

POSITION DESCRIPTION

Position	ANPC Mass Spectrometry Specialist		
Position Number	3958A01	Level/ Classification:	HEWH07/08
Reports to	ANPC Senior Operations Manager		
Unit	Australian National Phenome Centre		
Directorate	Health Futures Institute		
Positions Supervised	N/A		

Position Purpose

The 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 nuclear magnetic resonance (NMR) and mass spectrometers (MS) dedicated to metabolic phenotyping.

The MS Specialist is a highly trained operator with extensive experience in the use of mass spectrometry for targeted and untargeted metabolic profiling of clinical biofluids, tissue extracts and other matrices of biological and medical significance. The candidate will have a PhD (or equivalent experience) in MS and will also be experienced in statistical and bioinformatics analysis unique to metabolomics. The Specialist is responsible for high-sample volume analysis of clinical samples for large scale research studies using harmonized methodologies unique to the ANPC. The post will be concerned with all practical laboratory aspects required to generate and process high-fidelity data, sample handling and preparation, data QC, instrument troubleshooting and maintenance as well as analytical method development.

This position is funded as part of a recently awarded Medical Research Future Fund Grant entitled "Molecular phenomics approaches to improve understanding of Post-acute COVID-19 Syndrome - a biomarker augmented strategy for risk-based stratification and targeted intervention to improve clinical outcomes".

The position reports to the ANPC Senior Operations Manager. The Executive Director of the ANPC is Professor Jeremy Nicholson.

About Murdoch University

Murdoch University helps people discover how to make a difference, through education and research endeavor, and remains one of the most inclusive universities in the country, providing students with quality education and recognized academic standing within an engaging and caring environment. We are a university for all, irrespective of background and social standing with a focus on social equity, self-direction and freedom of thought and belief.

With strong links to government, business and the community, Murdoch University helps people discover how to make a difference. We are a young, innovative and enterprising university with more than 23,000 students and 1,700 staff across Perth, Singapore and Dubai. We are committed to high quality education, innovative research, and strong community engagement both locally and internationally.

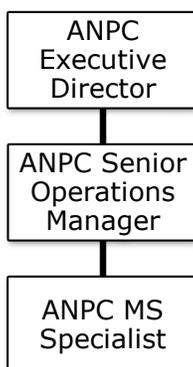
Our [Strategic Plan and Future Horizon 2017-2027](#) outlines an ambitious blueprint for development and growth, with a focus on one purpose: to be a creative force for current and future generations.

We are clear about our two core goals: to educate free thinkers who thrive in society and are sought after by employers; and, to provide life changing solutions for the world's big challenges through our outstanding translational research and innovative practice.

About the Work Area

The ANPC is a dedicated facility established for the purpose of performing "industrial-scale" metabolic phenotyping using an array of state-of-the-art analytical instruments including Nuclear Magnetic Resonance and Mass Spectrometers. This role will be responsible for the development and application of new MS methods for the acquisition of metabolic data using a range of MS modalities including orthogonal time-of-flight and triple-quadrupole mass spectrometers. In particular, the Specialist will work closely with a dedicated team involved in a Medical Research Future Fund Project entitled "Molecular phenomic approaches to improve understanding of Post-Acute COVID-19 Syndrome".

Reporting Relationships



Key Responsibilities / Duties

- Routine acquisition of biofluid and other clinical samples using an array of MS platforms such as UHPLC-QTOFMS, UHPLC-TQMS, MR-MS and timsTOFMS,
- Ensure spectrometers are operated in compliance with ANPC SOPs,
- Troubleshooting, servicing and maintenance of mass spectrometers,
- Perform data quality control and statistical modelling,
- To work with other MS and NMR specialists/academics to ensure seamless operation,

- Build and maintain a spectral database of chemical standards,
- To prepare analytical reports and dissemination via publications and presentations,
- Participate in research meetings and internal seminars,
- Maintain an up-to-date knowledge of relevant techniques (literature, conferences, workshops etc).
- Other duties as directed by the Director.

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

The founding principles upon which Murdoch University was established continue unabated today. We continue to be guided by the principles of:

- Equity and Social Justice
- Opportunity
- Sustainability
- Global Responsibility

These Murdoch principles come to life through our culture as evidenced by being an institution where the following are clear:

- Integrity
- Respect and Diversity
- Purpose
- Excellence and Future-focus

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 are to 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.

Selection Criteria

Essential

1. Extensive knowledge or experience in analytical chemistry and MS, with a focus on clinical metabolomics and/or lipidomics,
2. Knowledge and practical experience in the utilization, troubleshooting and maintenance of analytical instrumentation – especially UHPLC quadrupole time-of-flight MS and triple quadrupole liquid chromatography MS,
3. Experience in large, high-throughput sample studies, data QC and modelling,
4. Ability to draw biological inferences from mass spectrometry data for biomarker identification,
5. Knowledge of statistical and bioinformatic analysis techniques suitable for spectroscopic data sets

Desirable

1. PhD, near-completion of PhD in Metabolomics, Lipidomics, Mass Spectrometry or Analytical Chemistry is advantageous,

2. 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,
3. Experience working in an accredited environment (ISO/IEC accreditation),
4. Evidence of a developing track record of publishing in national peer-reviewed journals,
5. Willingness to work as part of a team and be open-minded and cooperative,
6. Flexible attitude towards work and ability to work outside normal office hours if required,
7. Discipline and regard for confidentiality, security and personal safety at all times,
8. Good time management skills.

Work Requirements

1. This role has been identified as requiring mandatory COVID19 Vaccination. You will be required to provide evidence of appropriate vaccination for COVID-19 in accordance with the relevant government mandate (or formally granted medical exemption) to be employed in this position.