THE UNIVERSITY OF NEW SOUTH WALES
POSTDOCTORAL RESEARCH ASSOCIATE
DEMENTIA RESEARCH UNIT / SCHOOL OF MEDICAL SCIENCES

POSITION DESCRIPTION

JOB PURPOSE

- The purpose of this job is to provide scientific support to a NHMRC funded research project in the Dementia Research Unit (DRU) within the School of Medical Sciences at UNSW. The research aims at understanding the acute and chronic mechanisms underlying brain damage in human neurological conditions using both in vivo and in vitro techniques.

MAIN DUTIES

- Conduct and coordinate animal experimental studies using rodent models of human neurodegenerative conditions
- Carry out maintenance and behavioural testing of mice
- Perform Western blot, and immunohistochemical analyses on animal tissue and cells
- Produce high-quality research data for conference presentations, manuscripts and funding applications
- Be responsible for planning experiments and analysing data
- Assist in supervision of research students
- Assist in writing scientific manuscripts
- Assist with laboratory management including maintenance of equipment, maintaining stock levels of consumables, general laboratory tidiness
- Regularly liaise with the supervisor in respect of the status of experimental work
- Comply with OHS regulations, contribute to registers, write SWPs and RAs
- Cooperate with all health and safety policies and procedures of the University and take all reasonable care that actions or omissions do not impact on the health and safety of others in the University

ENVIRONMENT

Statistics

The School of Medical Sciences consists of approximately 200 academic, professional & technical and research staff within the Departments of Anatomy, Physiology, Pharmacology and Pathology. The yearly budget for the School's General Funds is approximately $16 million. The School is engaged in active research programs with a total annual external funding of $11 million within the School. Sources of funding include the National Health and Medical Research Council, the Australian Research Council and the National Heart Foundation. The School of Medical Sciences delivers courses and programs to more than 5000 undergraduate, Honours and postgraduate students. In addition, the School also offers distance education programs.
Position Context

The School occupies the Wallace Wurth (Medicine) building at UNSW, and is physically linked to both the Lowy Cancer Centre and the School of Biotechnology and Biomolecular Sciences. Core research facilities exist within this Biomedical Science precinct to fully support virtually all contemporary forms of biomedical research. The School is integrally linked to the Centre for Vascular Research and Brain Sciences UNSW Institute. It is adjacent to the Prince of Wales/Sydney Children’s Hospital/Royal Women’s Hospital complex at Randwick. Strong collaborative ties exist with the Children’s Cancer Institute Australia, Neuroscience Research Australia, the Garvan Institute and the Victor Chang Cardiac Research Institute. The role will operate within the Dementia Research Unit (DRU) located on level 2 of the new wing of the Wallace Wurth building

Reporting Relationships

Supervisor’s title: Unit Head – Dementia Research Unit (DRU) Prof Lars Ittner

Other positions reporting to the supervisor: Various Researchers and Technical Staff
Positions reporting to this position: None

PRINCIPAL ACCOUNTABILITIES

The Research Assistant will be assisting a senior scientist in the day to day running of the laboratory and provide:

- Regular reporting (at least 1-2 times per week) to supervisor about work in progress and periodic presentation of findings at meetings of the Group;
- Effective and productive experimentation conducted to a high scientific standard;
- Data analysis, including statistical evaluation and interpretation;
- Adherence to the principles of maintaining a safe and clean laboratory environment;
- Timely and accurate assistance in the production of reports and scientific manuscripts;
- Effective contribution to project development and research student supervision

SELECTION CRITERIA

- PhD in medical sciences or related field. Background in neuroscience is highly desirable;
- Extensive research experience in animal experimental work, in particular, the behavioural and biochemical analysis of mice; as well as general care of mice, including tail cutting, ear marking and genotyping.
- Experience in antibody-based techniques such as immunohistochemistry, immunofluorescence and Western blotting;
- Experience in tissue processing, including paraffin embedding and sectioning, cryostat sectioning, and protein extraction;
- Experience with microscopy;
- Familiarity with cell culture techniques;
- Excellent oral and written communication skills with relevant computing and data analysis skills;
- Knowledge of OHS responsibilities and commitment to attending relevant OHS training.