

Training Document and Safety Manual

Advanced Imaging Facility
Room S448, Anderson Stuart Building
(An IBR Multi-User Facility)
Phone: x13930

**Please ensure the workplace is safe for you
and your colleagues at all times**

Date: February 2005
Review: February 2006

Training Document and Safety Manual

1. USER RESPONSIBILITIES:

- Read this manual. Sign the declaration to confirm that you fully understand all policies and procedures outlined.
- Undertake training by lab supervisor.
- Fill in *New user form*.
- Get signed approval for facility use by the lab supervisor.
- Follow standard operating procedures (SOPs) and facility signage at all times.
- Record problems in the log sheet and report them immediately to the lab supervisor.

2. SAFETY INFORMATION:

Important information/contacts

- This facility is called the *Advanced Imaging Facility*.
- It is located in Anderson Stuart Building F13, Room S448.
- *Lab supervisor* is Toby Knight (x12520).
- *Emergency First Aid Officers* are Marcus Robinson (x12595), Clive Jeffery (x12518) and Adel Mitry (x16500)
- *Chief Building Warden* is John Cossey (x12515)
- *Departmental Safety Officer* is Roland Smith (x12518)
- Campus Security EMERGENCY (24 hours) phone number is x13333
- Emergency Services (Police/Fire Brigade) phone number is 0-000

Relevant Literature

This document summarises safety procedures for this facility, but further reading of general laboratory safety is highly recommended. Please refer to *Standard AS/NZS 2243.1 Safety in Laboratories (General)* (copy in this folder).

This and other standards can be accessed at *Standards Australia Online*:
<http://0-online.standards.com.au.opac.library.usyd.edu.au/online/autologin.asp>

Hazards

Before beginning, users must identify any hazards relating to their work and notify the lab supervisor (include this information in the *New user form* or *Request to use live cells form*).

Refer to Risk Management *Guide to Hazardous substances* link at end of this section.

Personal protective clothing and equipment (PPCE)

- Enclosed footwear must be worn at all times; bare feet, sandals and thongs are not permitted.
- Lab coats, safety glasses, face shields, gloves and other protective equipment must be worn for certain procedures.
- Use the protective eye-guard attached to fluorescent microscopes at all times and do not look directly into the focussed fluorescent light.

Work practices

- Lab personnel shall observe the work practices outlined in *Standard AS/NZS 2243.1 Safety in laboratories* (copy in this folder).
- Do not bring food or drink for personal consumption into the laboratory. Eating, drinking, smoking, shaving and the application of cosmetics shall be prohibited.
- Familiarise yourself with emergency contact numbers (above), evacuation procedures and the location of fire extinguisher (corridor).
- Chemicals other than water, ethanol and immersion oil are not allowed in this laboratory. Water and ethanol must be stored in the wet area only (sink top). Immersion oil can remain in the work area. Permission must be granted to use any other chemicals.
- Wash skin areas that come in contact with chemicals, irrespective of concentration.
- Sample preparation must be carried out prior to entering this room if possible.

Spills and Waste Disposal

- If chemicals are used, be prepared for spills by doing the following:
 - Read the MSDS of all chemicals and be aware of the appropriate spill procedure. Inform lab supervisor.
 - Handle chemicals in containment trays where possible.
 - Avoid the possibility of incompatible chemicals mixing.
- Report significant spills and accidents immediately to the lab supervisor (x12520). Do not proceed without notification.
- For cleaning and decontamination procedures, refer to Section 5 of *Standard AS/NZS 2243.3* (copy in this folder) and *Appendix E List of effective chemical disinfectants* (copy in this folder).

- Segregate specialised wastes at point of discard and dispose of according to regulations.
 - *Non-infectious material* (paper, plastic) shall be disposed of in plastic bag-lined bin provided.
 - *Sharps* (broken glass, scalpel blades) shall be disposed of in container provided.
 - *Infectious material* SHALL NOT be disposed of in this room.
 - Refer to Section 9 of *Standard AS/NZS 2243.3* (copy in this folder).

General Housekeeping

- The use of power should be kept to a minimum. Please turn off all equipment that is not in use and lights that are not required.
- The air-conditioner control unit for this room is in the office next door (Room S448); it controls temperature in BOTH rooms (a pleasurable temperature in the microscope room may mean an Arctic one in the neighbouring office). This office belongs to Toby Knight and members of the Cullen laboratory. Please be polite when requesting use of the controls.
- At the end of the day, the last user should turn off all lights and equipment and check that the door is locked upon leaving. The door is locked with a master security card; Toby Knight, Roland Smith and Karen Cullen have these.

Please refer to the Risk Management webpage for more detail on -
Guidelines on laboratory safety:

http://www.usyd.edu.au/risk/ohs_manual/labsafety.shtml

Emergency guidelines:

http://www.usyd.edu.au/risk/ohs_manual/emergency/help.shtml

Hazardous substances:

http://www.usyd.edu.au/risk/ohs_manual/haz-subs/index.shtml

Radiation and laser safety:

http://www.usyd.edu.au/risk/ohs_manual/radiation.shtml

Biological safety:

http://www.usyd.edu.au/risk/ohs_manual/bio_safety.shtml

3. EQUIPMENT USE:

Before using any piece of equipment independently, the following must be undertaken:

- Training with lab supervisor
- *New user form* completion and sign off by supervisor
- Standard Operating Procedures to be adhered to at all times

Equipment

- Zeiss Axioplan 2 microscope, with AxioCam HR camera, AxioVision software, PC and two flat screen monitors
- Leica DMRBE upright microscope (confocal scanhead attaches)
- Leica DMIRBE inverted microscope (confocal scanhead attaches)
- Leica TCSNT confocal system: incorporates two microscopes, PC and two CRT monitors.
- Imaging PC, contains software for image processing, analysis

Computers

- Computers are to be used for image acquisition, processing and storage only.
- No unauthorized software is to be installed onto computers.
- No software is to be copied from computers.
- All data files must be stored in the appropriate folder or will be erased.
- Ensure a virus check is run on any discs that have been in other computers.

Guidelines

- Training will be conducted as needed/requested by users. Contact lab supervisor, Toby Knight (x12520). The lab supervisor must approve this induction process (by signature) before a new user can work independently.
- Details of experiments must be provided **before** equipment use (via the *New user form*)
- All equipment must be booked via the online booking calendar at: <http://aus.calsnet.net/ibrmicrocalendar>. Bookings must be kept up to date.
- In addition to booking, equipment usage must be recorded on the log sheet after each session.
- Bookings are limited to a **maximum of four hours per day, per user**. This is dependant on usage. If the microscope is free or has low-level use, then this limit may be extended upon approval by the lab supervisor. If a cancellation is made, users are urged to give as much notice as possible so that arrangements can be made. If you are more than **30 minutes late for your booking**, other users will be permitted to use the equipment.

- Users are encouraged to be considerate of the needs of others when making equipment bookings, which means limiting multiple session booking within a week to allow other users access.
- For after hours access, users must have undertaken training and reached a reasonable competency level as assessed by the lab supervisor. Users must then provide the supervisor with their security card number. After hours is considered to be Monday - Friday before 9am and after 5:30pm, and weekends.
- Equipment failure, software problems etc are to be brought to the attention of Toby Knight (x12520) immediately. These should also be noted in the log sheet for future reference.

4. DATA MANAGEMENT

- Users must store their data as soon as possible. The user must provide his/her own disks, and is responsible for transferring and/ or maintaining their own data.
- Any data left on the hard disk at the end of the month is subject to erasure.
- If assistance is needed in transferring images to disc or network, please contact Toby Knight (x 12520)

5. TECHNICAL SUPPORT

If any problems arise please contact Toby Knight (x12520). Users are encouraged to email with questions, complaints and suggestions regarding the use of all equipment. Users should not contact microscope companies directly.

6. LIVE CELL IMAGING POLICIES AND PROCEDURES

- Infectious materials (capable of causing infectious disease) are not permitted in this facility.
- If you are using live cells you must fill in a *Request to use live cells* form **before** you use the confocal and return this to the lab supervisor. Information required includes the type of cells you are using and a safe work practice procedure for decontamination of spills etc.

**ADVANCED IMAGING FACILITY
NEW USER FORM**

NAME:	
TRAINING DATE:	
INSTRUMENT:	
PHONE & EMAIL:	
LAB:	
PROJECT TITLE & DETAILS:	
<p>SPECIMEN INFORMATION</p> <p>Please provide as much information as you can regarding the organism, tissue and preparation eg. fixation, section thickness, immuno or histo protocol, fluorescent dyes</p>	
<p>MICROSCOPE INFORMATION</p> <p>Please provide as much information as you can regarding how you will be using the microscope e.g. lasers, filters, imaging technique, analysis required etc</p>	
<p>SUPERVISOR SIGNATURE</p> <p>Declares that you are permitted to independently operate the instrument named above</p>	

**ADVANCED IMAGING FACILITY
REQUEST TO USE LIVE CELLS FORM**

NAME:	
DATE:	
PROJECT TITLE & DETAILS:	
<p>SPECIMEN INFORMATION</p> <p>Please provide as much information as you can regarding the organism you are using eg. name of organism (species, wild type), able to replicate etc</p>	
<p>SPECIAL DECONTAMINATION PROCEDURES</p> <p>ie. can bleach or ethanol be used to decontaminate, or is it advisable that other solutions be used – please advise</p>	
<p>SUPERVISOR SIGNATURE</p> <p>Declares that use of this organism has been granted</p>	