



## POSITION DESCRIPTION

Department of Biochemistry and Pharmacology  
School of Biomedical Sciences

### Research Fellow – Computational Biologist

<b>POSITION NO</b>	0065534
<b>CLASSIFICATION</b>	Academic Level A or Level B
<b>SALARY</b>	\$83,468 - \$113,262 p.a. (Level A) plus 17% super or \$119,231 - \$141,581 p.a. (Level B) plus 17% super Depending on experience.
<b>SUPERANNUATION</b>	Employer contribution of 17%
<b>WORKING HOURS</b>	Full-time (1 FTE)
<b>BASIS OF EMPLOYMENT</b>	Fixed-Term for 24 months
<b>OTHER BENEFITS</b>	<a href="https://about.unimelb.edu.au/careers/staff-benefits">https://about.unimelb.edu.au/careers/staff-benefits</a>
<b>HOW TO APPLY</b>	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , select the relevant option (‘Current Opportunities’ or ‘Jobs available to current staff’), then find the position by title or number.
<b>CONTACT FOR ENQUIRIES ONLY</b>	Professor Michael Parker Tel +61 3 8344 2211 Email <a href="mailto:mwp@unimelb.edu.au">mwp@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:  
[about.unimelb.edu.au/careers](http://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***

An enthusiastic and ambitious early career researcher is sought to join the structural biology group led by Professor Michael Parker in the Department of Biochemistry and Pharmacology at the Bio21 Institute. Applicants with expertise in computational and structural biology are particularly sought to strengthen and develop the University's capacity in those areas. The University and its partners have invested heavily in structural biology over the last five years, particularly through Bio21 platforms such as the Ian Holmes Imaging Centre. The successful applicant will be supervised and mentored by Professor Parker.

The Structural Biology and Computational Design Laboratory is internationally recognised with the determination of more than two hundred atomic structures including those of membrane-associating proteins, detoxifying enzymes and protein kinases. Our work has provided insights into a number of diseases such as cancer, bacterial and viral infections, and neurological diseases such as Alzheimer's disease. In recent years we have been emphasising the translational aspects of our work with an increasing focus on structure-based drug discovery. This focus has been underpinned by the development of virtual screening and fragment screening platforms in-house, with funding from the Australian Cancer Research Foundation, and partnerships with a number of Biotechnology and Pharmaceutical companies including CSL Limited and Janssen.

The Research Fellow will be involved in computational biology projects of the lab, particularly in the application of structure-based drug discovery and complimentary techniques to medical problems of interest to the lab, both from a discovery point-of-view and translational efforts.

The successful candidate will be enthusiastic with a strong interest in the application of computational biology and biophysical approaches to understanding and finding treatments for human diseases.

You will be innovative in designing experiments and solving technical problems, critically appraise the scientific literature and maintain meticulous laboratory records. You will prepare reports and presentations on the work for group discussion and assist in the preparation of research manuscripts for publication. You will also contribute as a team member to general laboratory maintenance, and the safe and inclusive operation of the laboratory.

The School of Biomedical Sciences and its Departments foster 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 research in an area of computational biology with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences
- ▶ A large part of the work is being funded by a grant from the Cumming Global Centre for Pandemic Therapeutics on “A comprehensive structural and cell biology platform for rapid characterisation and therapeutic intervention of any infection of pandemic potential”. The computational biologist will support fragment and virtual screening programs on targets of pandemic potential, discovering hits and advancing them into leads using structure-based drug design approaches
- ▶ Collaborate with senior staff and external collaborators to actively seek and secure external funding and assist in the preparation and submission of research proposals to external funding bodies as appropriate
- ▶ Supervise students working on individual group projects at undergraduate, honours and graduate level
- ▶ Plan and carry out experiments focused on completion of research project aims
- ▶ Carry out experiments related to the project ethically, accurately and productively
- ▶ Maintain accurate and detailed records of all experiments conducted
- ▶ Perform other duties as requested by the appointee’s immediate supervisor consistent with the classification of this position
- ▶ Contribute towards publications arising from research in peer-reviewed journals

### **1.2 LEADERSHIP AND SERVICE**

- ▶ Contribute to the day-to-day organisation of the laboratory including ordering of reagents, maintenance of equipment and cleanliness of the laboratory
- ▶ Undertake other duties as requested by the appointee’s immediate supervisor and the Head of Department
- ▶ Assisting in the preparation of risk assessments and SOPs for laboratories and technical activities

### 1.3 RESPONSIBILITY AND COMPLIANCE

- ▶ Maintain a sound knowledge of current University Policy and Procedures, and reliably follow these and provide compliant advice to others
- ▶ Reliably follow communications protocols and or policies as appropriate
- ▶ Create ethics applications and report to ethics committees
- ▶ Adhere to Occupational Health and Safety (OHS) responsibilities as outlined in Section 4

### 1.4 IN ADDITION TO THE ABOVE, A LEVEL B APPOINTMENT WILL BE REQUIRED TO

- ▶ Provide leadership in the supervision of research graduate students, postdoctoral fellows and/or research assistants
- ▶ Lead the preparation of manuscripts related to the research project
- ▶ Lead the preparation and submission of fellowships and competitive grant applications
- ▶ Contribute to professional activities at state and national levels (committees, conferences, professional societies, grant review etc)

## 2. Selection Criteria

### 2.1 ESSENTIAL

- ▶ A PhD (or awarding of a PhD within six months of appointment commencement) in protein biochemistry or equivalent qualifications and experience in a related area, with a major in computational or structural biology or related discipline  
Evidence of experience in structure-based drug discovery and/or molecular dynamics simulations and/or AI applications in molecular biology
- ▶ The ability to work as part of a team with some degree of independence and minimal supervision, with an ability to take initiative, prioritise tasks to achieve project milestones
- ▶ Strong organisational skills and accurate recording and analysis of data generated from research undertaken
- ▶ Excellent communication skills in English, with the ability to communicate effectively with academic, administrative and support staff

### 2.2 IN ADDITION TO THE ABOVE, ESSENTIAL CRITERIA FOR A LEVEL B APPOINT ARE:

- ▶ Demonstrated experience in supervising students or research staff
- ▶ Strong publication track record relative to career stage
- ▶ Strong record of presentation at scientific meetings
- ▶ Demonstrated ability in attracting grant or fellowship support
- ▶ Advanced organisational skills and ability to manage administrative tasks and contribute to effective strategic planning
- ▶ Excellent interpersonal communication skills with demonstrated ability to work collaboratively and collegially with academic and administrative support staff

## 2.3 DESIRABLE

- ▶ Evidence of experience in molecular biology techniques, recombinant expression of proteins, protein purification using a variety of methods and performing and developing biochemical assays
- ▶ Experience working in a PC2 laboratory
- ▶ Experience in at least one of the following techniques: protein X-ray crystallography, protein nuclear magnetic spectroscopy, cryo electron microscopy, or membrane protein biochemistry
- ▶ Experienced with a number of different biophysical techniques other than those listed above (eg. SAXS, XL-MS, HDX-MS, SPR, ITC, CD, AUC, MST)
- ▶ Experience in expressing and purifying proteins from more than one of the following: bacteria, insect, and mammalian cells
- ▶ A strong commitment to collaborate with other institute and laboratories in the Parkville Biomedical Precinct

## 2.4 OTHER JOB-RELATED INFORMATION

- ▶ This position requires the incumbent to hold a current and valid Working with Children Check. The University of Melbourne is dedicated to safeguarding the welfare of all community members, especially those most vulnerable. As part of our commitment to child safety and in line with the Victorian Child Safe Standards, this position will be required to hold a valid Employee WWCC, regardless of where in the University an employee may work or what work they do.
- ▶ Occasional work out of ordinary hours, travel, etc.

## 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:

<https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel>

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**

<https://biomedicalsciences.unimelb.edu.au/departments/department-of-biochemistry-and-pharmacology>

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. The majority of the Departments research laboratories are located in the [Bio21 Molecular Science and Biotechnology Institute](#) affording excellent access to state-of-the-art technology platforms.

### **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

[www.mdhs.unimelb.edu.au](http://www.mdhs.unimelb.edu.au)

The Faculty of Medicine, Dentistry and Health Sciences (MDHS) is Australia's pre-eminent medical, health sciences and biomedical faculty and is recognised for its research, teaching, training, and policy leadership across all these fields.

The Faculty employs more than 3,000 staff, attracts more than 8,300 students each year and comprises six schools; 37 departments, centres and institutes; and 160 courses.

A large portion of our workforce work in hospital-based departments. We also have over 5,000 honorary staff including hospital-based staff and those in partner research institutes. Our people publish more than 10,000 peer reviewed publications every year and more than 50% of these include an international co-author.

In 2021 our research income was approximately 400M, comprising over 62% of research income for the University of Melbourne and conducting approximately 47% of all research across the University.

We are Australia's overall leader in clinical and health, ranked 14th globally in 2022 by the Times Higher Education World University Rankings. The 2023 Academic Ranking of World Universities ranks the University of Melbourne as first in Australia in clinical medicine (14th internationally), public health (12th internationally), human biological sciences and medical technology.

The University educates more health professionals, graduates, research and higher degree students and attracts more national competitive funding than any other Australian university. The Faculty offers a suite of professional entry masters level graduate programs, including the Doctor of Medicine (MD), the Doctor of Dental Surgery (DDS), and the Doctor of Physiotherapy (DPT) in addition to a range of graduate level programs such as the Master of Public Health, Master of Primary Health Care, Master of Social Work, Master of Clinical Audiology, Master of Speech Pathology, Master of Clinical Optometry, and many more in nursing, social work, health sciences and psychology.

Over 1,400 graduate research students conduct research supervised by over 2,300 staff and honoraries across the Faculty's six schools and in affiliated health services and research institutes. University departments are embedded in a range of health services including the Austin Hospital, Northern Hospital, Royal Melbourne Hospital, St Vincent's Hospital, The Royal Women's Hospital, Royal Children's Hospital, Western Hospital, Mercy Hospital and rural partners such as Goulburn Valley Health.

Our strategic plan, Advancing Health 2030, sets out a unifying vision for the Faculty to meet the challenges of a changing world and continue to make an impact on the health and wellbeing of our communities. The strategy has been designed to support and bring to life

the University's overall Advancing Melbourne strategy. Read more at: <https://mdhs.unimelb.edu.au/advancing-health-2030>

#### 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>