

POSITION DESCRIPTION

Position Title:	Postdoctoral Research Fellow / Research Fellow
Organisation Unit:	Institute for Molecular Bioscience
Position Number:	3076471
Type of Employment:	Full-time, Fixed-term
Classification:	Research Academic Level A or B

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) is one of Australia's leading research and teaching institutions. For more than a century, we have been bringing together outstanding educators, researchers and innovators – across a range of disciplines – to inspire the next generation and to advance ideas that can benefit the world.

Today, UQ is [ranked among the world's leading universities](#) and we are consistently recognised as one of the top 5 universities in Australia.

Each year, we teach around 55,000 students across 6 faculties, located at our 3 beautiful campuses at St Lucia, Herston and Gatton – as well as online. We aspire to broaden the knowledge and skills of these students, so that they're equipped to achieve their professional goals and make a positive contribution to our society, and the world.

The University is also home to 8 research institutes and more than 100 separate research centres with an interdisciplinary community of more than 1500 researchers, who have come to UQ from all over the globe. This outstanding community of researchers is continuing to build upon UQ's long and proud tradition of discovery science, invention, innovation, translation and commercialisation.

At UQ, we recognise that our people are our greatest asset. As such, we seek to recruit innovative people who are passionate about helping us to advance our mission and broaden our impact.

Our culture is built on the things that we value most highly – the pursuit of excellence; creative and independent thinking; honesty and accountability; mutual respect and diversity; and providing support for our people. Through the promotion of these values, we're creating a culture that encourages our people to bring their very best, authentic self when they come to work at UQ.

Organisational Environment

The University of Queensland's Institute for Molecular Bioscience, located on the main University campus, is Australia's leading biosciences research institute. Established in 2000, the Institute is home to over 420 staff and is located in thriving Brisbane, a city consistently ranked as one of the world's most vibrant and liveable cities.

The Institute, ranked in the Top 20 globally for life sciences research, pursues a multidisciplinary approach to solving some of the world's most serious challenges in the fields of health, disease and sustainable solutions for our cities, fuels and foods. The Institute is housed in a single building and is organized into technological platforms (Divisions) and research themes (Centres). The Divisions support state-of-the art facilities including the Centre for Microscopy and Microanalysis, which houses new cryo-electron microscopes; the NMR facility containing 500, 600 and 900 MHz machines; the Mass Spectrometry Facility accommodating a wide array of instrumentation; suites for work with a variety of model organisms; a plethora of next generation DNA sequencing technologies and the southern hemispheres leading program in complex genetic traits. The Research Centres accommodate 36 groups using a combination of genomics, chemistry and cell biology to take life science discoveries from the genome to drug design and application in the areas of antimicrobial resistance, inflammation, pain, cardiovascular disease and rare and developmental diseases.

The quality of our internationally recognised researchers underpins our research excellence. Over the past five years, our group leaders have attracted nearly \$250 M in research funding. They have leveraged funding from over 40 different national and international research sponsors including significant support from federal and state government sources. The success rate in federal funding schemes is amongst the highest in all of Australia. The accomplishment of our staff is reflected by the consistent contribution they make to the prestigious Nature science index and by the fact five are listed in the prominent 2018 Clarivate Highly Cited Researchers List.

A corner stone of the Institute is the strong emphasis on ensuring our discovery science has impact by translating our research discoveries to meet industry, community and clinical needs. The Institute has generated more than 30 patent families and has spun out multiple companies. The impact of our work is illustrated by two biopharmaceutical companies founded in the Institute, Protagonist Therapeutics Ltd and Inflazome Ltd. The former company entered into a \$1 B worldwide agreement to co-develop a drug for inflammatory bowel disease and the latter recently received \$70 M to develop treatments for inflammatory diseases. Our ambition to strengthen our translational portfolio continues. For example, in the last 12 months researchers from the IMB:

- were part of a successful push to put endometriosis on the national agenda to improve understanding, treatment and support of this debilitating disease
- identified genetic factors contributing to the risk of developing diseases like endometriosis and motor neurone disease, advancing our understanding of these disorders on a global scale
- discovered a new type of cell in the brain that mops up cellular waste and may provide protection against stroke and dementia
- discovered a small protein in spider venom that could prevent the devastating brain damage caused by stroke
- discovered we could shrink brain tumours using existing breast cancer treatments
- found a promising potential treatment for breast cancer that blocked cancer spread and improved survival rates in models
- discovered a molecular trigger for inflammation that could lead to new treatments for rheumatoid arthritis, inflammatory bowel disease and neurodegenerative diseases
- furthered research in development of new medicines for treating inflammatory diseases, including allergies, by building molecular switches that can control immune response
- as part of a global team, identified a new gene behind a rare form of inherited childhood kidney disease
- combated superbugs by creating a new diagnostic, repurposing old drugs and continuing to crowdsource the next antibiotic

- developed the first new therapy in over 30 years to be used successfully in patients to treat antibiotic resistant infections
- helped an Australian family-owned company create the first mass-produced organic insecticide from peptides found in the Butterfly Pea plant
- initiated a program to use algae to produce clean water, livestock feeds, foods, fuels and medicines

IMB's research outcomes are protected and commercialised by UQ-owned technology transfer group UniQuest.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is [available online](#).

The University of Queensland [Enterprise Agreement](#) outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

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

A Research Fellow (Level B) is expected to engage in research to further their expertise and to grow their research profile in their discipline. At this level it is expected the incumbent will develop and run their own research projects and fulfil the necessary requirements to contribute to the effective supervision of Honour and Higher Degree by Research Students.

The Group is focused on the exploration of Nature's biodiversity to develop molecular probes and discover novel therapeutic leads with applications in pain, cancer, memory, autism and gastrointestinal disorders.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Develop a coherent research program by conducting research and publishing scholarly papers or exhibiting in high quality outlets.
- Design and synthesis of peptides, molecular probes and synthetic building blocks.
- Pharmacological and biophysical characterisation of molecular compounds.
- Structure-activity relationship studies of molecular probes and therapeutic leads.
- Bioassays to drive drug discovery and development efforts and target validation.
- Work with colleagues in the development of joint research projects.
- Participate in applications for external research funding.
- Prepare research publications, progress reports, and oral presentations and participate in regular meetings to discuss project objectives, methodology and outcomes.

Teaching and Learning

- Contribute to supervision of Honour students, interns and Higher Degree by Research students.

Service and Engagement

- Begin to develop external relationships with industry, government departments, professional bodies and the wider community.
- Perform a range of administrative functions.
- Contribute to activities that benefit the organisational unit, including participation in decision-making and serving on internal committees.
- Any other duties as reasonably directed by your supervisor.

For Appointment at Level B

Duties as listed above, in addition to the following:

Research

- Take on a leadership role in independent and/or team research programs including external funding, and achieve national recognition and impact in the research area.
- Conduct research and publish scholarly papers in academic peer-reviewed journals that contribute to the group's strategic research strengths.
- Work with colleagues in the development and conduct of joint research projects, especially projects that are interdisciplinary and contribute to the strategic direction of the Institute.

Service and Engagement

- Provide effective links with industry, government departments, professional bodies and the wider community.
- Mentoring and supervision of staff.

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
 - 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 Associate Professor Markus Muttenthaler.

SELECTION CRITERIA

- PhD in the discipline area of Synthetic Chemistry, Chemical Biology, Pharmacology or Biochemistry.
- Demonstrated ability to conduct meaningful research in the discipline areas:
 - synthetic chemistry
 - peptide synthesis and characterisation
 - structure-activity relationship studies
 - molecular biology and pharmacology
- Experience in the research areas below is desirable:
 - venom peptide drug discovery
 - medicinal chemistry and peptide drug development
 - GPCR or ion channel pharmacology (IP-1, cAMP, FLIPR)
 - peptide structure determination by NMR
 - phage display
- Demonstrated high-level communication and interpersonal skills including the ability to consult and negotiate with other stakeholders to ensure project objectives are met.
- Well-developed laboratory, communication, interpersonal and consultative skills and the ability to work collaboratively with colleagues from a multidisciplinary background.

For appointment at level B

In addition to the above:

- Minimum of three years post-doctoral experience or equivalent and demonstrated research productivity and a research portfolio consistent with this experience.
- Strong track record in organic synthesis and medicinal chemistry
- Experience with cell culture and GPCR or ion channel pharmacology

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](#) 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 recruitment@uq.edu.au.