

# Appointment of Executive Director



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# THE AUSTRALIAN PLANT PHENOMICS FACILITY





## Message from the Chair of the APPF Advisory Board

Welcome to the Australian Plant Phenomics Facility.

Agriculture is at the core of a prosperous society. It provides the food, fibre, fuel and medicinal plants that are vital to the growth of its economy and the wellbeing of its people.

In order to feed a world population of 9.5 billion people in 2050, food production must be increased considerably by adopting sustainable agricultural practices. However, agriculture and food production will continue to face a number of challenges such as the effects of drought, salinity and extreme heat. Addressing these challenges will undoubtedly be difficult at a time of extreme climate variation.

The Australian Plant Phenomics Facility (APPF) has pioneered the establishment of plant phenotyping technologies, methodologies and analytical solutions. We have developed state-of-the-art phenotyping capabilities in controlled environments and in the field, which are supported by sophisticated data analysis and management tools that enable researchers and industry to address complex challenges in plant and agricultural science both here in Australia and around the globe.

The coming decade provides great opportunities to further enhance Australia's plant phenomics capability. The benefits of high quality phenomics have been recognised by researchers and industry alike. Plant phenotyping solutions are being adopted in scientific experiments and plant breeding programs to accelerate research output and agricultural impact. A coordinated approach is required to support this phenomics expansion, drive innovation, translate big data into meaningful information and accelerate knowledge transfer and impact.

The Executive Director will capitalise on these opportunities and will drive the development and implementation of a five-year strategy to meet the aspirations of the APPF.

As Chair of the Advisory Board, I invite you to join our dynamic team and have a real impact in shaping the future of plant phenomics in Australia.

**Dr Ron Sandland**  
Chair, APPF Advisory Board



# ABOUT THE AUSTRALIAN PLANT PHENOMICS FACILITY

A world-leading facility for innovative plant phenomics research  
to accelerate the development of new and improved crops,  
and more sustainable agricultural practice

The APPF facilitates advances in plant phenomics research and plant breeding to accelerate the development of improved crops and agricultural practices that support the sustainability of Australia's environment, the growth of its economy and the wellbeing of its people.

The APPF is a research infrastructure facility funded by the Australian Government's National Collaborative Research Infrastructure Strategy (NCRIS) to provide Australian scientists with a competitive advantage, drive cross-disciplinary collaboration and contribute to bridging public research and agricultural business.

The APPF is a distributed network of national research infrastructure platforms, strategically located across three renowned research organisations to benefit from a world class concentration of expertise in plant biology, spanning from gene discovery to the farm gate:

- > The Plant Accelerator® at the University of Adelaide's Waite Campus
- > The High Resolution Plant Phenomics Centre (HRPPC) at CSIRO Agriculture and Food
- > The Research School of Biology, Australian National University

### Mission

The APPF facilitates world class research and innovation in plant phenomics by:

- > providing efficient access to the research community and industry to state-of-the-art imaging technologies, robotics, sensor networks and data analysis tools platforms for plant science and agriculture,
- > developing new technologies and capabilities to facilitate innovation in plant phenomics,
- > contributing to multidisciplinary and cross-institutional collaborations that address critical challenges in agriculture,
- > promoting scientific partnerships and collaborations between researchers and industry,
- > upskilling technicians and next-generation scientists in the use of advanced phenotyping technologies,
- > expanding national and international research networks and
- > sustaining Australia's intellectual capability and capacity in plant phenomics.

Assisting Australian researchers and industry to develop improved crops and sustainable farming practices through investment in plant phenotyping infrastructure and expertise

# TECHNOLOGY SNAPSHOT

Advanced APPF technologies  
to support the emerging AgTech  
and Food Innovation arenas

Currently, global grain production is only just meeting consumption. In Australia, more extreme weather events and increasing salinity are undermining farm productivity. A transformational advance in yield is required.



## By exploring how the genetic makeup of a plant determines its appearance, function and performance, phenomics can help us tackle the most pressing agricultural challenges.

Phenomics data captured at the APPF enables the more rapid discovery of molecular markers and faster germplasm development, aimed at improving crop yields including the tolerance of major crops and other agriculturally important plants to biotic and abiotic stresses such as drought, salinity and plant diseases.



### High-throughput phenotyping

The APPF offers a range of capabilities for high-throughput phenotyping in controlled environments, from model plants to crops. Using automation and the latest camera and sensor technologies, researchers can monitor plant growth and performance at high-throughput to screen large populations of plants for novel genes that make plants grow better under adverse conditions with less inputs.



### Deep phenotyping

Understanding plant physiology and plant response to different stresses is essential to identifying novel traits that improve stress tolerance. Cutting-edge sensor technology combined with latest developments in image and data analytics help researchers to tease apart the individual components of plant development.



### Field phenotyping

Using both aerial and ground-based phenotyping platforms, the APPF helps agricultural researchers to test crop varieties in the field. Cameras and LiDAR technology are used to identify those lines with promising characteristics for agriculture in the coming decades. Combined with data management and analytical tools, APPF technology helps researchers make informed decisions about the performance of their plant material in the field.

# MEET THE TEAM

## Our multidisciplinary team of experts

To successfully operate the phenotyping capabilities of the facility, the APPF involves a dedicated, multidisciplinary team of experts with complementary skill sets and qualifications in the fields of:

- > plant science and biotechnology
- > mechatronic and agricultural engineering
- > bioinformatics and computational science
- > information and management technologies
- > horticulture
- > business development and management

A full staff list is available on our website at [www.plantphenomics.org.au/contact/](http://www.plantphenomics.org.au/contact/)





## APPF Advisory Board

The Advisory Board consists of four independent board members and three host institution representative members. The members bring a complementary set of skills and expertise to the APPF to support the implementation of its five-year strategy.



**Dr Ron Sandland**

Chair

Deputy Vice-Chancellor (Research)  
The University of Queensland



**Prof Tony Bacic**

Independent Member

Director, La Trobe Institute of  
Agriculture and Food,  
La Trobe University



**Prof Bronwyn Harch**

Independent Member

Deputy Vice-Chancellor (Research)  
The University of Queensland



**Richard Dickmann**

Independent Member

Head of Public and  
Government Affairs ANZ,  
Bayer Australia and New Zealand



**Prof Anton Middelberg**

University of Adelaide Representative

Executive Dean, Faculty of  
Engineering, Computer and  
Mathematical Sciences,  
University of Adelaide



**Dr Lynne McIntyre**

CSIRO Representative

Research Director,  
Breeding Higher Value Food Crops,  
CSIRO Agriculture and Food



**Prof Owen Atkin**

Australian National University

Representative

Professor and Head of  
the Division of Plant Sciences, RSB,  
Australian National University

# NATIONAL COLLABORATIVE RESEARCH INFRASTRUCTURE STRATEGY

World-class research infrastructure  
to underpin greater innovation in the  
Australian research sector and the  
economy more broadly







## The National Collaborative Research Infrastructure Strategy (NCRIS) is a Commonwealth funded initiative to support national research infrastructure.

The program comprises the nationally significant assets, facilities and services that support leading edge research and innovation, and is accessible to publicly and privately funded users across Australia and internationally.

In May 2018, the Government released the Research Infrastructure Investment Plan (RIIP), its response to the 2016 National Research Infrastructure Roadmap. The plan confirmed the Government's commitment to invest \$1.9 billion over 12 years under NCRIS to support national research infrastructure (NRI) and secure Australia's research future.

APPF NCRIS funding has been confirmed until 2022/23; a commitment to support the development and implementation of a new collaborative strategy to further strengthen APPF capabilities, stakeholder engagement and alignment with research and industry priorities.

# ROLE STATEMENT

## Executive Director, Australian Plant Phenomics Facility

The Executive Director will provide outstanding leadership to the senior management team of the Australian Plant Phenomics Facility and support to the Advisory Board.

Using your knowledge of the Australian research and innovation landscape, you will provide the direction, experience and business acumen needed to develop and implement our five-year strategy, ensuring APPF infrastructure is aligned with the needs of the research community and industry to help tackle some of the biggest challenges for agriculture of our time.

As a distinguished leader and exceptional communicator, you will form and nurture productive relationships with a range of private, governmental and non-profit stakeholders in Australia and overseas, drive cultural change and use your entrepreneurial skills to promote the principles of NCRIS and maximise the return on NCRIS investment.

We look forward to welcoming you to the APPF!

## Key responsibilities

### Strategy

- > Develop the APPF strategy and drive its implementation in alignment with NCRIS guidelines and principles and in close collaboration with the APPF's Advisory Board and senior management team.
- > Provide high-level advice to the Chair and members of the APPF Advisory Board to support decision making on operational and financial policy and strategy.
- > Actively pursue opportunities for co-investment to maximise outputs from NCRIS investment.
- > Facilitate national consultation in plant phenomics to ensure alignment of APPF infrastructure with research and industry priorities and ease of access to advanced technology.
- > Provide senior support and advice to the APPF Advisory Board.
- > Work closely with the Department of Education and Training to provide input into the development of the next Research Infrastructure Investment Plan.



### Business development

- > Translate long-term strategies into annual business plans.
- > Review the current business model and drive continuous improvement.
- > Oversee the central APPF budget.
- > Drive growth targets to evolve APPF programs and activities in line with its strategic goals.
- > Lead performance management, best practice monitoring, reporting and evaluation.
- > Convene meetings of the APPF Executive Committee.

### Stakeholder engagement

- > Nurture and leverage high value relationships and communication lines through controlled and strategy focussed engagement with various stakeholder groups (federal and state government departments, research community, industry, policy makers, RDCs, other NCRIS projects and APPF host organisations).
- > Act as primary contact for federal government and coordinate responses to national discussion papers, provide input in policy development and other ad-hoc information requested from time to time.

- > Oversee the delivery of APPF wide initiatives and programs aimed at improving facility access, knowledge transfer, education and stakeholder engagement.
- > Participate in NCRIS program activities and workshops.

### Selection criteria

#### Essential criteria

- > Extensive experience and proven expertise in the management of significant human and material resources.
- > Demonstrated high level strategic leadership to inspire a dynamic and unified work culture and to achieve a competitive advantage.
- > Well-developed business acumen and ability to influence policy development and decision making.
- > Demonstrated experience in developing and successfully implementing strategy and underpinning business plans.
- > Outstanding communication, negotiation and networking skills and ability to nurture and leverage high value business relationships.

- > Quality background in 'science to delivery' and sound understanding of the Australian research and innovation sector.
- > Demonstrated ability to attract co-investment and to drive and meet growth targets.
- > Understanding of Australian plant and agricultural science and related industry.
- > Capacity to be a facilitator for effective and multi-disciplinary collaboration.

#### Desirable criteria

- > An established reputation within, and existing professional networks across, the national and international agri-technology landscape and comprehensive understanding of the challenges and opportunities faced by agriculture.







# CONDITIONS OF EMPLOYMENT

## Appointment

The Executive Director will be appointed to the University of Adelaide, the lead agent of the APPF. The position is fixed-term for three years, with a possibility of extension subject to funding and annual performance reviews.

## Remuneration package

An attractive remuneration package will be negotiated.

## How to apply

To apply, please visit  
<https://www.adelaide.edu.au/jobs/>  
 and upload the following documents:

1. A covering letter
2. A statement addressing the selection criteria
3. A full CV containing the following information:
  - > Title, full name, address, daytime and evening telephone numbers, and email address;
  - > Residency status;
  - > Present and previous roles;
  - > Details of research outputs and achievements;
  - > Details of education and professional training and qualifications; and
  - > Any other relevant information such as offices held in professional bodies, community services etc.

**Closing date: 18 October 2018**

## Enquiries

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 Phenomics Facility and  
 Managing Director, The Plant Accelerator®  
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 [plantphenomics.org.au](http://plantphenomics.org.au)

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