



SPG Special Seminar

Dr Nathan Cowieson
Institute of Molecular Biology
University of Queensland

Synchrotron Radiation and High-Throughput Structure Solution

Nathan Cowieson is an Australian Synchrotron Research Program Fellow working at the IMB, UQ. Nathan will talk about a high-throughput program aimed at using structural biology techniques to characterise novel proteins involved in the process of inflammation. The core technology of this program is a procedure for cloning and expressing hundreds of mammalian proteins in parallel. Protein x-ray crystallography has been the major tool for determining structure in this project. However, whilst crystallography yields high-resolution structures it is only amenable to a minority of proteins that form diffraction quality crystals. To circumvent this bottleneck Nathan has been developing an approach combining synchrotron radiation circular dichroism, small angle x-ray scattering, chemical cross-linking and molecular modelling to obtain structural information of proteins that cannot be crystallised.

Time: Monday 19th Feb, 10:00 am

Location: Room 441

Molecular and Microbial Biosciences

Building G08

Butlin Avenue

Parking on campus is \$24 flat rate (you will need \$2 coins), enter from Butlin Ave onto Maze Crescent. Parking is also available at the Shepherd Street Carpark for \$4 hourly rate. See <http://www.facilities.usyd.edu.au/security/parking.shtml> for more information.

For more information, contact Liza Cubeddu (l.cubeddu@mmb.usyd.edu.au)