

Position description

Research Fellow (Structural Biology and Technology Development)

Position number	
Department/Unit	Department of Biochemistry & Molecular Biology
Faculty/Division	Faculty of Medicine, Nursing and Health Sciences
Classification (salary rates)	Level B
Employment type	Full-time
Work location	Clayton campus
Date document created or updated	October 2015

Position purpose

A Level B research-only academic is expected to carry out independent and/or team research within the field in which he/she is appointed and to carry out activities to develop her/his research expertise relevant to the particular field of research.

This presents an opportunity to develop cutting edge technology within the ARC Centre of Excellence in Advanced Molecular Imaging, led by Monash University. The successful applicant will be required to develop custom imaging systems, including custom light microscopes and custom devices to be linked to the existing electron microscopy platforms. This position will provide the opportunity to interact with the best scientists in Australia and develop tools that can be applied directly to solve challenging problems in structural biology and molecular medicine.

- **Reporting line:** The position reports to the applicable Lab Head.
- **Supervisory responsibilities:** none (although supervision of junior staff may be required from time-to-time)
- **Financial delegation and/or budget responsibilities** none.

Organisational context

Monash University is an energetic and dynamic university committed to quality education, outstanding research and international engagement. A member of Australia's Group of Eight research intensive universities, it seeks to improve the human condition and is committed to a sustainable future. Monash has six campuses in Victoria, a campus in Malaysia, a campus in South Africa, a centre in Prato, Italy, and numerous international partnerships and cooperative ventures. Monash has over 62,500 equivalent full-time students spread across its Australian and off-shore campuses, and over 7,400 full time equivalent staff. Almost 3,500 of these staff members are academic staff.

The Faculty of Medicine, Nursing and Health Sciences is the University's largest research faculty. World-class researchers work across disciplines including laboratory-based medical science, applied clinical research, and social and public health research. The faculty is also home to a number of leading medical and biomedical research institutes and groups, and has contributed to advances in many crucial areas: *in vitro* fertilisation, obesity research, drug design, cardiovascular physiology, functional genomics, infectious diseases, inflammation, psychology, neurosciences and mental health.

Courses offered by the faculty include medicine, nursing, radiography and medical imaging, nutrition and dietetics, paramedic studies, biomedical sciences, physiotherapy, occupational therapy, behavioural neurosciences and social work. A range of research and coursework postgraduate programs is also offered. The faculty takes pride in delivering outstanding education in all courses, in opening students to the possibilities offered by newly discovered knowledge, and in providing a nurturing and caring environment.

Further information can be found at: <http://www.med.monash.edu.au/about.html>

The School of Biomedical Sciences is the largest of the eight Schools within the Faculty and is located at the University's Clayton Campus. The School conducts a diverse range of undergraduate and graduate teaching, research and commercial activities. Revenue in 2012 was \$132.4M which includes research income of \$51.9M. The School employs approximately 561 staff in continuing and contract positions and 340 casual academic and professional staff.

The School is highly active in research, with numerous grants from international and Australian sources including the National Health and Medical Research Council (NHMRC), Australian Research Council (ARC), National Institutes of Health (NIH) and other public sector funding bodies. The School has seven departments and many different sources of income, including teaching.

The Department of Biochemistry & Molecular Biology is the largest of the seven departments within the School of Biomedical Sciences in the Faculty of Medicine, Nursing and Health Sciences. With revenue of over \$30 million in 2011, the department has been ranked as the premier department in the discipline since benchmarking of Australian departments began in 1998.

Key result areas and responsibility

Specific duties required of a Level B research-only academic may include:

- the conduct of research either as a member of a team or independently and the production of conference and seminar papers and publications from that research;
- supervision of research-support staff involved in the staff member's research;
- guidance in the research effort of junior members of research-only Academic staff in her/his research area;
- contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies;
- involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise;
- administrative functions primarily connected with her/his area of research;
- occasional contributions to the teaching program within the field of the staff member's research;
- co-supervision or, where appropriate, supervision of major honours or postgraduate research projects within the field of the staff member's area of research;
- attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees.

Key selection criteria

Education/Qualifications

1. Successful completion of PhD in Physics or a related field, from a recognised institution with subsequent post-doctoral research experience;

Knowledge and Skills

2. Demonstrated experience either in designing custom imaging devices or with vacuum systems in required.
3. Proven experience with Electron Microscopy or Synchrotron Beamlines would be advantageous.

4. Experience including Mechanical design using 3DCAD, Electronic design,
5. Experience with ray tracing is highly preferred
6. Programming skills for machine control and data analysis (i.e. C++, Python, Labview and Matlab).
7. Demonstrated track record of report writing and publishing to a high standard;
8. Demonstrated ability to work both independently and within a team;
9. Excellent organisation and record keeping skills;
10. Ability to analyse and communicate research outcomes;
11. Demonstrated self-motivation, creativity and problem solving skills; and
12. Ability to meet project timelines.

Other job related information

- Travel (eg. to other campuses of the University or to conferences)
- Peak periods of work during which the taking of leave may be restricted

Legal compliance

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.