

# EMBL's European Bioinformatics Institute

Unleashing the potential of big data in biology

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Industry Partnerships

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# What is EMBL-EBI?

- World leading source of public biomolecular data
- Our vision is to benefit humankind by advancing scientific discovery and impact through bioinformatics.
- Part of the European Molecular Biology Laboratory (EMBL), Europe's flagship laboratory for the life sciences.



# The European Molecular Biology Laboratory



EMBL-EBI

Bioinformatics



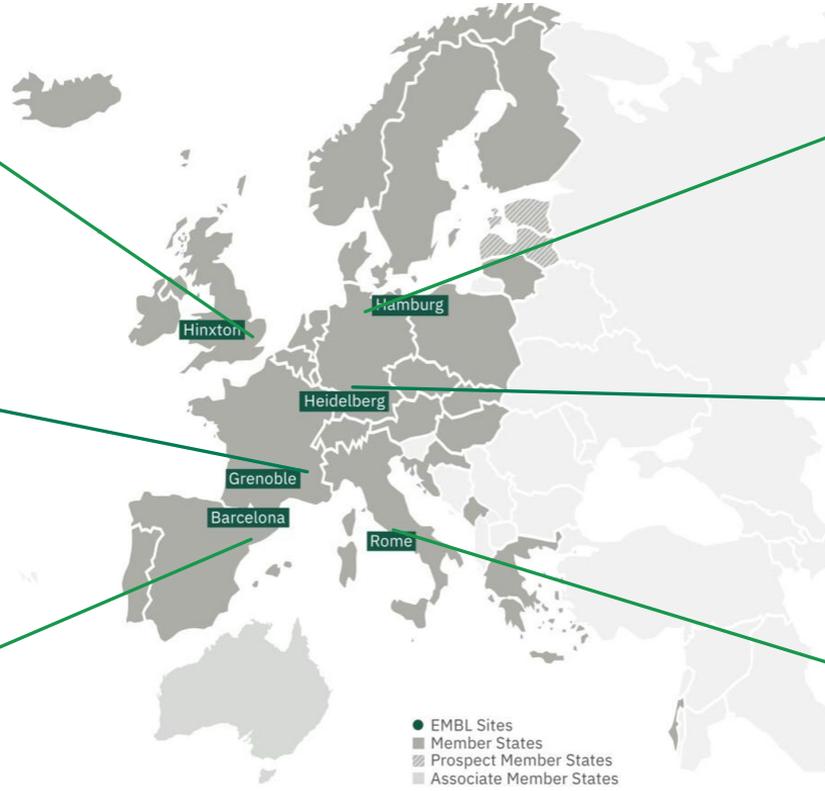
Grenoble

Structural biology



Barcelona

Tissue biology  
and disease  
modelling



Hamburg

Structural biology



Heidelberg

Life sciences



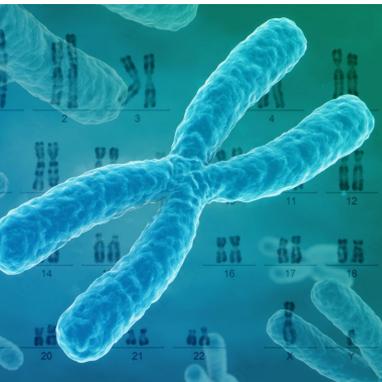
Rome

Epigenetics  
and neurobiology



Europe's flagship laboratory for the life sciences.

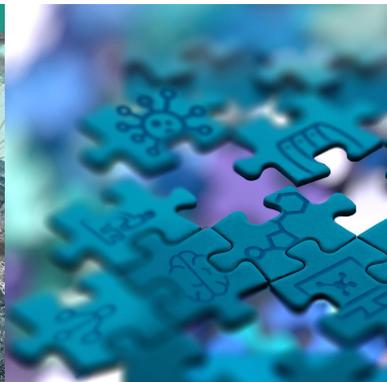
# Our mission



Deliver data  
resources



Perform excellent  
research



Train the next  
generation of  
scientists



Engage with  
industry



Coordinate  
bioinformatics  
in Europe

# Data resources to support life science research

[www.ebi.ac.uk/services](http://www.ebi.ac.uk/services)



# Data resources at EMBL-EBI



## Chemicals, molecules and drug discovery

ChEBI  
ChEMBL  
MetaboLights  
Open Targets  
SureChEMBL



## Genes, genomes and RNA

ArrayExpress  
Ensembl  
European Nucleotide Archive  
Expression Atlas  
HGNC  
MGnify  
Rfam  
RNACentral  
VectorBase  
WormBase



## Proteins

AlphaFold DB  
Enzyme Portal  
InterPro  
PDBe  
Pfam  
PRIDE  
UniProt



## Imaging and cellular structure

BioImage Archive  
Electron Microscopy Data Bank  
EMPIAR



## Genetic variation and disease data

COVID-19 Data Platform  
European Genome-phenome Archive  
European Variation Archive  
Mouse informatics



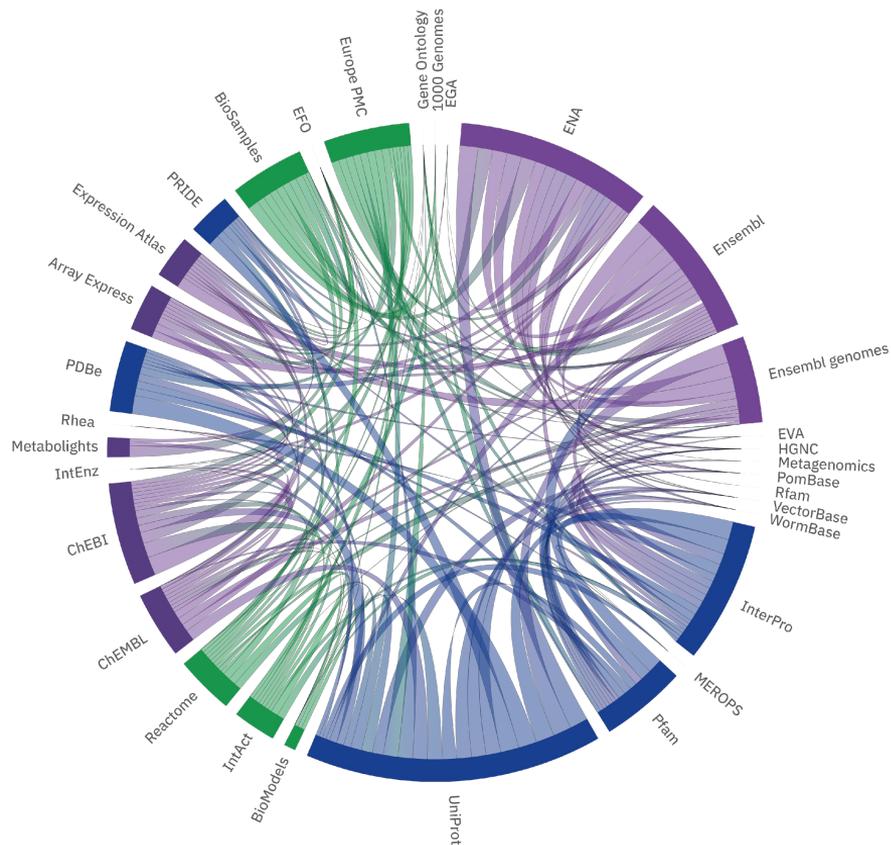
## Literature and knowledge management

BioModels  
BioSamples  
BioStudies  
Complex Portal  
Europe PMC  
GWAS Catalog  
IntAct  
OmicsDI  
Ontologies  
Reactome



# Database interactions

- Our collaborative community facilitates social, scientific and technical interactions
- This image shows internal interactions between data resources, as determined by the exchange of data.
- The width of each internal arc is weighted according to the number of different data types exchanged.



# Research

[www.ebi.ac.uk/research](http://www.ebi.ac.uk/research)



# Research groups at EMBL-EBI



Alex Bateman



Alvis Brazma



Paul Flicek



Zamin Iqbal



John Marioni



Janet Thornton



Pedro Beltrao



Isidro Cortes Ciriano



Moritz Gerstung



Thomas Keane



Irene Papatheodorou



Virginie Uhlmann



Ewan Birney



Rob Finn



Nick Goldman



Andrew Leach



Evangelia Petsalaki

# Bioinformatics training

[www.ebi.ac.uk/training](http://www.ebi.ac.uk/training)



# EMBL-EBI Training



Courses at  
EMBL-EBI

Courses at  
host sites

Visits and  
secondments

Train  
online

Train the  
trainer

# Supporting industry

- Our Industry Programme offers neutral ground where companies can meet and explore new developments and shared challenges.
- We support small and medium enterprises by providing free data, tools and infrastructure



# EMBL-EBI in 2021

**837**

members  
of staff

**107**

million requests  
to our websites  
on an average  
day

from  
**41**

million unique  
IP addresses

**400**

petabytes  
of raw data  
storage

**256**

journal  
papers  
published

**497,000**

unique IP  
addresses  
accessed  
Train online

**6.4**

million web  
requests received  
by COVID-19  
Data Portal

**189**

active grants  
at EMBL-EBI

**900**

participants in  
Industry  
Programme  
knowledge-  
exchange  
workshops

from over  
**248,000**

users in 191  
countries

**147**

collaborative  
grants with  
researchers in  
52 countries  
from 644  
institutes

**3,900**

people  
participated in  
our 46 public  
engagement  
events