

RESEARCH FELLOW

DEPARTMENT/UNIT	Medicinal Chemistry
FACULTY/DIVISION	Faculty of Pharmacy and Pharmaceutical Sciences
CLASSIFICATION	Level A
DESIGNATED CAMPUS OR LOCATION	Parkville campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The Faculty of Pharmacy and Pharmaceutical Sciences is dynamic, innovative and ambitious, engaging in world-class research and being a leading education provider for over 130 years. Our key research initiative is the Monash Institute of Pharmaceutical Sciences, in which we engage some of the best equipped and most experienced pharmaceutical scientists and medicine experts in Australia. Notably for the past 3 years Monash has been ranked in the top 3 institutions in the world for Pharmacy and Pharmacology. From a teaching perspective, our education curriculum - comprised of undergraduate, postgraduate and higher degrees by research programs - is purpose designed for the study of pharmacy and pharmaceutical sciences and taught by discipline experts. Our premises are located in 'the Parkville Strip', Australia's premiere health and biomedical precinct, and offer world-class teaching facilities and research laboratories to our students and staff. To learn more about the Faculty, please visit our website: www.monash.edu/pharm/

The Monash Institute of Pharmaceutical Sciences (MIPS) integrates research from five fundamental research themes to identify, develop, optimise and deliver new drug treatments – ultimately translating basic research into clinical trials. These are the Centre for Drug Candidate Optimisation, Drug delivery, disposition and dynamics, Drug discovery biology, Medicinal chemistry and the Centre for Medicine Use and Safety

MIPS is Australia's largest, most experienced and successful group of pharmaceutical scientists. Over 250 staff and 250 PhD students undertake and support basic and translational drug discovery, drug delivery and drug development research in new, state-of-the-art laboratories on Monash's Parkville campus. MIPS was established in 2008 and builds upon the ground-breaking research activities of the Victorian College of Pharmacy, Monash University, developers of the Relenza flu treatment. Our internationally recognised institute strives to conduct the most insightful science in our field by the best researchers and research students in world-class facilities. Our contemporary and collaborative organisational structure enables our research to occur where our core scientific disciplines meet. Collaboration at these disciplinary interfaces is expected to transform medicine design and development outcomes.

MIPS key therapeutic programs span across neuroscience, metabolic and cardiovascular diseases, global health issues, cancer, immunity, pain and inflammation. Our researchers are leaders in their fields. Their brilliance and dedication ensures that better medicines of world significance are discovered, researched and designed right here in Australia. Our talented staff include international leaders in G protein-coupled receptor biology, translational medicinal chemistry, structural biology, lead candidate optimisation, drug delivery, pharmacoepidemiology, pharmacometrics and medication safety.

MIPS has strong partnerships with industry leaders, including the global drug companies Servier, Takeda and Lonza, Biotech companies including Starpharma and PureTech Health and our own start-up companies such as Cincera. In total, we have long-term collaborative research programs with more than 20 biotechnology and pharmaceutical companies. We also collaborate with leading national and international research institutes and universities and attract substantial support from industry, government and funding agencies. Our supporters include the ARC, NHMRC, Victorian State Government Science Agenda, Health Workforce Australia, the National Institutes of Health in the US, the World Health Organisation (WHO), the Bill and Melinda Gates Foundation, the Medicines for Malaria Venture, the Drugs for Neglected Diseases initiative and various commercial and philanthropic organisations

The Medicinal Chemistry theme applies chemistry principles and techniques to the discovery and development of compounds to tackle disease.

POSITION PURPOSE

A Level A research-only academic is expected to contribute towards the research effort of the university and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

This role involves engaging in advanced research focusing on the design, synthesis, and application of innovative fluorescent probes to facilitate high-resolution imaging techniques, including super-resolution microscopy, near-infrared, and in vivo optical imaging. You will contribute to developing novel molecular tools aimed at enhancing the visualization and understanding of complex biological systems.

The Research fellow will lead the development of novel small-molecule and hybrid fluorescent probes tailored for high-performance imaging in complex biological systems. Responsibilities include rational probe design, synthetic organic chemistry, and structure–function optimization, with a strong emphasis on photophysical tuning and biological compatibility. The role also involves conducting collaborative imaging studies with biologists and physicists, utilizing state-of-the-art microscopy platforms to explore complex biological systems. Additionally, the incumbent will perform in vivo imaging experiments in preclinical models, providing valuable insights into biological

processes within living organisms. Data analysis and visualization will be essential to interpret imaging results and guide the refinement of fluorescent probes.

Reporting Line: The position reports to an Academic within the Medicinal Chemistry Theme

Supervisory Responsibilities: Assist with supervision of PhD and Honours students

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

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

1. The conduct of research under limited supervision either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and seminar papers and publications from that research
2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
3. Limited administrative functions primarily connected with the area of research
4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff
5. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures
6. 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
7. Advice within the field of the staff member's research to postgraduate students
8. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - a doctoral qualification in the relevant discipline or a closely related field

Knowledge and Skills

2. Strong evidence of laboratory experience in synthetic organic or medicinal chemistry with a demonstrated ability to work independently and safely.
3. Understanding of and experience in fluorescence microscopy and image analysis approaches for cellular and/or animal imaging will be highly regarded.
4. Demonstrated analytical and manuscript preparation skills; including a track record of refereed research publications
5. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise
6. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines

7. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
8. A demonstrated awareness of the principles of confidentiality, privacy and information handling
9. A demonstrated capacity to work in a collegiate manner with other staff in the workplace

OTHER JOB-RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.