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 (45), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). UQ again topped the nation in the prestigious Nature Index, and our Academic Ranking of World Universities result in the field of Life and Agricultural Sciences is 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 Institute for Molecular Bioscience (IMB) is a leading global life sciences research institute committed to improving quality of life through research. IMB was established in 2000 as UQ’s first research institute and is the cornerstone of one of the largest bioscience research precincts in Australia.

The Institute is home to more than 450 researchers, postgraduate students and support staff from more than 40 countries who work in partnership with their academic, industry and clinical colleagues around the world to advance knowledge in areas including pain, rare diseases, inflammation, superbug infection, cardiovascular disease, environmental research, drug discovery and development, cancer, diabetes and obesity, and reproductive health. Our mission is to drive the bioeconomy and create better health; our vision is to be a life sciences institute with global impact.

By investigating how we grow and develop at the genetic, molecular, cellular and organ levels, IMB researchers can better understand the development processes and pathways involved in human and animal health and disease. The institute also has the technical capacity to translate its new knowledge into drugs, diagnostics and technologies to more effectively prevent, detect and treat disease; and pursue opportunities in a range of biotechnology applications for health, industry and the environment.

IMB’s research outcomes are protected and commercialised by UQ-owned technology transfer group UniQuest.

Details of the research interests of the Institute may be accessed on the Institute’s website at: [https://imb.uq.edu.au/](https://imb.uq.edu.au/)

**Program in Complex Trait Genomics**

The Program in Complex Trait Genomics (PCTG) (website: [http://cnsgenomics.com](http://cnsgenomics.com)) is a joint initiative between the Institute for Molecular Bioscience (IMB) and the Queensland Brain Institute (QBI). Physically located in IMB, the broad research focus is towards a better understanding of complex traits and disorders, including psychiatric and neurological disorders. A key research strength is the development of underpinning computational and statistical analysis methods. The Program is led by an Executive comprising Prof Peter Visscher, Prof Naomi Wray and Prof Jian Yang who were awarded a five-year Program Grant by the Australian National Health and Medical Research Council, commencing in 2017. In addition, Peter Visscher was awarded a five-year Australian Research Council Laureate Fellowship in 2018 to enhance capacity in human complex trait genetics and genomics.

Visscher, Wray and Yang and their colleagues are internationally recognised for pioneering the use of multi-marker statistical methods in human genetics and for innovative methods in the analysis of genetic and genomic data of complex traits. Their research is regularly published in top journals such as Nature, Science, Nature Genetics, Nature Communications,
Genome Research, American Journal of Human Genetics, PLoS Genetics and Molecular Psychiatry.

Research in the Program covers four major themes: Statistical Genomics, Systems Genomics, Psychiatric Genomics and Motor Neuron Disease Genomics. The Program consists of over 20 postdoctoral research staff as well as PhD students, research assistants and visiting academics. Current research involves: the development of novel statistical genetics methodology and software; analysis of genotype, expression and methylation array data alongside DNA and RNA sequencing data; application of statistical genetic methods to infer the genetic control of traits and diseases.

Information for Prospective Staff

The Institute recognises and values equity and diversity, and encourages applications from any individual who meets the requirements of this position irrespective of gender, sexuality, race, ethnicity, religion, disability, age or other protected attributes.

IMB strives to provide an inclusive working environment, and along with the University is committed to supporting staff with family and caring responsibilities by providing policies, programs and initiatives to help balance work and family responsibilities.

Specific initiatives at IMB can be found at (https://imb.uq.edu.au/about/equity-and-diversity-imb)

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 develop and run research program in collaboration with members of the Program in Complex Trait Genomics (PCTG). This involves conducting research, supervising students, obtaining research funding and collaboration with national and international consortia.

**Duties**

Duties and responsibilities include, but are not limited to:

**Teaching and Learning**

- Work with colleagues and postgraduates in the development and conduct of joint research projects, especially projects that are interdisciplinary and contribute to the strategic direction of the School.
- Co-supervision of undergraduate and postgraduate student projects.
- It is encouraged that you actively seek teaching opportunities.

**Research**

- Research in the broad field of statistical genomics, including analysis of data generated by the Program, by collaborators or in the public domain, method development and testing and writing computer code data analysis.
• Engage in independent and/or team research programs including external funding, and achieve national recognition and impact in the research area.
• Conduct research and publish scholarly papers in both academic peer-reviewed and professional journals that contribute to the School’s strategic research strengths.
• Presentation of results in lab meetings and conferences.
• Displaying a work ethic expected for a researcher aspiring to a long-term career in science.
• Administrative aspects that underlie scientific research including record keeping and timeline development.
• Collaboration with other group members, and as part of national and international consortia.

**Service and Engagement**

• Foster the group’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 the Group Leader.
SELECTION CRITERIA

- PhD in a relevant field and at least two years post-doctoral experience or equivalent.
- Evidence of a contribution to research, including high-profile publications, conference presentations and successful external grant applications.
- Demonstrated expert knowledge in:
  - the principles of genetics and genomics
  - computer programming languages (e.g., C/C++)
  - linear model methodology
- Excellent attention to detail and record-keeping skills
- Self-reliance and motivation
- Well-developed communication, interpersonal and consultative skills and the ability to work collaboratively with colleagues from a multidisciplinary background.
- Initiative and problems solving skills
- 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.
- Commitment to upholding the University’s values, and with the outstanding personal qualities of openness, respectfulness and integrity.
- Developed industry liaisons and professional contacts is desirable.
- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives is desirable.
- Knowledge or Expertise in one or more of the following is desirable:
  - Quantitative genetics models and theories
  - The development and application of multi-marker methods
  - The analysis of large-scale SNP array and whole genome sequencing data
  - Motor neurone disease pathology and genetics
  - Analysis of large-scale genetic data
  - Integrative analysis of omics data
  - Psychiatric disorder genetics
- Past track record in genetics related research demonstrating ability to both work within teams and independently to successfully complete research projects is desirable.
- Experience in supervising or co-supervising PhD students and disseminating knowledge in complex trait genetics to students is desirable.

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.