



UTS:SCIENCE RESEARCH

PhD Scholarship in Bioinformatics and Vaccine Development

A PhD scholarship is available at the University of Technology Sydney for research into the application of bioinformatics for development of vaccines for livestock under the co-supervision of **Professor John Ellis**, Institute for the Biotechnology of Infectious Diseases (IBID) and **Dr Paul Kennedy**, School of Software.

IBID aims to deliver the highest quality research on the biology and control of infectious diseases in humans and animals. Its areas of research hold the keys to interrupting the lifecycle of pathogens: diagnosis and identification (detection); transmission; survival and development (infection); immunity; and control methods (treatment). Its research is internationally competitive in the field, with proven application to the treatment and prevention of infectious diseases.

Abortion, resulting from infections by the parasite *Neospora caninum*, is a major cause of economic loss to both the dairy and beef industries of cattle-producing countries of the world. Vaccination as a means of preventing abortion and/or infection represents a viable control strategy.

The project will involve the study of the genome of *N. caninum* by high throughput (454) DNA sequencing and bioinformatics approaches, as well as using novel bioinformatics approaches to identify potential targets for vaccine development. It will suit a research student with an interest in developing and combining experience in computational biology with modern laboratory approaches for developing vaccines.

Applicants should:

1. Possess an Honours degree (1 or 2A) or Masters degree (by research).
2. Training and/or background in computational biology and/or bioinformatics.
3. Experience working with databases, such as SQL
4. Experience programming with scripting languages, such as Python and/or Perl and experience with bioinformatics specific tools and databases.

The successful candidate will receive a scholarship of A\$30,000 per-annum for 3 years (tax free, conditions apply) as well as financial support to attend national and international conferences.

Open to both local and overseas applicants, and will remain open until it has been filled.

For further information, contact
Professor John Ellis

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