POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: Australian Institute for Bioengineering and Nanotechnology
Position Number: 3037074
Type of Employment: Full time, fixed term
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 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.

Organisational Environment

The University of Queensland's Australian Institute for Bioengineering and Nanotechnology (AIBN) is a dynamic multi-disciplinary research institute dedicated to developing technology to alleviate societal problems in the areas of health, energy, manufacturing and environmental sustainability. AIBN brings together the skills of more than 450 world-class researchers complimented by an extensive suite of integrated facilities, working at the intersection of biology, chemistry, engineering and computer modelling. With a reputation for delivering translational science, AIBN conducts research at the forefront of emerging technologies, and has developed strong collaborations with leading members of industry, academia and government. AIBN goes beyond basic research to develop the growth of innovative industries for the benefit of the Queensland and Australian economies. Information about the Institute can be accessed on the Institute’s web site at http://www.aibn.uq.edu.au/.

AIBN 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 AIBN Women in Science web site at http://www.aibn.uq.edu.au/women.

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

The primary purpose of this Postdoctoral position is to conduct research into high resolution spectroscopy of biomimetic materials as part of the prestigious Laureate Fellowship recently awarded to Prof. Rowan. This will involve the design and optimization of a confocal rheometer setup for study of soft and biological materials. The aim will be to observe cell focal adhesion and cellular activity as a function of applied force. Toward this aim a combined confocal-rheometer setup will be used, so that the microscope can acquire time-resolved, three-dimensional volumes and ultimately high-resolution images of a cell/extracellular matrix samples whose bulk visco-elastic properties will be tune and measured simultaneously.

Duties

Duties and responsibilities include, but are not limited to:
Research
- Develop close scientific collaboration with other members of the laboratory and assume a leadership role in the group in the field of high resolution microscopy.
- Develop, establish and optimise the state of the art confocal rheometer setup.
- Provide written and verbal reports (inclusive of manuscript submissions) on outputs associated with the project, inclusive of associated data analyses.
- Assist in the supervision and training of research higher degree students
- Maintain absolute confidentiality regarding the results of the project where appropriate and when requested.
- Be proactive in submission of grant application to enable new areas of research.
- Conduct research and aide in the publishment of scholarly papers.
- Present data and novel microscope techniques at national and international conferences to network with leading scientists and facility staff in the microscopy field.

Service and Engagement
- Foster the Institute's relations with industry, government departments, professional bodies and the wider community.
- As an expert on confocal microscopy, aide fellow group members in confocal microscopy experiments.
- Be responsible for the management of the confocal microscope, for ensuring the instrumentation is maintained and operating to factory specifications, and to provide microscopy research support and training.
- Draw upon prior experience to advise and train group members on the best methods to image and analyse their samples.
- 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 Professor Alan Rowan with day-to-day supervision by Dr Jan Lauko.
SELECTION CRITERIA

**Essential**
- PhD in the area of chemistry, biotechnology, physics or related discipline
- At least one year of postdoctoral experience in the field of confocal microscopy
- Demonstrated expert knowledge in the area of super resolution microscopy.
- Demonstrated teaching and training skills at undergraduate and graduate levels
- An ability to establish effective research relationships and to represent and promote materials science at a university and wider community level.
- Evidence of a contribution to research in materials science.
- Highly developed research and data analysis skills.
- High level of organisational, interpersonal and communication skills, including the ability to work individually and as part of a team.
- Ability to work collaboratively with colleagues.

**Desirable**
- Experience in teaching and training users in operation of lab equipment.
- Experience in design and construction of customised microscopy setups.
- Experience in design and programing of custom data analysis programs.

**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 (http://www.uq.edu.au/equity) 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 the contact person listed in the job advertisement.