Position Description

Title: Research Assistant

HEW Level: HEW 5

Faculty/Office: Faculty of Medicine and Health Sciences

Position Number: NEW

Department/Team: Biological Sciences

Date: June 2018

Position Purpose: To provide experimental and procedural support on research activities using mouse models that contribute to the understanding of physiological function of neurons and processes in neurondegenerative diseases in humans.

ORGANISATIONAL CONTEXT

Macquarie University is developing the nation’s first fully integrated academic health sciences centre under a university’s leadership. With a focus on patients and an ultimate goal of improving lives, the Macquarie University Health Sciences Centre will see true convergence of the learning and research endeavours of Macquarie’s Faculty of Medicine and Health Sciences with the clinical care provided at Macquarie University Hospital and Clinics. It brings together the excellent work of medical and allied health researchers across the University and around the country, with unparalleled access to the world-leading clinical resources and research facilities found only on our campus.

The Faculty of Medicine and Health Sciences has active research programs in biomedical, translational and health services domains, with current areas of strength including neurosciences (especially motor neuron disease, neurological rehabilitation, and the clinical neuroscience of pain), cancer medicine, and vascular science, amongst others. The Faculty hosts the Australian Institute of Health Innovation, an internationally acclaimed powerhouse researching health systems, e-health, and patient safety. In learning and teaching, the Faculty offers a unique suite of capability-based medical education programs including a unique three-year extended masters-level, professional-entry Doctor of Physiotherapy degree, a Graduate Diploma of Anatomy program, a Master of Public Health, an accelerated 2 year Bachelor of Clinical Science program and the Macquarie MD (Doctor of Medicine).

The Dementia Research Centre will provide an environment for innovative, interdisciplinary research for dementia, using and developing state-of-the-art technologies to advance basic discoveries towards translation into clinical treatments. The Dementia Research Centre is committed to providing a unique and supportive mentoring program to allow the growth of future leaders for dementia research. Furthermore, the multidisciplinary approach of the Centre to study Alzheimer’s disease will create an excellent opportunity for the training of PhD students.
## Key Accountabilities

- Assist with conducting and coordinating behavioural experiments in mice to monitor their health and wellbeing.
- Coordinate biological resources and manage their sustainability and quality.
- Prepare and analyse cell culture and animal tissues using a variety of molecular, cellular biology and protein chemistry research techniques including Western blotting, immunohistochemistry, PCR and two-hybrid assays.
- Undertake in-vitro techniques, including isolating and culturing of various animal cell types.
- Assist in the planning of experiments and conduct experiments in accordance with scientific standards and project requirements.
- Undertake appropriate record keeping and data management.
- Undertake data analysis and statistical evaluation and assist with the preparation of research data for presentation and publication.
- Assist with drafting reports and scientific manuscripts in a timely and accurate manner.
- Assist higher degree research students and other staff in laboratory research techniques including providing general guidance to ensure SOP, safety and best practice standards and procedures are maintained.
- Contribute to the efficient day-to-day operation of the laboratory including monitoring stock levels of consumables and ensuring they are maintained.
- Comply with relevant EEO and WHS regulations.
- Perform any other duties as required and appropriate for this classification.

## Position Context

### Reports to:
Senior Research Officer

### Positions Reporting to:
- Direct: nil
- Indirect: nil

### Key Direct Clients:
- Academic staff in the Dementia Research Centre
- HDR Students

### Other Key Relationships:
- Faculty laboratory operations team
- Risk and compliance
- Faculty Health and Safety committee
- Immediate team members
- Staff and students in the Department of Biomedical Sciences

### Budget Accountability:
Nil

### Role-specific Conditions:
- Immunisation and Vaccination Checks

### Scope and autonomy:
Work tasks may require interpretation, decisions and advice within the scope of defined projects, processes, procedures and techniques.

### Problem solving:
Draws on own knowledge and experience to analyse problems and develops and implements solutions.
## CAPABILITY FRAMEWORK

Capability Frameworks describe the behaviours, skills, attributes and experience required to successfully perform a position or group of similar positions.

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<tr>
<th>COMPETENCIES</th>
<th>ATTRIBUTES</th>
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<tr>
<td>Planning and Execution: Managing time and resources to complete tasks and achieve objectives.</td>
<td>Perseverance: Persevering despite obstacles to ensure tasks are completed.</td>
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<td>Quality Focus: Ensuring accuracy and quality when completing tasks.</td>
<td>Flexibility: Responding effectively to unexpected or changing circumstances.</td>
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<td>Communication: Effectively grasping and conveying ideas and concepts to others.</td>
<td>Reliability: Meeting commitments and responsibilities.</td>
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<td>Service Focus: Making students, staff, key contacts and their needs a priority.</td>
<td>Resilience: Dealing effectively with and recovering quickly from setbacks or pressure.</td>
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<td>Analysis and Judgement: Evaluating information and data to solve problems and make decisions.</td>
<td>Teamwork: Working in collaboration with others to achieve shared goals.</td>
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### REQUIRED KNOWLEDGE
Qualifications, technical and/or professional skills and information needed from day one for successful performance.

- Bachelor’s degree (Honours) or higher in medical science, neuroscience or related discipline.
- Knowledge of principles of molecular biology, molecular genetics and protein biochemistry.
- Lab administration and experimental planning.
- Computer skills including MS Office, database management and statistical analysis packages.

### ACQUIRED KNOWLEDGE
Organisational and/or professional skills and information to be developed within the first 3 to 6 months in the role for successful performance.

- Knowledge of how to work safely in Faculty of Medicine and Health Sciences Laboratories.
- Knowledge of the Faculty of Medicine and Health Sciences’ functions and structure.
- Knowledge of the Faculty of Medicine and Health Sciences’ policies, systems, processes and procedures.
- Knowledge of Animal Ethics guidelines.
- Knowledge of University policies, systems, processes and procedures.
- Knowledge of what other areas of the University do and how they interact with the faculty/office.

### KEY EXPERIENCES
Practical experiences and exposure to specific environments or activities related to successful performance.

- Molecular, cell biology, protein biochemistry methods including Western blotting, PCR, two-hybrid assays, mass spectrometry and immunohistochemistry.
- Experience in molecular and tissue culture techniques and protocols.
- Experience in mouse genetics, colony management and project resource strategy.
- Working effectively as part of a team to undertake and complete research projects.
- Working in a research laboratory with an understanding of laboratory health and safety practices and principles.