POSITION DESCRIPTION

Position	ANPC Mass Spectrometry Coordinator
Level/ Classification:	H0808
Reports to	Mass Spectrometry Lead
Unit	Australian National Phenome Centre
Directorate	Health Futures Institute
Positions Supervised	N/A

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 MS Coordinator is a highly-trained specialist scientist required to fulfil the day-to-day MS operations for the Australian National Phenome Centre (ANPC). Specifically, the candidate will coordinate the generation of high-quality MS data including the routine application of data QC measures, harmonization of spectrometers, development of new methods and the effective management of resources to ensure timely deliverable of outcomes. The role requires a candidate with considerable experience in the coordination and management of multiple MS of various modalities including modalities for targeted and untargeted metabolic profiling of clinical biofluids, tissue extracts and other matrices of biological and medical significance. The Coordinator will also be experienced in data quality control as well as a range of statistical and bioinformatics expertise unique to metabolic phenotyping. The post will be concerned with all practical laboratory aspects required to acquire high-quality MS data, sample handling and preparation, instrument troubleshooting and maintenance as well as analytical method development. The MS Coordinator will be responsible for maintaining an up-to-date knowledge of new methods and technology developments in the field and will work with academic researchers and other technical specialists within the ANPC to ensure seamless operation of analytical workflows and data pipelines.

The MS Coordinator will deputize for the MS Lead for operational and facilities management requirements. Other duties will include training of ANPC technical specialists and postgraduate students as well as managing the teaching and access schedules of users and collaborators. The position reports to the Mass Spectrometry Lead at the ANPC.

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:

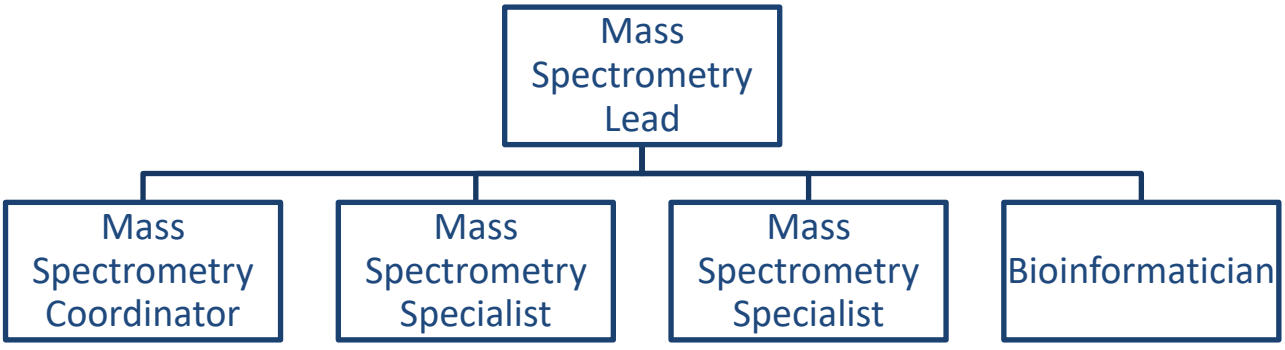
- Sustainability: Be a leading university in education, teaching and translational research in sustainability.
- Equity, Diversity, and Inclusion: Build a welcoming, diverse and inclusive community.
- First Nations: Become the University of first choice for First Nations peoples.

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 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/Duties

1. Coordinating the routine acquisition/analysis of clinical and biological samples using multiple modalities of Mass Spectrometry (MS).
2. Provide support to the MS Lead where required, including activities associated with the management of equipment and facilities.
3. Coordinate MS equipment workflows and usage in collaboration with other ANPC Specialists and Bioinformaticians to ensure seamless operation of instruments, data processing and workflows.
4. Ensure that MS spectrometers are operating at peak efficiency and troubleshooting for maintenance and repair.
5. Perform data quality assurance and pre-processing for analyte and metabolite identification.
6. Development and validation of new MS methods and pipelines and the maintenance of an in-house database of spectra.
7. To prepare technical reports for in-house quality assurance purposes and continuous improvement.
8. To prepare analytical test reports for collaborators and clients for dissemination via publications and presentations.
9. Participate in research meetings and internal seminars.
10. Provide MS training to staff and students as required.
11. Coordinate access to MS instrumentation for internal and external users.
12. Maintain an up-to-date knowledge of relevant informatics techniques (literature, conferences, workshops etc.).

Selection Criteria

Essential

1. PhD in MS spectroscopy, metabolomics/ metabonomics relevant to the high-throughput analysis of samples of clinical relevance.
2. Minimum of 5 years working experience in industry.
3. Experienced in the development and application of high-throughput metabolic phenotyping workflows by mass spectrometry.
4. Knowledge and practical experience in high-throughput operations, including preventative maintenance and instrument troubleshooting.
5. Experience in bioinformatics and data pre-processing pipelines unique to metabolic phenotyping including data QC, correction and treatment, as well as metabolite annotation and identification.
6. Ability to draw biological inferences from spectroscopic data for biomarker identification, and to inform biologically and clinically relevant inquiries.
7. Knowledge of statistical analysis techniques and software's suitable for spectroscopic data sets.
8. Discipline and regard for confidentiality, security and personal safety 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 working within a quality framework for workflow and data traceability.
3. Evidence of a developing track record of publishing in national peer-reviewed journals.
4. 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.