Future of Research Infrastructures

EMBL's Perspective

Edith Heard

Director General

Belgian Presidency Conference on Research Infrastructures

4 June 2024

EMBL 50 YEARS | 1974–2024

The foundation of the European Molecular Biology Laboratory

"[...] science has always been the most developed international activity that there is. It is as simple as that."

John Kendrew, Founder of EMBL

EMBL member states

Member states (29)

Austria 1974
Denmark 1974
France 1974
Germany 1974
Israel 1974
Italy 1974
Netherlands 1974
Sweden 1974
Switzerland 1974
United Kingdom 1974
Finland 1984
Greece 1984
Norway 1985
Spain 1986
Belgium 1990
Portugal 1998
Ireland 2003
Iceland 2005
Croatia 2006
Luxembourg 2007
Czech Republic 2014
Malta 2016
Hungary 2017
Slovakia 2018
Montenegro 2018
Lithuania 2019
Poland 2019
Estonia 2023
Latvia 2023

Associate member state

Australia 2008

Prospect member states

Serbia

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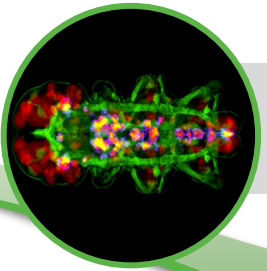
European Molecular Biology Laboratory (EMBL)

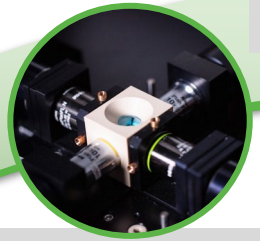
EMBL is Europe's leading intergovernmental laboratory for life sciences research



Excellent Research

Scientific Services

Advanced Training



Innovation and Translation

Integrating life sciences

2,000 people

29 member states

26 total start-ups

3,600 annual users of experimental services

107 million daily web requests to EMBL-EBI data services

8,700 course and conference participants

2022 metrics

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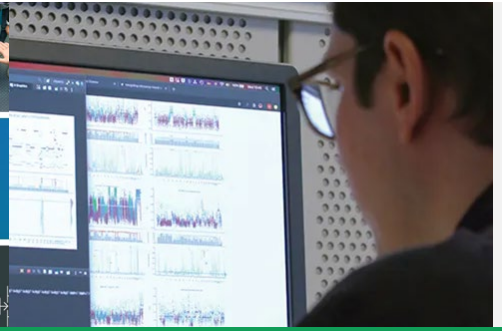
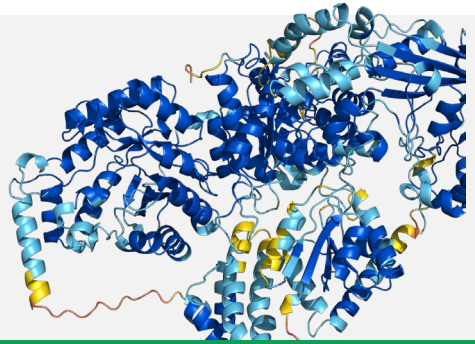
Open Science: For a positive culture change in research





United Nations
Educational, Scientific and
Cultural Organization

Open Science	Open Data	AI Applications	Partnerships
EMBL's Open Science policy strives for publications, data, and software to be as open as possible by default	EMBL-EBI data resources: international researchers can freely deposit, search, visualise, and reuse big life sciences data	Breakthrough AI models such as Alpha Fold relied on open data available through EMBL-EBI. Sharing data is a key enabler.	EMBL and UNESCO established a joint collaboration and fellowship programme to promote open science.

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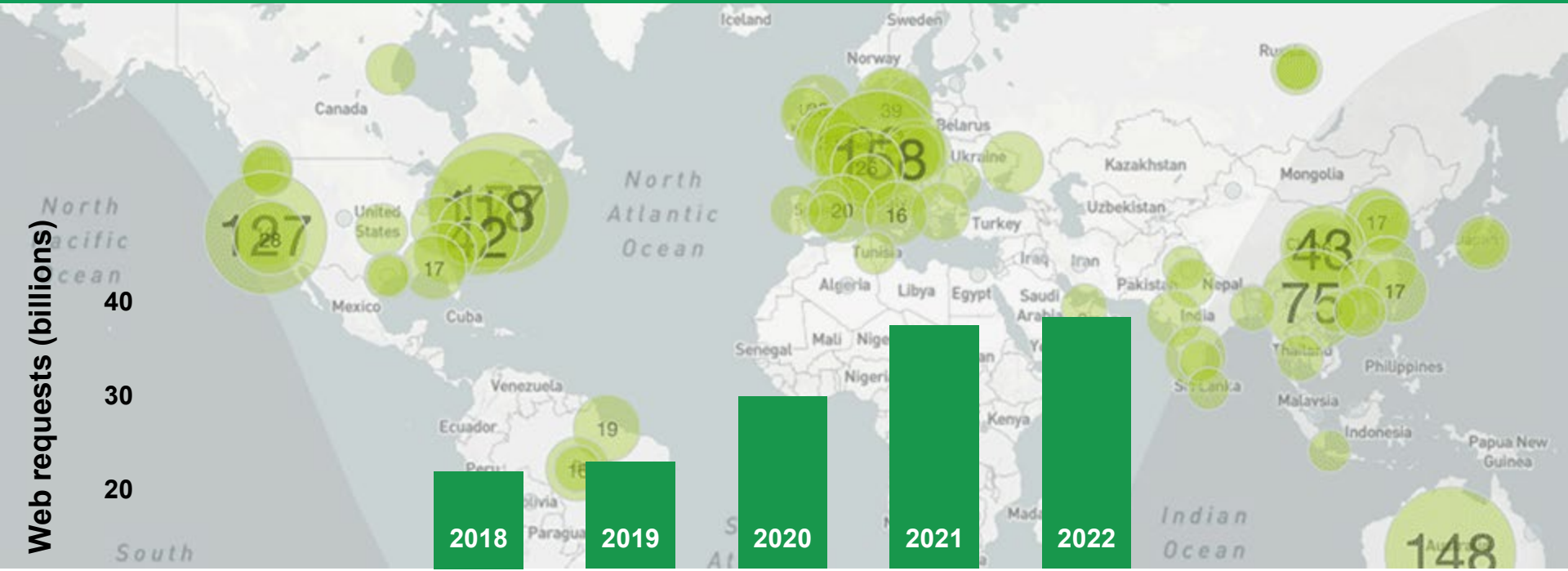
Global use of the EMBL-EBI Open Data Resources

107 million requests to our data resource websites on an average day



Average web requests increased 100% since 2018

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Weighing up Open Science and Research Security

- **RIs, such as EMBL, are already affected by complex geo-political conditions.** It is our institutional responsibility to establish and maintain global and agile collaborations with trusted foreign partners.

- **Global engagement approaches are essential** to build a more inclusive data infrastructure in the longer term.

- Yes, the international community benefits from our Open Science, but **Europe benefits too.**

Impact of EMBL experimental services

91% of users

said access to EMBL experimental services was vital for their research

70% of users

indicated that EMBL experimental services delivered wider societal impacts

Societal benefits of using EMBL experimental services

Use of EMBL experimental services has helped to deliver wider societal impacts:

n=378 *Food security and sustainable agriculture ^Other societal areas

"Scientific advances will always help find solutions to societal challenges."
EMBL academic user, France

Source: Technopolis analysis of EMBL external academic user survey

"By using EMBL experimental services our lab started to add new techniques to our toolbelt. We widened our range of methodological expertise."
EMBL academic user, Portugal

"Top notch facility that serves users in the best possible manner"
EMBL academic user, United Kingdom

"EMBL provides streamlined access to state-of-the-art instruments indispensable for structural biology studies."
EMBL academic user, Finland

technopolis group

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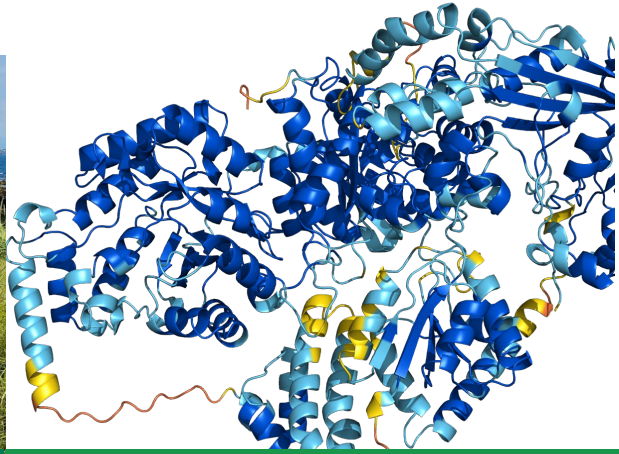
Adjusting to a changing and complex world

Making EMBL green

From energy efficiency and waste reduction solutions to green laboratory practices

Exploring new research areas

From planetary biology to microbial ecosystems and infection



Embracing digital transformation

From leveraging AI and machine learning to accelerating scientific breakthroughs

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Building and supporting life science in Europe and beyond

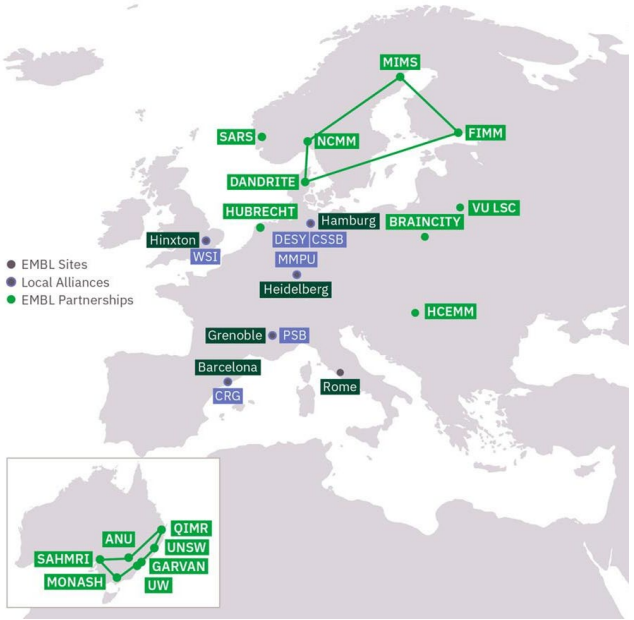
Building partnerships to implement EMBL's organisational models

Collaborating with multiple research infrastructures situated in member states

Establishing links and initiating collaborative relationships between **scientific communities**

Coordinating efforts **within and between member states** to propel Europe into a new era of life sciences

Fostering collaboration



Shaping science policy and strategy

European Commission

EIRO forum
serving european science

eosc

instruct ERIC

elixir

EURO-BIOIMAGING

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Thank you!

EMBL