Research Fellow in Biochemistry and Pharmacology

POSITION NO
0060744

CLASSIFICATION
Level A

WORK FOCUS
Research Focused

SALARY

SUPERANNUATION
Employer contribution of 17%

WORKING HOURS
Full-time (1.0 FTE)

BASIS OF EMPLOYMENT
Fixed term: Research

OTHER BENEFITS
https://about.unimelb.edu.au/careers/staff-benefits

HOW TO APPLY
Online applications are preferred. Go to http://about.unimelb.edu.au/careers, under ‘Job Search and Job Alerts’, select the relevant option (‘Current Staff’ or ‘Prospective Staff’), then find the position by title or number.

CONTACT FOR ENQUIRIES ONLY
Debnath Ghosal
Tel +61 3 8344 8441
Email debnath.ghosal@unimelb.edu.au

Please do not send your application to this contact

For information about working for the University of Melbourne, visit our websites: about.unimelb.edu.au/careers
Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Position Summary

The successful postdoctoral candidate will investigate the structure and function of bacterial and viral molecular machines that are important for pathogenesis using integrative approaches including cryo-EM, cryo-ET, CLEM and various biochemical and biophysical methods. Candidates with a strong background in structural biology (cryo-EM and/or X-ray crystallography)/computational biology/virology are encouraged to apply.

The position is located in the Ghosal lab, that has a comprehensive research programme. Located in the Bio21 Institute at The University of Melbourne, the is access to state-of-the-art instrumentation including a 300 keV Titan Krios G4 cryo-EM with phase plate, GIF and K3 direct detector, a 200 keV Talos Arctica, a 200 keV Glacios, a cryogenic fluorescence light microscope, a cryo-FIB-SEM, and comprehensive sample preparation and screening facility.

The Department is located in the School of Biomedical Sciences which fosters a values-based culture of innovation and creativity to enhance the research performance of the University and to achieve excellence in teaching and research outcomes. We invest in developing the careers and wellbeing of our students and staff and expect all to live by our Faculty Values of:

- Collaboration
- Compassion
- Respect
- Integrity
- Accountability

1. Key Responsibilities
1.1 RESEARCH AND RESEARCH TRAINING

- Undertake original research in structural biology using cryo-EM, cryo-ET, CLEM and various biochemical and biophysical methods.
- Undertake original research in structural biology and virology to understand host-pathogen interaction at high-resolution.
- Contribute to, and drive when appropriate, data collection and analysis, using specialised programs, such as IMOD, Relion, EMAN2 etc.
- Participate in research independently and as a member of a research team.
- Supervise or co-supervise of major honours or postgraduate research projects within research area.
- Contribute to publications arising from scholarship and research, such as publication of books and in peer reviewed journals.
- Present work at conferences and seminars where appropriate.
- Contribute occasionally to teaching within research field.

1.2 LEADERSHIP AND SERVICE

- Identify sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline.
- Coordinate the preparation and submission of a fellowship application for the project.
- Effective training of students and research support staff where required.
- Participate in community and professional activities related to the relevant disciplinary area.
- Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity.
- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

2. **Selection Criteria**

2.1 ESSENTIAL

- PhD or substantial progress towards PhD in Structural Biology (cryo-EM and/or X-ray crystallography)/Computational Biology/virology.
- Strong evidence of ability and desire to build an academic career trajectory.
- Advanced hands-on research experience in Structural Biology and related techniques.
- Demonstrated abilities to conduct independent and/or team-based research.
- Evidence of emerging local academic standing through research contributions.
- Demonstrated ability to articulate research through presentation in a public forum including conferences.
- Demonstrated excellent verbal and written communication skills for effective research collaboration and engagement.
- Demonstrated ability to operate sensitive and precise scientific equipment.
2.2 DESIRABLE

- Experience in cryoEM/cryoET/crystallography
- Ability to identify research grants and procurement
- Experience in the supervision or co-supervision and mentoring of honours and postgraduate students and other staff
- Ability to initiate and complete independent, self-motivated research with limited supervision (previous postdoctoral experience)
- Existing international collaborative links

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people’s age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

http://safety.unimelb.edu.au/topics/responsibilities/

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 DEPARTMENT OF BIOCHEMISTRY AND PHARMACOLOGY
The University of Melbourne


The Department of Biochemistry and Pharmacology has critical mass, interdisciplinary teaching and a remarkable breadth and depth in research expertise that underpin our key themes of molecular understanding of biology and disease, translational research, drug discovery and development.

It is envisaged to consolidate the research activities of the new Department. With respect to teaching, the Departments’ offerings are complementary, and we are looking forward to developing new courses across our joint areas of expertise.

5.2 SCHOOL OF BIOMEDICAL SCIENCES

https://biomedicalsciences.unimelb.edu.au/

As part of the Faculty of Medicine, Dentistry and Health Sciences since 2015, the School comprises three Departments, Departments of Anatomy and Physiology, Biochemistry and Pharmacology, and Microbiology and Immunology. It has 85 research groups across the three Departments, awarding-winning teachers and more than 2500 equivalent full-time student enrolments each year.

Our Mission

Create an innovative and inclusive academic environment building on a strong legacy of world-class excellence and lay the foundation for new generations of biomedical researchers to create new knowledge and lead the revolution in biomedicine, and realise their dream of advancing human health locally and globally.

Our Vision

• Promote collegiality and an inclusive academic environment through the engagement of partners, institutes, hospitals, industries, government and the community at large
• Cultivate the highest level of excellence in research and education
• Attract and develop a diverse and talented academic workforce
• Lead the revolution in biomedicine and translate research outcomes into life transforming healthcare
• Strengthen our intellectual and technological environment through interdisciplinary interactions, integration of resources and creative thinking
• Seize all opportunities to create the conditions for sustainability
• Observe the highest standards of ethics and integrity.

5.3 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES

https://www.mdhs.unimelb.edu.au

The Faculty of Medicine, Dentistry and Health Sciences (MDHS) plays a vital role in the delivery of the University of Melbourne’s Strategic Plan 2015-2020: Growing Esteem by providing current and future generations with education and research equal to the best in the world. It is Australia’s largest and leading biomedical research faculty. It employs more
than 1,700 members of staff, has more than 8,000 students, and total revenue of $607 million for 2015. Reflecting the complexity of today’s global health landscape, the Faculty is made up of six different Schools and four Strategic Research Initiatives, and draws together all areas of human health, ranging from the most basic to the most applied areas of research. The Faculty contributes close to 50 per cent of research conducted at the University.

The Faculty has appointed Australia’s first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty’s Reconciliation Action Plan (RAP), which will be aligned with the broader University-wide plan. To enable the Faculty to improve its Indigenous expertise knowledge base, the Faculty’s RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

5.4 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia’s premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers

5.5 ADVANCING MELBOURNE

The University’s strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University’s commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

- We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.
- We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.
- We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.
- We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne’s academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial
sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

5.6 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at https://about.unimelb.edu.au/strategy/governance