that young biologists from all over Ukraine came together for the two-week summer school *Biological Data Science* in the city of Uzhhorod in the west of the country. The event, co-organized by EMBO Member Wolfgang Huber and former EMBO Young Investigator Fyodor Kondrashov, took place at the local university, just like in 2023, from 7 to 20 July. More than 60 young bachelor's and master's students participated, undeterred by the in parts challenging journey across the war-torn country.

The whole idea started off as an online course. *Talk to the Scientist* was the name of a series in which high school students from Ukraine had a chance to talk to a researcher for a few hours. "It quickly became clear that in order to support individual

students it is necessary to do something in-person," says Kondrashov. "You cannot do things online."

This is how the idea of organizing an in-person summer school in Uzhhorod, a medium-sized city in Ukraine near the Slovak border, was born. "We wanted to run the classes in rather than outside the country, because not everyone can travel. In fact, men are currently not allowed to," explains Huber. In addition to Huber and Kondrashov, several life scientists from various European and North American institutes got involved as organizers and faculty. The event was partly funded by EMBO.

Participants learned about the latest developments in bioinformatics. "You need this sort of event in a country that has so many incredibly

talented young people," summarizes Kondrashov. "Data science, and its applications in biomedicine and biotechnology, are relevant for a modern economy and society," adds Huber. "Hopefully, the course spawns some networks and infrastructures that become self-sustained and effective in their own right."

The classes were filled with lectures, workshops and a lot of fun. And in the evenings, faculty and students spent their time talking life and science—just like in many other summer schools that took place all over Europe in the summer of 2024.

bds3.org

Bridging fundamental research and therapeutic applications

International project aims to make IIMCB a global leader

In 2023, the International Institute of Molecular and Cell Biology in Warsaw, Poland, (IIMCB), partnered with MRC-HGU, Edinburgh and VIB, Ghent to launch an ambitious project titled *RNA and Cell Biology – from Fundamental Research to Therapies* (RACE). Ranked first and awarded nearly 15 million euros, RACE is implemented under the Horizon Europe *Teaming for Excellence* programme 2022.

With RACE, by 2027, IIMCB will embrace 20 scientific groups with complementary expertise. It will host well-trained, entrepreneurial

researchers, and sustainable core facilities offering services also to industry. A professional incubator for technology transfer and fully digitalized administration will further enhance institute's capabilities. By combining research excellence with efficient commercialization, IIMCB will play a pivotal role in strengthening the biomedical sector in Poland but also worldwide.

After just one year, the RACE project is already thriving. IIMCB has expanded by two new research groups, while its staff has received first advanced training at partner insti-

tutions. IIMCB successfully established a Technology Transfer Office and made significant progress in digitalization.

Two EMBO Members, Marta Międzyńska, Director of IIMCB and Co-chair of the EMBO Council, and Wendy Bickmore, Director of MRC-HGU, are key figures driving this transformative project that bridges fundamental research and therapeutic applications.

iimcb.gov.pl/en/race

The Kendrew connection

Zoltán Molnár traces the history of EMBO, EMBL and his college in Oxford

“It’s a small world,” says newly elected EMBO Member Zoltán Molnár, who is a professor of developmental neuroscience at the University of Oxford, UK. He was delighted to learn about a connection between EMBO and St. John’s College, where he is an official fellow.

John Kendrew was one of the founding fathers of EMBO, first director general of EMBL, and president of St. John’s College from 1981 to 1987. The biochemist and crystallographer shared the 1962 Nobel Prize in Chemistry with Max Perutz, the first Chairman of EMBO Council, “for their studies of the structures of globular proteins”, carried out in Cambridge, UK. Kendrew was a

generous benefactor to St. John’s College in Oxford. Today the *Kendrew / Clarendon Scholarships* are available for applicants from economically less developed countries. The Kendrew Quadrangle of the college, which was opened in 2010, is named after him.

The smaller photo shows John Kendrew with the “forest of rods” model, which was used as a basis for building the atomic structure of myoglobin, in 1958. The larger photo shows Molnár standing next to the sculpture *Kendrew’s Milestone* by artists Langlands & Bell, which is an interpretation of the myoglobin structure, in the Kendrew Quadrangle in 2024.



New research institute opens its doors in Portugal

The Gulbenkian Institute for Molecular Medicine aims to address global health challenges

GIMM



Gulbenkian
Institute for
Molecular
Medicine

A new institute for transdisciplinary research in the field of global health has been established in Portugal. Born out of a merger of the Instituto de Medicina Molecular João Lobo Antunes and Instituto Gulbenkian de Ciência, the Gulbenkian Institute for Molecular Medicine (GIMM) will focus on fundamental research as

well as translation into innovative healthcare solutions. Based in Lisbon and Oeiras, GIMM will operate on two sites. It hopes to attract young talent to the area by fostering a rich research and innovation environment where global issues can be tackled collaboratively.

Another key area of work will be training future generations of scientists: GIMM offers PhD and post-doctoral programmes, as well as courses and internships for more junior levels. The institute hosts 38 research groups and around 700 researchers from over 40 nationalities, as well as several spin-offs and industry partners. EMBO Member Maria Mota, the CEO of GIMM, is keen to ensure the leading role of GIMM in shaping the R&D landscape within Portugal and Europe.

gimm.pt

Illuminating life

The *Astbury Conversation* combines an academic conference with public engagement

This April saw the return of the biennial *Astbury Conversation* that was established by EMBO Member Sheena Radford during her time as director of the Astbury Centre of the University of Leeds, UK. The event was built around the keynote speaker Xiaowei Zhuang, EMBO Associate Member at Harvard University, and the theme of illuminating life. Over 300 participants from all career stages came together from across the globe. Talks ranged from new cancer treatments to ways to visualize proteins in unprecedented detail within a cell and the role of disordered proteins. They were punctuated by a vibrant poster and networking event in the evening, which featured over 100 posters. Lively discussions continued into the night.

As in previous years the *Astbury Conversation* ended with a public lecture by the keynote speaker. It was attended, amongst others, by several students from the University of Leeds *Reach for Excellence* scheme. This widening participation scheme provides opportunities for students, who may not have considered a research intensive university, to take part in higher education activities. They were inspired by Zhuang's talk about the broader as-

pects of her work and the impact it has had on our ability to see into the cell. The *Astbury Conversation* looks forward to welcoming everyone to the next conference, so look out for announcements including the new topic for 2026.

eu.eventscloud.com/website/11502/home



© Astbury Centre

New MSc Programme in Digital Health

The two-year programme at Tel Aviv University is part of the EU *Digital Europe Programme*

A new Master of Science Programme has been launched at the Faculty of Medical and Health Sciences of Tel Aviv University, Israel. The two-year MSc Programme in Digital Health, which is co-organized by EMBO Member Karen B. Avraham, is part of the EU *Digital Europe Programme*, a funding programme focused on bringing digital technology to a range of different fields. The new MSc programme will focus on digital transformation in healthcare organizations, and data science in healthcare for improved healthcare delivery in Israel and around the world. It aims to provide future researchers, physicians and health system leaders with the knowledge and skills to implement novel digital technologies, such as artificial intelligence, robotics, or cyber and quantum computing into processes within the health sector.

Within the framework of the EU *Digital Europe Programme*, Tel Aviv University collaborates with six universities as well as eight research centres and industrial partners from across Europe, encouraging networking across disciplines and borders. The network will provide students with a foundation in technological development and innovation, as well as research and clinical application. Another key aspect of

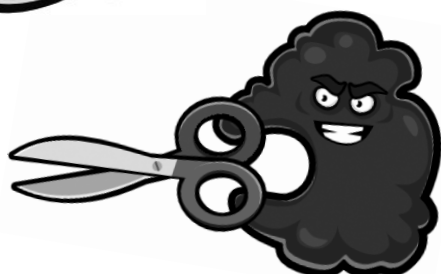
the programme will be training in how to assess the social and ethical aspects of digital transformation processes. The first intake of students will begin in autumn 2024.

international.tau.ac.il/Digital-Health-MSc



Educational computer game released

DEGRADATOR teaches concepts of ubiquitination and protein degradation



EMBO Installation Grantee Wojciech Pokrzywa and his group at the International Institute of Molecular and Cell Biology in Warsaw, Poland, have released an educational computer game that illustrates details of ubiquitination and the protein degradation process. *DEGRADATOR* is aimed at teenagers aged 12 and up, as well as adults with an interest in science.

The game is designed to provide the public with a learning tool to visualize and understand the molecular processes involved in protein turnover. Over ten levels, players dive deeper and deeper into the world of cell biology, taking on the role of the E3 enzyme, whose job is to break down proteins. The developers hope the game will not only aid understanding of these concepts, but also ignite an interest in molecular biology. The game is free and available for download on Google Play or can be played directly online.

degradator-game.com

RNAmed: Future Leaders in RNA-based Medicine

A holistic approach to training young scientists in the area of RNA therapeutics

The graduate programme *RNAmed—Future Leaders in RNA-based Medicine* aims to equip doctoral students with cutting-edge skills in RNA-based medicine, a field set to revolutionize disease treatment and prevention. Launched in 2022 by EMBO Member Jörg Vogel and funded by the Elite Network of Bavaria, the programme will enrol up to 20 PhD students in Würzburg, Munich or Regensburg, Germany.

Adopting an interdisciplinary approach, *RNAmed* enables students to explore diverse research areas including RNA modification and delivery, CRISPR-Cas technology, non-coding RNAs, RNA biology of

infections and RNA chemistry. The international cohort of PhD students is trained to think critically and work collaboratively through structured mentoring, summer schools, industry internships, and workshops on both technical and soft skills. This holistic approach prepares them for varied careers in academia, industry, entrepreneurship or policy-making.

The programme also features joint visits, such as to the winter retreat of *RNA-DECO* at the University of Innsbruck, Austria. *RNA-DECO*, coordinated by Michael Jantsch, comprises twelve Austrian research groups that study the effects of RNA

modification on RNA structure and metabolism. During the retreat, students had the opportunity to attend multidisciplinary talks, present their work and exchange ideas with leading researchers.

Promoting academic excellence and fostering an open, international spirit, *RNAmed* encourages active networking and extracurricular engagement. By nurturing enthusiasm for RNA science and its societal impacts, *RNAmed* aims to drive the future of precision medicine and targeted molecular therapies forward.

helmholtz-hiri.de/en/jobs-talents/rnamed



© Anuja Kibe

Books

A selection of books by or about members of the EMBO communities

Alfonso Martinez Arias

The Master Builder: How the New Science of the Cell is Rewriting the Story of Life

Basic Books, 2023
ISBN-10: 1541603273

EMBO Member Alfonso Martinez Arias suggests in his book that cells, not DNA, hold the key to understanding history, present and future of life. While genes are important, he argues that nothing in our genes explains why the heart is on the left side of the body, or how many fingers we have. At the heart of the book is a new concept of the essence of life.

Jordi Casanova i Roca

Dones? Homes? Sexe i gènere, biologia i cultura

Publicacions i Edicions de la Universitat de Barcelona, 2023
ISBN-10: 849168915X

In his book, EMBO Member Jordi Casanova i Roca analyzes the relationship between biological sex and social gender. Are we women and are we men because we are born as such? Or because society makes us grow up as women and men? Do we have to deny the existence of differentiated sexual characteristics to combat gender roles? This book does not intend to offer ultimate answers, but rather to approach the issues raised by these and many other questions.

Katalin Karikó

Breaking Through: My Life in Science

Crown, 2023
ISBN-10: 0593443160

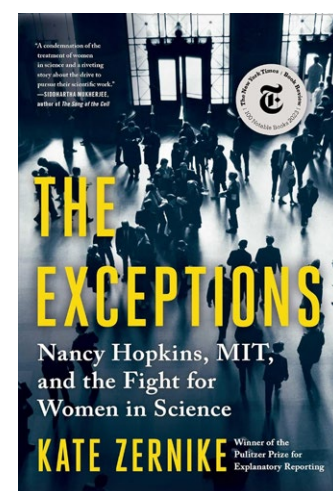
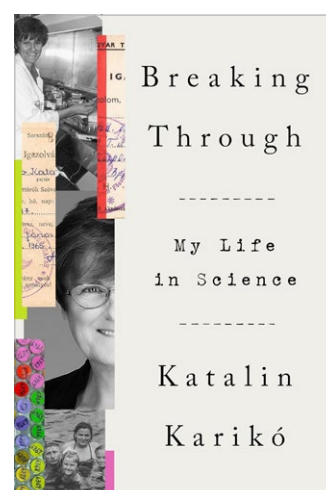
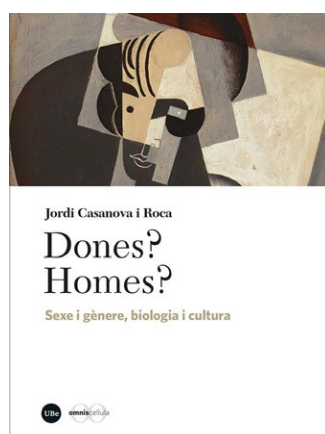
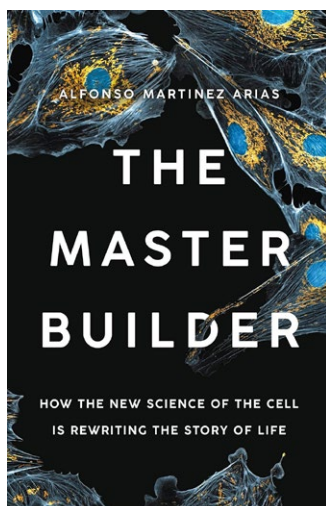
This autobiography by EMBO Member Katalin Karikó, recipient of the 2023 Nobel Prize in Physiology or Medicine, tells the story of an extraordinary woman who never wavered in her belief that an under-appreciated molecule, messenger RNA, could change the world. She sacrificed nearly everything for this dream and encountered many difficulties. Through indefatigable motivation, she succeeded, and her decades-long research led to COVID vaccines.

Kate Zernike

The Exceptions: Nancy Hopkins, MIT, and the Fight for Women in Science

Scribner, 2023
ISBN-10: 1982131837

Written by the Pulitzer Prize-winning journalist Kate Zernike, who broke the story for The Boston Globe, the book chronicles a history-making fight for equal opportunity in world-class science. It is the story of molecular biologist and cancer researcher Nancy Hopkins who led a group of sixteen brilliant women, including EMBO Associate Member Ruth Lehmann. The book describes how their campaign prompted MIT to make the historic admission that it had long discriminated against its female scientists.



Awards

A selection of prizes awarded to members of the EMBO communities



Karen B. Avraham

Shambaugh Prize for Excellence in Otolary Research

Collegium Oto-Rhino-Laryngologicum Amicitiae Sacrum (CORLAS)

The prize is awarded every second year by the CORLAS Board to a member who has accomplished remarkable work in the field of otology and related basic research.



Lucia Banci

Richard R. Ernst Prize in Magnetic Resonance 2023

Euromar

She receives the prize in recognition of her contributions to paramagnetic Nuclear Magnetic Resonance and its application to intracellular transport of metal ions. The prize, worth 15,000 euros, rewards groundbreaking applications of techniques in all areas of magnetic resonance.



Elena Conti

Kafatos Lecturer 2023

EMBL/Bodossaki Foundation

The Kafatos Lecture series honours the legacy of Fotis Kafatos, former EMBL Director General and first President of the European Research Council. The lecture brings groundbreaking, accessible and relevant life science research to the world-wide public. Conti's lecture had the title *Should it stay or should it go: how cells control the life and death of mRNA molecules*.



Stephen Cusack

Ivano Bertini Award 2023

Bruker BioSpin

He is the first recipient of this award that recognizes a significant achievement in frontier research utilizing an integrative structural biology approach. It honours Cusack's work on the structure of protein-RNA complexes and proteins involved in host-pathogen responses. The award commemorates Bertini who built a world-class Centre for Magnetic Resonance in Florence.



Eileen Furlong

UCD Alumni Award in Research, Innovation and Impact 2023
University College Dublin

She is recognized by her *alma mater* for her work in the fields of transcription, chromatin biology, developmental biology and genomics. The award celebrates her groundbreaking research and recognizes her societal contributions.



Dirk Görlich

Louis-Jeantet Prize for Medicine 2024

Louis-Jeantet Foundation

He is awarded the prize for elucidating how the directionality of cargo transfer between the cytoplasm and nucleus is achieved and for his discovery of the selective FG phase that governs transport through nuclear pores.



Matthias Hentze

Pioneer Award 2023

The International Council for Caring Communities

He is recognized for his contributions as a world-class scientist in RNA biology, leadership and commitment to finding solutions for environmental issues through molecular biology. The award was established to acknowledge leaders whose visionary thinking, exceptional leadership and creative initiatives have improved our society.

Centenary Award 2023

Biochemical Society

He receives the award for his discoveries in RNA biology.



Julia Mahamid

Michael and Kate Bárány Award 2024

Biophysical Society

She is recognized for her contributions, both technical and biological, to the field of cryo-electron tomography. The award recognizes an outstanding contribution by a person who has not achieved the rank of full professor at the time of nomination.



Wojciech Pokrzywa

Team Award for Significant Achievements in the Field of Scientific Activity

Polish Ministry of Science and Higher Education

Pokrzywa and his team from the International Institute of Molecular and Cell Biology in Warsaw received this award at the Polish Science Gala.



Arun Kumar Shukla

Infosys Prize in Life Sciences 2023
Infosys Science Foundation

He is awarded for his outstanding contributions to understanding the biology of G-protein coupled receptors. The prize is worth 100,000 US dollars and endeavours to elevate the prestige of science and research in India and inspire young Indians to choose a vocation in research. It is given annually in six categories.



Charles Swanton

Jeanet-Collen Prize for Translational Medicine 2024

Louis-Jeanet Foundation

He is awarded the prize for his groundbreaking discoveries in cancer genetics and evolution, leading to insights into how tumours evolve, spread and develop resistance to drugs.



David Rubinsztein

Movement Disorders Research Award 2024

American Academy of Neurology

The award recognizes his outstanding work in the field of Parkinson's disease and other movement disorders.



Giulio Superti-Furga

Lennart Philipson Award 2024
EMBL

He receives the award in recognition of his impact as researcher, mentor, founder of companies and inventor of tools and methods, which he shares with the life sciences community.



Bernt Eric Uhlin

H. M. The King's Medal in the 8th size in the ribbon of the Order of Seraphim

King of Sweden

The medal honours his achievements in the development of microbiology research. This royal medal of Sweden was established in 1748 and is awarded for service that benefits society or service of a humanitarian nature.



Erin Schuman

Körber European Science Prize
Körber Foundation

She receives this prize worth one million euros. Her research has shown that proteins critical for neuron communication, memory storage and overall brain development are produced locally at synapses.

Research!Sweden Honorary Award 2023

Stiftelsen Forska!Sverige

He receives the award for his long and dedicated work in building a world-leading and sustainable scientific environment in molecular infection medicine.

Good reads

A selection of publications by members of the EMBO communities

Non-stem cell lineages as an alternative origin of intestinal tumorigenesis in the context of inflammation

Lauri Aaltonen, Riccardo Fodde and colleagues
Nature Genetics / 20 June 2024
DOI: [10.1038/s41588-024-01801-y](https://doi.org/10.1038/s41588-024-01801-y)

A synthetic differentiation circuit in *Escherichia coli* for suppressing mutant takeover

Uri Alon and colleagues
Cell / 15 February 2024
DOI: [10.1016/j.cell.2024.01.024](https://doi.org/10.1016/j.cell.2024.01.024)

Time-resolved single-cell transcriptomics defines immune trajectories in glioblastoma

Ido Amit and colleagues
Cell / 4 January 2024
DOI: [10.1016/j.cell.2023.11.032](https://doi.org/10.1016/j.cell.2023.11.032)

Molecular profiling of sponge deflation reveals an ancient relaxant-inflammatory response

Detlev Arendt and colleagues
Current Biology / 4 January 2024
DOI: [10.1016/j.cub.2023.12.021](https://doi.org/10.1016/j.cub.2023.12.021)

Human histone H1 variants impact splicing outcome by controlling RNA polymerase II elongation

Gil Ast and colleagues
Molecular Cell / 2 November 2023
DOI: [10.1016/j.molcel.2023.10.003](https://doi.org/10.1016/j.molcel.2023.10.003)

Ordered and disordered regions of the Origin Recognition Complex direct differential *in vivo* binding at distinct motif sequences

Naama Barkai and colleagues
Nucleic Acids Research / 10 June 2024
DOI: [10.1093/nar/gkae249](https://doi.org/10.1093/nar/gkae249)

Hepatocyte regeneration is driven by embryo-like DNA methylation reprogramming

Yehudit Bergman and colleagues
PNAS / 8 April 2024
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Differential SNARE chaperoning by Munc13-1 and Munc18-1 dictates fusion pore fate at the release site

Debasis Das and colleagues
Nature Communications / 16 May 2024
DOI: [10.1038/s41467-024-46965-7](https://doi.org/10.1038/s41467-024-46965-7)

Synaptobrevin2 monomers and dimers differentially engage to regulate the functional trans-SNARE assembly

Debasis Das and colleagues
Life Science Alliance / 18 January 2024
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Uracil/H⁺ Symport by FurE Refines Aspects of the Rocking-bundle Mechanism of APC-type Transporters

George Diallinas and colleagues
Journal of Molecular Biology / 1 October 2023
DOI: [10.1016/j.jmb.2023.168226](https://doi.org/10.1016/j.jmb.2023.168226)

The last two transmembrane helices in the APC-type FurE transporter act as an intramolecular chaperone essential for concentrative ER-exit

George Diallinas and colleagues
Microbial Cell / 5 January 2024
DOI: [10.15698/mic2024.01.811](https://doi.org/10.15698/mic2024.01.811)

Lung dendritic-cell metabolism underlies susceptibility to viral infection in diabetes

Eran Elinav and colleagues
Nature / 13 December 2023
DOI: [10.1038/s41586-023-06803-0](https://doi.org/10.1038/s41586-023-06803-0)

VWD domain stabilization by autocatalytic Asp-Pro cleavage

Deborah Fass and colleagues
Protein Science / 21 February 2024
DOI: [10.1002/pro.4929](https://doi.org/10.1002/pro.4929)

Enhancer-promoter interactions become more instructive in the transition from cell-fate specification to tissue differentiation

Eileen Furlong and colleagues
Nature Genetics / 31 January 2024
DOI: [10.1038/s41588-024-01678-x](https://doi.org/10.1038/s41588-024-01678-x)

High Quantum Yield Amino Acid Carbon Quantum Dots with Unparalleled Refractive Index

Ehud Gazit and colleagues
ACS Nano / 8 January 2024
DOI: [10.1021/acsnano.3c10792](https://doi.org/10.1021/acsnano.3c10792)

Therapeutic potential of co-signaling receptor modulation in hepatitis B

Matteo Iannacone and colleagues
Cell / 18 June 2024
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Antibody-independent protection against heterologous SARS-CoV-2 challenge conferred by prior infection or vaccination

Matteo Iannacone and colleagues
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ZIP2 cleavage blocks polyspermy by modulating the architecture of the egg coat

Luca Jovine and colleagues
Cell / 14 March 2024
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Deep learning insights into the architecture of the mammalian egg-sperm fusion synapse

Luca Jovine and colleagues
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Interrogation of endothelial and mural cells in brain metastasis reveals key immune-regulatory mechanisms

Johanna A. Joyce and colleagues
Cancer Cell / 18 January 2024
DOI: [10.1016/j.ccell.2023.12.018](https://doi.org/10.1016/j.ccell.2023.12.018)

Microenvironmental reorganization in brain tumors following radiotherapy and recurrence revealed by hyperplexed immunofluorescence imaging

Johanna A. Joyce and colleagues
Nature Communications / 15 April 2024
DOI: [10.1038/s41467-024-47185-9](https://doi.org/10.1038/s41467-024-47185-9)

The homodimer interfaces of costimulatory receptors B7 and CD28 control their engagement and pro-inflammatory signaling

Raymond Kaempfer and colleagues
Journal of Biomedical Science / 28 June 2023
DOI: [10.1186/s12929-023-00941-3](https://doi.org/10.1186/s12929-023-00941-3)

RNA activators of stress kinase PKR within human genes that control splicing or translation create novel targets for hereditary diseases

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Int. Journal of Molecular Sciences / 22 January 2024
DOI: [10.3390/ijms25021323](https://doi.org/10.3390/ijms25021323)

Loss of EIF4G2 mediates aggressiveness in distinct human endometrial cancer subpopulations with poor survival outcome in patients

Adi Kimchi and colleagues
Oncogene / April 2024
DOI: [10.1038/s41388-024-02981-x](https://doi.org/10.1038/s41388-024-02981-x)

Oncostatin M signaling drives cancer-associated skeletal muscle wasting

Serkan Kir and colleagues
Cell Reports Medicine / 16 April 2024
DOI: [10.1016/j.xcrm.2024.101498](https://doi.org/10.1016/j.xcrm.2024.101498)

In vitro production of cat-restricted *Toxoplasma* pre-sexual stages

Hakimi Mohamed-Ali and colleagues
Nature / 13 December 2023
DOI: [10.1038/s41586-023-06821-y](https://doi.org/10.1038/s41586-023-06821-y)

p53 deficient breast cancer cells reprogram preadipocytes toward tumor-protective immunomodulatory cells

Moshe Oren and colleagues
Proc Natl Acad Sci USA / 26 December 2023
DOI: [10.1073/pnas.2311460120](https://doi.org/10.1073/pnas.2311460120)

Continuous glucose monitoring and intrapersonal variability in fasting glucose

Eran Segal and colleagues
Nature Medicine / 30 May 2024
DOI: [10.1038/s41591-024-02908-9](https://doi.org/10.1038/s41591-024-02908-9)

Bacterial SNPs in the human gut microbiome associate with host BMI

Eran Segal and colleagues
Nature Medicine / 2 November 2023
DOI: [10.1038/s41591-023-02599-8](https://doi.org/10.1038/s41591-023-02599-8)

Phages overcome bacterial immunity via diverse anti-defence proteins

Rotem Sorek and colleagues
Nature / 22 November 2023
DOI: [10.1038/s41586-023-06869-w](https://doi.org/10.1038/s41586-023-06869-w)

Ribosomal protein L24 mediates mammalian microRNA processing in an evolutionarily conserved manner

Hermona Sorek and colleagues
Cellular and molecular life sciences / 23 January 2024
DOI: [10.1007/s00018-023-05088-w](https://doi.org/10.1007/s00018-023-05088-w)

Longitudinal machine learning uncouples healthy aging factors from chronic disease risks

Amos Tanay and colleagues
Nature Aging / 7 December 2023
DOI: [10.1038/s43587-023-00536-5](https://doi.org/10.1038/s43587-023-00536-5)

A concept for international societally relevant microbiology education and microbiology knowledge promulgation in society

Kenneth Timmis, Martin Kaltenpoth, Judith P. Armitage and colleagues
Microbial Biotechnology / May 2024
DOI: [10.1111/1751-7915.14456](https://doi.org/10.1111/1751-7915.14456)

Systematic analysis of drug combinations against Gram-positive bacteria

Athanasios Typas and colleagues
Nature Microbiology / 28 September 2023
DOI: [10.1038/s41564-023-01486-9](https://doi.org/10.1038/s41564-023-01486-9)

Phage proteins target and co-opt host ribosomes immediately upon infection

Jörg Vogel and colleagues
Nature Microbiology / 4 March 2024
DOI: [10.1038/s41564-024-01616-x](https://doi.org/10.1038/s41564-024-01616-x)

RNA-based medicine: from molecular mechanisms to therapy

Jörg Vogel and colleagues
The EMBO Journal / 20 September 2023
DOI: [10.15252/embj.2023114760](https://doi.org/10.15252/embj.2023114760)

Events

Practical Courses

DE-Heidelberg | 4–8 November 2024 |
B. Ramasz
The Fundamentals of High-End Cell Sorting

DE-Heidelberg | 17–22 November 2024 |
R. Stripecke
Humanized mice: immunotherapy and regenerative medicine

DE-Hamburg | 17–24 November 2024 |
J. Kosinski
Integrative structural biology: Solving molecular puzzles

CL-Valpariso | 3–17 January 2025 | *R. Mayor*
EMBO Practical Course on Developmental Biology

DE-Heidelberg | 9–14 February 2025 |
R. Mellwig
In-situ CLEM at room temperature and in cryo

DE-Heidelberg | 23–28 February 2025 |
A. Hendrix
Extracellular vesicles: from biology to biomedical applications

DE-Heidelberg | 23–28 March 2025 | *S. Leidel*
Measuring translational dynamics by ribosome profiling

DE-Heidelberg | 9–14 March 2025 | *C. Ludwig*
Quantitative proteomics: strategies and tools to probe biology

DE-Heidelberg | 7–14 April 2025 | *J.E. González-Pastor*
Microbial metagenomics: a 360° approach

Workshops

IN-NISER-Bhubaneswar | 5–8 December 2024 |
P. Singru
Neuropeptides and behavioural flexibility

DE-Heidelberg | 4–7 February 2025 | *J. Ries*
In-situ structural biology: expanding the toolbox for structural cell biology

IN-Hyderabad, Telangana |
9–12 February 2025 | *V. Nandicoori*
Host and pathogen heterogeneity in tuberculosis

ES-Torremolinos | 10–13 February 2025 |
G. Sabio
Energy balance in metabolic diseases

IT-Assisi | 11–14 February 2025 | *S. Rompani*
Subcortical Sensory Circuits: from perception to behavior

TW-Taipei | 14–18 March 2025 | *Y. Chern*
Neural Development and Neurodegeneration

AT-Radstadt | 16–21 March 2025 | *M. Zerial*
From molecules to organisms: An integrative view of cell biology

CL-Maitencillo | 7–11 April 2025 | *M. Sousa*
Emerging Concepts of the Neuronal Cytoskeleton (7th Edition)

PT-Lisbon | 13–16 April 2025 | *M. Bettencourt-Dias*
Integrating cell and planetary scales to address climate resilience

IT-Venice | 14–18 April 2025 | *L. Civiero*
ASTROCYTES 2025 - From Molecules to Systems

IT-Stresa | 27–30 April 2025 | *S. Santaguida*
Chromosome Segregation and Aneuploidy

FR-Les Houches | 27 April–2 May 2025 |
B. Treanor
Immunobiophysics: from fundamental physics to understanding the immune response.

EMBO | The Company of Biologists Workshop

JP-Kobe | 6–8 November 2024 | *I. Chambers*
Molecular mechanisms of developmental and regenerative biology

Early Career Lecture Course

GR-Nafplion | 3–6 November 2024 | *N. Vakirlis*
Evolutionary and Comparative Genomics

India | EMBO Lecture Course

IN-Pune | 24–28 February 2025 | *S. Banerjee*
RNA-protein complexes: from molecular assembly to physiological functions and disease

EMBO | EMBL Symposia

DE-Heidelberg | 5–8 November 2024 |
A. Groth, T. Halazonetis, H. Ulrich
DNA replication: from basic biology to disease

DE-Heidelberg | 18–21 March 2025 |
J. Berman, M. Ralser, L. Carvalho, M. Rodnina
Mechanisms of drug resistance and tolerance in bacteria, fungi, and cancer

DE-Heidelberg | 8–11 April 2025 | *S. Coelho, G. Dey, M. Dorrity, N. Dubilier, F. Vincent*
Wild frontiers of model organisms

Upcoming deadlines

Cell Bio 2024
Early registration
30 September

Final abstract submission (poster)
15 October

ascb.org/cellbio2024



Gold Medal
1 February

Courses and Workshops
1 March, 1 July **NEW**

Young Investigator Programme
1 April

Installation Grants
15 April

Global Investigator Network
1 May **NEW**

FEBS | EMBO Women in Science Award
15 May



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