POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow in Nanobiotechnology
Organisation Unit: Australian Institute for Bioengineering and Nanotechnology
Position Number: 3040313
Type of Employment: Full time, fixed term for 3 years
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 position is the design, synthesis, characterization and performance evaluation of advanced nanoformulation for next-generation termiticides. The appointee will participate in the Advance Queensland Innovation Partnership Project “Nanotechnology for next-generation termiticides” and work closely with industrial partners.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Initiate research work to meet the project requirements of the Advance Queensland Innovation Partnership Project, including managing data collection and data analysis
• Design synthesis of nanomaterials and characterization of intricate nanostructures using state of art technologies
• Develop nanomaterials-based pesticide formulations aiming for industrial purposes
• Investigate the mechanism of nanomaterial-platform technology in various bio-applications
• Provide written and verbal reports (inclusive of manuscript submissions) on outputs associated with the project
• Publish papers in high-quality refereed journals and attend national / international conferences
• Assist with the preparation of external grant applications and initiation of new projects
• Collaborate with project research partners in both industry and academia
• Participate in supervision of post-graduate students

Service and Engagement
• Foster the Institute’s relations with industry, government departments, professional bodies and the wider community.
• 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 Chengzhong Yu.
SELECTION CRITERIA

*Essential*

- A PhD in chemistry, materials science or biomedical engineering
- Demonstrated knowledge in materials science, drug loading and agricultural active delivery
- Previous work on projects involving biology, nanomaterials and their applications in drug delivery, nanomedicine or delivery of agricultural actives
- Demonstrated track record of publications in high-level peer reviewed journals and conferences
- Demonstrated experience in nanomaterials synthesis, characterization and mechanism investigation
- Demonstrated experience in in vitro and in vivo pest bioassays
- Demonstrated knowledge of good laboratory practice and ability to maintain accurate record of laboratory work
- Excellent interpersonal skills including the ability to communicate effectively with research collaborators in both industrial and academia
- Ability to independently research and develop experimental procedures to solve a given problem
- Ability to work collaboratively as part of a multi-disciplinary team
- Excellent time management skills and demonstrated ability to work within deadlines
- High level of written communication skills and good organisational skills
- Ability to work with limited supervision
- Ability to learn new skills and use new technologies
- Ability to lead a team of junior researchers

*Desirable*

- Experience in the nanomedicine and DNA vaccine
- Experience collaborating with industrial organizations
- Evidence to initiate new research directions
- Ability to perform advanced electron microscopy for characterizations of nanomaterials and cells
- Experience in writing grant applications.

**Seminar**

Applicants invited for interview may be expected to present a seminar in conjunction with the selection interview process.

**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.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.