Australian BioCommons

Enabling analysis of life science data through national research infrastructure

Australian BioCommons is a digital research infrastructure that is helping Australian researchers to understand the molecular basis of life across environmental, agricultural and biomedical sciences.

The BioCommons helps keep Australian life science research globally competitive by deeply collaborating with research communities to develop essential bioinformatics resources, including tools, methods and training that researchers require to respond to national challenges.

WHAT IS RESEARCH INFRASTRUCTURE?

Digital research infrastructure is the collection of tools and services that underpins data-driven research and innovation. It provides critical access to digital platforms, tools, advanced high-performance computing facilities and cloud resources.

Australian BioCommons is a collection of people, tools, technology and services that enable life sciences research excellence.

WHAT WE DO

We consult with researchers to define shared challenges and identify community-scale solutions. We work with our network of service providers, research institutions and international peers to remove roadblocks and deliver enhancements.

- Provide enduring access to the digital techniques, data and tools
- Develop and maintain community scale digital infrastructure in concert with international peer infrastructures
- Offer strategic advice and leadership at a national scale
- Streamline access to analysis and data services
- Convene communities of practice
- Deliver a national training program

Collaboration is the foundation of all Australian BioCommons activities

SERVICES ARE FULLY-SUBSIDISED FOR AUSTRALIAN RESEARCHERS

Australian BioCommons offers a wide range of tools and services in conjunction with key national and global partners.

Galaxy Australia
A web-based platform containing over 1100 bioinformatics tools that can be chained together in workflows, with extensive online training available.

Australian Apollo Service
Curate and edit your genome annotations in real-time on a collaborative, web-based system.

Australian AlphaFold Service
Upload the amino acid sequence of your protein and receive the AI-generated 3D structure, with the underlying set up done for you.

Australian Fgenesh++ Service
Annotate your eukaryotic genomes with this free to use pipeline, with extensive online instructions available.

Bioinformatics ToolFinder
Find your tool of choice by searching for installations on Australian research infrastructures.

Bioinformatics WorkflowFinder
Explore and use workflows registered by Australian BioCommons partners on WorkflowHub.

Bioplatforms Australia Data Portal
Discover datasets generated by large-scale open science programs within the Bioplatforms Australia Framework Initiatives.

Training Infrastructure as a Service
Deliver training easily with all the computational infrastructure and support you need from Galaxy Australia.

Bioinformatics Training
Webinars, hands-on workshops and events to uplift your skills and connect you to the latest global developments.

BETTER SYSTEMS NEED NATIONAL PARTNERSHIPS

Australian BioCommons coordinates a diverse range of collaborative projects.

Human Genome Informatics
- Enhancing Australia's capability for secure and responsible sharing of human genome research data
- Establishing the infrastructure to enable Australia to participate fully in the global human genomics data sharing ecosystem

ABLeS - the Australian BioCommons Leadership Share
- Offering communities computational resources, specialist expertise, centrally supported tools and software to support the generation of reference data assets
- Establishing a bioinformatics software accelerator
- Pathway for accessing tailored national high performance computing resources

Nextflow Tower service
- Deploying a centralised command post for Nextflow pipelines

Data Commons in the Cloud
- Establishing a new data commons to support Australian cardiovascular research
- Connecting Australian paediatric cancer research to a global data commons
- Co-leading the international Gen3 Community Forum

ARGA
- Enabling the discovery and use of genomic data from Australian native and agricultural species

CONNECT WITH US

Looking for events, training opportunities and news?
Subscribe to our monthly e-news

Want to help design relevant bioinformatics infrastructure and services? Our researcher communities convene around various methods.

biocommons.org.au/get-involved

Interested in delivering training?
Our National Bioinformatics Training Cooperative brings together trainers to collaborate.

biocommons.org.au/training-cooperative

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BIOPLATFORMS AUSTRALIA

NCRIS National Research Infrastructure for Australia
An Australian Government Initiative

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