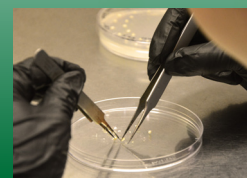
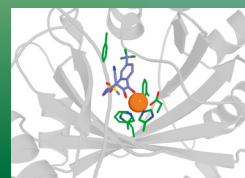




PLANT SYNBIO AUSTRALIA

TRANSFORMING
AGRICULTURE AND
BIOMANUFACTURING
THROUGH PLANT
SYNTHETIC BIOLOGY



Plant SynBio at Adelaide University

plantsynbio.au

The Plant SynBio Australia node at Adelaide University is located within the agriculture and wine research precinct on the University's Waite Campus. Specialising in synthetic biology in major agricultural crops and 'model' plants, the node has a fully equipped tissue culture and transformation facility, plus access to secure growth facilities for growing plant material and testing GM crops at scale.

Plant SynBio Australia is funded through Bioplatforms Australia under the National Collaborative Research Infrastructure Strategy (NCRIS) and institutional partners



Bioengineering services for agriculture and research

Plant SynBio Adelaide specialises in the synthetic biology of major cropping species including wheat, barley, canola and rice.

We offer infrastructure and expertise for research providers, government and industry institutions as a fee-for-service as well as providing incubation space for the start-up community and opportunities for collaboration.

Our capabilities span the full synthetic biology cycle including design of molecular componentry, genetic editing, biomanufacturing and plant transformation, and the phenotypic evaluation of bio-designed plants in controlled environments or in the field.

Full-service biofoundry

Our technologies and infrastructure support novel development of plant vaccine production, bio-pharmaceuticals, novel crops and foods, improved crop yields, and increased resistance to drought, disease or other environmental

stresses. We have developed integrated bioinformatics and data management solutions to support our plant synthetic biology services enabling secure data handling, traceability and protection of customer intellectual property.

Security, stewardship, support

Plant SynBio Adelaide offers PC2 certified tissue culture facilities and plant growth facilities and a molecular biology laboratory. We also operate one of the few sites in Australia where GM plants can be tested at scale in the field.

Our team collaborates closely with clients to manage project scope, deliverables, timelines and success criteria. Operations are conducted under stringent biosafety, ethical and regulatory frameworks, with robust quality control systems to ensure compliance, safety and reproducibility. The Adelaide Node follows global best practice in agricultural biotechnology stewardship, supporting responsible deployment and reducing regulatory risk.

Infrastructure

Services

- Gene editing
- Advanced CRISPR
- Transient and stable gene expression systems
- Multi-omics analysis systems
- Computational biology and machine learning
- Stewardship services/consultation

Fully equipped molecular biology laboratory

- NanoCollect WolfG2 cell sorter
- RNA/DNA handling and analysis equipment
- qPCR capabilities
- Analytical microscopes
- Secure sample storage facilities

Plant tissue culture facility

- 7 laminar flow hoods
- Dedicated media preparation area
- *Agrobacterium* handling facilities
- Vacuum and biolistic transformation equipment

Plant growth facilities

- 8 PC2 certified growth chambers (light and temperature control)
- 7 PC2 certified growth rooms
- Access to PC2 certified glasshouse
- PC2 certified field site

Human Capital

The Adelaide node consists of a passionate team of 12 multidisciplinary scientists, engineers, technical specialists and business professionals who work collaboratively offering unique capabilities to deliver high-quality, reproducible synthetic biology solutions.

Collocated services

Microscopy Australia, Metabolomics Australia, The Plant Accelerator and convenient access to South Australian Genomics Centre and Australian Genome Research Facility.



Node Director

Prof. Matthew Gilliam

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Plant SynBio Australia

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