POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow/Research Fellow in Microbial Bioinformatics / Software Development

Organisation Unit: School of Earth and Environmental Sciences

Position Number: NEW

Type of Employment: Full time, Fixed Term

Classification: Research Focussed Academic A/B

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 CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (42), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

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 52,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 15,400 international students from 135 countries, adding to its proud 250,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $1.75 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 School of Earth and Environmental Sciences is one of the largest Schools of this type in Australia with more than 50 full-time academic staff members who are widely published internationally and have extensive research backgrounds. Researchers, teachers and students from around the world are drawn to our world-class research facilities and vibrant academic environment. Further information about the School can be accessed at https://sees.uq.edu.au/.

While based at UQ’s St Lucia Campus, the position involves significant collaboration with QIMR Berghofer Medical Research Institute. QIMR Berghofer is a world-leading medical research institute with a rich 70-year history of scientific discoveries and translational medical research. QIMR Berghofer is home to more than 600 scientists, students and support staff and is not far from UQ’s St Lucia Campus. Further information about QIMR Berghofer can be accessed at https://www.qimrberghofer.edu.au/.

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

To engage, as a Postdoctoral Research Fellow/Research Fellow, within a dynamic team of researchers by performing bioinformatic (and statistical) analyses of sequence data derived from microbial communities and where necessary develop new tools and software. The position is funded by a project concerning how maternal diet influences the gut microbiome of infants and their susceptibility to respiratory diseases in early life. The applicant should be proficient with Phyton and R and will be expected to develop and run software for analyses of Illumina and Oxford Nanopore Technologies data. The applicant will be expected to analyse data and write papers.

Applicants should also refer to the UQ Academic Criteria for Performance policy. This policy applies to staff at levels A to E, across all of the academic categories - Teaching and Research, Teaching Focused, Research Focused and Clinical Academic.
Duties

Duties and responsibilities include, but are not limited to:

Research

Level A and B

• Perform high-quality analyses of microbial communities, including assembly and annotation of (meta)genomes and marker gene datasets (e.g. 16S, ITS, 18S)

• Develop new software for the analysis of Illumina and Oxford Nanopore Technologies data

• Use genome annotation pipelines

• Publish papers in high-quality scholarly journals

• Work with colleagues and postgraduates in the development of joint research projects

• Interpret biochemical pathways

• Contribute to the effective supervision of Honours and Higher Degree by Research students when required

Level B:

• Contribute to applications for external research funding

Service and Engagement

Level A and B

• Perform a limited range of administrative functions in the group and School

• Any other duties as reasonably directed by your supervisor

• Present results at conferences and stakeholder meetings

Level B

• Foster the School’s relations with industry, government departments, professional bodies and the wider community.

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 Dr Paul Dennis and Associate Professor Simon Phipps.

SELECTION CRITERIA

At Level A and B

- PhD in the area of microbial ecology, microbiology, bioinformatics, computer science or a highly related field
- Demonstrated expert knowledge in Python and R
- Demonstrated expert knowledge in microbial ecology and bioinformatics
- Demonstrated expertise in software development
- Demonstrated expertise in paper writing
- An ability to establish effective relationships and to represent and promote academic discipline at a university and wider community level, including industry, government and professional bodies.
- Ability to work collaboratively with colleagues.
- Commitment to upholding the University’s values, and with the outstanding personal qualities of openness, respectfulness and integrity
- Knowledge of microbial metabolism and the de novo analysis of metabolic pathways would be desirable
- Expertise in multi-table multivariate statistical analyses would be desirable

At Level B

- Significant track record of publishing in high-quality journals
- Considerable supervisory experience
- Significant record of research funding success

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.

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