

Topic: Drug-resistant tuberculosis in Vietnam**Supervisor:** Professor Greg Fox**Associate Supervisor:** Dr Emily Maclean, University of Sydney**Institution:** The University of Sydney**PROJECT PROPOSAL**

Background: Tuberculosis (TB) is the leading infectious cause of death over the past decade. People who develop drug-resistant TB have a substantially increased risk of poor outcomes, including death, recurrent disease and catastrophic health costs. Resistance to isoniazid, a key of first-line drug used to treat TB, is the commonest form of drug-resistant TB globally. Vietnam has a high incidence setting both for TB and isoniazid-resistant TB – one in five people treated for TB are affected. The FLIRT trial is a NHMRC-funded clinical trial that will evaluate the effectiveness of an antibiotic treatment for isoniazid-resistant tuberculosis in Vietnam, Australia and Canada. This PhD project will be undertaken as a part of the FLIRT trial, exploring upon the use of modern molecular diagnostics to treat of drug-resistant TB in these three countries.

Setting: A series of studies will be undertaken in Vietnam among an existing cohort of 900 patients with isoniazid-resistant TB within the Vietnam National TB Programme enrolled in the FLIRT Trial.

Project aims:

Aim 1: To evaluate the diagnostic accuracy of rapid molecular diagnostics to diagnose isoniazid and fluoroquinolone-resistant tuberculosis

Aim 2: To determine the prevalence of isoniazid-resistant tuberculosis among people treated for TB in Vietnam

Aim 3: To evaluate predictors of poor treatment outcomes among people with isoniazid-resistant tuberculosis.

Value of scholarship: \$29,500 per year for 3.5 years (\$105,000)

Candidates: This scholarship is for international candidates, with experience working in Vietnam.

International tuition fee scholarship: Candidates will be supported to apply for an international tuition fee scholarship. <https://www.sydney.edu.au/scholarships/e/university-of-sydney-tuition-fee-scholarship.html>

Location: 18 months of the scholarship will be undertaken in Vietnam, with approval from the University. The remaining 18 months will be based at the University of Sydney, Australia.

Funding source: This scholarship will be funded through an NHMRC Investigator Grant of Greg Fox (RC K9102, PC N8246). The stipend employment will be through an NHMRC Clinical Trials and Cohort Studies grant, subject to recruitment to a role within the study.