

PhD stipend scholarship

Efficacy of long-lasting insecticidal nets and alternative vector control strategies against malaria and dengue mosquitoes in the South-Pacific region

We are offering a PhD candidature in the field of malaria and arbovirus mosquito control based at the Australian Institute of Tropical Health and Medicine (AITHM) at James Cook University in Cairns. The strategic mission of AITHM is to confront northern Australia's major health security risks and to deliver significant public health benefit locally, regionally and globally.

The successful PhD candidate will be involved in a highly collaborative research program co-ordinated by AITHM, the Papua New Guinea Institute of Medical Research (PNGIMR), Burnet Institute and other international partners. The focus of the project is to establish and conduct biological and chemical tests for insecticidal efficacy of a wide range of insecticide treated bed nets and surfaces treated with residual insecticides collected in PNG and other malaria endemic countries in the region, to inform malaria control programs and strategies.

In addition, our research programs provide the opportunity to be involved in a broad range of activities surrounding malaria and arbovirus vector control in the South Pacific Region with a focus on PNG, ranging from chemical analyses and bioassays over molecular analyses of mosquito samples to mathematical modelling of malaria transmission. Provided an easing of Covid-19 restrictions in the coming years, the project may involve research travel to Papua New Guinea.



AITHM | AUSTRALIAN INSTITUTE
OF TROPICAL HEALTH & MEDICINE



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CAIRNS // MACKAY // THURSDAY ISLAND // TOWNSVILLE

Methodologies:

- Chemical analyses e.g., LC-MS, HPLC, NMR, XRF;
- Electron microscopy techniques;
- Working with colony mosquitoes; mosquito bioassays;
- Molecular techniques;
- Mathematical modelling and statistics.

Eligibility:*Essential*

- BSc Honours Class I or M.Sc. (or equivalent via outstanding record of professional or research achievements)
- Excellent computer, communication, and organisational skills
- Forward thinking, innovation and creativity are encouraged

Desirable

- experience with chemical analysis techniques such as HPLC or LC-MS
- entomology techniques such as mosquito identification, collection and rearing
- experience with molecular techniques such as PCR and ELISA
- basic statistical analysis skills
- experience with mathematical disease modelling.

Scholarship:

JCU-level stipend of \$28,597 per annum for three years, full-time study. Closing date: 01/03/2021

Application:

Please send your Curriculum Vitae, a copy of your academic record, and 1-page outline of your goals for a PhD (as per contact details below).

Supervisors:

- Dr Stephan Karl <https://research.jcu.edu.au/portfolio/stephan.karl/>
- Professor Norelle Daly <https://research.jcu.edu.au/portfolio/norelle.daly/>
- Professor Leanne Robinson https://www.burnet.edu.au/people/507_leanne_robinson

Contact details:

- Dr Stephan Karl stephan.karl@jcu.edu.au; +61460648208
- Professor Norelle Daly norelle.daly@jcu.edu.au

Conditions of Scholarship:

The award of an AITHM scholarship is conditional upon:

1. Successful enrolment as a James Cook University PhD candidate. Applicants can familiarise themselves with entry requirements at: <https://www.jcu.edu.au/graduate-research-school/candidates/prospective-students>
2. Application for alternative scholarship funding, including the JCU Postgraduate Research Scholarship, in each year of candidature. Should such an application be successful and that scholarship is of lesser value to the AITHM Scholarship, the scholarship holder will receive the balance of the AITHM Scholarship.