POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow/Research Fellow
Organisation Unit: School of Pharmacy
Position Number:
Type of Employment: Full Time, Fixed Term (2 Years)
Classification: Level A or Level B

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 250,000-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.

**Faculty of Health and Behavioural Sciences**

The Faculty of Health and Behavioural Sciences is a strong faculty that has a coherent focus on health and well-being underpinned by a clear integrative theme related to preventative health and behaviour change. Furthermore, the Faculty provides the opportunity for the non-medical health sciences to have a stronger voice and greater visibility within the University.

The Faculty currently includes six schools and five research centres:

- School of Dentistry
- School of Health and Rehabilitation Sciences
- School of Human Movement and Nutrition Sciences
- School of Nursing and Midwifery and Social Work
- School of Pharmacy
- School of Psychology
- Centre for the Business and Economics of Health
- Centre for Youth Substance Abuse Research
- Recover Injury Research Centre
- Queensland Alliance for Environmental Health Sciences
- Poche Centre for Indigenous Health

**The School of Pharmacy**

The School of Pharmacy is one of the largest Schools of this type in Australia with over 50 academic staff (including joint appointments with community, hospital and government pharmacies) who are widely published internationally and have extensive research backgrounds. A team of 20 administrative, scientific and IT staff provide operational support, and over 50 people are employed through the School on research grants and other contracts.

The School of Pharmacy has experienced tremendous growth in student numbers, research productivity and professional pharmacy involvement over recent years. The School offers:

- Bachelor of Pharmacy Honours (4 years).
  
  The degree is taught in six integrated streams of study (Quality Use of Medicines, Dosage Form Design, Drug Discovery, Data Analysis in Pharmacy, Biological Fate of Drugs and Social and Professional Aspects of Pharmacy)

- Research-focused Major in Clinical and Experimental Therapeutics (on-course)

- Clinical Pharmacy and Pharmacy Practice (postgraduate – flexible delivery options)
The School has active research groups in areas ranging from Therapeutic Targeting, Pharmacometrics, and Pharmacy Education to Quality Use of Medicines. Research funds are obtained from government and private sources – UQ, ARC, NHMRC, Queensland Cancer Fund, Queensland Pharmacy Research Trust, Federal and State governments and the pharmaceutical industry. In 2010, the School of Pharmacy relocated to new, purpose built facilities in Brisbane’s PACE (Pharmacy Australia Centre of Excellence) precinct adjacent to hospital, research and industry partners.

Details of the School's activities may be accessed on the school’s web site at http://www.uq.edu.au/pharmacy

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

We are seeking a talented, highly self-motivated Postdoctoral Research Officer or Postdoctoral Senior Research Officer to undertake R&D into the design and library synthesis of novel opioid peptides developed at PACE, and assessment of their stability in biological milieu. This will be complemented by in silico receptor docking studies, and pharmacological evaluation in nociceptive receptor derived cell lines using state-of-the-art HTRF assay technology.

The individual will be working closely with staff and students involved in assessing the biological fate of the peptides in rodent models as well as their pharmacological activity in models of nociception.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Demonstrate leadership, initiative and drive for the industry-funded project, through regular dialogue with, and oversight from Dr Harendra Parekh, Dr Peter Moyle, Dr Karnaker Tupally and Assoc. Prof. Peter Cabot.
- Design and execute well-planned, documented research experiments (working towards GMP standards) relevant to the project aims, objectives and desired outcomes.
- Manage the day-to-day operations of the research project, including method development and laboratory book recording (working towards GLP standards), data collection, critical analysis of data, and long-term data storage, regular review of the literature, and where applicable, overseeing animal ethics clearances.
- Perform solution phase organic synthesis and solid phase peptide library synthesis, alongside purification and analysis using state-of-the-art HPLC and automated purification systems.
- Establish *in silico* receptor-ligand docking and binding affinity assays to inform peptide library design.
- Develop LC-MS assays to ascertain degradation profiles of peptides incubated with biological milieu.
- Design, interpret and perform cell-based assays (e.g. HTRF) examining the receptor-specificity of peptides.
- Prepare interim progress reports as requested for internal review, and present findings with critical insights at regular ‘in-house’ meetings.
- Prepare major milestone reports in a timely manner, for internal review, prior to submission and review by the industry partner.
- Take an active, leadership role in supervising related Major/Honours/PhD student projects, and ensuring, where applicable, milestone reports for their projects are prepared and submitted in a timely manner. Ensuring milestone presentations are prepared for students under supervision.
- Be proactive in developing draft manuscripts for publication in high quality outlets, pending industry partner approval (which may be delayed).
- Be proactive in identifying innovative paths of research and partnerships related to the project, and actively engage in their exploration.

### Service and Engagement

- Undertake administrative tasks related to the day-to-day running of research projects, including maintaining lab books and stock levels.
- Foster the School’s relationships with industry, government departments, professional bodies and the wider community.
- Any other duties as reasonably directed by your supervisors.

### 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 directly to Dr Harendra Parekh, Dr Peter Moyle, Dr Karnaker Tupally and Associate Professor Peter Cabot, in the School of Pharmacy.
SELECTION CRITERIA

**Essential**

- A Bachelor (Hons) or Master of Science or a related field.
- At Level B, PhD in Pharmacy, Pharmaceutical Chemistry or related field.
- Recent research experience of working in a research laboratory either as a Research Assistant, RHD student or post-doctoral scientist.
- Proven experience in efficient planning and execution of experiments.
- Demonstrated experience in solution phase organic synthesis and solid phase peptide library design, synthesis and evaluation, including HPLC and mass spectrometry.
- Demonstrated experience in the application of cellular pharmacological techniques such as, but not limited to HTRF assays, fluorescence microscopy and immunolabelling.
- Evidenced ability in report writing, record keeping, and presentation of research results.
- Demonstrated ability in adopting a methodical, systematic approach to experimental design and problem solving.
- An ability to work collaboratively with team colleagues and also work with minimal supervision.
- High level of organisational skills, including experience and demonstrated ability to manage confidential research records/data and adhere to specific work schedules to meet strict/tight deadlines.
- Ability to ensure regular maintenance of laboratory housekeeping duties, checks and troubleshooting of scientific equipment.
- Established computer skills, including working with spreadsheets, databases and word processing programs.
- Excellent communication and interpersonal skills and an ability to maintain and develop a positive working relationship within the research team.

**Desirable**

- Experience developing and interpreting data from LC-MS based assays profiling peptide stability in biological milieu.
- Experience in establishing *in silico* models of receptor-ligand docking(binding/affinity, and interpreting data to inform peptide design modifications.
- A high level of experience in contributing to reports and articles for publication and patent applications.

**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. Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au