



Sydney
Forensic Medicine
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**University of Sydney Medical Foundation Building,
Level 3 Staff Common Room (Room 314)
92 - 94 Parramatta Road, Camperdown**

Monday 4 May 2009, 4.00 PM – 5.30 PM

Research Seminars

Forensic Applications of Synchrotron Radiation

*Presented by A/Professor Tony Masters, School of Chemistry,
University of Sydney*

A synchrotron is a large machine (about the size of a football field) that accelerates electrons to almost the speed of light. As the electrons are deflected through magnetic fields they create extremely bright light. The light is channeled down beam lines to experimental workstations where the results can be used for research. The recently opened Australian synchrotron located in Melbourne opens up new opportunities for research (www.synchrotron.org.au/). For more information on the synchrotron and its potential applications in forensic medicine and science come and hear Tony Masters from the University describe how he has been using this new approach in isolating fingerprints.

Mitochondrial (mt) DNA testing

Presented by Dr Bing Yu, Central Clinical School, University of Sydney

Genotyping using mtDNA is an important approach in population studies or defining origins of peoples since this type of DNA is found in multiple copies in each cell, and its transmission is predominantly maternal in origin. It can also be used in the forensic scenario because it allows minute amounts of tissues to be studied, and the data generated can be quite useful in assigning relatedness between samples. MtDNA testing provided crucial evidence in identifying the perpetrator of the bombing of the Australian embassy in Jakarta in 2004. Come and hear Bing Yu describe how mt DNA testing is conducted in a genetics laboratory.

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