

POSITION DESCRIPTION



Position	Bioinformatics Analyst
Level/Classification	HEW0606
Reports to	Associate Professor
Unit	Personalised Medicine Centre
Directorate	Research & Innovation, Health Future Institute
Positions Supervised	Nil

Position Purpose

One of the core objectives of the University's strategic plan for research and innovation is to provide appropriate and capable resources to support research excellence. The creation of a central facility for medical genomics will cement the outstanding national and international reputation of the fully accredited established medical genomics facilities at Murdoch. This will support and enhance research and teaching capabilities across disciplines.

The Bioinformatics Analyst supports the research endeavours in medical science through research, development, training, and analysis using bioinformatics tools across a range of areas relevant to modern medical genomics at the population and single cell level.

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 Bididi. 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

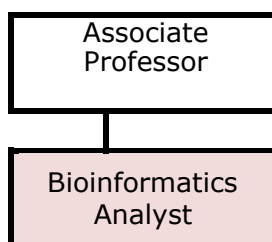
The Personalised Medicine Centre is a collaborative research centre between Murdoch University and the Perron Institute, where cutting-edge laboratory research and clinical expertise converge. Our team of researchers and health professionals, drawn from diverse fields, is united in a shared commitment to advancing personalised medicine - the development of innovative treatments tailored to addressing the specific needs of individual patients, needs that are largely determined by a person's unique genetic makeup and lifestyle.

Our research spans a broad spectrum of critical healthcare challenges. Our diverse research teams are advancing work in areas such as genetic therapies, genomics, motor neurone disease, sepsis, immunogenomics and drug hypersensitivity, cognitive health, muscular dystrophy, and neurodegenerative disorders such as Parkinson's disease, myositis, and multiple sclerosis.

To learn more about our Centre's research groups visit

<https://www.murdoch.edu.au/research/hfi/our-centres/personalised-medicine-centre>

Reporting Relationships



Key Responsibilities/Duties

1. Utilise bioinformatics tools and techniques for performing data analysis on genomic, transcriptomic, and proteomic.
2. Provide training and support in the use of bioinformatics software tools.
3. Develop effective analysis pipelines for analysing large genomic datasets.
4. Maintain a current knowledge of the computational and information technologies required in medical scientific bioinformatics.
5. Ensure Bioinformatic analysis performed is compliant with accreditation requirements and best practice.
6. Carry out and assist with other duties as required.

Selection Criteria

Essential

1. Bachelor of Science Degree in Molecular Biology, Computational Biology or Computer Science or an equivalent combination of relevant experience and/or training.
2. A strong foundation in bioinformatics principles, proficiency in programming languages like Python or R.
3. Demonstrated ability to assist in the development and implementation of bioinformatics analyses workflows and pipelines.
4. Demonstrated understanding of sequencing lab technologies as it applies to the life sciences.
5. A high level of oral and written English communication skills.
6. Demonstrated ability to interact effectively with client groups, scientists and support staff and to work collaboratively in a team environment.

Desirable

1. Ph.D in a medical genomics field
2. Experience using Microsoft Word, Excel and PowerPoint
3. Experience with genome assembly for larger diploid or complex genomes.
4. Experience with short- and long-read datasets, single-cell sequencing, TCR sequencing.
5. Understanding of bioinformatic pipelines and predictive modelling approaches relevant to genomic research.

Work Requirements

1. Australian permanent residency or possession of a valid visa with work entitlement in Australia.
2. Ability to work outside of normal office hours when required.
3. Comply with the requirements of OHS for the laboratory, including compliance with legislative authorities such as OGTR (Office of the Gene Technology Regulator) and AQIS (Australian Quarantine Inspection Service), during handling, disposal and storage of biologicals and chemicals.
4. Comply with systems and processes that are in place for the appropriate storage, handling and disposal of biohazard materials, chemicals and reagents.

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

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 Career Development Conversation annually to discuss their career aspirations and growth opportunities.

All Staff undergoing a probation period are required to set probationary objectives with their leader 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.