PhD Scholarships – Novel antibody therapeutics and diagnostics for oncology

Organisation Unit:  Centre for Advanced Imaging
ARC training Centre for Innovation in Biomedical Imaging Technology (CIBIT)

Type of Employment: Full Time - Fixed Term, Full Time - Scholarship

Salary: Research Scholar BAND

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 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.

The Centre for Advanced Imaging

The Centre for Advanced Imaging (CAI), a strategic initiative of The University of Queensland, is a leading imaging research facility in Australia, and one of a handful in the world. It brings together the skills of a critical mass of researchers and state-of-the-art, world- or Australian-first imaging research instruments including NMR, EPR, MRI, PET, CT, optical imaging and an on-site cyclotron and radiochemistry facilities. CAI hosts the largest Node of the National Imaging Facility (NIF) (http://anif.org.au/).

CAI conducts research across the spectrum from development of new imaging technologies, analysis of molecular structure, synthesis of MRI and PET biomarkers targeting fundamental biological processes to studies of major diseases affecting a range of organ systems, through to imaging economically significant agricultural animals and plant material, minerals and construction materials.

A multidisciplinary, cohesive student community have come together from all over the globe to CAI to undertake research training. The Centre has an active student association (STAC) that provides many opportunities for networking and professional development, a supportive mentoring structure that will enhance personal and professional growth, an annual symposium and a well-attended weekly seminar program which attracts high profile National and International speakers.

Further details on the Centre for Advanced Imaging and ongoing research can be found on CAI’s website http://www.cai.uq.edu.au/.

CAI is committed to supporting the career growth of female researchers and have a number of initiatives to support females in developing and achieving a fulfilling research career at the institute. For more information, please visit our CAI Women in Imaging website at https://cai.centre.uq.edu.au/women-imaging.

The Australian Research Council Training Centre for Innovation in Biomedical Imaging Technology (CIBIT)

CIBIT is a multidisciplinary collaboration between researchers at The University of Queensland’s Centre for Advanced Imaging and partners in the Medical Technologies and Pharmaceutical industry. The purpose of this national Centre is to provide research training to close critical skills gaps and to develop more effective imaging probes and scanning algorithms in conjunction with industry partners. Students will undertake industry-driven research to overcome bottlenecks in the development and application of novel diagnostics, therapeutics and theranostics and to inform changes in regulatory policy that support industry growth. Scholarships will include an industry placement for one year.

CIBIT encompasses two major research themes; the project will be specifically related to Theme 1.

Theme 1: Diagnostics, Therapeutics and Theranostics for Precision Medicine in Cancer. Theme 2: Harnessing the Digital Revolution to improve Diagnostic Imaging cost-effectively.
CIBIT is supported by industry partners Inter-K Peptide Therapeutics, Clarity Pharmaceuticals Pty Ltd, Minomic International Ltd, Theranostics (Australia) Pty Ltd, Brisbane Veterinary Specialist Clinic, Uniting Care Medical Imaging, Red Radiology Pty Ltd, Siemens Healthcare Pty Ltd and BGI International Pty Ltd.

The Project

Nanomedicine is a major driver of the biotechnology sector and contributes significantly to innovation in Australia. Of particular importance, is the role that novel antibody therapies contribute to clinical regulation of many diseases. We are seeking high achieving graduate students to undertake postgraduate research into next generation nanomedicines that utilise antibody-targeting strategies to deliver radio- or chemotherapeutics. These projects will have a strong industry focus, with dedicated input and training from commercial partners in the biotechnology sector. Applicants should have experience in chemistry and biology, and can expect high-level training in state-of-the-art imaging facilities for in vivo validation of new technologies. The unique collaborative environment presented within this program will offer the candidate opportunities to expand their career into areas spanning academia and industry. In particular, the candidate will be involved in developing new biomedical imaging guided therapies (theranostics), diagnostic radiopharmaceuticals, antibody-drug conjugates for cancers including prostate and ovarian cancer, glioma, melanoma and osteosarcoma.

The Candidate

Applications are invited from outstanding and enthusiastic graduates with relevant backgrounds. Students may be domestic or international of high scholarly calibre and will have a First Class Honours degree, Masters degree or equivalent. Applicants must meet the requirements for admission into the UQ Graduate School PhD program (https://graduate-school.uq.edu.au/uq-research-degrees) and should also be eligible for a UQ Graduate School Scholarship (UQGSS) (https://graduate-school.uq.edu.au/scholarships).

Remuneration

The base stipend will be at the rate of AUD $27,082 per annum (2018 rate) tax-free for three years with the possibility of two six month extensions in approved circumstances. For the candidates who have been successful in obtaining any government-funded scholarship or UQ-funded scholarship or any other external scholarship, a top-up scholarship may be awarded.

Enquiries

For enquiries specific to this project please email A/Prof. Kristofer Thurecht (k.thurecht@uq.edu.au) or Prof. David Reutens (director_cibit@uq.edu.au)

To Apply

All applicants must supply the following documents:
- A cover letter that addresses how you meet the requirements for participation in the project and admission to the PhD program;
- Academic CV, including details of two referees. Please go to https://graduate-school.uq.edu.au/what-include-academic-curriculum-vitae-cv for details on what is required in an academic CV;
- For international applicants from a non-English speaking background: evidence of meeting UQ’s English language proficiency requirements: https://graduate-school.uq.edu.au/english-language-proficiency-requirements;
• Academic transcripts and award certificates for all post-secondary study undertaken, complete or incomplete, including the institution grading scale, and official translations if the original document language is not English.