THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

# POSITION DESCRIPTION

| | |
|---|---|
| **Position Title:** | Postdoctoral Research Fellow |
| **Organisation Unit:** | School of Biomedical Sciences |
| **Position Number:** | NEW |
| **Type of Employment:** | Fixed-Term, Full-Time |
| **Classification:** | Research Academic 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 (40), the US News Best Global Universities Rankings (42), QS World University Rankings (47), Academic Ranking of World Universities (54), and the Times Higher Education World University Rankings (66). Excluding the award component, UQ is now ranked 45$^{th}$ 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 53,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 17,000 international students from 135 countries, adding to its proud 260,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $2.15 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+.

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

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 $330 million of the total $2.0B UQ budget. The Faculty employs over 1000 of the 6,600 UQ staff total, with a community of more than 4,200 non-salaried academic appointees and around 3,200 students.

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 which through Spinifex 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, brain and mental health, maternal and child health genomics and health services. 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 Children's Health Research Centre (CHRC) 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.

**School of Biomedical Sciences**

The University of Queensland School of Biomedical Sciences is a distinguished centre for teaching and research in the academic disciplines of Anatomy, Developmental Biology, Physiology, Pharmacology and Pathology. The School has more than 40 full-time research and teaching staff and is one of the largest Schools of its type in Australia. It has links to other prestigious research centres on the St Lucia campus including the Queensland Brain Institute (QBI), the Institute of Molecular Bioscience (IMB) and the Australian Institute for Bioengineering and Nanotechnology (AIBN). Our diverse research provides an exciting environment for national and international research fellows and higher degree students. It is concerned with advancing the understanding of how cellular mechanisms contribute to the function of the human body in health and disease. Details of the research interests of academic staff may be accessed on the school's web site at https://biomedical-sciences.uq.edu.au/

In addition to its graduate research programs, the School teaches undergraduate students in Science, Medicine, and Health Sciences.

**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.

**About the Vukovic – Neuroimmunology and Cognition Laboratory**

The Vukovic laboratory investigates how brain function is sculpted and influenced by the immune system. Specifically, we examine the role of brain's main resident immune cell population (i.e. microglia), as well as various peripheral immune cells, on learning and memory in mice. We are interested in defining the contribution of immune cells to such higher cognitive tasks, including for neuroinflammatory conditions where learning and memory deficits can occur, e.g. following traumatic brain injury, cancer treatment, and ageing. We have established an array of genetic and pharmacological tools alongside robust behavioural assays to directly probe the function of these immune cells in both the healthy and diseased brain.

The ultimate goal of our work is to link cellular and molecular events to altered behaviour, and to harness the brain's intrinsic regenerative potential for stimulating optimal cognitive function. For a recent highlight of our achievements see Willis et al., 2020; https://researchers.uq.edu.au/researcher/2243). If you are up for a challenge, please apply. For further information, email Dr Jana Vukovic j.vukovic@uq.edu.au.

# DUTY STATEMENT

**Primary Purpose of Position**

The focus of our research is to uncover the molecular mechanisms underpinning the beneficial effects of microglia that can be harnessed therapeutically to stop the secondary damage following brain injury. To date, we have profiled the beneficial microglial phenotype and the successful candidate will develop and implement genetic techniques to manipulate expression of candidate genes in microglia in order to uncover factors critical in limiting the spread of secondary damage. The position is supported by the Sylvia and Charles Viertel Foundation.

A Postdoctoral Research Fellow (Level A) will focus their efforts on developing their expertise and emerging research profile in neuroimmunology and will be supported and guided by more senior academic research staff with the expectation of an increasing degree of autonomy over time.

**Duties**

The duties and responsibilities include, but are not limited to:

Research

- Design and conduct experiments to assess microglial function in vitro and in vivo.

- Prepare and publish high-quality manuscripts, provide weekly progress reports and participate in regular meetings to discuss project objectives, methodology and outcomes.

- Lead and develop a project/research team in line with best practice research methodologies, while managing and mentoring students/employees to create a positive scientific research culture.

- Display a work ethic expected for a researcher aspiring to a long-term career in science.

- Contribute to day-to-day maintenance of lab supplies/stocks and cell/mouse lines.

- Participate in applications for competitive research funding support.

Service and Engagement

- Begin to develop a teaching portfolio.

- Perform a range of administrative functions as required.

- 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 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 the Viertel Senior Medical Research Fellow.

## SELECTION CRITERIA

*Essential*

- PhD in neuroscience, immunology or relevant related fields.
- Very high level of drive and enthusiasm to address scientific questions aimed towards high-impact findings.
- Experience in handling mice, conducting surgical procedures in mice (e.g. stereotaxic surgery) and processing tissue samples for immunostaining or FACS analysis.
- Working knowledge of CRISPR/Cas and AAV-/LV- genome editing technologies.
- Demonstrated high-level communication and interpersonal skills including the ability to consult and negotiate to ensure project objectives are met.
- Working knowledge of ethics, confidentiality, security and privacy as they relate to research samples and data.
- Evidence of first-author publications in reputed refereed journals.
- An emerging profile in research in the discipline area.

### Qualification Verification

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

### Vaccinations and Immunisation

It is a condition of employment for this role that if you are required now or in the future, to work or interact in Queensland Health clinical facility; or in an equivalent clinical health facility; or health care role; or will be required to perform work tasks that put you at risk of exposure to vaccine-preventable disease you are required to be immunised against, and remain immunised against, certain vaccine preventable diseases (VPDs) in accordance with the University's Vaccinations and Immunisation Guidelines (PPL 2.60.08). The employee is required to provide evidence of immunisation against VPDs.

*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 for further information and points of contact if you require additional support.*

*Accessibility requirements and/or adjustments can be directed to recruitment@uq.edu.au.*