2024

ANNUAL REPORT

BIOPLATFORMS AUSTRALIA

PARTNERS

LEADERSHIP

Bioplatforms Australia is committed to maintaining a high standard of governance and leadership. Strategic direction and operational oversight are provided by an independent Board of Directors and supported by an Executive Management Committee who advise on platform technologies and organisational initiatives.

EXECUTIVE MANAGEMENT COMMITTEE

The Executive Management Committee manages and advises on platform issues and operations. It is also responsible for implementing strategic initiatives, including Commonwealth funding agreements established with network partners. The committee is comprised of the Chief Executive and scientific leaders from across the Bioplatforms network.

BOARD MEMBERS

Bioplatforms Australia's Directors offer a wealth of experience across scientific, business and government domains.

Chair

Prof Peter Gray

Directors

Dr Sue Meek
Dr Katherine Woodthorpe
Prof James McCluskey
Ms Erica Kneipp

PHOTOGRAPH CREDITS:

p18 – Robert Mitreski, 23Strands
p19 – Rahau Shirazi

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HIGHLIGHTS 2023/2024

Capability

18
world-class facilities, including 2 biofoundries

$38m+
invested in state of the art technology and leading expertise

403
funded staff (339 full time employees)

Digital Infrastructure (BioCommons)

14
Bioinformatics training sessions (BioCommons, face-to-face and webinar)

3,974
training attendees 28% live, 72% recorded

9,919
users of Galaxy Australia

459
analytical tools added

Scientific programs and initiatives

20
active national initiatives

342.6Tb
'omics datasets held in the Bioplatforms Data Portal

1,553
registered users (210 new) to the Bioplatforms Data Portal across all initiatives datasets

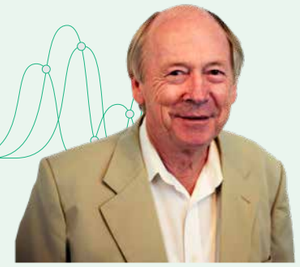
Scientific outcomes of technology platform nodes

950
research papers published in peer-reviewed journals

>226
ARC and NHMRC grants Chief Investigator, partner investigator/ organisation

7
ARC Centres of Excellence, Industry Transformation Research Hub,Training Centre

CHAIRMAN'S REPORT



BIOPLATFORMS AUSTRALIA

In 2023/24, Bioplatforms Australia Limited received additional funding totalling $113 million from the Australian Government's Department of Education National Collaborative Research Infrastructure Scheme (NCRIS).

This funding complements the $85 million received through the 2022 program guidelines and provides financial security to the Bioplatforms project for the next five years. The new funding provides 'Step Change' long term resources for national Synthetic Biology infrastructure and significant growth in Bioplatforms' digital program. The contributions from the Department of Education's Research Infrastructure team continued the implementation of the 2021 National Research Infrastructure Roadmap, and together with a range of investments across the NCRIS network, positions Australian research to continue to provide both scientific excellence and translational benefits for Australian society.

New Infrastructure Investment

Bioplatforms long term financial certainty has ensured the viability and productivity of our network across genomics, proteomics, metabolomics and bioinformatics facilities. Contracts have been signed with project participants to the value of $120 million with generous co-investment with our partners of a further $85 million cash. This presents a significant national asset, enabling a body of research that extends the breadth of biomedicine, agriculture, food and biodiversity.

With the generous Step-Change support of NCRIS permitting the growth and development of a national Synthetic Biology capability, Bioplatforms took the opportunity to provide continuity to our existing BioFoundries – the Australian Genome Foundry (Macquarie University) and IDEABio (The University of Queensland).

Further, after extensive consultation Bioplatforms invested in three plant science focused Synthetic Biology centres at La Trobe University, the Australian National University and The University of Adelaide respectively. The newly formed network builds from significant existing capability that Bioplatforms has partnered with through the Australian Research Council Centres of Excellence program and Industry Transformation opportunities and represents a globally unique resource. We look forward to the extensive planning coming to material value for the Australian research and industrial communities in the coming years.

I must acknowledge the broader NCRIS community who have been integral in enabling the Synthetic Biology step-change activity, including Therapeutic Innovation Australia, Phenomics Australia, the Australian Plant Phenomics Network, ANSTO, and Microscopy Australia.

Bioplatforms Facility Contribution

Bioplatforms has been able to maintain and strengthen its commitment to supporting the Australian life sciences community through a diverse access program, provision of targeted infrastructure requirements, and making integrated capability available to initiatives that are of significant breadth, scale and complexity, in a way that is not readily achievable through other mechanisms. In 2023/24 the Bioplatforms network undertook 15,840 contracts for 3,492 discrete collaborators, from which 23% of activity was focused on industrial and commercial research communities. Additionally, a total of 9,919 registered users accessed digital resources for 'omics analyses through the Australian BioCommons platforms, reflective of the increasing digital dependency in modern life science.

Bioplatforms investments in 'Omics and Synthetic Biology research infrastructure provide avenues for broad impact in areas of significance to Australia, indicated by our access breakdown with 66% from the biomedical sector, 21% focused on food and agricultural research with the final significant focus being biodiversity and environmental research. Our network supported in excess of 950 peer reviewed manuscript, indicative of the systematic value and high quality that the Bioplatforms network brings the Australian research system.

Strategic Research Partnership

Bioplatforms purposefully seeks to support the discovery-to-impact cycle within the innovation system though advanced partnership strategies that require contributions from multiple scientific disciplines. Towards this end, Bioplatforms has partnered extensively to drive convergence with other researchers, scientific capabilities, partnering and businesses, and financial investors, thereby providing a vibrant ecosystem for innovation and application.

An example of our partnership approach included the formation and early deployment of an integrated NCRIS Health Group comprising leadership from Population Health Research Network, Phenomics Australia, National Imaging Facility, Therapeutic Innovation Australia and Bioplatforms Australia. The purpose of the cluster is to support significant Australian research agendas deliberatively and seamlessly with harmonious access to the cross section of health directed NCRIS capabilities. The collective approach is now providing collaborative support to a growing number of NHMRC and MRFF initiatives.

The ongoing collaborative work of the Bioplatforms framework data strategy has also continued to deliver new initiatives in areas such as Australia's unique biodiversity. A comprehensive genomic reference library is now nearing completion for Australia's vertebrate fauna, with significant activities in flowering plants, grasses and fungi on going. Bioplatforms is partnered with our NCRIS peers at the Atlas of Living Australia and Australian Research Data Commons to expose this data through the Australian Reference Genome Archive.

The framework initiatives are increasingly aimed at generating multi-faceted benefits from their broad collaborations. As an example, the aforementioned native fungi survey – Australia's Functional Fungi – has assisted taxonomists classify an abundant and diverse family, working with the food industry to characterise mushrooms as a safe protein source and supporting biotech with discovery of new classes of potentially life changing drugs called psylocibins.

A highly effective team

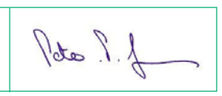
The achievements of 2023/24 year as outlined above have been made possible only through the efforts and commitment of many hundreds of people in the Bioplatforms network. I would like to thank all involved, and particularly acknowledge the contributions of our facility leaders. Collectively, and individually, you have played a significant role in engaging broad research communities, providing advice to the Board, supporting our Executive and acting as the wider face of Bioplatforms throughout a national network comprising Universities, Medical Research Institutes, Publicly Funded Research Agencies, Industry bodies, State and Territory government funded research initiatives, and a wide range of private sector companies.

The contribution of the Company Executive, Andrew Gilbert and his small yet high achieving team – Mabel Lum, Sophie Mazard, Sarah Richmond, Victoria Snelson, Kelly Scarlett, Aude Touffu, John Parisot and Darren Plett – has been central to our accomplishments throughout the year, and to our increasingly aspirational plans. We are particularly delighted to have welcomed Aude and Darren through the year. The hard work, dedication and professionalism of Andrew and his team are key to the ongoing successes of Bioplatforms Australia.

I wish to acknowledge and appreciate the role of Dr Les Trudzik who retired as Chair of Bioplatforms at the Annual General Meeting in December 2023. As a founding Director Les has provided oversight with wisdom and energy and will be greatly missed. Two new Directors have been appointed to the Board, Professor James McCluskey and Ms Erica Kneipp who bring tremendous experience in academia, the national research environment and commercialisation. Jim and Erica augment the corporate history and system perspectives that existing Directors Professor Sue Meek and Dr Katherine Woodthorpe continue to provide.

I am looking forward with great anticipation to the ongoing contribution of Bioplatforms Australia to the national research environment.

Professor Peter Gray
Chairman



NETWORK ACCESS

Effective results driven research requires a critical mass of expertise and state-of-the-art infrastructure for the Australian life sciences sector.

Through Bioplatforms' infrastructure and personnel investment, we ensure highly skilled researchers have access to world-class technology platforms in genomics, proteomics and metabolomics with integrated bioinformatics capabilities.

The life sciences sector is transforming with increased focus on data-enabled approaches to modern day complex biological challenges.

To ensure an ongoing state-of-the-art capability across the research sector, Bioplatforms has consolidated our diverse platforms and technology capabilities into 'critical mass' Centres, each with specialised functions. The demand in our 'omics capabilities continues to grow. The completed contracts have led to impacts across all four capabilities (genomics, proteomics, metabolomics, bioinformatics).

We support the breadth of the Australian research community through our diverse client base.

Research contracts completed were distributed proportionally across clients and sectors, with repeat business averaging 4.5 contracts per client over the year, indicative of the value of Bioplatforms facilities to researchers. This year has seen an increase in industry clients as well as a stronger focus in Agri-food related works.

3,492 clients

15,840 contracts

950 publications

SYNTHETIC BIOLOGY

Biofoundries

$8.3m towards the setup of a national synthetic biology infrastructure capability (2020)

$55m as a step change investment to address critical gaps (2023)

ARC Centre of Excellence

$35m ARC investment

32 partner organisations

Spin-off and start-ups

HydGene Renewables

Number 8 Bio

ENABLING LABORATORY ACCESS

Clients

61% University

16% Medical research institutes and PFRA

15% Government and industry

Research focus (based on client numbers)

58% Biomedical and diagnostics

24% Agri-food

11% Environmental

DIGITAL INFRASTRUCTURE

Galaxy Australia

459 analytical tools added

8,375 users in FY23/24

BioCommons

14 training events held

3,974 live attendees and recording views

PARTNERSHIP DEVELOPMENT

- Cooperative Research Centres
- CSIRO Future Science Platforms
- ARC Centres of Excellence
- Industry Transformation Research Hubs and Training Centres – active
- Medical Research Future Fund missions (MRFF)
- ARC and NHMRC research projects
- Commercially – linked activities (patents, clinical trials, start-ups)

NATIONAL DATA INITIATIVES

342.63Tb 'omics datasets (additional 46.86Tb in 2023-24)

>100 reference genomes of native Australian species

>10,000 environmental samples with microbial genomic resource

>60 population genomics studies conducted in support of conservation efforts

BIOPLATFORMS AUSTRALIA

With the advent of next generation DNA sequencing technology, high-throughput and high-resolution mass spectrometry and means by which biological systems can be engineered, Australian research, in line with global trends, is becoming increasingly dependent on ‘omics capability.

The role of molecular life science is pervasive across the domains of human health, agriculture and environment and this will continue well into the next decade of Australian research and development. Omics now contributes substantially to approximately 30% of Australian research efforts and will be key to enhancing productivity and enabling step change advancements across these three domains.

Bioplatforms supports a sophisticated network of genomics, proteomics, metabolomics and bioinformatics instruments, technologies, expertise, analysis tools and access to commercial translation opportunities in Australia. The network is augmented by additional state, institutional and commercial investments that work harmoniously to support our world class researchers in human health, agriculture, environment, microbiology, and synthetic biology.

DEPLOYMENT TO NATIONAL PRIORITIES

Over the next decade, genomics, proteomics, metabolomics and phenomics have the potential to make the following impacts:

Agriculture

- Achieve better breeding, genetic selection and rotation decisions through the application of decision agriculture
- Fast-track fundamental research through the creation of a referential ‘omics data resource of key pathogens and their strains and how they vary over time and space.
- Consolidate and extend national knowledge and capabilities in plant and livestock protection and biosecurity preparedness.
- Bolster a national network for the identification and monitoring of agricultural pathogen populations that affect a broad range of agricultural sectors.
- Improve the balance of environmental sustainability – more efficiencies in crop and livestock production have the potential to lead to more efficient and sustainable land and water use.

Environment

- Providing data driven decision making for conservation managers who are working at the coalface to save our global species when they are undertaking critical actions such as translocations, captive breeding, or responding to natural disasters such as bushfires.
- Supporting a new workforce of scientists: genome biologists, population biologists, bioinformaticians, population geneticist and zoologists who are able to not only manage the genetic diversity in our most threatened species, but also boost genetic diversity in critically important functional genes involved in immunity, growth and reproduction through annotation of their genomes.
- Enhance our understanding of our biodiversity by creating a comprehensive reference library of DNA sequences of all known Australian species. In the Academy of Science’s decadal plan one their strategic actions call for a “curated, vouchered reference library of DNA sequences covering the breadth of the tree of life in our region.”
- Build the phylogenies (evolutionary trees) on which modern classification systems are built.
- Provide new methods for the discovery of new species through environmental DNA (eDNA) studies. By sequencing and analysing DNA in soil, water, air and other bulk environmental samples new species are regularly discovered which are enhancing our understanding of our ecosystems.

Human Health

- Research, development, clinical trial, precision medicine (‘omics has impact across this lifecycle).
- Drug discovery, vaccine development.
- Better health screening for genetic risk factors including arthritis, diabetes and cardiovascular disease.
- Understand gene and cell function.
- Better understand the impact of the environmental factors on human health through the epigenome.
- Protein structure and function.
- Re-engineer and manipulate biological processes through CRISPR.
- Personalised medicine: sequencing-based assays can now identify disease-specific drivers, mutational signatures, tumour mutational burden and neo-antigens, offering tremendous promise to guide personalised patient care.

Supporting the value chain from high quality fundamental research through to industry engagement and commercialisation is critical across all of these themes.

BIOPLATFORMS AUSTRALIA

FEATURE STORIES

FRAMEWORK INITIATIVE INTEGRATED AGENDA

Australia is one of a few megadiverse regions in the world and has around 10 percent of the world's species, with 80 percent of Australia's native species not occurring naturally anywhere else.

The creation and utility of genomics data and tools enable our leading scientists, industries, and government to identify and discover species currently unknown to science. They also facilitate a deeper understanding of the functions of organisms in nature, as well as their variability and interactions. Leveraging the genetic material found in Australia fosters innovative applications and enhances our ability to assess and manage both the direct and indirect effects of biodiversity on the resilience, adaptation, and richness of Australian ecosystems.

Over the past decade, Bioplatforms Australia, in collaboration with the biodiversity community, has created reusable open-access data focused on significant species aligned with government and research challenges.

Our strategy emphasises a unified approach to thematic national priorities, where the research effort and associated novel data products have immediate utility and impact while simultaneously increasing the collective volume of trusted, high-quality data accessible to broader research communities. We aim to catalog this data through the Australian Reference Genome Atlas (ARGA), currently in early release in partnership with the Atlas of Living Australia (ALA), Australian Research Data Commons (ARDC), and the Australian BioCommons. ARGA marks the beginning of an effort to digitally coordinate Australia's biodiversity genomic resources and provide a systematic basis to fill Australia's Tree of Life with genomic data as opportunities arise – including and beyond Bioplatforms supported biodiversity data.

Achieving the realisation of the Australian Tree of Life over the next decade would require the characterisation of 40,000 new species each year – a scale that is currently unattainable. To address this challenge, Bioplatforms and the Australian BioCommons are developing an Australian Tree of Life Informatics Capability.

This digital initiative will accelerate data generation, assembly, and analysis, and provide specialised platforms tailored to effectively decipher genomic data for real-world applications. The infrastructure will leverage approaches developed by the UK-based Wellcome Sanger Institute's Darwin Tree of Life project and Galaxy infrastructure supporting the Vertebrate Genomes Project, bringing their workflows and methodologies to Australia.

At the close of the 2023–24 period, Bioplatforms convened over 50 researchers and professionals from our Biodiversity and Environment National Initiatives at Taronga Zoo to showcase the breadth of current activities and discuss strategies to continue to support the discovery, monitoring and management of Australia's Tree of Life at scale. More than ever, fuelling efforts that describe and enhance our understanding of Australia's unique species and environment is critically important as the nation faces increasing environmental stressors. By enhancing the development of genomic resources, we aim to empower Australian research, ensuring that Australia's Tree of Life continues to serve as a vital tool for guiding innovative science and future conservation and sustainable management policies.

ADVANCING MELANOMA SCREENING THROUGH PERSONALISED RISK SCORES

Bioplatforms Australia has provided a long-term support for this major public health challenge. Our past involvements enabled the generation of biomolecular datasets characterising melanoma tumours which aided in the determination of the 'driver' mutations behind this disease and underpinned the development of further therapeutics.

Melanoma is the third most common cancer in Australia and the leading cause of cancer-related deaths among young Australians.

While population-wide screening is economically unfeasible, targeted screening for high-risk individuals offers promise. Dr Aideen McInerney-Leo, from the Dermatology Research Centre at the UQ Diamantina Institute, has recently received a NHMRC grant to develop personalised melanoma risk scores. Collaborating with QIMR Berghofer Medical Research Institute, Monash University, and The University of Sydney, this project aims to improve early detection and patient outcomes.

The research involves the Australian Cancer Research Foundation Flagship Centre program, with 10,000 Australians undergoing total body imaging and genomic sampling. Supported by cross-NCRIS capabilities including the National Imaging Facility and the Australian Research Data Commons, the Australian Centre of Excellence in Melanoma Imaging and Diagnosis (ACEMID) will integrate genetic and UV damage data to develop comprehensive risk assessments. Personalised risk scores will be provided to 4,000 individuals, with follow-up on psychological and behavioural impacts.

The 2022 Australian Skin and Skin Cancer Summit highlighted the importance of industry and clinical collaborations for successful risk score implementation. If successful, this initiative could lead to a sustainable, effective screening program, enhancing melanoma prevention and detection in Australia.

SYNTHETIC BIOLOGY PROGRAM

Australia has internationally competitive synthetic biology expertise in fundamental research supported by a world recognised regulatory framework for gene technology.

To capitalise on recent national investment, including a Biofoundry and Centre of Excellence, NCRIS has committed $55m to Bioplatforms Australia to fund a four-year program. This step change investment aims to bridge critical gaps between Synthetic Biology research and its economic and social impact, ensuring Australia is globally competitive, industrially attractive, and positioned to deliver new bioindustries.

The investment will support a cohesive set of technology and ecosystem elements that will enable research and translation across three synthetic biology workflow streams (Industrial Biotechnology, Plant Science and Medical Science).

This year, the investment has progressed across several key elements:

01 | Core capacities to enable Synthetic Biology research

- Industrial Biotechnology through continuation and expansion of our current Biofoundry facilities based at Macquarie University (Australian Genome Foundry) and The University of Queensland (IDEA Bio)
- New Plant Synthetic Biology capability approved by the board

02 | Ecosystem dimensions to facilitate research to market innovation

- Synthetic Biology lead and expert advisory committee chair appointed
- Freedom to operate and commercial ecosystem scoping commenced
- First spin outs supported – HydGene, Number 8 Bio

03 | Supporting infrastructure, technology and skills including seamless access to NRI dependencies

- Engagement with APPN, TIA, PA, NIF, MA, and ANSTO ongoing
- Scoping study to investigate the intersection of Artificial Intelligence and Machine Learning substantially underway

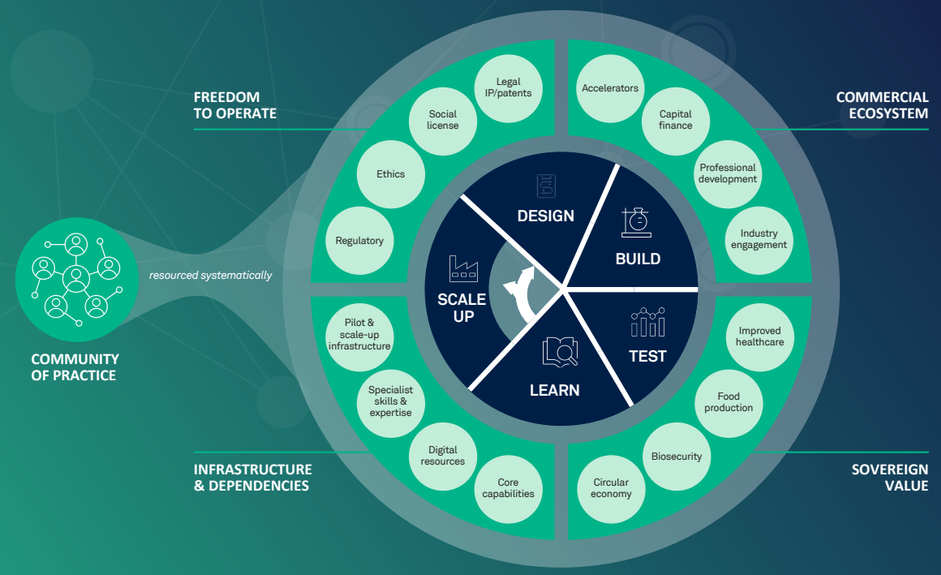
04 | Scale-up infrastructure and expertise

- Landscaping and engagement activities commenced
- Bioplatforms sponsorship of an Australian delegation to SynBioBeta

05 | Strategic deployment to sovereign value through activity-based funds

BUILDING AUSTRALIA'S POSITION IN THE GLOBAL SYNTHETIC BIOLOGY REVOLUTION

Step change will be delivered through investment in Synthetic Biology capability in the form of research infrastructure and skills, in the context of ecosystem elements that will inform, accelerate and target collaborative activity to programs of national significance.



ENGINEERED YEAST CREATES VALUABLE PRODUCTS FROM WASTE MILK FROM THE DAIRY INDUSTRY

Annual dairy food waste in Australia totals approximately 710,000 tonnes, equivalent to 8% of national milk production (Dairy Australia, 2023).

The effect of this wastage is not just economic it also has an impact on the environment and food security. Most of this wastage occurs post farm gate, for example at processing, distribution, food service and consumer stages of the supply chain. The Australian Genome Foundry (AGF) is an NCRIS-funded facility at Macquarie University that enables high-throughput development of new microbes, including yeast and bacteria. AGF formed a collaboration with DairyUP, a $16m partnership led by the University of Sydney's Dairy Research Foundation, and delivered through the New South Wales Department of Primary Industry, Scibus and Dairy Australia.

AGF are engineering microbes to grow on milk, a process known as fermentation. The team designed and constructed engineered microbial strains using synthetic biology techniques integrated with robotic platforms like liquid handlers, colony pickers and automated incubators. These engineered microbes are then used to convert waste products for production of bioenergy, enzymes, organic acids, biopolymers and biomass. This valorisation of milk waste will offer a cost-effective solution for generating new revenue streams for farmers and processors while mitigating waste from the industry.

IDEA BIO PROVIDES SOLUTIONS TO TRANSITION THE WORLD'S BIGGEST COMPANIES TO NET ZERO

Australia, along with all parties of the Paris Agreement, has committed to the global goal of holding the increase in global average temperatures to well below 2°C of warming and pursuing efforts to keep warming to less than 1.5°C.

The Net Zero Plan will describe a pathway toward achieving the legislated target of zero greenhouse gas emissions by 2050. It is clear that achieving this plan requires innovative new ideas to drive down emissions and development of renewable biomanufacturing activities. IDEA Bio is an NCRIS and University of Queensland (UQ) funded facility that offers synthetic biology services. It is an integrated space capable of providing cutting-edge synthetic biology services, offering high-throughput solutions for Australian researchers and businesses.

IDEA Bio have been collaborating with the new Biosustainability Hub at UQ and industry partners to engineer new microbes that use fermentation to turn industrial waste streams into molecules with a diverse range of downstream applications.

Key industry projects include:

- Turning greenhouse gas from industrial processors, like steel mills, into a feedstock for sustainable aviation fuel with carbon capture company LanzaTech.
- Using gas fermentation to create a wide range of new products with global energy company Woodside Energy.

These effective collaborations bring together cutting-edge research projects and some of the world's biggest companies to find solutions to challenges like climate change, biodiversity, mining sustainability and future food production.

RESEARCH PROGRAMS

OVERVIEW

Bioplatforms' Initiatives are national collaborative projects that use integrated 'omics infrastructure to support research themes of national significance. The interdisciplinary and collaborative nature of these projects ensures the datasets are relevant to current scientific questions and immediately employed for high impact research.

Over the lifespan of the program, 36 initiatives have received investment for research integrating genomics, proteomics and metabolomics. The 2023–2024 year saw 2 new programs initiated: the Animal Health and Disease Initiative, the Integrated Pest Management Omics Initiative.

Additional programs are being scoped for future Framework Initiative investment, with continued focus on primary industry and innovation, as well as the completion of the establishment of genetic resources for all Australian flora, fauna taxonomic groups.

OUR MISSION

Bioplatforms catalyses research collaborations to build new capabilities and critical data resources to support some of Australia's biggest scientific challenges. These challenges span agriculture, biomedicine and the environment, as well as extending to relevant international endeavours.

BIOPLATFORMS INITIATIVE PROGRAM

NATURE AND ENVIRONMENT

Accelerating understanding and conservation of Australia's Tree of Life

PRIMARY INDUSTRIES AND FOOD

Fostering productivity and resilience: 'omics data for Australia's primary industries

HUMAN HEALTH AND WELLBEING

Supporting optimal health outcomes for all Australians

New

Active

Completed

THE BENEFITS OF DATASET PROGRAMS

01 Build large-scale data resources

02 Maximise impact of national research infrastructure

03 Build scientific capabilities

04 Catalyse scientific collaboration and international linkages

05 Research acceleration and translation into industry

NATIONAL INITIATIVES

43%
of Australia's 830 bird species are found nowhere else.

Out of the 107 bird families in Australia, 41 have no Australian representative genome.

THE AUSTRALIAN AVIAN GENOMICS INITIATIVE

The Australian Avian Genomics Initiative, launched in late 2023, aims to create a comprehensive foundation of genomic data to advance the understanding and conservation of Australia's unique native bird species.

Australia plays a pivotal role in the evolution of modern birds, with around 830 species, 43% of which are found nowhere else. Despite international advances in avian genomics and phylogenomics, gaps in genomic data remain, particularly for Australian birds. An audit of existing reference genomes, drawn from sources such as Bird10K, Vertebrate Genome Project (VGP), and the Bioplatforms-supported Threatened Species Initiative, found that out of the 107 bird families in Australia, 41 have no Australian representative genome. Addressing these gaps would significantly enhance our understanding of the ecology, behaviour, and functional traits of these species.

The initiative seeks to address these gaps by generating essential genomic resources, including reference genomes, phylogenomics, and population genetics data. This work will accelerate research on traits where Australia's birds are uniquely positioned to contribute to global science. Key areas of focus include understanding the genetics behind migration, nomadism, nectarivory, drought tolerance, cooperative breeding, plumage patterns, mimicry, bill morphology, and adaptation to arid zones. Additionally, the initiative will investigate how species like waterbirds detect infrasound to locate water after rainfall, offering unique insights into their behaviour.

Beyond fundamental research, the initiative is designed to meet critical needs for the conservation of Australia's unique bird biodiversity. By linking genomics with ecological management, the data generated will provide crucial support to conservation strategies identified by society, government, and industry.

In February 2024, the initiative launched its first open call for partnerships, which received an enthusiastic response. Nineteen projects are already underway, covering diverse areas such as speciation genomics of fairy wrens, population genetics and viromics in migratory seabirds, and conservation genomics for Australian parrots. The initiative is well-positioned to contribute globally to avian genomics while addressing the pressing needs of Australia's bird biodiversity, as identified by society, government, and industry.

THE INTEGRATED PEST MANAGEMENT 'OMICS INITIATIVE

Over 250,000 invertebrate species play crucial roles in Australia's ecosystems and food systems.

Bioplatforms Australia launched the Integrated Pest Management (IPM) 'Omics Initiative at the end of 2023.

While some species contribute to ecosystem health and productivity, others pose significant threats as pests and vectors of disease. Despite their importance, most Australian insect species remain unidentified or poorly understood, which limits pest control and conservation efforts.

The IPM 'Omics Initiative represents a major step towards sustainable pest management through the generation of essential genomics data. The program supports the development of omics-based strategies for integrated pest management, helping researchers, farmers, and policymakers better understand insect biodiversity, ecological roles, and evolutionary adaptations. The initiative will also accelerate the discovery and identification of insect species, including cryptic species, and contribute to assessing extinction risks. By facilitating insect monitoring and baseline assessments in agriculture and horticulture, the initiative will expand knowledge of insect roles in ecosystems, including their responses to human impacts, adaptations to environmental changes, and predator-prey dynamics. It will provide crucial insights into insecticide resistance and the broader effects of pest control measures on pollination and ecosystems.

In June 2024, the initiative launched its first open call for partnerships, inviting project proposals focused on whole genome sequencing and population genetics to deepen our understanding of insect diversity, adaptation, and behaviour. The data generated will provide a foundation for innovative pest control strategies and beneficial insect management, delivering tangible outcomes for Australia's agriculture, forestry, and horticulture sectors.

EMPOWERING AUSTRALIA'S BIOSECURITY

Leveraging 'omics data for a resilient future in agriculture and national security.

An effective biosecurity and biodefence system is crucial for protecting Australia's primary industries, natural environments, and public health. Yet, the growing complexities of global connectivity, climate change, and shifting landscapes bring increased challenges. To protect ecosystems, ensure food security, and maintain national resilience, Australia must continually advance its systems to detect, prevent, and respond to emerging biological threats.

Bioplatforms, in collaboration with a broad range of stakeholders, is advancing the development of data and tools to enhance Australia's responsiveness to these challenges. Molecular technologies—spanning genomics, proteomics, and metabolomics—are key to understanding and managing pathogens and other biological threats. Access to high-quality reference data is essential for surveillance, diagnostics, epidemiological studies, tracking antimicrobial resistance, and informing intervention strategies like vaccines. These resources also help predict disease transmission and the risk of cross-species spillover events.

Through initiatives like the Plant Pathogen 'Omics Initiative, the Animal Pathogen Genomics Initiative, and collaborations with the Department of Defence Science and Technology Group and the Safeguarding Australia through Biotechnology Response and Engagement (SABRE) Alliance on the Ricin Genomics and Global Origins Initiative, Bioplatforms is helping to ensure Australia's biosecurity infrastructure remains resilient and adaptive.

These national collaborations will deliver critical infrastructure to strengthen national surveillance, diagnostics, and response capabilities, reinforcing Australia's preparedness for future biological threats.

COLLABORATION AND PARTNERSHIPS

IMPACT THROUGH COLLABORATION

Bioplatforms has ongoing partnerships with Cooperative Research Centres, Australian Research Council (ARC) Centres of Excellence, and ARC Industry Transformation Research Hubs. We also collaborate closely on national programs and have strong links with international partners.

These examples of partners national and international partnerships are central to delivering on our core values and beliefs – building impact, quality, collaboration and trust.

OUR COLLABORATIONS AND PARTNERSHIPS FOR 2023/24

International

- Elixir (Europe)
- Joint Genome Institute (USA)
- National Microbiome Data Collective (USA)
- Kew Gardens (UK)
- National History Museum (UK)
- Earth BioGenome Project (Multinational)
- Genomes on a Tree – GoaT (Multinational)
- Pan-Cancer Analysis of Whole Genomes Consortium (Multinational)

Cross-NCRIS projects

- Australian Reference Genome Atlas (ARGA – ALA)
- OzBarley (ARDC, APPN)
- Ocean Data Nexus (ARDC, IMOS)
- Biomedical discovery asset (ARDC, Phenomics Australia)
- NISEEF
- NCRIS Health group (NIF, PHRN, PA, TIA EMBL Aus)

Commercial and industrial partners

- HydGene Renewables – Biological Hydrogen production
- Coopers brewery – biofouling and fermentation improvements
- Number 8 Bio
- Precision Oncology Screening Platform Enabling Clinical Trials (PrOSPeCT) – Omico
- LanzaTech
- 23Strands

Medical Research Future Fund (MRFF)

- Building an Australian Cardiovascular disease Data Commons (ACDC)
- Supporting Australian Brain Cancer Research with an integrated network of platforms
- Pathways to benefit for Indigenous Australians in Genomic Medicine (ALIGN)
- OMIX3: High-capacity integrated multi-omics
- The Australian Functional Genomics

ARC Industry Transformation Research hub and training centre

- Centre for Medicinal Agriculture
- Research Hub for Sustainable Crop Protection
- Centre for Facilitated Advancement of Australia's Bioactives
- Centre for Accelerated Future Crop Development
- Centre for Next-Gen Technologies in Biomedical Analysis
- Hub for Carbon Utilisation and Recycling – RECARB Hub
- Centre in Plant Biosecurity

ARC Centre of Excellence

- Nanoscale BioPhotonics – completed
- Plant Cell Walls – completed
- Australian Biodiversity and Heritage
- Synthetic Biology
- Plant Success in Nature and Agriculture
- Innovations in Peptide and Protein Science
- Plants for Space
- Mathematical Analysis of Cellular Systems
- Indigenous and Environmental Histories and Futures

Cooperative Research Centre (CRC)

- SMART CRC – decision pending
- CRC for Transformations In Mining Economies

Programs

- SABRE Alliance
- National Biodiversity DNA Library (NBDL – CSIRO)
- Reef monitoring

COMMERCIALISATION AND INDUSTRY ENGAGEMENT

Enabling translation and commercialisation of Bioplatforms-supported research in areas aligned with current national scientific and innovation priorities ensures that our activities provide maximum value to the Australian public.

Early-stage commercialisation is supported through the identification and triaging of opportunities, access to infrastructure and expertise, an extensive network of collaborators and commercial partners, and, in some cases, early-stage investment.

23STRANDS USES WHOLE GENOME SEQUENCING TO IMPROVE PRECISION MEDICINE

The 23Strands team – from left to right: Robert Mitreski, Mark Grosser, Omer Ingber, Hua Lin, Daniel Damiano, Teresa Hardianto, Lucy Chhuo, Zelia Soo and Kai Guo

23Strands, a pioneering Australian startup, has leveraged Bioplatforms' cutting-edge facilities, networks, and early-stage investment to revolutionise personalised healthcare.

Their team is unlocking the full potential of modern genomics technology by conducting whole genome sequencing at Bioplatforms' facilities. This is complemented by integrated clinical and research data, which is analysed using advanced machine learning and AI techniques.

Their whole genome sequencing data analysis pipelines and healthcare platforms are now being utilised across various fields, including IVF, cardiovascular disease, and cancer.

23Strands has established strong connections with several Bioplatforms programs, including the Australian Cardiovascular Alliance, Indigenous Genomics Medical Research Future Fund program (MRFF ALIGN), and the Australian Cardiovascular Data Commons (ACDC).

Additionally, 23Strands has recently achieved significant milestones, including a $3 million MRFF grant for clinical validation of its technology which highlights the government's confidence in their innovative approach.

The company has forged strategic partnerships to drive growth and expansion, notably establishing a significant Virtus partnership through an incorporated joint venture, which marks a crucial step towards commercialisation. 23Strands has also signed a collaboration with a global biopharmaceutical company, further demonstrating the market potential of their solutions.

DEVELOPING A UNITED VISION FOR AUSTRALIA'S BIOMANUFACTURING INDUSTRY

To ensure Australia is globally competitive, industrially attractive, and positioned to deliver new bioindustries, it is vital to address the gap between research and its commercial exploitation.

In December 2023, Bioplatforms Australia, CSIRO, and the Centre of Excellence in Synthetic Biology hosted a biomanufacturing workshop to identify potential barriers to a national bioeconomy, create a shared vision, and drive collaborative policy development.

International leaders such as Dr Rick Johnson (USA), Dr Joel Cherry (USA) and Dr Yoshiyuki Fujushima (Japan) joined government officials, industry leaders, and academics to exchange insights and apply international lessons to the Australian context. 'Staging this workshop was a significant step for the sector in Australia' says Centre of Excellence Director Professor Ian Paulsen. 'To be in partnership with CSIRO and Bioplatforms Australia to advocate with a singular vision is very powerful.'

Dr. Johnson shared the decade-long journey of BioMADE, a USA public-private partnership, to establish biomanufacturing as a national priority in the USA. BioMADE aims to secure the future of the United States through a sustainable domestic end-to-end biomanufacturing ecosystem supported by innovation, education, and collaboration.

Professor Esteban Marcellin, the Bioplatforms academic lead at IDEA Bio, is already working on PF technology improvements with international partners for new products made from captured greenhouse gases.

The workshop highlighted the need for upskilling workers in fermentation and creating industry-focused career paths for PhD graduates. Discussions focused on the necessity of a coordinated national strategy to support pilot-scale facilities, train the workforce, and promote full-scale commercial production, positioning Australia to capitalise on a potential US$4 trillion global opportunity. The importance of learning from international experiences while addressing Australia's unique context was emphasised to advance a robust bioeconomy.

Bioplatforms Australia, CSIRO, and the Centre of Excellence in Synthetic Biology hosted a biomanufacturing workshop to identify barriers to a national bioeconomy, create a shared vision, and drive collaborative policy development.

CAPABILITIES NETWORK

SCIENTIFIC RESEARCH CHANGES LIVES THROUGH INNOVATION.

Bioplatforms Australia encourages innovation by investing in scientific infrastructure and biomolecular research capabilities through our Capabilities Network. This Network spans 18 leading universities and research facilities across Australia, and employs 403 staff annually.

Our capabilities network is organised into four technology platforms – genomics, proteomics, metabolomics, synthetic biology and bioinformatics.

Our capabilities network is organised into five technology platforms

GENOMICS

Gene Discovery and Genome Function

- Australian Genome Research Facility
- The Ramaciotti Centre for Genomics, UNSW, NSW
- Biomolecular Resource Facility, ANU, ACT
- Genomics Western Australia, WA
- South Australian Genomics Centre, SA

PROTEOMICS

Protein Structure and Function

- Australian Proteome Analysis Facility, NSW
- Monash Proteomics & Metabolomics Facility
- and Monash Antibody Discovery Platform, VIC
- Mass Spectrometry and Proteomics Facility, UNISA, SA
- Proteomics International and UWA, WA

BIOINFORMATICS

Data acquisition, integration, analysis and modelling

- Australian BioCommons led out of the University of Melbourne
- The Queensland Cyber Infrastructure Foundation (QCIF)

METABOLOMICS

Small Molecule Analysis

- Bio21 Institute, University of Melbourne, VIC
- Australian Wine Research Institute, SA
- Centre of Metabolomics, UWA, WA
- Australian Institute of Bioengineering and Nanotechnology, UQ, QLD

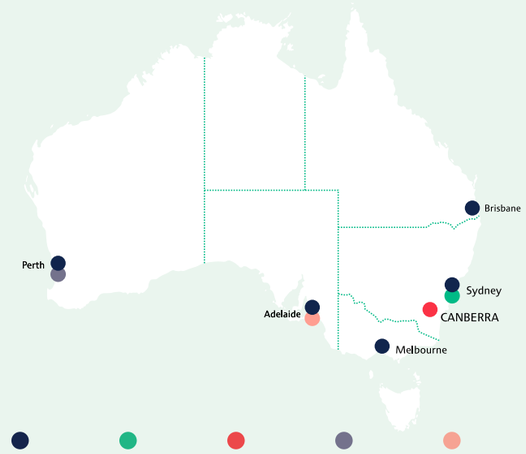
SYNTHETIC BIOLOGY

Design-Build-Test-Learn

- Australian Genome Foundry – Macquarie University, NSW
- IDEA Bio – University of Queensland, QLD

Genomics

The genomics platform is important to every field of life science research and provides cutting-edge genome research services via our state-of-the-art infrastructure and world class specialists with expertise in high throughput genomics, transcriptomics, epigenomics and bioinformatics



01

A new era in eye health: how genetic risk scoring is transforming glaucoma care

Glaucoma, a condition that can lead to irreversible vision loss, often progresses silently, causing gradual damage to the optic nerve before symptoms become noticeable. Early detection is crucial for effective management and treatment, but traditional methods often fail to identify individuals at risk before significant damage has occurred.

To address this, researchers are leveraging advanced genetic analysis to evaluate an individual's risk of developing glaucoma by examining numerous gene variants. In collaboration with SeonixBio, AGRF played a pivotal role in developing and accrediting an assay for calculating genetic risk scores, using the Illumina Global Screening Array and cutting-edge bioinformatics tools.

Bioplatforms facilities

Australian Genome Research Facility

Partners

SeonixBio

Outcome

The development and accreditation of a genetic risk assessment test now available for clinical use in Australia.

Impact

The results of this research promise to enhance early detection and targeted monitoring, potentially preventing irreversible vision loss in many individuals by identifying at-risk patients before substantial damage occurs.

02

Uniting genomics and indigenous knowledge to save the bilby

This groundbreaking project combines genomic data from both extant and extinct bilby species with Indigenous knowledge to enhance conservation efforts for this unique Australian marsupial. Bilbies, culturally significant to Indigenous Australians, are the sole members of the family Thylacomyidae and possess unique biological traits.

By leveraging cutting-edge genomics at the Ramaciotti Centre for Genomics and fostering cross-cultural collaboration, the project aimed to improve conservation management, benefiting both bilby populations as well as Indigenous and non-Indigenous communities across Australia.

Bioplatforms facilities

Ramaciotti Centre for Genomics

Partners

The University of Sydney, The University of Western Australia, UNSW Sydney, University of California Santa Cruz, South Australian Museum, The University of Adelaide, Illumina, Macquarie University, Universitat Autònoma de Barcelona, Western Australian Museum, Indigenous Desert Alliance, La Trobe University, University of Melbourne, Kiwirrkura Community & Kiwirrkurra Rangers

Outcome

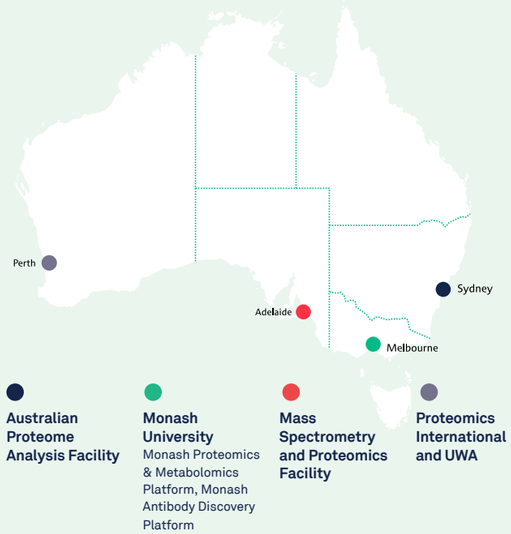
Researchers successfully assembled the first chromosome-length reference genome for the threatened Ninu (greater bilby) and sequenced the genome of the extinct Yallara (lesser bilby).

Impact

This work advances conservation management by integrating genomic data with Indigenous knowledge, benefiting both bilby populations and the broader scientific and Indigenous communities.

Proteomics

Proteomics is the large-scale study of protein structure and function. Bioplatforms' supported facilities offer a broad range of services including high throughput protein characterisation, protein biochemistry, monoclonal antibody production, along with drug discovery and screening.



01 Game-changing advancements in medicinal cannabis testing in South Australia

In response to the rapidly growing medicinal cannabis industry in Australia, the Mass Spectrometry and Proteomics Facility at the University of South Australia has established a comprehensive cannabis quality control and testing workflow. Partnering with MedTEC Pharma, a leading South Australian healthcare company, the project focuses on providing high-quality, efficient testing services for locally grown medicinal cannabis.

Using advanced technologies including the SCIEX 4500 Triple Quadrupole LC-MS/MS for cannabinoid measurement and the Shimadzu 8040 Triple Quadrupole GC-MS/MS for terpene analysis, the facility has developed reliable methods to profile and quantify both major and minor cannabinoids, as well as 23 terpenes present in cannabis products.

Bioplatforms facilities

Mass Spectrometry and Proteomics facility at the University of South Australia

Partners

MedTEC Pharma

Outcome

The Mass Spectrometry and Proteomics Facility has developed a comprehensive cannabis quality control and testing workflow, which includes reliable profiling and quantification of cannabinoids and terpenes. The facility is also actively seeking funding to obtain its own NATA accreditation to further enhance its available services.

Impact

The development of these methods will provide patients with access to high-quality, locally grown medicinal cannabis products. Such advancements reduce the reliance on imported cannabis goods, which currently make up 75% of the market, and support the South Australian medicinal cannabis industry.

02 Reimagining oats for the future of food innovation and sustainability

Oats, valued for their high dietary fibre and antioxidants, are in growing demand for human consumption. However, their high oil content limits milling efficiency and the production of nutrient-rich food products. With increasing interest in alternative protein and dairy sources like oat milk, reducing oat oil content could unlock new opportunities for food innovation.

The Mass Spectrometry and Proteomics Facility at the University of South Australia, in collaboration with the South Australian Research and Development Institute (SARDI), is addressing this challenge by leveraging cutting-edge MALDI mass spectrometry imaging and advanced proteomics techniques to establish industry-relevant oil thresholds.

Bioplatforms facilities

Mass Spectrometry and Proteomics Facility at the University of South Australia

Partners

The South Australian Research and Development Institute (SARDI), the Oat Grain Quality Consortium (OGQC), the Grains Research and Development Corporation (GRDC)

Outcome

By identifying the genetic and biochemical pathways controlling oil content to establish industry-relevant oil thresholds in oats, this collaborative project aims to develop low-oil oat lines with improved milling and product development potential.

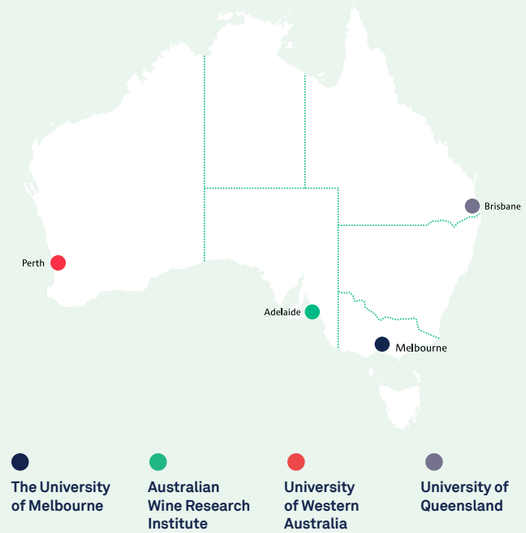
Impact

The results of this research will benefit oat breeders, growers, processors, and manufacturers by enhancing the range of oat-based products available to consumers, supporting food innovation, and addressing the growing demand for alternative protein and dairy sources such as oat milk.

Metabolomics

Metabolomics involves large-scale analysis of cell metabolites. Metabolomics is integral to the suite of 'omics technologies required for systems analysis and is often described as the 'glue' that brings multiple 'omics efforts together.

Through our network of metabolomics partner facilities, we provide state-of-the-art metabolomics capabilities and customised services, from specific detection and quantification services, through to complex investigations and systems wide analyses in biological systems.



01 Unveiling new frontiers in brain cancer treatment and precision surgery

Every five hours, an Australian is diagnosed with brain cancer, a disease that takes more lives among children and people under 40 than any other cancer. Treatment resistance remains a common challenge, often leading to terminal diagnoses. In response, the Brain Cancer Research Laboratory is advancing diagnostics, treatment models, and strategies to overcome resistance.

A key focus is developing methods to better distinguish between normal brain tissue and tumours during surgery, minimising harm to healthy tissue and improving outcomes. Cutting-edge technologies such as Imaging Mass Spectrometry, LC-MS, and GC-MS metabolite profiling are helping the team to uncover the metabolic complexities of adult glioma.

Bioplatforms facilities

Metabolomics Australia at The University of Melbourne

Partners

The Brain Cancer Centre co-led by Dr Jim Whittle, Dr Saskia Freytag, and Dr Sarah Best, at the Walter and Eliza Hall Institute

Outcome

Innovative methods including Imaging Mass Spectrometry and metabolite profiling have been developed to better distinguish between normal brain tissue and tumours during surgery, optimising sample preparation for spatial metabolomics analysis.

Impact

This research is paving the way for more effective and precise brain cancer treatments, offering hope to patients by improving surgical outcomes and enhancing the ability of medical professionals to combat this challenging disease.

02 New horizons in ALS therapy through advanced metabolomics research

Amyotrophic Lateral Sclerosis (ALS), a progressive neurodegenerative disease with no cure, is the focus of the MetFlex project led by Associate Professor Shyuan Ngo at The University of Queensland. This study investigated the safety and tolerability of trimetazidine as a potential treatment for ALS. The Queensland Metabolomics and Proteomics facility (Q-MAP) played a key role by developing assays to quantify biomarkers of cellular oxidative stress in blood samples from trial participants. Using advanced liquid chromatography with triple quadrupole mass spectrometry, Q-MAP analysed oxidative stress biomarkers like malondialdehyde and 8-hydroxy-2'-deoxyguanosine, providing critical data on the drug's impact.

Bioplatforms facilities

Queensland Metabolomics and Proteomics facility at the University of Queensland

Partners

The Royal Brisbane and Women's Hospital, University Medical Center Utrecht (Netherlands), Centre de Recherche de Biomédecine de Strasbourg (France), INSERM (France) and King's College London (UK)

Outcome

The completion of the MetFlex project's Phase 2a trial has set the stage for a more comprehensive Phase 2b randomised double-blind placebo-controlled clinical trial.

Impact

This project could revolutionise ALS treatment and offer new hope to patients battling this challenging neurodegenerative disease.

AUSTRALIAN BIOCOMMONS

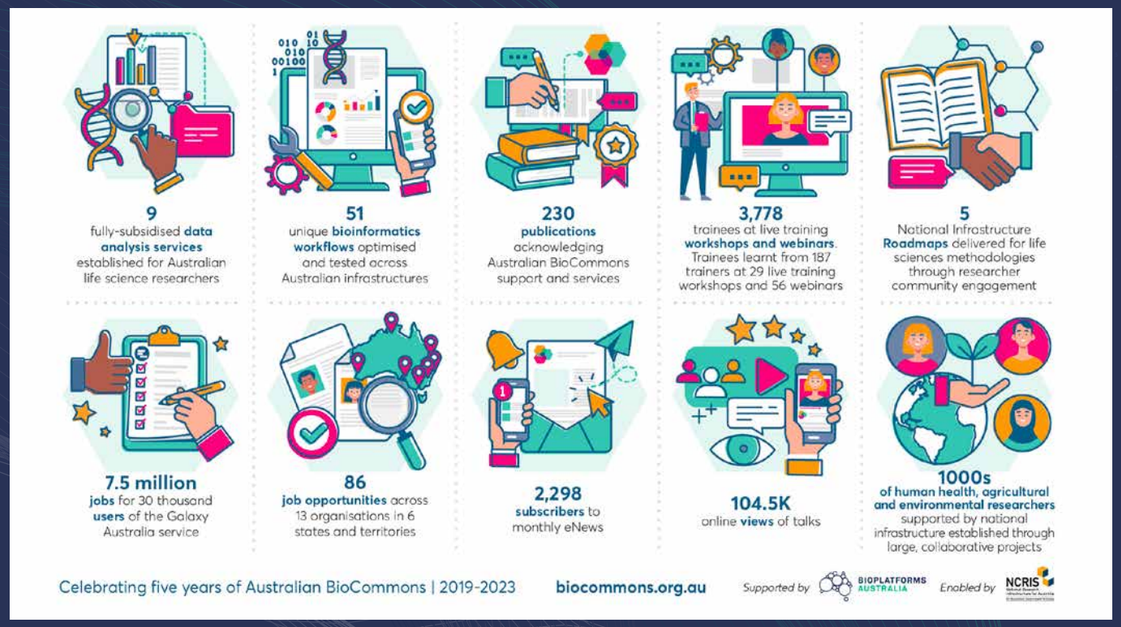
THE AUSTRALIAN BIOCOMMONS IS BUILDING DIGITAL CAPABILITY IN AUSTRALIAN LIFE SCIENCES.

The Australian BioCommons continued to support a broad range of communities through collaboration with strategic partners during 2020–23.

In 2023, the BioCommons celebrated five years of operation, showcasing the digital infrastructure expanded range of activities to support the Australian research community.

Since 2019, the Australian BioCommons has established a thriving community made up of Australia's leading life science researchers, computational service providers and research institutions. Together, they create and share the bioinformatics tools, expertise and services needed to deliver collaborative research infrastructure for community-scale solutions.

ENHANCING ANALYSIS OF LIFE SCIENCE DATA THROUGH NATIONAL RESEARCH INFRASTRUCTURE



GALAXY AUSTRALIA IS SHAPING A GLOBAL APPROACH TO ACCESSIBLE COMPUTATIONAL RESEARCH

Galaxy Australia is a key component of the Australian BioCommons national infrastructure.

It plays a pivotal role in advancing life sciences research by providing a fully subsidised, web-based data analysis platform that enables researchers to conduct complex computational analyses without needing specialised programming skills. With over 1,000 bioinformatics tools and digital techniques available, Galaxy Australia simplifies the challenges of large-scale data analysis and promotes reproducible, transparent research. Its "point and click" interface allows life scientists to focus on their research without the burden of command-line interactions.

In 2023–2024, Galaxy Australia made significant contributions to the global Galaxy platform. Notable achievements include hosting the 2023 Galaxy Community Conference in Brisbane, which attracted over 130 delegates from 20 countries, and leading the definitive publication on the platform's key features. Additionally, Galaxy Australia collaborated with ELIXIR at the BioHackathon 2023 to enhance features such as data submission to ENA, genome annotation workflows, and the innovative Galaxy Labs, shaped by a user experience-driven approach.

Galaxy Australia's efforts benefit life science researchers, users in need of established workflows, as well as Galaxy developers. This platform is part of the Australian BioCommons national infrastructure and is managed by QCIF, The University of Melbourne, and AARNet. Its success is supported by computational resources from partners including ARDC Nectar Research Cloud, National Computational Infrastructure, Pawsey Supercomputing Research Centre, and Microsoft Azure, along with funding from the University of Melbourne and Bioplatforms Australia.

GALAXY AUSTRALIA

The digital analysis service, Galaxy Australia, has grown to become a critical research infrastructure for the Australian life sciences community. Rapid development, including continual code base improvements and new hardware offer access to best practice pipelines and tools in genomics, proteomics and metabolomics.

SUPPORTED TRAINING OF 2,173 RESEARCHERS IN 2023/24

Over the 2023–2024 period, Galaxy Australia has supported the training of 2,173 researchers including undergraduates and Masters students, as well as supported 81 publications.

The bioinformatics tools provided by Galaxy Australia were accessed by 8,375 users from 84 Australian universities and research organisations. Together, over the 2023–2024 period, they ran 2,500,145 jobs through the platforms.

NATIONAL COLLABORATIONS ADVANCE HUMAN GENOMICS RESEARCH THROUGH BETTER DATA SHARING

Unlocking research data is key to advancing human disease diagnosis and treatment, but it requires large-scale collaboration.

The Australian BioCommons is leading two major initiatives in this space: the Australian Cardiovascular Disease Data Commons (ACDC) and GUARDIANS (Genomics Uplift for Australia through Research Data Infrastructure at National Scale).

With Australia's growing repository of human genomics data, accessing and utilising these datasets for research remains a challenge. The Australian BioCommons is building the infrastructure needed to share this data securely and ethically, ensuring strong privacy and safety measures in collaboration with key stakeholders.

These initiatives are focused on building the foundations for human genomics digital research infrastructure in Australia.

By developing multiple data commons, the BioCommons aims to support flagship collections, deliver trust and identity solutions, and provide innovation pilots for future advancements in the field. Ultimately, this work will serve as a hub of technical expertise, leadership, support, and training for the broader research community.

Beneficiaries of these efforts include Australian human 'omics researchers, research institutions, and the global human 'omics research community. Individuals affected by complex diseases, including cancer and cardiovascular conditions, will also stand to benefit from the improved diagnostics and tailored treatments that result from this research.

Key technologies used in these projects include the Gen3 cloud-based platform for managing and sharing large human genomic datasets, GA4GH Beacon v2, CI Logon, and the Resource Entitlement Management System (REMS). The ACDC project involves partnerships with the Baker Institute, 23 Strands, Australian Cardiovascular Alliance, CSL, University of Sydney, and Australian BioCommons. Meanwhile, GUARDIANS is supported by collaborations that include the University of Sydney and University of Melbourne, with additional partners pending agreements.

NCRIS
National Research Infrastructure for Australia
An Australian Government Initiative

Bioplatforms Australia is a non-profit organisation that supports Australian Life science research by investing in state-of-the-art infrastructure and expertise in genomics, proteomics, metabolomics and bioinformatics.

Investment funding is provided by the Commonwealth Government National Collaborative Research Infrastructure Scheme.

BIOPLATFORMS AUSTRALIA

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