POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: Queensland Brain Institute
Position Number: 3042190
Type of Employment: Fixed term, full time up to 12 months, with the possibility for extension
Classification: Academic Research Level A

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (65). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences,
sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

The Queensland Brain Institute works to understand the development, organisation and function of the brain. We aim to understand the neural circuits in the brain, how their function results in behavioural outcomes, and how dysfunction of these circuits leads to disorders such as dementia, Parkinson’s disease and schizophrenia. We aim to (1) Develop novel therapeutic approaches to treat disorders of neural function and (2) Use our understanding of brain function to improve learning in classrooms and in the workplace.

Established in 2003, QBI (www.qbi.uq.edu.au) is housed on the St Lucia campus of UQ. It is home to more than 450 staff and students, including 41 group leaders.

Over the past decade QBI has become known as one of the world’s leading neuroscience research institutes. It played a key role in contributing to UQ attaining the highest possible score of 5 for neuroscience, in both the 2010, 2012, and 2015 Excellence in Research for Australia (ERA) reviews, one of only two universities in Australia to achieve this.

Neurodegeneration Pathobiology Laboratory

The lab (led by Dr Adam Walker) focuses on molecular, cellular and mouse model studies of the causes and potential treatments for motor neuron disease (MND) and frontotemporal dementia. We are an enthusiastic, cooperative, dedicated and ambitious group working towards finding cures for disease. For more information please visit qbi.uq.edu.au/walkergroup and walkerneurolab.org.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

The position will involve conducting and analysing experiments to understand molecular mechanisms and potential treatments for motor neuron disease and frontotemporal dementia, with a focus on cellular stress responses, protein aggregation and novel pathogenic biochemical pathways. You will use techniques focused on the use of transgenic mouse models of disease including stereotaxic surgery, behavioural analysis and pre-clinical testing, as well as biochemistry, primary cell culture, immunohistochemistry, advanced...
molecular biology and microscopy, lentiviruses and AAVs, and analysis of human tissues, to identify new potential therapeutic targets.

**Duties**

Duties and responsibilities include, but are not limited to:

- Conduct research and experiments to understand the molecular mechanisms of neurodegenerative disease and to test potential therapeutic avenues.
- Publish high quality papers and contribute to the disciplined academic environment of the laboratory and the institute.
- Acquire and maintain familiarity with relevant scientific literature and contribute to the academic environment of the laboratory and institute.
- Keep clear and accurate records and ensure effective record keeping and data management.
- Present results of research at meetings at all levels – laboratory, institutional, national and international as appropriate.
- Assist with training and supervision of other researchers and students within the laboratory.
- Undertake relevant training and professional development as appropriate.

**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the [University’s Code of Conduct](#)
- requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](#) developed by the University or Institute/School
- the adoption of sustainable practices in all work activities and compliance with associated legislation and related University [sustainability responsibilities and procedures](#)
- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related [responsibilities and procedures](#) developed by the University

**Organisational Relationships**

The position reports to Dr Adam Walker (adam.walker@uq.edu.au).

**SELECTION CRITERIA**

**Essential**

- PhD in a relevant area of neuroscience research
- Strong expertise in mouse models of neurodegenerative disease, including the use of in vivo surgery techniques, viruses, motor and behaviour studies, and pre-clinical trials
- Expertise in biochemistry, molecular biology, cell biology, and histology techniques
Understanding of molecular mechanisms of neurodegeneration

Excellent attention to detail, organisational ability, and record-keeping skills with a high level of motivation, initiative, and problem-solving skills

A highly inquisitive nature and a strong desire to develop new ideas and research directions, aimed towards making high-impact findings and developing a research career

Excellent verbal, written, and interpersonal communication skills, and the ability to work both independently and collaboratively

**Desirable**

- A strong background in studies of neurodegeneration and experience in the study of mouse and human brains and spinal cords
- Expertise in advanced microscopy techniques, advanced molecular/cell biology (such as CRISPR), RNA analyses, proteomics and bioinformatics
- Record of high-profile first-author publications
- Record of success in competitive funding schemes, and prizes and awards for research
- Experience in scientific presentation at an international level

**Qualification Verification**

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University's Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

This role is a full-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.