
POSITION DESCRIPTION

Position Title:	Research Fellow/Senior Research Fellow in Statistical Genetics
Organisation Unit:	Institute for Molecular Bioscience
Position Number:	3036822
Type of Employment:	Full time fixed term for up to 3 years
Classification:	Academic Research Level B or C

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 (45), the US News Best Global Universities Rankings (52), QS World University Rankings (51), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index; and secured a greater share of Australian Research Council grants in 2016 (\$24.5 million) than any other university nationally.

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 230,000-plus alumni. The University has about 7,000 academic and professional staff and a \$1.7 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://uniquet.com.au/our-track-record>).

UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim 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: <http://www.imb.uq.edu.au>.

Complex Trait Genomics Alliance

The Complex Trait Genomics Alliance brings together UQ groups working on complex genetics traits in human and agriculture. The Alliance includes:

- The Program in Complex Trait Genomics (website: cnsngenomics.com), a joint initiative between the Institute for Molecular Biosciences (IMB) and the Queensland Brain Institute (QBI) led by Professors Peter Visscher, Naomi Wray and Jian Yang, who were recently awarded a Program Grant by the Australian National Health and Medical Research Council, commencing in 2017. 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.
- Professor Grant Montgomery at IMB (<http://researchers.uq.edu.au/researcher/3210>)
- Dr Joseph Powell at IMB (<http://researchers.uq.edu.au/researcher/2525>)
- Professor David Evans at UQ Diamantina Institute (<http://www.di.uq.edu.au/professor-david-evans>)
- Professor Ben Hayes at the Queensland Alliance for Agriculture and Food Innovation (QAAFI) (<https://qaafi.uq.edu.au/profile/1059/ben-hayes>).

The Alliance has received strategic funding from the Deputy Vice Chancellor Research to support this role in part.

The research of the Alliance Principal Investigators is regularly published in top journals such as Nature, Science, Nature Genetics, Genome Research and American Journal of Human Genetics.

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 diseases.

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 the Position

The is a teaching and research position (60% research, 20% teaching, and 20% service). The teaching component for this position is less than that of a typical Teaching and Research Academic but is still a crucial component. The appointee will be the course coordinator for a new semester-long course, "Statistics in Genetics" co-branded as a 3rd year undergraduate and a Masters-level course (offered as an elective to four Masters Degrees). It is anticipated this course will be offered for the first time in Semester 2, 2017, and will cover topics such as Best Linear Unbiased Prediction, REML, association mapping.

The appointee will be able to choose the focus of the research component of role but will be based either at IMB (Visscher/Wray/Yang) or QAAFI (Hayes). Appointment at level B requires at least two years' postdoctoral experience and the appointee will be expected to develop and run their own research program in collaboration with members of the Program. To be appointed at level C the appointee will be expected to have a track record in attracting grant funding and supervision of research higher degree candidates. The level of appointment will be dependent on the successful applicant's qualifications and experience and in line with the UQ Criteria for Academic Performance.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Research in the broad field of statistical genetics, 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
- Primary role in manuscript preparation
- 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
- In discussion with lab heads, development of timelines
- Record-keeping
- Collaboration with other group members, and as part of national and international consortia
- Co-supervision of undergraduate and postgraduate student projects

Teaching

In relation to the new course “Statistics in Genetics”

- Finalise the course content, including preparing and editing course profiles as required.
- Teach a substantial proportion of the lectures
- Organise others to be lecturers, co-ordinate content
- Standardise format
- Organise and lead weekly practical sessions
- Organise all assessment
- Respond to student queries
- Ensure quality control for the new course, both formally through the various University mechanisms (surveys, peer evaluations, participation in examiners’ meetings) and informally (presentation at teaching seminars, seeking guidance from peers)

Community Service

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

Service/Administration

- Perform a range of administrative functions in the Institute.
- Contribute to the processes that enable the Complex Trait Genomics Alliance to disseminate knowledge to a broad range of the research community.
- Contribute to the processes that enable the academic team to manage the work of the Institute, including participate in Institute decision-making and serve on committees.
- Perform service duties to the national and international research community such as peer-review of manuscripts and grants.

Other

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

- 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 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 Naomi Wray if the appointee is based in IMB or Professor Ben Hayes if the appointee is based in QAAFI.

Part-time appointments

Part-time appointment may be considered.

SELECTION CRITERIA

Essential

For appointment at level B

- At least two years post-doctoral experience or equivalent and demonstrated research productivity consistent with this experience
- Evidence of research productivity, including publications, successful grant applications and conference presentations in line with UQ Criteria for Academic Performance
- Knowledge of
 - the principles of genetics and genomics
 - linear model methodology
- Computing skills, including in scripting language and programming
- Excellent attention to detail and record-keeping skills and an ability to work relatively independently with excellent organisation skills that allow for meeting deadlines.
- Self-reliance and motivation
- A high level of written, oral and interpersonal communication skills
- Ability to work collaboratively with colleagues
- Initiative and problems solving skills

Desirable

- Knowledge and Experience in
 - quantitative genetics models and theories
 - teaching mixed model methodology
 - the analysis of large-scale genetic data
 - supervising or co-supervising RHD students
- Past track record in genetics related research demonstrating ability to both work within teams and independently to successfully complete research projects

For appointment at level C

- In addition to the requirements at Level B, you will have an established record of achievement in teaching, research, service and engagement in line with UQ Criteria for Academic Performance for Level C appointments.

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.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au

**Applications are also encouraged from women.
This role is a full-time position; however flexible working arrangements may be
negotiated.**