

POSITION DESCRIPTION



Position	Nuclear Magnetic Resonance Lead
Level/ Classification	HEW0909
Reports to	Head of Facilities, Australian National Phenome Centre
Unit	Australian National Phenome Centre
Directorate	Health Futures Institute
Positions Supervised	2+

Position Purpose

The Australian National Phenome Centre (ANPC) is a world-class facility led by Murdoch University focused on high-throughput targeted and exploratory metabolic phenotyping. The ANPC is located on Level 3 of the Harry Perkins Institute of Medical Research adjacent to the Fiona Stanley Hospital, Western Australia, and is the largest dedicated facility for metabolic phenotyping in the world. The ANPC houses the largest collection of mass spectrometers (MS) and nuclear magnetic resonance (NMR) instruments dedicated to phenomics research.

The ANPC NMR Lead is a highly-trained specialist required to lead the day-to-day NMR operations of the Australian National Phenome Centre (ANPC). This role requires an individual with considerable operational and research experience in the field of NMR-based metabolomics with operational experience in the management of complex analytical facilities with multiple NMR modalities. Working with the ANPC Head of Facilities, the NMR Lead will develop and implement strategies to optimise the utilisation of analytical instruments and generate revenue to support operational activities.

The leadership role will be concerned with all practical laboratory aspects required to acquire high-quality NMR data, sample handling and preparation, instrument troubleshooting and maintenance as well as best-practise analytical method development and validation. Considerable experience in the management of NMR instrumentation (including 400MHz FoodScreener, 600MHz IvDr, 800MHz and F80 Benchtop) and ancillary facilities equipment associated with core infrastructure is necessary. Together with other ANPC leaders, the NMR Lead will share Facilities Management responsibilities for both physical and digital infrastructure to maintain a safe and compliant working environment that is focused on cost and operational efficiency with optimal instrumental uptime.

The role will also lead the technical generation, quality review and endorsement of NMR data through the application data QC measures to ensure that results are appropriate for promulgation to clients and collaborators on time. As the NMR Lead, the candidate will play a key role in the development and implementation of a Quality Management System for the ISO/IEC accreditation of analytical tests. As the lead trainer for NMR, the candidate will develop and deploy training programs to ensure that ANPC staff, students and users are able to optimise workflow effectively and safely.

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 Bidji. 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:

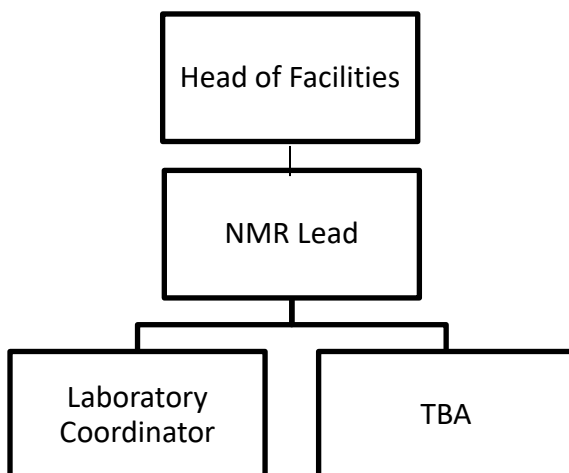
- Sustainability: Be a leading university in education, teaching and translational research in sustainability.
- Equity, Diversity, and Inclusion: Build a welcoming, diverse and inclusive community.
- First Nations: Become the University of first choice for First Nations peoples.

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 ANPC is a dedicated facility established for the purpose of performing “industrial-scale” phenotyping using an array of state-of-the-art analytical instruments including high-field Nuclear Magnetic Resonance and multiple Mass Spectrometer modalities, as well as a range of specialised technologies that will enable research and translation through a systems approach. The ANPC is located at the Harry Perkins Institute of Medical Research (South) and is a key platform within the Murdoch University Health Futures Institute.

Reporting Relationships



Key Responsibilities

1. Provide scientific and operational leadership for all matters related to NMR.
2. Lead and manage the generation of NMR data for the ANPC.
3. Lead the development, validation and optimisation of NMR analysis with a focus on quality and continuous improvement.
4. Establish and enforce rigorous QC controls for NMR data acquisition, processing and reporting.
5. Oversee the scheduling, access to and prioritisation of NMR instrumentation and staff resources for multiple projects and facility users.
6. Lead the training and mentoring of NMR users to ensure safe and effective utilisation of the ANPC.
7. Manage NMR preventative maintenance and service scheduling, instrumental installations, decommissioning, and calibrations.
8. Together with the MS Lead, act as the instrument facilities liaison for all matters related to the management of ANPC infrastructure, including being on-call duties after-hours for critical incidents.
9. Together with the ANPC leadership, manage and communicate facility shut-downs, capital works and refits.
10. Work with the ANPC leadership to manage NMR-related budgets, procurement and resources allocation.
11. Carry out and assist with other duties as required.

Selection Criteria

Essential

1. PhD in Chemistry, Metabolomics or related field.
2. More than 5 years of experience in a facility associated with NMR analysis and/or high-throughput analytical services.
3. Extensive knowledge or experience in NMR-based metabolomics.
4. Strong NMR data QA/QC experience.
5. Strong background in the design, implementation and maintenance of production-grade bioinformatics pipelines for NMR.
6. Highly effective project management skills and the ability to multi-task.
7. Ability to handle sensitive information and maintain confidentiality at all times.

Desirable

1. Ability to communicate analytical strategies to researchers in other fields as well as general ability to communicate well, conveying ideas and concepts clearly and effectively in speech and in writing.
2. Experience in an ISO/IEC accredited facility focused on high-throughput analysis and access management.
3. Flexible attitude towards work and ability to work outside normal office hours if required.

Work Requirements

1. Australian permanent residency or possession of a valid visa with work entitlement in Australia.

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. Details of the University policies on Development Review can be accessed here. 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.