Position Description

Title: Research Assistant  
HEW Level: HEW 4

Faculty/Office: Faculty of Medicine and Health Sciences

Department/Team: Department of Biomedical Sciences

Date: March 2020

Position Purpose: To conduct technical research tasks and activities for the Motor Neurone Disease (MND) research group in the Faculty of Medicine and Health Sciences.

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 educational programs aimed at post-graduation subspecialty medical education and training, and a unique three-year extended masters-level, professional-entry Doctor of Physiotherapy degree.
**KEY ACCOUNTABILITIES**

- Provide research support to projects examining the molecular and cellular mechanisms of neurodegeneration in motor neurone disease (MND) and comply with research protocols, including planning and conducting experiments.

- Provide research support for projects that require proteomics, molecular biology, cloning and mass spectrometry applications.

- Investigate, evaluate and validate new techniques including quality control and trouble-shooting.

- Undertake a variety of molecular, cellular biology and protein chemistry research techniques and related duties including DNA cloning, DNA construct assembly, PCR, gel electrophoresis, in vitro mRNA production, flow cytometry, western blotting, immunocytochemistry, immunohistochemistry, and microscopy.

- Assist with data management and analysis, including computational and statistical analysis, for the MND Research group.

- Perform cell culture techniques, preferably including cell culture, transfections, and viral transductions.

- Contribute to the preparation of research data for presentation and publication.

- Participate in project meetings as well as departmental and institutional forums.

- Assist students in the use of research laboratory equipment.

- Contribute to the efficient day-to-day operation of the laboratory.

- Comply with relevant EEO and WHS regulations.

- Ensure work areas, including equipment, are well maintained and comply with PC2 and other specified practice guidelines.

- Perform any other duties as required and as appropriate for the incumbent’s level of competence.

**POSITION CONTEXT**

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<tr>
<th>Reports to:</th>
<th>Senior Research Fellow, Motor Neurone Disease Research Team</th>
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<tr>
<td>Positions Reporting to:</td>
<td>Direct: nil</td>
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| Key Direct Clients: | • Academic staff of the MND research group  
  • Immediate team members  
  • MQ-postgraduate and HDR students |
| Other Key Relationships: | • Faculty laboratory operations team  
  • Faculty of Medicine and Health Sciences administrative and research operations staff members  
  • Staff and students in the Department of Biomedical Sciences  
  • Staff and students in the Department of Clinical Medicine |
| Budget Accountability: | Nil |
| Role-specific Conditions: | Nil |
| Scope and autonomy | Decides when and how to perform variable tasks of greater complexity within the scope of established processes and priorities. |
| Problem solving | Applies knowledge of standard processes, procedures, systems and/or techniques to identify and implement solutions to problems. |
### 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><strong>Planning and Execution</strong>: Managing time and resources to complete tasks and achieve objectives.</td>
<td><strong>Perseverance</strong>: Persevering despite obstacles to ensure tasks are completed.</td>
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<td><strong>Quality Focus</strong>: Ensuring accuracy and quality when completing tasks.</td>
<td><strong>Flexibility</strong>: Responding effectively to unexpected or changing circumstances.</td>
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<td><strong>Service Focus</strong>: Making students, staff, key contacts and their needs a priority.</td>
<td><strong>Reliability</strong>: Meeting commitments and responsibilities.</td>
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<td><strong>Analysis and Judgement</strong>: Evaluating information and data to solve problems and make decisions.</td>
<td><strong>Integrity</strong>: Maintaining confidentiality, discretion and professionalism.</td>
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<td><strong>Teamwork</strong>: Working in collaboration with others to achieve shared goals.</td>
<td><strong>Initiative</strong>: Taking action, on own accord, to address problems and prevent them from reoccurring.</td>
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<td><strong>Communication</strong>: Effectively grasping and conveying ideas and concepts to others.</td>
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### REQUIRED KNOWLEDGE
Qualifications, technical and/or professional skills and information needed from day one for successful performance.

- Bachelor degree or equivalent in medical science or related discipline.
- Computer skills including MS Office and internet and database management
- Technical knowledge of proteomics applications, molecular biology, cloning and related technologies
- Knowledge, understanding and operation of proteomics and mass spectrometry technologies and application
- Knowledge of genetics

### 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/office’s functions and structure.
- Knowledge of the faculty/office’s policies, systems, processes and procedures.
- Knowledge of the MND team’s research projects.

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

- Performing molecular biology techniques such as DNA cloning, DNA construct assembly, PCR, gel electrophoresis, in vitro mRNA production
- Conducting protein chemistry methods including Western blotting, immunocytochemistry, immunohistochemistry, and microscopy
- Performing cell biology techniques such as cell culture, transfections, viral transductions, and flow cytometry
- Working independently on research projects
- Working in a PC2 or QC2 research laboratory