POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow/Research Fellow
Organisation Unit: Queensland Brain Institute
Position Number: 3035485
Type of Employment: Full Time, Fixed Term up to 2 years
Classification: Academic Research Level A or B. Level of appointment will be commensurate with qualifications, experience and academic achievements.

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 well within the top 100 universities worldwide, measured through a number of major independent university rankings: the Academic Ranking of World Universities, Times Higher Education World University Rankings, US News Best Global Universities Rankings, QS World University Rankings and Performance Ranking of Scientific Papers for World Universities, and is indeed in the top 50 in some of these rankings. In 2013, UQ attracted more Australian Research Council funding than any other Australian university or research body.

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 Australian Teaching and Learning Council Awards for Teaching Excellence 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, and a founding member of Universitas 21, an international consortium of leading research-intensive universities. UQ is also the largest university in Queensland.

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 215,000-plus alumni. The University has more than 7,000 academic and professional staff and a $1.6 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.

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.

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 primary purpose of the position is to understand the neural basis of resting-state network of the brain and identify in vivo endophenotypes of disorders using structural, functional and molecular imaging in rodent (particularly mouse) models. Specifically this project will examine learning dependent neuroplasticity of the brain connectome and its relationship with neurotransmission, electrophysiology, behaviour and interventions. This will require extensive animal handling, behavioural experiments and functional imaging with Magnetic Resonance Imaging (MRI). We will validate with pharmacological and optogenetic manipulations and calcium recording in these animal models. Functional MRI experiments in awake rodent will be explored to understand the plasticity without anaesthesia effect.

Duties

Duties and responsibilities include, but are not limited to:

- Conduct research and experiment to understand connectivity and brain function in rodents.
- 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.
• Present results of research at meetings at all levels – laboratory, institutional, national and international as appropriate.
• Contribute to safe laboratory working environment.
• Contribute to supervision of junior members and students within the laboratory and to the smooth running of the laboratory.

Other
Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:
• 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 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 A/Prof Kai-Hsiang Chuang.

SELECTION CRITERIA

Essential
• PhD in the area of neuroscience, biomedical engineering, physics, chemistry.
• Demonstrated expert knowledge in the area of MRI physics, animal MRI, in vivo optogenetic study, electrophysiology
• Experience in functional MRI, MRI data analysis using SPM or FSL; programming language (Matlab or C/C++)
• Excellent attention to detail
• Demonstrated organisational ability and good record-keeping skills
• Self-reliance and motivation
• High level interpersonal skills
• Excellent verbal and communication skills
• Initiative and problem solving skills
• Awareness of laboratory safety, occupational health and safety protocols
• Evidence of a contribution to research, including successful external grant applications
• Ability to work collaboratively with colleagues.
Desirable

- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives.

Seminar

Applicants invited for interview will be expected to present a seminar in conjunction with the selection interview process.

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 is committed to equity, diversity and inclusion.