

EMBL Postdoctoral Programme

An exciting and stimulating environment

European Molecular Biology Laboratory





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“One of EMBL’s missions is to provide training to scientists at all career stages. The laboratory hosts approximately 260 postdoctoral researchers and is committed to providing them with the training, mentoring and career development support needed to successfully progress in their desired careers. Many of our postdoc alumni are now leaders in academia, industry and beyond.”



Edith Heard, EMBL Director General



Choosing the right postdoctoral position is one of the most important decisions of your career. During your time as a Postdoc you will make the transition towards becoming an independent scientist. An inspiring postdoctoral experience goes beyond experiments conducted in the lab – it encompasses continuous scientific training, a wealth of opportunities for professional networking, guidance and training to support your personal and career development as well as stimulating a rewarding work-life balance. At EMBL, we offer an exciting and well-structured environment to help you achieve this transition productively and successfully.

Become an EMBL postdoctoral fellow and you will become a highly valued member of one of the world's top research communities, known for extensive collaboration between groups. EMBL – Europe's flagship laboratory for the life sciences – is international, innovative and interdisciplinary: its 1700 employees from more than 80 nations represent a broad range of scientific disciplines including biology, medicine, chemistry, physics, mathematics, engineering and computer sciences. Research is conducted by over 80 independent groups cover-

ing all aspects of natural sciences contributing to the advancement of molecular biology. EMBL's postdoctoral community comprises about 260 members across our six sites.

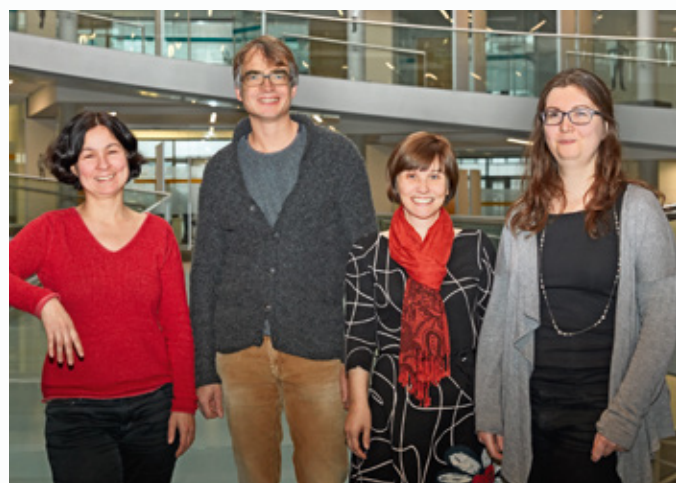
We are committed to creating a welcoming environment that provides the right conditions for career advancement. The importance of our postdoctoral fellows is recognised in the support we offer, including dedicated training and development to enhance career planning and personal skills. We appreciate that a postdoctoral period can be a time of personal reflection of long-term goals and expectations. Our dedicated mentoring programme not only helps you to make the most of your postdoctoral experience, but also helps to define and achieve career objectives by providing an additional source of guidance.

Colleagues active in the Postdoctoral Association and the Staff Association are equally available to support initiatives relating to professional development, to sponsor networking events and to help foster postdoctoral life at EMBL in general. Access to childcare enables those with families to successfully combine work and family life.

As highly trained scholars, postdoctoral fellows contribute significantly to EMBL's ambitious and exciting research programme. EMBL postdocs have a track record of success, with many holding positions in academia, industry and other science-related positions. If you want to be a part of this vibrant community, read on – we look forward to warmly welcoming you to EMBL.

The Postdoctoral Programme Team:

*Brenda Stride (Postdoctoral Programme Manager),
Detlev Arendt (Senior Scientist & Academic Mentor
Postdoctoral Training), Monika Lachner (Head of Internal
Scientific Training & Dean of Graduate Studies),
Rachel Coulthard-Graf (Career Advisor)*



World-class, international and exciting

Why join EMBL?

EMBL provides an exciting and stimulating environment for post-doctoral fellows, with access to everything you need at this critical career stage:

World-class research labs and facilities

EMBL labs are equipped with the latest technologies, allowing you to realise ambitious research projects.

Active seminar programme

We welcome prominent speakers from institutes around the world to speak to our scientific community. In-house research is actively communicated via departmental seminars involving the participation of faculty, postdoctoral fellows, and PhD students.

Dedicated training and career development

EMBL is committed to ensuring all staff have access to relevant transferable skills to build their careers with courses ranging from language training to grant writing. The post-doctoral programme also offers dedicated workshops and events aimed at helping our postdoctoral community explore and prepare for the next career step.

Vibrant international and interdisciplinary atmosphere

Science at EMBL is interdisciplinary, international and innovative. EMBL's 1700 employees represent more than 80 nationalities. Scientists at all career stages are involved in and foster extensive collaboration across the six EMBL sites. On an international scale researchers at EMBL are widely connected: an average of 900 collaborations are entertained across EMBL each year.

Access to scientific expertise and support

EMBL's onsite core facilities work hand in hand with the scientific community to develop and provide access to state-of-the-art technologies, equipment and expertise for the EMBL community and its member states.

The core facilities are composed of the Advanced Light Microscopy Facility, the Electron Microscopy Core Facility, the Chemical Biology Core Facility, the Flow Cytometry Core Facility, the Genomics Core Facility, the Metabolomics Core Facility, the Protein Expression and Purification Core Facility, and the Proteomics Core Facility.

Staff Association

Composed of elected representatives, the Staff Association is 'the voice' of EMBL employees and also includes representatives from the postdoctoral community. It is consulted for policy changes and administrative affairs that directly affect all members of personnel.

Who are we looking for?

Postdocs at EMBL have a wide range of backgrounds, including biology, chemistry, biochemistry, molecular biology, engineering, medicine, physics, mathematics, computer science and bioinformatics. Interdisciplinarity is an important strength of research at EMBL and, as such, we welcome fellows interested in moving into a new area of research. Excellence, creativity, diligence and innovation are the guiding principles for our research community.

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Fliegenraum
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About EMBL

The European Molecular Biology Laboratory (EMBL)

EMBL is Europe's flagship laboratory for the life sciences. Our interdisciplinary, curiosity-driven research programme fosters early independence and encourages collaboration. We are more than 1700 people, from over 80 countries, operating across six sites.



Heidelberg

Scientists at EMBL Heidelberg explore a wide range of questions in the fields of cell biology and biophysics, developmental biology, genome biology, and structural and computational biology. The site also houses core facilities, where experts in gene sequencing, microscopy and more develop novel techniques and refine approaches to enable researchers to get the best possible data out of each experiment.

EMBL Heidelberg is nestled in the woods above Germany's oldest university city. Alongside the labs and facilities, the EMBL Advanced Training Centre hosts courses and conferences – many organised with campus partner EMBO – that attract thousands of scientists every year, making the campus a hotbed of discussion, innovation and collaboration. A short ride uphill from a town that has been an international tourist destination for centuries, EMBL fits right into Heidelberg's welcoming, international spirit.



Barcelona

EMBL is establishing a new site in Barcelona, where scientists will explore how tissues and organs function and develop, in health and disease. Alongside cutting-edge research, the site will house state-of-the-art imaging facilities, enabling scientists worldwide to access microscopy and modelling technologies specifically designed for studying tissues.

EMBL Barcelona will be located in the Barcelona Biomedical Research Park (PRBB), one of the largest infrastructures in Southern Europe dedicated to translational research. In this highly collaborative, interdisciplinary and international environment, EMBL researchers will benefit from a partnership with the Centre for Genomic Regulation (CRG) and opportunities for collaboration with other pioneering research institutes, both on campus and in the region. Perched on the Barcelona seafront, and within walking distance of the city's iconic architecture, the site is bathed in the energy of this bustling, creative metropolis.



Grenoble

Scientists at EMBL Grenoble reveal the 3D structure of proteins and their interactions with the genome. Experts at the site develop instrumentation and methods for every step of biological structure determination, and provide structural biology services to scientists worldwide.

EMBL Grenoble is located on the European Photon and Neutron (EPN) Campus, and is a key player in the campus-wide Partnership for Structural Biology. Close interactions with campus partners like the European Synchrotron Radiation Facility (ESRF) create the ideal conditions for EMBL researchers and instrumentation developers to push boundaries. Within view of the Alps, the site is on the outskirts of the lively university town of Grenoble, where a multitude of cultural events and outdoor activities are on offer year-round.

EMBL's missions are:

- Pioneering research: uncovering the molecular basis of life
- Providing world-class research infrastructure and services
- Driving research, innovation and progress through technology development, interactions with industry and technology transfer
- Training and inspiring the next generation of scientists
- Playing a leading role in the integration of life science research in Europe



Hamburg

At EMBL Hamburg, scientists investigate the structure of challenging molecules that impact human health. The site's service teams develop methods and software to support scientists from around the world in every step of biological structure determination.

EMBL Hamburg is located on the campus of the German photon science research centre DESY. Access to and collaboration with the campus' world-leading synchrotron and laser facilities – PETRA-III, FLASH and X-FEL – enables researchers and instrumentation developers at EMBL Hamburg to drive state-of-the-art structural biology methods and cutting-edge technology. Just half an hour away from Germany's largest port, the site echoes the vibrant, international atmosphere of the city that has something for everyone.



EMBL-EBI Hinxton

Researchers at EMBL-EBI are transforming genomics through novel sequence analysis methods, multi-dimensional statistical analysis and data-driven discovery. EMBL-EBI maintains the world's most comprehensive range of freely available and up-to-date molecular databases. Experts on site collaborate with scientists worldwide to ensure that these resources evolve as new approaches and trends arise.

EMBL-EBI is located on the Wellcome Trust Genome Campus, which provides a stimulating environment in which to conduct top-quality research, and is regularly visited by some of the greatest minds in the biomedical sciences. EMBL-EBI is housed in modern buildings in a beautiful rural setting and is only a stone's throw from the historic university town of Cambridge, where ancient college buildings sit alongside peaceful meadows.



Rome

Scientists at EMBL Rome explore the connections between genome, environment and neural function. At this site, neuroscientists and epigeneticists work side by side. In this unusual set-up, experts in each of these fields can draw on insights, inspiration and advice from the other.

EMBL Rome shares a campus with the European Mouse Mutant Archive (EMMA) and research groups from the Italian National Research Council (CNR). At this site, researchers can draw inspiration from the historical city and from the mountains, lakes and medieval towns of the Lazio countryside.

The EMBL Postdoctoral Programme

Get in touch

If you are interested in becoming an EMBL postdoc, the first step is to contact the group leader of your choice directly to ask about opportunities. Contact details and information about the research topics of each group can be found under 'Research' at www.embl.org.

Entry routes

Most postdoctoral fellows enter EMBL via one of the following entry routes:

- with external funding in the form of individual postdoctoral fellowships
- on grant money available to the group leader
- by applying to some of the postdoctoral fellowships offered as specific positions on our job pages (www.embl.org/jobs)
- via one of the EMBL dedicated programmes described on the opposite page

Employment

EMBL offers attractive employment conditions including competitive salaries, additional allowances dependent on family circumstances, generous annual leave entitlement and broad social security benefits. The maximum length of a postdoctoral stay at EMBL is five years.

Social security benefits

Social security benefits include comprehensive health care benefits for fellows and their families and coverage by the EMBL pension scheme. Included in the pension scheme are a number of social security benefits including retirement pension, invalidity pension and survivor benefits and unemployment.

The pension contribution is portable, meaning that in most cases, EMBL fellows will receive a lump sum payment upon departure from EMBL that incorporates both the fellow's and EMBL's contribution to the scheme.

Family friendly and supporting diversity

The programme supports equal opportunities. Some of EMBL's sites have onsite child care and the others have arrangements with local providers. Part-time is a possibility for fellows returning from parental leave. EMBL also makes work place modifications for researchers with special needs.

Collaboration and community

You will join a community that encourages collaboration, scientific exchange and openness to new ideas. Networking is an important part of the postdoctoral experience at EMBL, and the Postdoctoral Association and EMBL postdoctoral office work together to organise events and opportunities that unite fellows from all disciplines and sites.

We look forward to hearing from you.

- About 260 postdocs across the six EMBL sites
- Fellows have access to a wide range of courses on offer
- Fellows are supported by an established second mentor programme
- The postdoctoral office organises career development events
- Active postdoctoral association promotes the views of the postdoctoral community within EMBL and organises networking events

EMBL Interdisciplinary Postdocs 4 (EIPOD4)

EIPOD4 is a new international postdoctoral fellowship programme co-funded by Marie-Sklódowska Curie Actions. Designed to support the increasing diversity of career paths in Europe's research landscape the programme offers three tracks for fellows to choose from based on their research interests and career aspirations. The academic track is designed for fellows largely interested in pursuing a classical academic career. The industry track supports interdisciplinary research projects involving an industry partner or applied research projects. The clinical track targets MD/PhDs who aspire to work as physician scientists and fellows with a strong interest in biomedical research.

Fellows are based at EMBL and work on self-designed interdisciplinary research projects. All projects involve at least two EMBL groups. Additional external partners from academia, industry, clinics and museums may also participate in EIPOD4 projects as defined by the chosen track.

The EIPOD4 fellowship programme is open to all nationalities and welcomes applications from experience researchers with diverse educational backgrounds (e.g. life sciences, mathematics, chemistry, physics, engineering) who are passionate about pursuing ambitious interdisciplinary research projects in an international setting. The positions include

- Three-years of secured funding
- Travel and accommodation support to visit partner labs (EMBL and external if relevant)
- Mandatory and optional training offers
- Public engagement activities
- Dedicated career development service including a career secondment programme
- Conference funds



EIPOD projects capitalize on synergies at the borders of overlapping yet separate scientific fields, and involve transferring techniques to a novel context. You are invited to design and propose an interdisciplinary project of your choice according to your research interests. For more information and to apply please visit [s.embl.org/eipod](https://www.embl.org/eipod)

EMBL also has a number of smaller site specific fellowship programmes offering a few fellowships per year. For more information please visit the EMBL Postdoctoral pages (<https://www.embl.de/training/postdocs/index.html>).



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Research at EMBL

Directors' Research, Heidelberg

Research groups led by the EMBL Director General, EMBL Director, and EMBO Director

- What are the mechanistic links between chromosome structure, epigenetic modifications and gene expression during development and disease?
- What are the connections between gene expression, cell metabolism and disease?
- What determines cell shape in *Drosophila*?

Cell Biology and Biophysics, Heidelberg

Discovering molecular and biophysical mechanisms of cell structure and function

- How do macromolecular machines and protein networks drive cell division, cell migration and cell communication?
- How do proteins and mechanical forces regulate the formation of organelles, cells, tissues and organisms?
- How do a cell's molecular architecture and genetic program change when it differentiates?

Developmental Biology, Heidelberg

Investigating how cells are coordinated and how they evolve to shape and maintain living organisms

- How did the central nervous system evolve?
- How does tissue-specific gene expression regulate cell fate and behaviour?
- What is the interplay between genes and regulatory elements in generating variation during evolution?

Genome Biology, Heidelberg

Understanding the molecular processes leading from genotype to phenotype

- What are the mechanisms governing genetic, epigenetic and genome regulation?
- How are transcriptional, metabolic and protein networks regulated and interconnected?
- How do differences in genomes translate to differences between individuals?

Structural and Computational Biology, Heidelberg

Understanding the molecular basis of biological function, from proteins and cellular processes to species interactions

- How are biomolecular networks organised in space and how are they regulated?
- How do molecular interactions define different cell states in individuals and in disease?
- How does dynamics of protein interactions and higher order assemblies determine functionality within and between cells?

We are entering the era of **Digital Biology**. By combining cutting-edge experimental approaches that visualise and quantify molecular processes, and computational technologies that integrate data across scales, researchers at EMBL strive to understand and make predictions about life, in health and disease.

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Tissue Biology and disease modelling, EMBL Barcelona

Exploring how genes, molecules and cells come together to form tissues and organs

- How do molecular and genetic networks ultimately build, regulate and control tissues and organs?
- How do changes in genes percolate through cells, tissues and organs to result in disease?

Structural Biology, EMBL Grenoble

Revealing the 3D structure of proteins and their interactions with the genome

- How do viral polymerases replicate and transcribe the viral genome? Can this be blocked with drugs?
- How do the proteins that bind to DNA regulate what gene is transcribed?
- What are the interactions involved in RNA processing, transport and degradation?

Structural Biology, EMBL Hamburg

Unravelling the structure of challenging molecules that impact human health

- Which host-pathogen interactions are most crucial for infection?
- What are the molecular mechanisms of transport across cell membranes?
- How can these findings drive new approaches to drug discovery and therapy?

Bioinformatics and Computational Biology, EMBL-EBI, Hinxton

Developing and implementing sequence analysis methods, multi-dimensional statistical analysis and data-driven discovery

- How do novel cellular functions arise and diverge during evolution?
- How do genomes, transcriptomes, proteomes and their interactions vary between cells, tissues and individuals?
- How do variations in cancer genomes lead to differences in therapy success?

Epigenetics and Neurobiology, EMBL Rome

Exploring connections between genome, environment and neural function

- How do neural pathways form and function, in health and disease?
- How do genome and environment shape an animal's behaviour?
- What exactly has an impact on the genetic information we express and pass on to the next generation?

Meet some of our former postdocs



Daniel Gerlich

- Nationality: German
- Joined EMBL in 2002
- Currently: Group Leader, Institute of Molecular Biotechnology, Austria

“I was attracted by the scientific excellence at EMBL, the cutting-edge technology available, and the international ambience.”

While at EMBL, Daniel worked on various projects aimed at understanding chromosome organisation in vertebrates during the cell cycle. Key to his postdoctoral experience was the collaborative spirit amongst research groups, within and outside of EMBL: “I valued the frequent scientific discussions with postdocs, PhD colleagues and PIs throughout our research unit and beyond.”

His most challenging task was to progress from postdoctoral fellow to group leader, but even here EMBL proved its worth: “I am grateful for the helpful advice and generous support that I received from my postdoc supervisor during the transition to build up my independent research group.”

Now working as a senior research group leader at the Institute of Molecular Biotechnology in Vienna, Austria, Daniel continues to contribute to the fields of chromosome organisation and cell division. His group is investigating how cytoskeletal and membrane systems shape emerging daughter cells.

Daniel advises new postdocs: “Benefit from the great opportunities at EMBL its facilities and from the collaborative spirit – this enables interdisciplinary research projects that would be hard to achieve at many other places.”



Gemma Holliday

- Nationality: British
- Joined EMBL in 2005
- Currently: Bioinformatician, Medicines Discovery Catapult, UK

“It was a very supportive environment – you are encouraged to spread your (research) wings”

It was not a particular quality but a particular person who attracted Gemma to EMBL-EBI: “I had collaborated with Janet Thornton’s group during my PhD,” she says. “The prospect of working for her, as one of the UK’s leading scientists, was very exciting.”

Gemma came to EMBL-EBI to build upon her PhD work – the creation of a unique database of enzyme reaction mechanisms called MACiE (Mechanism, Annotation and Classification in Enzymes). In her new role at the University of California, she continues as the MACiE project leader. “The whole purpose of my research was, and still is, understanding the chemistry of enzymes,” Gemma says. As a postdoc, she used MACiE data to expand analysis of how enzymes perform myriad complex chemistries with such a small range of chemical units. Later on, her research expanded to include the evolu-

tion of function within enzymes, in collaborative projects within the group and further afield.

“EMBL’s postdoctoral programme is very strong, especially with respect to its support infrastructure,” she says. “There are a lot of challenges in moving from PhD to postdoctoral research, such as learning to be more assertive and confident in yourself as a scientist. I found the mentoring process especially useful, as well as the ability to talk to other people who had been through the transition.”

From gaining experience as a course trainer to supervising PhD students, Gemma embraced many different opportunities for learning and development as a postdoc. “I’m not sure there was any one thing that I liked best about my time at EMBL, specifically the EBI,” she concludes. “It is a wonderful environment to work in.”



Foteini Mourkioti

- Nationality: Greek
- Joined EMBL in 2003
- Currently: Assistant Professor, Department of Orthopedic Surgery, Perelman School of Medicine, University of Pennsylvania

“During my postdoctoral time, I got the opportunity to be exposed to world-class scientific training.”

After completing a bachelor degree in Biology in Greece followed by her PhD in Germany, Foteini joined EMBL Monterotondo in Italy for a postdoctoral position. Foteini describes her motivation to join EMBL as “the possibility to work in an international environment that was committed to excellence in research and innovation.” Her work focused on understanding the role of different cell types and various signalling pathways in mammalian regeneration mechanisms of skeletal and cardiac muscle.

What she liked best about her postdoctoral time at EMBL was “the free exchange of scientific approaches, ideas, unpublished data and the generosity of EMBL scientists to help with experimental problems when needed”.

Foteini is currently working at Stanford University in California where her main focus of research is to study the cardiac and skeletal muscle defects in Duchenne Muscular Dystrophy (DMD) as well as to develop and test new therapies. She was the recipient of a prestigious Career Development Award from the American Heart Association to support her research. She also teaches and participates in various training activities at the Stanford Medical School. She encourages new postdocs to interact with colleagues also outside of the lab. “The people you meet at EMBL will not only be your friends but also future scientific collaborators” she says.



Matthias Mentel

- Nationality: German
- Joined EMBL in 2002
- EIPOD Fellow
- Currently: Group Leader in the personal care industry

“For me as a chemist, I was very much looking forward to working in close collaboration with people from all different disciplines in biology.”

Matthias was a recipient of a prestigious EMBL Interdisciplinary Postdoc (EIPOD) fellowship, the premise of which is to support interdisciplinary research involving two or more groups at EMBL. What initially attracted him to the EIPOD programme was the possibility to work on a project that would do exactly this: “Provide great insight into biological questions with the help of smart chemical tools”. His research focused on the development of labelled biochemical signalling molecules, which he subsequently used to study cellular signal transduction processes.

What Matthias enjoyed most about his postdoctoral time at EMBL was the scientific spirit. “It’s a great thing at EMBL, that if you have a scientific problem or question, there is definitely someone somewhere to help you further” he says. He encourages new postdocs to keep an open mind in research and to look beyond their individual research projects. While at EMBL he got involved in, and contributed to, the research of others in addition to his own project allowing “the highly interdisciplinary environment at EMBL” to inspire him.

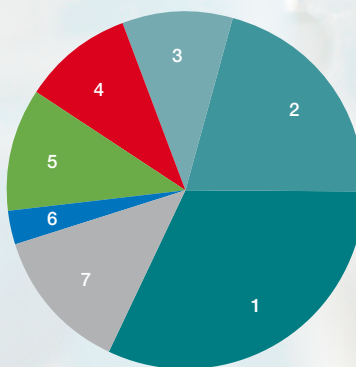
Life after EMBL

EMBL Alumni Relations

The EMBL Alumni Relations office offers staff and alumni resources and opportunities to keep connected, find new positions, and make the transition back home or abroad. In addition to various career development resources, they also offer forums for online discussions and networking events around the globe. More information about the Alumni Association is available at: <http://www.embl.org/alumni>

Career Outcomes: Current roles of former EMBL postdocs

Following training at EMBL, the vast majority of postdocs remain active in research, many in leadership roles.



Academic research / teaching (62%)

1 Principal investigator	32%
2 Research / teaching staff	21%
3 Postdoc	10%
4 Industry R&D	10%
5 Science-related non-research professions	11%
6 Non-science-related professions	3%
7 Career path unknown	13%

Based on publicly available career information for the current positions of 1057 former EMBL postdocs, who spent at least 1 year at EMBL and left between 1997 and 2016. Data collected by the Postdoc Office in 2017.





Join us

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EMBL is Europe's flagship laboratory for the life sciences. We are an intergovernmental organisation established in 1974 and are supported by over 20 member states.

EMBL performs fundamental research in molecular biology, studying the story of life. We offer services to the scientific community; train the next generation of scientists and strive to integrate the life sciences across Europe.

We are international, innovative and interdisciplinary. We are more than 1700 people, from over 80 countries, operating across six sites in Barcelona (Spain), Grenoble (France), Hamburg (Germany), Heidelberg (Germany), Hinxton (UK) and Rome (Italy). Our scientists work in independent groups and conduct research and offer services in all areas of molecular biology.

Our research drives the development of new technology and methods in the life sciences. We work to transfer this knowledge for the benefit of society.

**EMBL
Postdoctoral
Programme**

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