Research Fellow in Evolutionary Biology

POSITION NO 0056546
CLASSIFICATION Level A
SALARY $77,171 - $104,717 pa (pro rata for part-time)
PhD entry level – A.6 $97,558
SUPERANNUATION Employer contribution of 17%
WORKING HOURS Full-Time
BASIS OF EMPLOYMENT Fixed-Term for five years
OTHER BENEFITS http://about.unimelb.edu.au/careers/working/benefits
HOW TO APPLY Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY Professor Nina Wedell
Email nina.wedell@unimelb.edu.au

Please do not send your application to this contact

For information about working for the University of Melbourne, visit our website: about.unimelb.edu.au/careers
Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations.

Position Summary

The Research Fellow will be a member of the project team who will work on research that will provide new insight into how resistance evolves and is maintained in natural populations and may result in potential reduction in pesticide use with associated economic and biodiversity benefits.

This project aims to develop new approaches to mitigate resistance evolution by applying sexual selection theory to predict evolution of insecticide resistance in flies. A key assumption of current agriculture management strategies is that resistance carries fecundity or survival costs, but this is rarely demonstrated, especially in nature. Not all resistance mutations are novel; many represent pre-existing variants maintained by balancing selection, ie opposing effects in males and females, or by environmental fluctuations.

This research will provide new insight into how resistance evolves and is maintained in natural populations and may result in potential reduction in pesticide use with associated economic and biodiversity benefits.

This Research Fellow reports to the Project Manager, Prof Nina Wedell, and is in the School of BioSciences, located on the Parkville campus.

The project will involve:

- Quantify the fitness consequences of expressing different resistance alleles in male and female Drosophila species
- Introgress different resistance alleles into multiple Drosophila genetic backgrounds
- Evolve replicate Drosophila melanogaster populations
- Quantify reproductive behaviours in evolved D. melanogaster flies expressing different resistance alleles
- Determine the impact of endosymbionts on resistance in D. melanogaster
- Metabolomic quantification of male and female Drosophila with different resistance alleles
- Determine the fitness impact of male and female transgenic flies expressing orthologous resistance genes
- Field collection of D. melanogaster across Australia

1. Key Responsibilities

You are expected to significantly contribute towards the research effort of the team and to develop your research expertise with an increasing degree of autonomy.

1.1 RESEARCH

- In collaboration with Senior Academic staff conduct internationally competitive research, resulting in publications in high impact journals
Contribute to and publish academic papers and other scholarly outputs to a high academic standard in accordance with the research expectations of the University of Melbourne

Actively participate in research seminars and conferences to disseminate research findings in their area of expertise as opportunities arise

Contribute to the preparation, or where appropriate individual preparation of research proposal submissions to internal or external funding bodies as relevant.

Undertake administrative functions and obligations primarily connected with the staff member’s area of research

Contribute to, and assist in the co-supervision and training of research students at graduate and undergraduate level

Engage with relevant professional and industry bodies and stakeholders to foster collaborative partnerships

1.2 OTHER DUTIES

Perform other tasks as requested by the supervisor or the Head of School

Actively participate in the University Professional Development Framework

Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4

2. Selection Criteria

2.1 ESSENTIAL

Completion of a PhD in zoology, evolutionary and/or behavioural ecology or a related discipline

Experience in insect fitness assays

A broad range of skills in evolutionary and behavioural ecology

Experience in experimental evolution studies

Experience in insect husbandry, especially of Drosophila flies

A demonstrated aptitude for independent research, with a sound publication record in relevant areas, commensurate with experience and opportunities

Demonstrated ability to prepare research reports and manuscripts for publication

Strong evidence of ability and desire to build an academic research career trajectory

Excellent interpersonal and both written and oral communication skills in English

Excellent ability to work co-operatively and positively in a multi-disciplinary research-based team environment and liaise with people from diverse backgrounds

Demonstrated excellent organisational skills to meet deadlines and bring projects to a timely completion

Demonstrated ability to develop, administer and see through to completion appropriately designed research projects with limited supervision
2.2 **DESIRABLE**

- The ability to attract external funding through grant applications and/or support in funded joint projects with others internal or external to the university
- Experience in assisting with supervision of students undertaking undergraduate or higher degree research projects

3. **Equal Opportunity, Diversity and Inclusion**

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in Advancing Melbourne that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people’s age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous deserve to service for excellence and reach the targets of Advancing Melbourne.

4. **Occupational Health and Safety (OHS)**

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

http://safety.unimelb.edu.au/topics/responsibilities/

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. **Other Information**

5.1 **SCHOOL OF BIOSCIENCES**

https://biosciences.unimelb.edu.au

The School of BioSciences was formed in 2015 through the amalgamation of the School of Botany and the Departments of Genetics and Zoology, thus bringing together a critical mass of 160 Academic staff and 240 Research Higher Degree students undertaking world
class teaching and research in the biological sciences. Academics within the School are aligned to four research clusters: Ecology, Evolution and Environmental Science; Genetics, Genomics and Development; Plant Science and Computational Biology. Through cross-disciplinary collaborations within the School and with external partners, the School is a major recipient of grant and contract funding.

The School is a major contributor to the Bachelor of Science, Bachelor of Biomedical Science and the Environmental Science programs, its teaching program reflecting the research interests within the School.

5.2 FACULTY OF SCIENCE

https://science.unimelb.edu.au

Science at the University of Melbourne is among the most highly ranked Faculties of Science in Australia*. Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us. We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 53,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs, Australian Mathematical Sciences Institute (AMSI) and home to numerous Centres.

Science manages more than $315 million of income per annum, with a staff base in the order of 290 professional staff, and more than 630 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 9,700 undergraduate and 2,400 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is a leader in research, contributing approximately $80 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

* Based on 2018-19 subject rankings by QS and Time Higher Education

5.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia’s premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With
outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers.

5.4 ADVANCING MELBOURNE

The University’s strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University’s commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne’s academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at http://www.unimelb.edu.au/governance