



RESEARCH FELLOW – VECTOR GENOMICS

DEPARTMENT/UNIT	Institute of Vector Borne Diseases
FACULTY/DIVISION	Office of the Provost and Senior Vice President
CLASSIFICATION	Level A
WORK 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 **Provost & Senior Vice-President** is responsible for: setting and implementing the University's research strategy, improving the academic and research performance of the University; oversight of faculties and university-wide centres and institutes; development of academic staff employment policies and procedures that enable a high performance culture; identifying and developing new research opportunities and clusters, expanding international research collaborations and interdisciplinary areas of excellence.

The **Institute of Vector-Borne Disease (IVBD)** falls within the Office of the Provost and Senior Vice-President. The primary purpose of the Institute is to spearhead the University's research efforts in eliminating diseases such as dengue fever and Zika. The Institute is home to dedicated laboratory facilities, including a large BSL2 and BSL3 insectary. The Institute houses the World Mosquito Program (WMP) within Monash University, an international collaborative research program designed to prevent the transmission of arboviral diseases threatening the health of people living in tropical and subtropical regions and aims to improve global health whilst significantly reducing the financial burden on local health systems in these regions. The WMP currently operates in 10 countries and is expanding.

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 Pathogen and Vector Genomics group studies the evolution of mosquitoes, parasites, and arboviruses in order to derive useful epidemiological information to aid in disease control. The Research Fellow will develop computational and experimental analyses relating to genome rearrangements and mobile elements in the

mosquito *Aedes aegypti*: the principal vector of Dengue, Zika and Chikungunya and a species of considerable public health importance.

While the Research Fellow will be expected to define their own path for this work, we envisage that this will include the development of novel computational analyses and/or software for the analysis and characterisation of genomic rearrangements and integrations; development of novel sequence-based assays; whole-genome sequencing of wild mosquito populations; and the use of population genetics tools and techniques to investigate the effects of these features on gene flow. The role would suit a computational/population geneticist looking to work in infectious disease research, or an experienced entomologist/vector biologist who would like to pursue work in a computational field.

The successful candidate will assemble high-impact publications, assist in grant applications, and become an active citizen of IVBD, the World Mosquito Program and the wider community of infectious disease researchers in Melbourne.

Reporting Line: The position reports to Senior Research Officer - Vector and Pathogen Genomics

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 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

KEY SELECTION CRITERIA

Education/Qualifications

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

Knowledge and Skills

2. Experience generating, analysing and interpreting genomic data, including work on evolutionary genetics, population genetics or genomic association studies; OR Significant experience with vector/dipteran/infectious disease research and a desire to pursue research in a computational field

3. Demonstrated analytical and manuscript preparation skills including a track record of refereed research publications
4. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise
5. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
6. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
7. A demonstrated awareness of the principles of confidentiality, privacy and information handling
8. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
9. 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

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University and international locations will 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

LEGAL COMPLIANCE

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.