POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: School of Biomedical Sciences
Position Number: NEW
Type of Employment: Full Time – 1 Year, potential for extension (>12 months)
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 CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (42), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

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 52,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 15,400 international students from 135 countries, adding to its proud 250,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $1.75 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 School of Biomedical Sciences

The School of Biomedical Sciences is a distinguished centre for teaching and research in the academic disciplines of Anatomy, Developmental Biology, Physiology, Pharmacology, Neuroscience, and Pathology. The School has over 40 full-time research and teaching staff and is one of the largest Schools of this type in Australia. It plays a vital function at UQ in serving as the link between the activities of research-only UQ institutes (Queensland Brain Institute (QBI), Institute of Molecular Bioscience (IMB), Australian Institute for Bioengineering and Nanotechnology (AIBN)) and the broader research goal of translating research into clinical practice. Our diverse and state-of-the-art research provides an exciting environment for national and international research fellows and higher degree students. Details of the research interests of academic staff may be accessed on the school’s web site at http://www.uq.edu.au/sbms/

In addition to its graduate research programs, the School teaches into the postgraduate medical program (MD), and to undergraduate students in a wide variety of courses in Science, and Health and Behavioural Sciences.

Faculty of Medicine

The University of Queensland’s Faculty of Medicine is an internationally recognised provider of world-class education and research. The research-intensive Faculty has a gross budget of almost $300 million, employs approximately 1000 continuing and fixed-term staff (headcount), has a community of more than 4000 non-salaried academic appointees and around 3200 students (headcount).

The Faculty of Medicine offers Australia’s largest medical degree program for graduates and school-leavers. Undergraduate and postgraduate programs are available in the disciplines of Medicine, Health Sciences, E-Health, Mental Health, Biomedical Sciences and Public Health.

The Faculty possesses enormous strengths spanning research, teaching, industry engagement and clinical practice in disciplines ranging from the basic sciences, biomedical research and development, to clinical trials and public health. Research projects within the Faculty have already led to discoveries with far-reaching social and economic impacts, including the revolutionary Gardasil (TM) vaccine for cervical cancer (Professor Ian Frazer) and a drug discovery EMA401 (Professor Maree Smith), a first-in-class oral treatment for chronic pain, that through Spinafex Pharmaceuticals led to Australia’s largest biotechnology commercialisation deal. Faculty staff include three highly cited authors, one Fellow of the Royal Society (FRS), three Fellows of the Australian Academy of Science (FAA) and 12 Fellows of the Academy of Health and Medical Sciences (AAHMS). The Faculty is a core member of Brisbane Diamantina Health Partners, the Brisbane-wide academic health science system.
Educational offerings in biomedical sciences, medicine and public health are informed and supported by research activity across a range of fundamental and clinical areas of importance including recognised strengths in cancer, skin diseases, chronic and critical illness, brain and mental health, maternal and child health, and genomics. Cutting-edge facilities such as the Herston Imaging Research Facility (HIRF), the UQ Centre for Clinical Research (UQCCR), our laboratories in the Translational Research Institute (TRI) and the new Centre for Children’s Health Research (CCHR) enable outstanding research outcomes and sharpen our understanding of cancer, autoimmunity, mental disorders, infectious diseases and neurological disease. Further details are available at [www.medicine.uq.edu.au](http://www.medicine.uq.edu.au).

**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-ug](http://www.uq.edu.au/current-staff/working-at-ug)

The University of Queensland [Enterprise Agreement](http://www.uq.edu.au/current-staff/working-at-ug) outlines the position classification standards for Levels A to E.
DUTY STATEMENT

Primary Purpose of the Position

The position involves developing live cell-based assays to screen for self-reactive anti-neuronal antibodies in blood samples from human patients with neurological and psychiatric diseases. Key objectives are to establish a pipeline to stably transfect cell lines with neuronal cell surface proteins, and to assess reactivity of patient sera against these using a variety of techniques, including immunostaining and flow cytometry. The successful applicant will also be driving fundamental research projects to advance understanding how presence of identified anti-neuronal antibodies may lead to neurological and psychiatric diseases.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Establish and maintain stably transfected cell lines expressing neuronal or other proteins of interest, and then use immunolabelling to visualise these proteins/antigens;
- Liaise with Queensland Pathology to validate the use of transfected cell lines for detecting self-reactive antibodies in blood samples from human patients with known neurological or psychiatric autoimmune disease;
- Use transfected cell lines to screen for the presence of anti-neuronal antibodies in cohorts of patients not previously thought to be suffering from autoimmune neurological disease;
- Conduct basic research experiments how identified autoantibodies interfere with neuronal cell function in vitro and in vivo;
- Conduct outstanding research and publish in high impact scholarly papers;
- Apply for independent funding to further expand the research portfolio;
- Assist in the supervision and training of research higher degree students.

Administration

- Prepare applications and documents for institutional ethics and biosafety committees to obtain relevant approvals and meet reporting requirements;
- Any other duties as reasonably directed by your supervisor.

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 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 Jana Vukovic (Head, Neuroimmunology and Cognition), and the successful candidate will be jointly supervised by Dr. Jana Vukovic, A/Prof Marc Ruitenberg (Head, CNS Injury and Inflammation Research Laboratory), and Dr Stefan Blum (Neurologist, Mater and Princess Alexandra Hospitals).

SELECTION CRITERIA

**Essential**

- PhD (or equivalent) in one or more of the following areas:
  - Immunology, immunobiology or molecular neuroscience
- Demonstrated skills / expertise in the following areas:
  - Cell culturing and aseptic technique
  - Transfection of cell lines
  - Flow cytometry, immunocytochemistry and/or western blot
  - Microscopy, image acquisition and data analysis
- Evidence of high-level contribution to research, including an established track record of peer-reviewed publications and/or successful external grant applications;
- Strong motivation with the ability to work independently, design and interpret experiments, with excellent organisational skills;
- Highly developed teamwork and communication skills, including excellent record keeping, written and interpersonal skills.

**Desirable**

- Previous experience with (neuro-) inflammation research;
- Willingness to participate in ongoing training, learn and develop new techniques;
- Experience with multi-colour flow cytometry and cell sorting;
- Previous experience with modelling human disease in animal models;

**Seminar**

Applicants invited for interview may be asked to present a research 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 values diversity and inclusion.
Applications from Aboriginal and Torres Strait Islander peoples are encouraged. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au
Applications from women are particularly encouraged.
This role is a full-time position but flexible-working arrangements may be negotiated.