

STANDARD TEACHING AND RESEARCH POSITION DESCRIPTION



Position	Senior Research Fellow
Level/ Classification	ACLEC
Reports to	Director, Centre for Crop and Food Innovation, and Director, WA State Agricultural Biotechnology Centre
Division	Centre for Crop and Food Innovation / State Agricultural Biotechnology Centre
College	Food Futures Institute

Position Purpose

The purpose of this position is to provide research leadership in the design, development and delivery of innovative genomics and molecular breeding research that advances genetic gain in pulse crops. The incumbent will lead and coordinate multidisciplinary research activities, including the design and implementation of multi-location field trials, high-throughput genotyping and sequencing of pulse germplasm, advanced genomic and bioinformatics analyses, and the development and application of AI-enabled breeding approaches to identify and deploy superior haplotypes for crop improvement. The position will contribute to the development of genomic resources and databases, publish high-impact research outputs, secure competitive research funding, supervise higher degree by research (HDR) students and research staff, and foster strategic collaborations with national and international research partners. Working closely with the Director, CCFI/SABC, the appointee will provide scientific leadership in the successful delivery of the GRDC-funded project, *Achieving Improved Genetic Gain for Yield in Chickpea, Faba Bean and Lentil Using Genetic Diversity*, while contributing to Murdoch University's strategic research priorities in Food and Agriculture.

About Murdoch University

Murdoch University is a young and dynamic university with a foundational commitment to the environment, social justice and inclusion, and making education accessible to more people. Founded as Western Australia's second university in 1974, today, Murdoch has more than 21,000 students and 1,700 staff across campuses in Perth, Singapore and

Dubai. With more than 90,000 Alumni, Murdoch graduates can be found all over the world, making a positive difference.

Our Strategy – Ngala Kwop Biddi. Building a brighter future, together – guides the University's direction and reaffirms our shared purpose to change lives and society for the better through accessible education and research.

The Strategy is focused on three key themes:

- Sustainability: Be a leading university in education, teaching and translational research in sustainability.
- Equity, Diversity, and Inclusion: Build a welcoming, diverse and inclusive community.
- First Nations: Become the University of first choice for First Nations peoples.

Murdoch is also committed to building engagement with our local community, State, nation, and global society with a track-record in creating strong partnerships with business, government and industry.

About the Work Area

The Food Futures Institute is one of Murdoch University's research institutes, working to provide solutions on the sustainable use of limited land and water resources to economically and ethically improve food, forestry and fibre production. The incumbent of this position will be located in the Centre for Crop and Food Innovation, and State Agricultural Biotechnology Centre within the Food Futures Institute.

The Centre for Crop and Food Innovation represents a collaboration of academic research staff working with industry partners to provide both strength and depth in research on major broadacre and horticultural crops to improve yield, quality and enhance tolerance and protection from biological and environmental stresses. Centre for Crop and Food Innovation comprises a team of academic and research staff and over 50 current HDR students and is ideally placed to capitalise on new technologies and investments in crop agriculture.

The State Agricultural Biotechnology is the collaborative university Centre for R&D in agricultural and veterinary biotechnology in Western Australia. It provides platform technologies and world class equipment and facilities for R&D in agricultural biotechnology to researchers from universities, state government and industry. At any time 15-20 research groups and companies rent space and use the State Agricultural Biotechnology facilities. The State Agricultural Biotechnology is well resourced with research and teaching facilities, and hosts a number of research groups and centres across the disciplines of:

- Agricultural Sciences,
- Environmental and Conservation Sciences,
- Molecular and Biomedical Sciences and
- Murdoch University College of Veterinary Medicine.

Reporting Relationships



Key Responsibilities / Duties

1. Provide strategic leadership in the development, management and delivery of innovative research programs aligned with the objectives of the Centre for Crop and Food Innovation (CCFI), contributing to the Centre's national and international research profile.
2. Develop, lead and sustain nationally and internationally competitive research programs in genomics, functional genomics, molecular breeding, AI-enabled crop improvement and related disciplines.
3. Initiate, develop and maintain strategic collaborations with universities, government agencies, industry and international partners to strengthen multidisciplinary research and translational outcomes.
4. Secure competitive research funding through the leadership and preparation of high-quality grant applications and foster partnerships with government and industry stakeholders.
5. Design, lead and oversee glasshouse, controlled-environment and multi-location field experiments, ensuring high standards of scientific rigour, project delivery and research governance.
6. Lead the development and application of advanced genomics, sequencing, bioinformatics, molecular genetics and AI-enabled analytical approaches to address strategic challenges in crop improvement and agricultural biotechnology.
7. Interpret and integrate genomic, phenotypic and bioinformatics datasets to deliver high-impact research outcomes and facilitate translation into breeding and agricultural applications.

8. Publish high-quality research outputs in leading international peer-reviewed journals and disseminate research findings through conferences, industry engagement and stakeholder activities.
9. Supervise, mentor and provide academic leadership to Higher Degree by Research (HDR) students, postdoctoral researchers, research staff and early career researchers, fostering a collaborative and high-performing research environment.
10. Contribute to teaching, curriculum development and postgraduate education in agricultural sciences and related disciplines, where appropriate.
11. Provide leadership in the administration, governance and strategic planning activities of the Centre, School and University, and contribute to professional service activities within the broader research community.
12. Undertake other duties consistent with the classification level and strategic priorities of the University.

Selection Criteria

Essential

1. Ph.D. in Agricultural Biotechnology/ Genetics/ Plant Breeding, or any other relevant subject with at least 5 years research experience in the crop genomics and pre-breeding data.
2. Demonstrated national and emerging international reputation in genomics, functional genomics, molecular breeding, crop improvement or related research areas, evidenced by an excellent publication record in high-quality peer-reviewed journals.
3. Demonstrated ability to develop, lead and manage independent research programs and deliver high-quality research outcomes.
4. Demonstrated experience supervising and mentoring HDR students, postdoctoral researchers and research staff, with evidence of successful research training outcomes.
4. Demonstrated experience leading multidisciplinary research projects and collaborating effectively across institutions, industry and international partners.
5. Demonstrated capacity to establish productive collaborations with government, industry and research organisations that contribute to research translation and impact.
6. Excellent written and verbal communication skills, including a strong record of scientific publications, technical reports, grant writing and presentations to academic and industry audiences.
7. Demonstrated organisational, leadership and project management skills with the ability to manage multiple research activities simultaneously.
8. Demonstrated commitment to equity, diversity, inclusion and a safe, respectful workplace.

Desirable

- Experience in crop improvement programs involving legumes, cereals or other agricultural species.
- Experience using advanced genomics technologies, high-throughput sequencing, molecular breeding and AI-assisted methods for genetic analysis and crop improvement.
- Experience working with industry-funded research and commercialisation partnerships.
- Experience contributing to university teaching, curriculum development and academic leadership.

Work Requirements

1. Ability to work outside of normal office hours when required.
2. Australian residency or possession of a valid visa with work entitlement in Australia.

Probationary Review

This position may be subject to a probationary period, during which time the academic staff member is required to meet set probationary objectives and pass a probationary review. Probationary objectives are set following appointment to the position and confirmed at the first Academic Contribution Development Review (ACDR).

General Obligations

While at work, an employee must:

- take reasonable care for their own health and safety and ensure that their acts or omissions do not adversely affect the health and safety of other persons;
- report incidents, injuries and hazards;
- comply with any reasonable instruction that is given by Murdoch University; and
- comply with Murdoch University policies and procedures.

Academic Career Framework

Murdoch University's Academic Career Framework provides a transparent, equitable and consistent approach to probation and promotion as well as outcome and workload expectations. Please refer to the Murdoch University Academic Career Framework for performance criteria and expectations for all academic positions.

Guiding Principles and Values / Code of Ethics and Code of Conduct

Our Values

- Authenticity
- Integrity

- Respect
- Inclusivity
- Openness

Our Principles

- Act with justice, respect and responsible care.
- Be collegiate and respectful of other points of view.
- Protect academic freedom.
- Be agile, flexible and resilient.
- Make decisions at the most appropriate level.
- Be transparent in decision-making and with information.
- Adopt common approaches to common tasks.
- Be careful stewards of our resources.

All staff will comply with the University's Code of Ethics and Code of Conduct and demonstrate a commitment to its Equity, Diversity and Safety principles and the general capabilities of personal effectiveness, working collaboratively and demonstrating a focus on results.

All Staff complete a Development Review Annually. A Commencing Development Review should be completed within 3 months of commencement.

We acknowledge that Murdoch University is situated on the lands of the Whadjuk and Binjareb Noongar people. We pay our respects to their enduring and dynamic culture and the leadership of Noongar elders past and present. The boodjar (country) on which Murdoch University is located has, for thousands of years, been a place of learning. We at Murdoch University are proud to continue this long tradition.