The University of Western Sydney has an advanced bio-imaging facility with state-of-the-art confocal and multi-photon microscopes. By analysing fluorescence emitted from a sample, confocal imaging unites the power of optical microscopy, biology, biophysics and advanced computational methods. We are able to visualize the 3D structure of cells, to decipher how genes, molecules and proteins work and interact in living cells and organisms and how they are affected by changing environmental, physiological and disease conditions.

The Confocal Facility provides:
» Access to confocal, multiphoton and wide-field microscopes
» Expertise in confocal imaging, microspectroscopy and image visualization
» Development and validation of bioimaging techniques
» Application of a range of microimaging and microspectroscopic techniques to assist with your research
» Training, advice in research solutions, assistance in developing individual imaging protocols and associated data analysis in molecular sciences, microbial, invertebrate, plant and animal biology, agriculture, biomedicine, chemistry, forensics and biophotonics
» Sample analysis on a fee-for-service or collaborative basis.
» Student, researcher and industry users welcomed.

Instruments
Inverted Leica TCS SP5 laser scanning confocal microscope - This system uses AOBS variable spectral detection instead of traditional emission filters and has the following laser lines: 405, 458, 476, 488, 496, 514, 561, 594 and 633 nm. It has micro-spectral detection capability and has a fully tunable Multi-Photon imaging system; a Becker & Hickl Fluorescence Lifetime Imaging (FLIM) system and fluorescence correlation spectroscopy system.


The Confocal Facility also contains other light and fluorescence microscopes and equipment including: a Fluorescence Olympus BX60 microscope and Jenoptik ProgRes C14 digital camera and a Fluorescence Leica MZ12 stereomicroscope and JVC digital camera.

Applications include:
» Imaging of samples in 3D and using time series (milliseconds to hours)
» Imaging of auto fluorescent specimens or of fluorophore and/or GFP labelled samples
» Micro-spectroscopic and diffusion analysis of molecules (e.g., proteins) enabling quantitative dynamic tracking of molecules

For more information on how to access this equipment please contact:
Dr Anya Salih, Confocal Research Manager
a.salih@uws.edu.au
02 4570 1452
OR
Victoria Hirst, UWS Innovation Project Officer
v.hirst@uws.edu.au
(02) 9685 9742