



## POSITION DESCRIPTION

<b>Position</b>	Research Assistant		
<b>Position Number</b>		<b>Level/Classification</b>	HEW0404
<b>Reports to</b>	Professor		
<b>Unit</b>	Centre for Molecular Medicine and Innovative Therapeutics		
<b>Directorate</b>	Research and Innovation		
<b>Positions Supervised</b>	Nil		

### Position Purpose

The Research Assistant in the Centre for Molecular Medicine & Innovative Therapeutics (CMMIT) undertakes laboratory work as required for the completion of specific research projects. This position is to provide high quality research support focusing on the project aims to meet the deliverables on an externally funded research grant.

### About Murdoch University

Murdoch University helps people discover how to make a difference, through education and research endeavour, and remains one of the most inclusive universities in the country, providing students with quality education and recognised 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

CMMIT established in 2018 and headed by Professor Steve Wilton as Director forms part of Murdoch University's commitment to excellence in health and medical research. The Centre brings together researchers and clinicians from across the university and Perron Institute to

apply the tools of personalised medicine to the treatment and diagnosis of an increasing range of diseases by:

- Undertaking cutting edge research that directly impacts on the health and wellbeing of patients
- Taking findings from the laboratory and clinic, and translating these into commercial products (viz. new drugs and diagnostics) or improvements in clinical practice and health policy
- Fostering collaboration across the Centre's twelve research groups with the goal of increasing the scope and quality of the Centre's research

CMMIT's research is diverse and is spread across twelve research areas:

**Molecular Therapy** – research focusing on developing genetic drugs to treat Duchenne muscular dystrophy and other disorders, particularly inherited disorders.

**Precision Nucleic Acid Therapeutics** – research on the development of novel therapeutic molecules for target-specific delivery of drugs or diagnostics to specific disease sites in the body including in cancer, diabetes and neurological diseases, including Alzheimer's disease.

**Motor Neurone Disease** – research on novel approaches to the treatment of the debilitating and ultimately fatal disease, motor neurone disease (MND), a disease affecting 350,000 people worldwide.

**Neurodegenerative Diseases** – research is focused on molecular mechanisms underlying various neurodegenerative diseases and identifying the genomic alterations as potential drug targets or biomarkers.

**Clinical Exercise and Cognition** – research in the area of exercise and cognition on biomechanics, physiology, metabolism and cognition with the goal of informing the personalised management and treatment of patients.

**Multiple Sclerosis** – research on clinical, laboratory, radiological, and genetic aspects of multiple sclerosis, a disease affecting over 23,000 Australians.

**Myositis** – research on the treatment, genetics and immunopathology of immune-mediated myositis.

**Functional Genomics** - research investigating the functional consequences of genetic changes that are associated with neurodegenerative diseases.

**Cell-Tissue Systems Modelling** - research focusing on integrating the physical, chemical and biological processes underlying diseases such as osteoarthritis, colorectal cancer, and acute kidney injury by using computational and mathematical models.

**Sepsis Diagnostic Research** - researchers invested in finding new and better ways to diagnose, treat and prevent sepsis in newborns, adults and companion animals.

**Economic Evaluation of Disease & Diagnostics** - researchers in the field of health economics/health care financing, conduct cost-effectiveness and cost-benefit analysis to

examine value for money and resource-allocation for clinical, laboratory and public health interventions.

**Skin Integrity Research Group** - research focusing on the clinical prevention and early identification of surgical wound complications such as surgical site infection and surgical wound dehiscence. The research programme includes Phase 1-IV clinical trials, comparative effectiveness studies, validation of diagnostic methods for identification and classification of wound infection, and the development of AI tools to predict at risk patient groups.

### Reporting Relationships



### Key Responsibilities/Duties

1. Conduct experiments using tissue culture, molecular biology, synthetic nucleic acid techniques, and immunochemistry and protein analysis.
2. Perform research into the manipulation of gene expression for potential therapeutic application, using antisense oligomers and a variety of analytical techniques *in vitro* and in animal models.
3. Restocking, organizing and maintenance of laboratories
4. Use of databases and digital notebooks to store and analyse data
5. Produce data for preparation of research papers for scholarly journals.
6. Maintain clear and detailed records of experimental design, procedures and outcomes.
7. Maintain accurate records, analyse data using statistical and graphics programmes.
8. Other duties as required.

### Selection Criteria Essential

1. Completion of a relevant degree with honours or an equivalent combination of relevant experience and/or education and training in tissue culture.
2. Experience with immunohistochemical assay
3. Experience with molecular biology techniques.

4. Relevant experience and ability to coordinate data collection and undertake other research studies under supervision.
5. Demonstrated technical laboratory skills, and ability to maintain clear and accurate laboratory records.
6. Highly developed organisational and time management skills with a high level of attention to detail.
7. Ability to effectively analyse information and produce clear, succinct reports and documents.
8. An ability to ensure information is kept secure and maintain strict confidentiality.
9. Excellent written and verbal communication skills.

### **Desirable**

1. Previous experience in a university environment.

### **Work Requirements**

1. Ability to work outside of normal office hours when required.
2. 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.
3. Comply with systems and processes that are in place for the appropriate storage, handling and disposal of biohazard materials, chemicals and reagents.
4. Be able to provide evidence of appropriate vaccination or immunity in accordance with the University's Immunisation Policy.

### **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.