STANDARD TEACHING AND RESEARCH POSITION DESCRIPTION

Position	Postdoctoral Research Fellow, Microbial Engineering
Level/ Classification	ACLEA
Reports to	Associate Professor, Microbiology and Biochemistry
Division	School of Medical, Molecular and Forensic Sciences
College	Environmental and Life Sciences

Position Purpose

The Postdoctoral Research Fellow will contribute high level research to externally funded national research projects, forming part of a multidisciplinary research team within Murdoch University's Legume Rhizobium Sciences (LRS) group. LRS is an internationally recognised hub for research and training in the microbiology of rhizobia, undertaking both basic and translational research to improve the sustainability of agricultural practices in Australia and around the world.

This position will be located within the School of Medical and Molecular Sciences, in the College of Environment and Life Sciences. LRS also forms part of the Centre for Sustainable Farming Systems, within Murdoch University's Food Futures Institute and as such the appointee will also be a member of these units.

The successful candidate will be responsible for adapting and applying microbial engineering techniques to rhizobia, with the aim of increasing their genetic stability and symbiotic associations. The postdoctoral research fellow will also contribute to national projects aimed at increasing pulse and pasture nitrogen fixation efficiency, along with undertaking professional activities relevant to the discipline.

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.

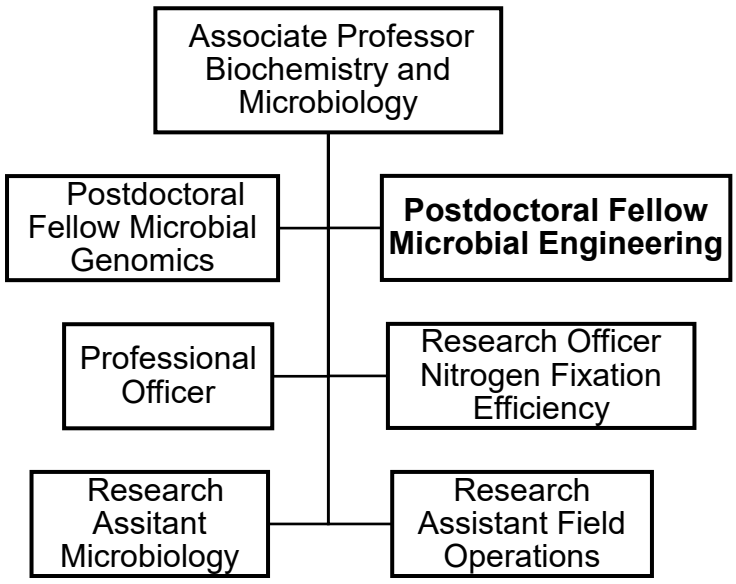
About the Work Area

The School of Medical, Molecular and Forensic Sciences is engaged in a wide range of endeavours in the biomedical, medical diagnostic, food science and nutrition, molecular and forensic science fields. Key research areas include infectious disease, anti-microbial resistance, immunology, cancer biology, microbiology, forensic biology, food science and human nutrition. The school offers fascinating and exciting undergraduate and postgraduate teaching programs and is committed to providing a high-quality educational experience for students.

The Food Futures Institute (FFI) works to provide solutions on the sustainable use of limited land and water resources to economically and ethically improve food, forestry and fibre production. The FFI promotes excellent teaching and research facilities and has highly qualified academic and professional staff. The FFI is comprised of three research centres:

1) Centre for Sustainable Farming Systems
2) Centre for Crop and Food Innovation
3) Centre for Animal Production and Health

Reporting Relationships



Key Responsibilities / Duties

1. Coordinate and undertake research to adapt and apply microbial engineering techniques to rhizobia, to increase their genetic stability and symbiotic effectiveness.
2. Conduct long and short-read genome sequencing of bacteria, including annotation, assembly and polishing of sequence data and subsequent analysis.
3. Develop and undertake glasshouse experiments to assess performance of wild-type and modified bacteria in symbiosis with a range of legume hosts.

4. Interpret and disseminate research findings through peer-reviewed publications, presentations at academic conferences, and seminars, contributing to the advancement of the field.
5. Develop and maintain a scholarly research profile by engaging in continuous professional development, seeking research funding, and contributing to the academic community.
6. Collaborate with interdisciplinary research teams, supervise postgraduate and honours students, and contribute to the development of research capabilities within the institution.
7. Build and maintain partnerships, collaborations and networks with relevant research bodies, service providers and growers, and other industry bodies relevant to Australian rhizobial research.
8. Present the research findings at seminars and field days to industry, and the agricultural and scientific community, including through academic publication.
9. Participate in the University's Annual Career Development Conversation (ACDC).
10. Undertake such other duties as determined by the Associate Professor of Microbiology and Biochemistry.

Selection Criteria

Essential

1. A PhD, awarded or submitted in microbiology, biochemistry or closely related discipline, with strong skills in mutagenesis and genetic techniques.
2. Demonstrated ability to undertake and complete microbiology-based research projects and to manipulate, analyse and make inferences from data.
3. Demonstrated experience of at least twelve months in advanced microbiology and molecular techniques for the study of legume microsymbionts.
4. Demonstrated ability to work under broad direction only, exercise initiative in undertaking responsibilities and work effectively as a team member.
5. Demonstrated ability and commitment to supervise research students.
6. Well-developed interpersonal skills and the ability to work effectively as a member of an interdisciplinary and collegial team.
7. Demonstrated high levels of written and oral communication skills in English.

Desirable

8. Evidence of skills in computer programming and proficiency working with Linux.
9. Demonstrated ability to publish in scientific literature, including papers under review.

Work Requirements

1. A willingness and ability to travel within Western Australia, nationally and internationally, when required.
2. Ability to work outside of normal office hours when required.
3. Australian permanent 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.