



RESEARCH FELLOW (CANCER METABOLISM & TUMOUR IMMUNOLOGY)

DEPARTMENT/UNIT	Department of Biochemistry and Molecular Biology
FACULTY/DIVISION	Faculty of Medicine, Nursing & Health Science
CLASSIFICATION	Level A
DESIGNATED CAMPUS OR LOCATION	Clayton 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 Medicine, Nursing and Health Sciences**, is the largest faculty at Monash University, and offers the most comprehensive suite of professional health training in Victoria. We consistently rank in the top 40 universities worldwide for clinical, pre-clinical and health sciences.

We want to improve the human condition. That is our vision - it has no expiration date. Through academic health centres, other translational models and by educating the healthcare workforce of the future, our staff, students and alumni directly improve quality of life.

Setting the global health care agenda, the Faculty aspires to lead in all areas of research activity and influence local, national and international policy to improve health and social outcomes and health inequalities. We've made a major impact in the world of medical research and become globally recognised for our quality education of over 41,000 doctors, nurses, and allied health professionals.

We are ambitious and aim to maintain our position as a leading international medical research university. We're recognised for the breadth and depth of our research, for our commitment to translational research, for the quality and scale of our research capability, and as a thriving biotechnology hub.

To learn more about the Faculty, please visit www.monash.edu/medicine.

The **Monash Biomedicine Discovery Institute (BDI)** is one of the largest and most dynamic biomedical research and teaching environments in Australia. The Institute and its cognate Departments of Anatomy and Developmental Biology, Biochemistry and Molecular Biology, Microbiology, Pharmacology and Physiology comprise over 120 research groups and deliver discipline-focused teaching into our flagship Bachelor of Biomedical Science Degree, the Bachelor

of Science Degree, as well as the Medical School and various Health- related Degree Programs. We pride ourselves on an excellent and evolving teaching curriculum and provide world-class teaching and learning space for Biomedical Sciences.

The BDI comprises six inter-disciplinary health-focused research Programs, each led by a renowned leader in the field. The BDI programs include Infection and Immunity, Cancer, Cardiovascular Disease, Development and Stem Cells, Metabolism, Diabetes and Obesity and Neuroscience. The BDI works closely with the clinical and drug development precincts at Monash and has a number of major industry partnerships to facilitate the translation of our research. For more information about the BDI please visit our website at www.monash.edu/discovery-institute.

The Cellular Signalling and Human Disease Laboratory is one of 15 independent laboratories within the Metabolic Disease & Obesity Program and one of 55 independent laboratories within the Infection and Immunity Program in the Monash Biomedicine Discovery Institute (BDI). Further details about the Cellular Signalling and Human Disease Laboratory can be found at www.monash.edu/discovery-institute/departments/biochemistry-and-molecular-biology.

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.

The Research Fellow (Cancer Metabolism & Tumour Immunology) will conduct research in the area of immunology.

Therapies that enhance the immune response to tumours have revolutionised the management of cancer. However, many tumours do not have a high mutational burden and are not 'visible' to the immune system or evolve alternate immunosuppressive mechanisms to escape immune-surveillance. The project will take advantage of multidisciplinary techniques and utilise both cell-based and animal models to develop novel approaches by which to bolster T cell and NK cell recruitment and anti-tumour immunity. A key focus will be on the role of intracellular checkpoints in T cells and NK cells. This position will work in an established research team with a track record in research excellence and will be capable of coordinating a multifaceted research program, working both independently and collaboratively in a team.

The Research Fellow (Cancer Metabolism & Tumour Immunology) will have extensive experience with molecular and genomic techniques, immune cell isolation, T cell and/or NK cell phenotyping, and the use syngeneic tumour models.

Reporting Line: The position reports to the Head of the Cellular Signalling and Human Disease Laboratory

Supervisory Responsibilities: Not applicable

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 of the academic
4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff
5. Occasional contributions to teaching in relation to their research project(s)

6. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures
7. 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
8. Advice within the field of the staff member's research to postgraduate students
9. Other duties as required from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - A PhD in Biochemistry or Immunology with a background in cancer biology and tumour immunology.

Knowledge and Skills

2. Demonstrated analytical and manuscript preparation skills; including a track record of refereed research publications
3. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise
4. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
5. A demonstrated awareness of the principles of confidentiality, privacy and information handling
6. The ability to work both independently in a research environment and as part of an inter-disciplinary research team
7. Extensive experience with mouse handling and surgery, mouse genotyping and a firm understanding of complex genetic crosses
8. Knowledge and experience with molecular and genomic techniques, including RNAseq, CRISPR-Cas9 gene editing and real time PCR, immune cell isolation and culture, biochemical techniques, including western blotting, cell culture, and establishing syngeneic orthotopic tumour models
9. Knowledge and experience with the isolation and characterisation of murine T cells and/or NK cells, multi-colour immune cell phenotyping by flow cytometry, including T cell and/or NK cell phenotyping, and the adoptive transfer of T cells into mice;
10. A desire to build an independent research profile

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.