

# RESEARCH FELLOW

**DEPARTMENT/UNIT**

Department of Microbiology, Biomedicine Discovery Institute

**FACULTY/DIVISION**

Faculty of Medicine, Nursing and Health Sciences

**CLASSIFICATION**

Level A

**DESIGNATED CAMPUS OR LOCATION**

Clayton campus

## ORGANISATIONAL CONTEXT

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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 ground-breaking 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 – [#Changelt](#) 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, consistently ranked 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. 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, reduce health inequality and promote greater health and social outcomes.

We're 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](http://www.monash.edu/medicine).

Our Faculty includes four Sub-Faculties: Health Sciences, Clinical and Molecular Medicine, Biomedical Medicines, and Translational Medicine and Public Health.

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 clinical and drug development precincts at Monash and has a number of major industry partnerships to facilitate the translation of our research; and will be closely aligned with the Victorian Heart Hospital (VHH), which is being built on the Clayton Campus. For more information about the BDI please visit our website at [www.monash.edu.au/discovery-institute](http://www.monash.edu.au/discovery-institute).

The **Department of Microbiology** is one of five departments in the School of Biomedical Sciences. The department teaches undergraduate students at a variety of levels in a broad range of courses, but most of our students are undertaking degrees in Biomedical Science, Science or Medicine. A vigorous postgraduate program is supported, with more than 50 PhD students currently enrolled.

Research within the department aims to understand how various microbes interact with their human or animal hosts at the molecular level, how that interaction can result in disease, and how this can be prevented. The department is well equipped for broad genomic, transcriptomic and proteomic investigations. These are applied to projects designed to increase our understanding of microbial pathogenesis, the development of antibiotic resistance, the immune response to infection, and in vaccine development. Further details about the department can be found at: [www.med.monash.edu.au/microbiology/](http://www.med.monash.edu.au/microbiology/)

## POSITION PURPOSE

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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 Department of Microbiology is currently recruiting for a Research Fellow to work under the supervision of Professor Diana Hansen. In this role, the successful candidate will participate in multidisciplinary and international consortiums, with research partners across Indonesia and

Japan. The successful candidate will pursue a systems biology approach to investigate immune responses to dengue virus in endemic areas to identify correlates of protection from severe illness as well as biomarkers to predict dengue fever disease outcomes.

The role is well suited to an enthusiastic and diligent researcher with good communication skills (both written and verbal), excellent project management skills, attention to detail and ability to work independently and collaborate with multidisciplinary and geographically dispersed teams.

The successful candidate will have a doctoral degree in immunology, microbiology, or public health. The appointee will have demonstrated experience in the assessment and analysis of immune responses to infection in humans, and the application of techniques including but not limited to flow cytometry, CyTOF, ELISA, RNA-sequencing and single cell-RNA-sequencing as well as basic coding skills in R (or willingness to learn) for RNA-sequencing and high-dimensional cytometry analysis.

**Reporting Line:** The position reports to Professor in Microbiology

**Supervisory Responsibilities:** This position might require co-supervision of 1-2 Honours and/or PhD students.

**Financial Delegation:** Not Applicable

**Budgetary Responsibilities:** Not Applicable

## KEY RESPONSIBILITIES

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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

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### Education/Qualifications

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

## **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. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
6. A demonstrated awareness of the principles of confidentiality, privacy and information handling
7. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
8. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications and specified university software programs, with the capability and willingness to learn new packages as appropriate
9. Demonstrated experience in the assessment of immune responses to infection in humans
10. Demonstrated experience in the application of analytical and statistical tools for the analysis of immune responses in humans
11. Demonstrated experience in the application of techniques including but not limited to flow cytometry, CyTOF, ELISA, RNA-sequencing and single cell-RNA-sequencing
12. Basic coding skills in R (or willingness to learn) for RNA-sequencing and high-dimensional cytometry analysis

## **OTHER JOB RELATED INFORMATION**

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- 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**

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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.