POSITION DESCRIPTION

Position Title: Microscopy Officer
Organisation Unit: Institute for Molecular Bioscience
Position Number: NEW
Type of Employment: Part Time (0.8FTE), Fixed-Term
Classification: HEW Level 6

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://uniqquest.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 Australian Cancer Research Foundation funded Institute for Molecular Bioscience Microscopy facility was established in 2009 and is a world-leading example of technology designed for discovery. As technology progresses, the facility has continued to evolve revealing information previously beyond our reach, shifting the scientific frontier. Greater clarity, faster speed, and longer observational windows allow for deeper probing into the fundamental processes that make things tick. This opens the door to new questions and ultimately, new discoveries.

The facility incorporates over twenty instruments ranging from workhorse widefield and confocal microscopes to cutting edge technologies created by contemporary Nobel Laureates such as the Lattice Light-sheet and Stimulated Emission Depletion (STED) super-resolution microscopes. Significant investments have also been made in computing to process, quantify and visualise the big-data produced by modern microscopes. This significant investment in technology with wide-ranging capability which is programmed specifically for the needs of the 30 research teams that utilise it allows researchers to perform multiple complimentary experiments within one facility, harnessing advances in technology to enhance our rate of discovery.

Ongoing projects include development of an image analysis portal for GPU HPC based processing of Big Data generated on the latest generation of sCMOS based microscopes. In order to make this a reality, real-time file converters have been created to convert proprietary vendor formats into open-source formats such as .tif, which can subsequently be viewed in our in house developed HPC based 4D visualiser in near real time. Other projects include micro-controller based user access control of equipment and custom designed microscopes including openSPIM and OPT.

The IMB Microscopy Facility is currently operated by two full time staff, including the Microscopy Facility Manager (Professional) and Microscopy Research Officer (Academic).

For more information about our systems, staff and access visit: imb.uq.edu.au/microscopy or contact microscopes@imb.uq.edu.au.

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)
Further 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

**DUTY STATEMENT**

**Primary Purpose of Position**

To support the Microscopy Facility Manager in delivering advanced optical, fluorescence and confocal microscopy services, ensure instrumentation is maintained and operating to factory specifications, and to provide microscopy research support and training. A variety of techniques will be used to support researchers from within the Institute, University and external clients to design, conduct, analyse and report on experiments.

**Duties**

Duties and responsibilities include, but are not limited to:

- Coordinate and provide individual user training and group training in the use of advanced microscopes, image acquisition, visualisation software and analysis for biological research
- Conduct and identify requirements for routine and/or ad hoc microscope cleaning and maintenance, including conducting general maintenance of microscope equipment and day-to-day running of the imaging facility
- Conduct troubleshooting of minor equipment and software issues
- Asset management including stocktaking, part ID tagging, and ordering of consumables
- Maintain up to date records for training, work done for users and relevant charges
- Maintain knowledge of state-of-the-art microscopy systems and techniques including learning and understanding the complexities and risks of working in a PC2 biological environment
- Any other duties as reasonably directed by your supervisor

**Other**

- Due to the nature of biomedical research as well as the training component (eg, workshops), it may be necessary to work outside of normal business hours on occasion.
- Moving and lifting heavy equipment may be required.

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](http://www.uq.edu.au)
- requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](http://www.uq.edu.au) 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](http://www.uq.edu.au)
- 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 Microscopy Facility Manager.
SELECTION CRITERIA

- A degree with subsequent relevant experience or an equivalent combination of extensive relevant experience and/or education/training.
- Demonstrated experience and skills in operating and maintaining optical microscopes, including fluorescence and confocal microscopes as well as the provision of training to users.
- Proven expertise in conducting biomedical/life science microscopy applications for the analysis of structure, morphology and function with specialist techniques.
- Organisation, interpersonal and communication skills, including the ability to work individually or as part of a team, and to prepare professional reports and non-routine correspondence on complex matters and to interact, influence and negotiate with a range of clients on complex issues.
- Experience in, or the ability to rapidly acquire, working in a PC2 biological environment and the associated risks.
- Extensive experience with both Zeiss and Leica confocal microscopes, as well as Nikon and Olympus widefield systems, such as those currently installed in the IMB Microscopy facility is desirable.
- Experience with administrative tools such as command line, group policy and registry editor tools in Windows based operating systems is desirable.
- Experience with Image analysis software is desirable such as
  - ImageJ/FJI including macro programming
  - Zeiss Zen
  - Leica LASX
  - Nikon NIS-Elements
- Experience in software programming languages including software development for scientific imaging acquisition and analysis is desirable.

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 part-time position and flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to recruitment@uq.edu.au