



The EMBL Australia Mirror of EMBL-EBI

The EMBL Australia Mirror of EMBL-EBI, located at The University of Queensland, provides an Australian-based entry to many of the data services of the European Bioinformatics Institute (EBI). EBI, an institute within the European Molecular Biology Laboratory (EMBL), is the world's premier life sciences data resource.

The EMBL Australia Mirror is freely available online to the Australian and international researchers. It will continue to grow over upcoming months to include a broad selection of EBI's databases, software frameworks, and online tools for data retrieval, querying, analysis, comparison, integration and visualisation.

This Facility, the first of its kind outside the UK, will enable new opportunities for large-scale research and collaboration, data analysis and advanced training in Australia and the region. It will enhance Australia's international scientific standing, position Australia as a premier biomolecular data service provider, and become a key differentiator in attracting

investment into Australian life sciences, biotechnology and ICT.

In addition to providing local copies of existing EBI data and services, the EMBL Australia Mirror intends to work with EBI to implement and offer novel and/or customised services in selected areas that complement and extend those of EBI itself. These new services will extend international practice and offer new capabilities to the Australian and global research communities, for example in agricultural-plant biotechnology and biodiversity informatics.

The EMBL Australia Mirror will embrace a service function, i.e. is not primarily a research facility, although focused research and development will be required to develop unique, customised data services in selected areas. It is being managed in accordance with EMBL policies that emphasise open access to data.

The Mirror Facility is co-located with the National Computational Infrastructure (NCI) Specialised Facility in Bioinformatics.

Benefits for the Australian Research Community

- Faster access to EBI data
- Programmatic access to EBI data and software
- Options to copy EBI data to the NCI SF Bioinformatics for specialised computation
- Opportunities to develop new data services in conjunction with EMBL-EBI

Types of data resources and tools available

- Genomes
- Nucleotide Sequences
- Protein Sequences
- Macromolecular Structures
- Small Molecules
- Gene Expression
- Molecular Interactions
- Reactions & Pathways
- Protein Families
- Enzymes
- Literature
- Taxonomy
- Ontologies
- Patent Resources
- Sequence Similarity & Analysis
- Pattern & Motif Searches
- Structure Analysis
- Text Mining

About EMBL-EBI

EBI, based on the Wellcome Trust campus in Hinxton, just outside Cambridge UK, is one of the five campuses of EMBL. EBI, a leading centre for research and services in bioinformatics, grew out of pioneering work at EMBL Heidelberg in developing and providing public biological databases to the research community. The EBI databases span the molecular life sciences including genomics, proteomics, cheminformatics, transcriptomics, pathways and systems. Research groups at EBI also create tools that allow researchers to integrate and analyse this information.

EMBL Australia Bioinformatics Network

In conjunction with Bioplatforms Australia, EMBL Australia is forming the Australian Bioinformatics Network (ABN), a group of experts who will facilitate uptake of Mirror services by the Australian research community, and ensure that priorities of Australian researchers inform its further development. The ABN will be a primary means by which the Mirror provides advanced technical training, industry liaison and outreach, and ensures the delivery and growth of services.

About EMBL Australia

In March 2008, Australia became an associate member of the European Molecular Biology Laboratory (EMBL) for a period of seven years.

EMBL Australia was formed to maximise the benefits of the Associate Membership through activities such as funded research positions, collaborative ventures and the formation of research institutes.

EMBL Australia seeks to connect and internationalise Australian research through integrated research networks that connect to global partnerships. It drives enhanced research quality through the development of world-class scientific leaders.

EMBL Australia delivers on these aims through four primary activity streams:

- First-class scientific training and collaborative opportunities for Australian life scientists
- Establishment of the EMBL Partner Laboratory Network across Australia
- Pursuing new opportunities in international co-funding for research
- Exchange of expertise, resources, services, and innovation between Europe and Australia.

Infrastructure

The Mirror and the SCISF comprises:

- 3,000+ cores in 384 nodes
- 10+ terabytes RAM
- 500+ terabytes storage (initially)

Funding and partners

The EMBL Australia Mirror of EMBL-EBI is funded and supported by:



More information

EMBL Australia Mirror of EMBL-EBI
www.ebi.edu.au

EMBL Australia
www.emblaustralia.org

National Computational Infrastructure
Specialised Facility in Bioinformatics
<https://www.ncisf.org/>