RESEARCH FELLOW (BIOINFORMATICIAN)

DEPARTMENT/UNIT	Biochemistry and Molecular Biology
FACULTY/DIVISION	Faculty of Medicine, Nursing and Health Sciences
CLASSIFICATION	Level A
DESIGNATED CAMPUS OR LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

At Monash, work feels different. There's a sense of belonging, from contributing to something groundbreaking – a place where great things happen. You know you're part of something special and purposeful because, like Monash, your ambitions drive you to make change.

We have a clear purpose to deliver groundbreaking intensive research; a world-class education; a global ecosystem of enterprise – and we activate these to address some of the challenges of the age, Climate Change, Thriving Communities and Geopolitical Security.

We welcome and value difference and diversity. When you come to work, you can be yourself, be a change-maker and develop your career in exciting ways with curious, energetic, inspiring and committed people and teams driven to make an impact – just like you.

Together with our commitment to academic freedom, you will have access to quality research facilities, infrastructure, world class teaching spaces, and international collaboration opportunities.

We champion an inclusive workplace culture for our staff regardless of ethnicity or cultural background. We have also worked to improve gender equality for more than 30 years. Join the pursuit of our purpose to build a better future for ourselves and our communities – #ChangeIt with us.

The Faculty of **Medicine, Nursing and Health Sciences** is the largest faculty at Monash University, a global university with campuses across Victoria and international locations in Indonesia, Malaysia, China, India and Italy. Our Faculty 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. In 2022, our Nursing and Midwifery climbed to the rank of 14th in the world and 1st in Victoria in the QS World University Rankings.

We want to improve the human condition. That is our vision - it has no expiration date. By educating the current and future healthcare workforce, and undertaking medical research, both discovery and clinical, our students, staff and alumni all work to directly improve people's quality of life.

Contributing to the global health care agenda, the Faculty aspires to lead in all areas of its research and education activity, collaborating to influence local, national and international policy to improve health and social outcomes, and reduce health inequity.

We've made a major impact in the world of medical research and are globally recognised for our quality education of over 63,000 doctors, nurses, and allied health professionals and health researchers. The future health of our communities is underpinned by the sustained excellence of our education and research capabilities.

We are ambitious and committed to maintaining our position as a leading international medical research and teaching university. We're recognised for the quality of our graduates, the scale and depth of our research, our commitment to translational research, and as a thriving biotechnology hub. To learn more about the Faculty, please visit www.monash.edu/medicine.

The **Department of Biochemistry & Molecular Biology** is the largest of the five departments in the School of Biomedical Sciences. Biochemistry and molecular biology are closely-related disciplines which study the chemical components of living cells, including the genetic material, in order to understand biological processes and how these are altered in disease.

Research and teaching in the department encompasses six broad themes: cell biology, signal transduction, host/pathogen interaction, structural biology, immunology and developmental biology. Our research is highly relevant to major human diseases and pathological processes, including infection, inflammation, diabetes and obesity, developmental and degenerative disorders, cardiovascular disease, and cancer. The Department has been ranked as the premier Department in its discipline since the inception of ARC benchmarking of Australian Departments in 1998.

Further details about the department 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 (bioinformatician) is funded by an NH&MRC research grant focusing on tissue repair and colorectal cancer. This position will oversee and deliver high-quality bioinformatics to support the research of the Stem Cells and Cancer laboratory. The Research Fellow will develop and implement data analysis for single cell sequencing, spatial transcriptomics as well as routine analysis such as RNAseq. This position will also work closely with both molecular and computational biologists and the Monash Bioinformatics Platform (www.monash.edu/researchinfrastructure/bioinformatics).

Reporting Line: This position reports to the Head of 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 directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
    - A doctoral qualification in the relevant discipline area such as biology, computer science, physics, statistics or bioinformatics; or
    - an honours degree or higher qualification and progress towards a doctorate in biology, computer science, physics, statistics or bioinformatics.

Knowledge and Skills

2. Demonstrated ability to undertake high-level research activities; including a track record of refereed research publications
3. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
4. Strong communication skills for collaborating with both computational and biological researchers
5. A demonstrated awareness of the principles of confidentiality, privacy and information handling
6. Experience in handling large data sets and analysis of high-throughput experimental data including emerging technologies such as single cell genomics
7. Experience in Unix/Linux, and familiarity with R or Python and relevant statistical packages
8. A demonstrated ability to work independently

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.