



PhD POSITION AVAILABLE

Transforming DNA and protein detection methods with advanced optics: rapid crime scene assessment

An exciting PhD project is available to develop a rapid DNA-based typing and discriminating platform for crime scenes and other applications. This opportunity is available for a Biology student with an interest in Physics or Forensics to work with a newly appointed ARC Super Science Fellow as part of a transdisciplinary biology- physics team.

A generous top-up scholarship (\$10,000 per annum) is available, and in addition there are opportunities to present research outcomes at national and international conferences. Please refer to our webpage for more details (www.adelaide.edu.au/ipas or www.adelaide.edu.au/acad/).

Background: The aim of this project is to develop a novel rapid scanning platform for use at crime scenes. The approach brings together the expertise in forensics and molecular biology within the Australian Centre for Ancient DNA (ACAD) with advanced microstructured optical fibre (MOF) sensing technologies recently developed in the Institute for Photonics & Advanced Sensing (IPAS).

The project will develop new measurement tools that will transform the way crime scenes are analysed, which will transform the way policing and CSI activities are performed at crime scenes and will have impact in fields including immigration, border security, disaster victim identification, environmental and conservation management.

The postgraduate student will work closely with Dr Linh V. Nguyen (ARC Super Science Fellow), Prof Alan Cooper (Director of ACAD) and Prof Tanya Monro (Director of IPAS). The project involves the development of an advanced biological sensing platform to enable the discrimination of blood and potentially DNA of different individuals at crime scenes. This exciting, transdisciplinary project in the fast-growing and well-funded research environment at both IPAS and ACAD provides a unique opportunity to gain a PhD in Biology with a special emphasis on bioforensic/biophysics, with research experience and training in key areas such as:

- Environmental and conservation research
- Optics & Lasers, Spectroscopy
- Fibre optics & photonics •hotonics sensor development
- Chemical & Biological functionalisation of surfaces for selective detection of species

Please forward an Expression of Interest including a CV detailing your research experience on your previous works to Dr. Linh V. Nguyen (linh.nguyen01@adelaide.edu.au). Please note, candidates will be required to secure a PhD scholarship from the University of Adelaide or other funding bodies before receiving the top-up scholarship from this project.