Research Associate in Bioinformatics
Science and Engineering Faculty
About the Position

Post Entry Quarantine (PEQ) facilities in Australia play a significant role in detecting and preventing entry of exotic pests at the border. In partnership with the Department of Agriculture, Water and Environment (DAWE) the Bioinformatics Research Associate will have the opportunity to work alongside with plant pathologists and diagnosticians at DAWE’s state of the art PEQ facility in Mickleham, Victoria to build in-house data analysis capability to uptake the use of high throughput sequencing (HTS) approaches as a tool to accelerate the safe and robust testing of viruses and viroids in imported plants.

This is a unique opportunity to work with a team at the forefront of Australia’s plant biosecurity network as a Research Associate, in Bioinformatics and close collaboration with an industry funded QUT-led initiative, you will have the opportunity to implement and deploy an optimised high throughput sequencing (HTS) bioinformatics virus/viroid diagnosis pipeline. You will take carriage of the large scale data analysis of side by side comparisons of HTS against PEQ approaches, prepare bioinformatics HTS diagnosis end user guides, provide hands-on training to DAWE staff, contribute to the dissemination of project outcomes to government and industry audiences.

This position reports to the Senior Bioinformatics Solutions Architect, eResearch Office (based in Brisbane) for supervision, workload management and for Performance Planning and Review (PPR).

Key responsibilities include:

- Lead the implementation, testing and validation of a virus diagnostics bioinformatics workflow within Galaxy Australia and other platforms as appropriate.
- Encourage a collaborative and open team culture that is end-user focused and proactive.
- Proactively engage and work in close collaboration with the QUT HTS Project team to deliver agreed project outcomes.
- Develop training materials, user guides and upskill staff within the PEQ molecular diagnostics team to use bioinformatics tools and workflows to process high-throughput sequencing (HTS) datasets for the diagnosis of plant viruses and viroids in a range of plant commodities.
- Conduct large scale side-by-side comparison of PEQ vs HTS methodologies and contribute to disseminate project outcomes to policy regulators and industry stakeholders.
- Establish a data management plan for analysis and archival of de-identified HTS datasets.
- Prepare quarterly reports to funding agency and provide regular updates to QUT and PEQ teams.
- Participate in national conferences, seminars and workshops in collaboration with industry-funded relevant initiatives.
- Implementing and administering University policy within the Faculty with respect to equitable access to education and workplace health and safety.

To be appointed as a Research Associate in Bioinformatics, the successful applicant must meet the position classification standards outlined in the QUT Enterprise Agreement (Academic Staff).

Type of appointment

This appointment will be offered on a fixed-term, full-time basis for one (1) year. Subject to additional funding there may be an option to be extended for a further period of time.

Location

Based at QUT’s Post Entry Quarantine facility in Mickleham, Victoria

Selection Criteria

1. A PhD or equivalent in bioinformatics, plant pathology, plant virology or a related field.
2. Demonstrated experience in the design, implementation, deployment and optimisation of end-to-end bioinformatics workflows in Galaxy Australia or other platforms.
3. Proven analytical and problem solving skills to optimise and increase accuracy of HTS diagnosis of viruses and viroids.
4. Extensive experience developing training courses and user guides for upskilling of diverse end-users.
5. Experience in wet-lab molecular biology techniques for identification of biomarkers and diagnosis of pests is highly desirable.
6. Proven effective team work skills, excellence in interpersonal communication and experience supporting a variety of internal and external stakeholders.
Remuneration and Benefits

The classification for this position is Academic Level A (LEVA) which has an annual remuneration range of $79,722 to $108,176 pa. Which is inclusive of an annual salary range of $68,139 to $92,458 pa and 17% superannuation.

In July 2020 QUT staff voted in favour of a variation to its Enterprise Agreements. The variations were approved by the Fair Work Commission in August 2020.

The variation impacts leave loading (for new staff no loading will be paid or accrued during the period the variation is in effect), salary increases (the salary increase which was due to occur in the first full pay period of December 2020 has been deferred until the first full pay period of December 2021) and superannuation (superannuation will be paid to staff as though the salary increase which would have been paid in December 2020 has taken effect and, subject to the rules of the superannuation fund, a defined benefit member will continue to make contributions in alignment with the contributions made by the University). A link to the variation is here.

Beyond personal and professional fulfilment, a career at QUT brings a broad range of tangible benefits. With competitive remuneration including superannuation, the University offers real and generous benefits.

QUT is a high quality and flexible organisation that is proud of its excellent employment conditions which include but are not limited to:

- Reduced working year scheme
- Parental leave provisions
- Study support encompassing leave and financial assistance
- Comprehensive professional development
- Salary Packaging

Further benefits can be found at the Working at QUT page.

Information for applicants

The position is open to applicants who have unrestricted work rights in Australia for the duration of the fixed-term appointment. In support of our strategic priority of Indigenous Australian success, Aboriginal Australians and Torres Strait Islander people are encouraged to apply.

Applicants who reach the final stage of the selection process will be expected to provide certified evidence of identification and consent to undergo a National Police Check. Applicants will be provided with an opportunity to discuss the outcome of the check before a decision on appointment is made.

For further information about the position, please contact Associate Professor Roberto Barrero, Senior Bioinformatics Solutions Architect on (07) 3138 4027; or for further information about working at QUT contact Human Resources on (07) 3138 4104.

QUT is proud to be an inaugural Athena SWAN charter member. We have extensive and established support programs for women in STEMM. For more information on the Athena SWAN charter, contact Tracy Straughan on (07) 3138 1584.

Candidates who are interested in the position are encouraged to apply even though they may feel they are not strong on individual selection criteria.

In assessing merit, the panel will take into consideration “performance or achievement relative to opportunity”. We recognise that many staff today have a range of personal circumstances, and career histories that challenge traditional ideas of an academic staff member. This may mean, for example, prioritising the quality of achievement rather than the quantity, as considerations of part-time employment, career interruptions and significant periods of leave are taken into account when assessing performance or achievement.

The selection panel is also committed to conducting a process which is fair and free from bias, including unconscious bias.

How to Apply

For further information and to apply, please visit www.qut.edu.au/jobs for reference number 20542.

When applying for this position your application must include the following:

- A current resume.
- A list of publications, and roles played (author contributions) in each publication
and succinct description of research outcomes.

- A statement of your achievements against each of the selection criteria.
- The names and contact details of two referees.

**Applications close 25 October 2020**

**About QUT**

QUT is a major Australian university with a global outlook and a 'real world' focus. We are one of the nation's fastest growing research universities and our courses are in high demand.

We are an ambitious and collaborative institution that seeks to equip our students and graduates with the skills they will need in an increasingly disrupted and challenged world. We are transforming the student experience we offer our 50,000 students and we place a premium on the international and national accreditation of our various professional degrees.

Our internationally award-winning Science and Engineering Centre is home to The Cube, acknowledged as one of the world's largest digital interactive learning and display spaces. QUT established the world's first Creative Industries Faculty, and we invest heavily in collaborative learning and interdisciplinary research environments, including the $95M Education Precinct.

Further information about QUT can be obtained from the website at [www.qut.edu.au](http://www.qut.edu.au).

**Our Vision**

QUT’s **Blueprint 6** is our institutional strategic plan. The Blueprint formalises QUT’s ambitions and declares our strong sense of purpose which is to provide transformative education and research relevant to our communities. It provides a framework and strategies to enable QUT to realise our vision to be the university for the real world and identifies the following priorities:

- support aspiration and inclusion
- encourage creativity and entrepreneurship
- embrace digital transformation and technology
- embed principles of health and wellbeing
- support Indigenous Australian engagement, success and empowerment
- enable professional engagement and ethical leadership and,
- focus on the environment and sustainability

Aligned to and supporting our vision are the QUT Values. These Values highlight what makes QUT distinct and successful. Providing a compass for our decisions, actions and behaviours and strengthening our community.

**QUT Values**

- Ambition
- Curiosity
- Innovation
- Integrity
- Inclusiveness

**About the Science and Engineering Faculty**

**Our mission is to be the partner of choice for STEM education and research.**

The Science and Engineering Faculty (SEF) delivers programs in Science, Engineering, Information Technology, Mathematics and Urban Development to over 12,000 students. The Faculty’s courses are in high demand and student feedback indicates some of the highest satisfaction with overall education experience in the sector. QUT is accredited by the UK Higher Education Academy and to date more than 500 staff have achieved fellowships. The Faculty is home to outstanding researchers of international renown, including four ARC Australian Laureate Fellows and five Highly Cited Researchers. Five ARC Centres of Excellence, including the Australian Centre for Robotic Vision and Australian Centre of Excellence for Mathematical and Statistical Frontiers, are hosted by the Faculty. In the most recent 2018 Excellence in Research for Australia rankings, 91 percent of the Faculty’s research was rated as above or well above world standard.

The Faculty demonstrates a dedicated commitment to addressing the problems of our time through active participation in 13 Cooperative Research Centres, including three announced in 2019: Future Battery Industries; Future Food Systems; and SmartSats. Faculty members are also regularly supported in their fundamental and applied research through the Australian Research Council and industry bodies such as the Rural Development Corporation.

Strong industry connections enable us to
address genuine challenges through research and offer our students relevant and practical experience. Through long-standing collaborations with partners such as BMW, Boeing, Stryker, Shell and the Commonwealth Bank of Australia, we remain at the forefront of teaching by facilitating learning that is delivered on campus, online and in the real world.

QUT has received a bronze award in the inaugural Science in Australian Gender Equity (SAGE) pilot, a national program promoting gender equity and gender diversity in STEMM, with the SEF as a key leader. [www.qut.edu.au/science-engineering](http://www.qut.edu.au/science-engineering)

Our researchers use world-class facilities and engage in large-scale programmatic activities, allowing coordinated research to be undertaken at scale to address global challenges.

The Faculty partners with QUT’s two transdisciplinary research institutes, the Institute for Future Environments (IFE) and the Institute of Health and Biomedical Innovation (IHBI). We are the majority Faculty partner in IFE, which is focused on the future nexus of natural, built and virtual environments and generates knowledge, technology and practices that make our world more sustainable, secure and resilient. The IFE is home to the worldclass Central Analytical Research Facility, supporting a global research community through state-of-the-art instrumentation for scientific analysis. [www.qut.edu.au/institute-for-future-environments](http://www.qut.edu.au/institute-for-future-environments)

After the Faculty of Health, the Science and Engineering Faculty is also the most significant partner in IHBI, which is focused on developing partnerships between health and biomedical scientists to bring new treatments to patients and to provide better health for our community. [www.qut.edu.au/institute-of-health-and-biomedical-innovation](http://www.qut.edu.au/institute-of-health-and-biomedical-innovation)

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### About the School of Biology and Environmental Science

The School of Biology and Environmental Science seeks to understand how microorganisms, fungi, plants, and animals – grow, sense, adapt, interact, and evolve. It studies how genes, species and ecosystems function and can be managed, conserved, and restored; and where appropriate apply this knowledge to biotechnological solutions.

Our school brings together multidisciplinary research teams to address global challenges, ranging from food security to climate change. We work across all levels of complexity, from genes to whole organisms, and in natural to modified ecosystems. Through research, we aim to:

- significantly contribute to the advancement of food production,
- develop more resilient and nutritional crops,
- understand groundwater-soil-vegetation interactions,
- treat plant and animal diseases, and
- prevent and control pests and invasive species.

The school has an outstanding record of producing impactful pure and applied research outcomes, with ERA ratings for fields of research either at or well above world standard (ERA 2015). We are the partner of choice for research and innovation at federal, state and regional government levels, and with industry and end-users. Our researchers currently play a leadership role in the Australian Research Council’s (ARC) Industrial Transformation Research Centre for Fruit Fly Biosecurity Innovation and the ARC Centre of Excellence in Synthetic Biology. School members have leadership roles and are affiliated with a number of University research centres including the Centre for Agriculture and Bioeconomy, Centre for the Environment and Centre for a Waste-Free World.

Mindful of the way in which science and engineering must be done in the 21st century, the school creates an environment where issues can be discussed, researched and resolved in a way that attends to competing priorities. Our courses in science and engineering reflect this approach as we seek to provide students with learning experiences appropriate to real world problems.