POSITION DESCRIPTION

Position Title: Research Technician or Research Assistant
Organisation Unit: School of Biomedical Sciences
Position Number: NEW
Type of Employment: Part-time (0.6) to full-time, Fixed-Term
Classification: HEW 5 or HEW 6

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 (45), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). UQ again topped the nation in the prestigious Nature Index, and our Academic Ranking of World Universities result in the field of Life and Agricultural Sciences is 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 240,000-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 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 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 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.

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
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

DUTY STATEMENT

Primary Purpose of Position

The primary purpose of this position is to provide support for research projects investigating the pharmacokinetics and tumour delivery/activity of novel chemotherapeutic nanomedicines. The position will assist in conducting preclinical pharmacokinetic experiments on small laboratory animals, including surgical cannulation of blood vessels, collection and analysis of biological samples via radiometric techniques, HPLC and microscopic imaging and monitor the wellbeing of experimental animals.

The appointee will also be expected to contribute to the broader commercial and academic research interests of the group and maintain the laboratory.

Duties

Duties and responsibilities include, but are not limited to:

Experimental duties (HEW 5) will include:

- Monitoring the health and wellbeing of small laboratory animals under experimentation
- Biochemical and cell-based characterisation of animal and human cells using FACS and microscopy
- Surgical cannulation of the carotid artery and jugular vein of rodents
- Undertake pharmacokinetic experiments to investigate the ADME of potentially cytotoxic and radioactive materials after IV, SC, oral or pulmonary dosing
- Necropsy and processing of tissues/biological samples for further analysis via scintillation counting, HPLC, size exclusion chromatography, ELISA, confocal fluorescence microscopy/FACS
- Establishment of tumour-bearing rodents and evaluation of tumour growth/metastasis and drug disposition via in vivo imaging (bioluminescence/fluorescence imaging, PET etc)
- Maintaining immortalised and primary cell lines in culture
- Undertake biochemical analysis of samples
- Undertake molecular pharmacology experiments
- Be involved in nanomaterial synthesis and/or formulation
- Maintain good lab notebook records
- Contribute to research papers
- Data analysis using software programs such as excel, GraphPad Prism, Sigmaplot, WinNonlin.
- Maintain lab stocks of consumables and routine lab decontamination/cleaning
- Conduct research under supervision either as a member of a team or, where appropriate, independently for non complex experiments and contribute to the production of publications and research reports arising from that research
- Assist in the operation of lab equipment
- Maintain the laboratory and laboratory equipment and records of compliance, training etc
- Assist in the development of risk assessments and standard operating procedures
- Assist in the supervision of more junior members (eg. Undergraduate students)
- Other reasonable duties requested by the supervisor

Additional duties and responsibilities for HEW 6 appointment will include:
- Liase with members of the project team, external collaborators and researchers at UQ
- Undertake lab work at other UQ institutions or campuses, or work interstate for a brief period
- Higher level supervision of lab members (undergraduate and PhD students, more junior RAs)
- More routine management of the lab
- Lead/set up more complex experiments under limited supervision

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 Senior Lecturer, Dr Lisa Kaminskas
SELECTION CRITERIA

Essential (HEW 5)

- Applicants must possess an undergraduate degree pharmaceutics, pharmacology, veterinary science or a related discipline.
- Prior experience in the handling and conduct of studies using small laboratory animals.
- Experience with rodent surgery or dissections.
- Experience with cell culture, FACS, fluorescence microscopy, HPLC and ELISA analysis.
- A knowledge of pharmacokinetics.
- A strong understanding and experience with the use of software programs (such as excel, GraphPad Prism).
- The demonstrated ability to plan and conduct quality research.
- Excellent record keeping skills and a strong work ethic.
- Ability to work independently and as part of a team.
- Flexibility to maintain flexible work conditions to accommodate experimental requirements where necessary.
- Willingness to work with cytotoxic and radioactive materials.

Additional Essential (HEW 6)

- Applicants must possess an undergraduate degree in pharmaceutics, pharmacology, veterinary science or a related discipline and possess significant relevant post-degree research experience.
- Significant prior experience in conducting studies using small laboratory animals with excellent handling skills as well as a strong understanding of their anatomy.

Desirable

- Experience with rodent surgical techniques, including fine vessel cannulations.
- Experience with ADME studies.
- Experience with molecular pharmacology.
- Experience in nanomaterial synthesis/formulation.
- Experience with other biochemical analyses.
- Knowledge and experience with rodent cancer models.
- Scintillation counting and/or dealing with dangerous or hazardous chemicals.
- Skills in in vivo imaging techniques.
- Experience with intravenous, subcutaneous.
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 (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to Lou Betts (l.betts@uq.edu.au)