

2026 PhD research opportunity

Seeking the brightest graduates to advance your career in industry supported world-class bioscience research



Apply today

The successful candidates will receive:

- A \$37,000 P.A. (taxfree) (2026 rate) scholarship for up to three and a half years, including additional support worth up to \$15,000.
- Training in Australia's first integrated agricultural systems biology research centre, AgriBio
- Professional development programs
- International travel opportunities (up to \$6000)

Based at AgriBio, Centre for AgriBiosciences, Melbourne, Victoria, Australia

Successful applicants must meet the La Trobe University entry requirements for a Doctor of Philosophy degree.

Check your eligibility here:

<https://www.latrobe.edu.au/study/apply/research/doctor>

For enquiries and to apply, please forward a covering letter, your curriculum vitae (please include evidence of research writing) and academic transcripts to:

Kendra Whiteman

Higher Education Manager

Agriculture Science and Technology
kendra.whiteman@agriculture.vic.gov.au

Closing date for applications: until filled

Genomic approaches for measuring dispersal and abundance of pest fruit flies.

Understanding how insect populations change in size, move across landscapes, and persist between seasons is fundamental to Integrated Pest Management (IPM). New genomic approaches such as close-kin mark-recapture (CKMR), now allow population size, movement, and connectivity to be estimated from genetic relationships among individuals, overcoming many limitations of traditional field-based methods

This PhD project will develop and evaluate genomic approaches for measuring dispersal and abundance of the Queensland fruit fly (*Bactrocera tryoni*), Australia's most economically important horticultural pest. Combining population genomics, computer modelling, and field studies, the research will generate fundamental insights into fruit fly ecology while addressing key questions for pest management and biosecurity.

PhD Project Aims:

- Develop individual-based simulation models of *B. tryoni* population dynamics using the evolutionary simulation framework SLiM.
- Conduct field studies to determine how ecological and life-history processes explain genetic patterns observed in natural populations.
- Develop new analytical methods for estimating population size, dispersal, and demographic parameters from genomic data.

The PhD forms part of the Hort Innovation Fresh and Secure Trade Alliance (FASTA) program, providing opportunities to work with a diverse team of researchers and applied entomologists.

The successful candidate will be supervised by Assoc. Prof. Paul Cunningham and Dr. Alexander Piper (School of Applied Systems Biology).