

QBISOP# 119 Microscopy Facility Induction

This document is an important record of the training and competency assessment of personnel working within the Queensland Brain Institute. It is necessary to ensure all parties (the worker, supervisor and QBI) are fulfilling their obligations under Queensland’s *Work, Health and Safety* legislation.

This form must be signed off by both the trainer and trainee and forwarded to QBI’s OH&S Manager who will keep it on a permanent file.

TRAINING INFORMATION

Name of Trainee:.....

Supervisor of Trainee:.....

Name of Trainer:.....

Date of training:

COMPETENCY QUESTIONS

The trainee has demonstrated:

The correct use and operation of PPE including lab coat, safety glasses and closed shoes YES NO

They understand that the person conducting the experiment must book in PPMS YES NO

Proposed list the procedures, equipment and techniques to be used

.....

If I find any broken or missing equipment who should I contact and when?

Non QBI members requiring core (business) hour access to QBI facilities

Completed relevant laboratory UQ online safety training courses? YES NO

Completed relevant building induction and QBI Emergency Procedures Induction if required? YES NO

Access dates required:.....

If using unfixed genetically modified organisms or unscreened human tissue, please provide your IBC approval number

Does this material require Biosecurity (Quarantine) containment? YES NO

STATEMENTS

Statement by Trainee:

I, have been trained in the attached SOP and have completed the above competency assessment.

Signature:..... Date:.....

Statement by Trainer:

I, have trained the above person in the attached SOP and on this date they were assessed as **competent** to carry out the tasks.

Signature:..... Date:.....

PLEASE RETURN SIGNED FORM TO OH&S MANAGER FOR RECORD KEEPING

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QUEENSLAND BRAIN INSTITUTE – STANDARD OPERATING PROCEDURE

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SOP Reviewed By: Anaud Gaudin

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QBISOP#119 MICROSCOPE FACILITY INDUCTION



Biological Exposure – There are a number of biological substances used within the Microscopy Facility that may present a health hazard to the worker. The Microscopy Manager must be notified of any work with unfixed tissue exposed to infectious microorganisms (such as lentivirus or AAV) or human products. Unfixed samples of these products must be sealed, aerosol creation must be minimised and all spills must be decontaminated following the QBI spill procedure.

Laser Exposure – Many of QBI Microscopes contain Class 3 or 4 lasers entirely enclosed by a shield with interlocks to protect users from exposure to harmful laser light. It is imperative that these safety systems are not interfered with and under no circumstances should any optical elements be removed from the microscope light path or fail-safe switches be circumvented.

Chemical Exposure – Hazardous chemicals are used in many microscopy procedures. Ensure correct work procedures are followed to minimise contamination of microscopes.

Sharps – Handle all sharps with care and dispose of in appropriate sharps containers, this includes microscope slides and coverslips.

Scope

This standard operating procedure details the safe practice within the animal behaviour facility at the Queensland Brain Institute to ensure that all welfare, ethics and OGTR conditions are correctly met. It has been written in consultation with Australian/New Zealand Standards: AS/NZS 2243 Safety in laboratories Part 1: Planning and operational aspects and Part 3: Microbiological aspects and containment facilities.

Pre-Start Considerations

Inductions and Training

Every new user must undergo specific training before being allowed to use any given piece of equipment. The trainer must be a member of the microscopy facility team and be granted authorization to use the equipment autonomously before being able to book and use the equipment freely.

A QBI building induction including safe work within PC2 laboratories is required before access to the facilities can be given onto your card. This induction may be shortened if you have already attended a similar induction within another UQ Institute or School – contact ohs@qbi.uq.edu.au for more information.

Equipment

Ensure all equipment is in working order. Do not try and service or repair the microscopes by yourself. If there are problems contact QBI Microscopy team immediately. Microscopes and equipment of the facility are distributed over several rooms in QBI consisting of Level 4 (rooms 412, 414), Level 5 (room 507, 507A, 507B, 513A), level 6 (616, 618) and Ritchie Bld (3B). All these rooms are in or connected with PC2 laboratories and therefore all PC2 regulations should be observed on the premises.

Ethics

All personnel working with and procedures conducted on human samples or animals **MUST** be covered by an appropriate ethics application.

Institutional Biosafety Committee, OGTR and Biosecurity Clearances

All experiments involving viable genetically modified organisms such as tissue exposed to AAV or unfixed human tissue, must be covered by an appropriate Institutional Biosafety Committee (IBC) and if necessary an Office of Gene Technology Regulator (OGTR) approval. Your approval may need to list QBI Microscopy Facilities.

Material requiring Biosecurity (Quarantine) containment must have specific documented work procedures.

Please provide this information to the QBI Microscopy Team.

Personal Protective Clothing and Equipment

The minimum PPE you are required to wear whilst working within this facility is:

Enclosed Shoes – fully covered heel and toe and good coverage of the top of the foot. They should be impervious to liquids. No bare feet, thongs, sandals or ballet flats.

Lab Coat – a white lab coat must be worn at all times when working in the facility. Remove before leaving the lab and launder regularly. Your lab coat must be autoclaved if you suspect it has been contaminated with biologicals, or if you are working with quarantine, viral vectors or human clinical samples. Contact x66418 for collection.

Eye Protection – Safety glasses are considered standard PPE while working within QBI laboratories. They are available in dispensers located at each entrance to the facility. Other styles are available for purchase from QBI Stores. You should collect a pair as soon as possible when you start.

**** Safety Glasses may limit but will not prevent chemicals from splashing into your eyes. Safety Glasses are only suitable when the chemicals you are working with would not harm your eyes in the event of an accident.**

Gloves - Different gloves are available for different tasks. Please ensure that you are using the right type of glove for the task you are undertaking. For chemicals, this information can be found in the SDS (Chemwatch SDS at uq.edu.au/ohs).

Emergency Procedures

Chemical or Biological exposure

Follow these steps **immediately** if there has been a spill of hazardous chemical or infectious biological:

1. Evacuate immediate area – including injured if safe to do so
2. Notify others in vicinity
3. Treat Injured – use emergency showers and eye wash stations and call Security on 336 53333
4. Activate emergency stop if spill is flammable
5. Notify QBI Safety Team on 334 66418 to assist with injured and coordinate clean up.

Emergency stop

Located at the exits of laboratories. Activating this button will shut down the non-potable water, plumbed gas and power points on the floor. This is to be used in an emergency where there is the possibility of an explosion, such as a large spill of flammable liquid, or in the case of an electrocution.



Emergency showers/eye wash stations

Emergency showers and eyewash stations are located throughout the lab. In the event of a chemical spill on your clothes or skin, use the emergency shower by first removing any affected clothing, pulling down the lever and remaining under the shower until the chemical is removed. If chemicals have contacted the eyes, push the paddle on the eyewash station and purge eyes with the water stream, trying to keep them open as much as possible for 20 minutes. Have someone contact a First Aid Officer and medical attention will be sought immediately. Collect any contaminated clothing in a clinical waste bag and seal it. Thoroughly swab down all skin exposed to the spill with paper toweling, chlorhexidine soap and clean water, and dispose of contaminated toweling in the room clinical waste bin. Ask colleagues to notify the QBI Safety Manager, who will ensure the area is clean and escort you to the general shower facility.



Further assistance must be obtained by contacting security on 336 53333, the QBI Safety Manager on 334 66411 or the nearest first aid officer from the list that is beside all first aid kits and on safety notice boards.

Punctures or cuts – If a person is cut or punctured with a sharp contaminated by a biological or chemical substance, wash the affected area under running water while encouraging gentle bleeding of the wound. The wound should then be treated as per normal first aid, by stemming the flow of blood. Further assistance can be obtained by contacting

security on 336 53333, the QBI Safety Manager on 334 66411 or the nearest first aid officer from the list that is beside all first aid kits and on safety notice boards.

Spill control and cleanup:

Yellow biohazard spill kits and clean up procedures are posted on the walls within the main PC2 lab area for spills of infectious biologicals. Orange chemical spill kits are located both inside and outside main labs within QBI. You are responsible for evacuating the area and then notifying the QBI Safety Team on 334 66418 for assistance to co-ordinate the clean-up. Only attempt to clean up a hazardous spill if you know what the spill is and have been trained on spill clean-up procedures. Training is available through UQ Staff Development website.

Biological Spill Kit



Chemical spill kit



All incidents must be reported to the Safety Manager and on UQs online incident reporting system.

Contacts: Security 336 53333 or QBI On-call 334 66418 or QBI Safety Manager 334 66411.

Requirements for Safe Conduct within QBI Laboratories

The following describes the minimum requirements for working within any of QBIs laboratories, including the bee house and aquarium, and has been taken from AS/NZS 2243.1 part 4.1.

Safety in the laboratory depends upon personnel achieving a recognized standard of behaviour. Personnel who have medical conditions that can affect their ability to work safely within the laboratory's procedures, or that can contribute to increasing the hazardous nature of the situation should report this to their supervisor. The following requirements shall apply to all personnel who use or enter the laboratory:

- Always adopt an alert attitude and be conscious of potential hazards. Report hazards, faults, incidents and injuries to the QBI Safety Manager.
- Ensure that personal clothing is suitable to laboratory conditions, e.g. non-slip, closed-in footwear. Do not wear open-toed shoes in the laboratory. Only wear jewelry that either cannot be caught in equipment or contaminated by infectious substances or chemicals, or is protected from these hazards.
- Use protective clothing and devices appropriate to the type of operation being carried out.
- Practice good laboratory hygiene - do not apply cosmetics or handle contact lenses in the laboratory. Do not handle, prepare, store or consume food or drink for personal consumption in the laboratory. Do not smoke within the laboratory or associated storage areas.
- Behave appropriately at all times within the laboratory, do not run and do not sit on lab benches.
- Regard all substances as hazardous unless there is definite information to the contrary.
- Do not undertake any work unless the potential hazards of the operation are known as accurately as possible, and the appropriate safety precautions, including containment, are adopted.
- Wash skin areas that come in contact with chemicals, irrespective of concentration or biologicals. Wash hands upon leaving the laboratory.
- Practice good housekeeping, e.g. immediately cleaning up spills and correctly disposing of wastes including packaging. Do not allow the laboratory to become cluttered and ensure there are no slip or trip hazards. Replace benchcoat frequently.

- Make sure you are not under the influence of anything that may impair your ability to work safely (e.g. prescription medication or alcohol)
- Any skin abrasions must have a waterproof covering applied to prevent potential contamination.
- Long hair must be tied back before entering the lab to ensure it doesn't get contaminated or caught in equipment.
- Microbiological waste shall be disposed of appropriately and any re-useable labware shall be collected and decontaminated appropriately.
- Potentially contaminated equipment shall not be removed from the area or worked on by maintenance personnel without first being decontaminated.

After hours work

Workers must NOT work alone after hours unless:

- they are EXPERIENCED in the task they are doing and their supervisor has approved them to work after hours
- No High Risk work is to be carried out after hours – ie. Working with highly toxic chemicals, large volumes of corrosives or significant exposure to mechanical, radiation or electrical hazards.
- All rules that apply during regular hours must be followed including wearing correct PPE.
- Let someone else in the building know you are here and what your intended work is and wear your ID at all times.
- NO children and non-QBI personnel in laboratories. Outside lab areas, children must be supervised at all times.
- In the event of a fire alarm, evacuate the area IMMEDIATELY. Go directly to the regular QBI evacuation assembly area in the Brian Wilson Chancellery Annex.
- When you are finished your work, ensure that your work area is safe and notify any personnel still working that you are leaving.
- You can arrange to be driven to your car or home (if you live locally) by the University's Safety Bus (336 51234). A timetable is available using the **UQ SafeZone app** - <https://www.pf.uq.edu.au/unisafe/uqsafezone/>
- In the event of an **emergency**, contact UQ Security immediately on 336 **53333** or by using the **UQ SafeZone app**
- Contact **334 66418** for 24/7 equipment and building support (QBI On-call)
- You are not permitted to sleep overnight in any part of the building.

Biological Waste (Clinical waste)

- All non-chemical waste generated by research in QBI laboratories is termed Clinical waste (other terms are biological or path waste). This waste is classified in the Australian Dangerous Goods Class 6.2 'Infectious Substances'. This means it cannot be disposed of in the general waste as there is a risk it will cause harm to people or the environment.
- Clinical waste includes both contaminated items (e.g. sample containers, kimwipes etc.) as well as items that can be *perceived* to be Clinical waste. This means that, for example, gloves can NEVER be disposed of in general waste, even if you know they are 'clean', because they are assumed to be contaminated.
- **This waste must be placed in Yellow bins with Yellow liners, both labelled with the biohazard symbol.** Once these bins are full (not overflowing!), **seal the bag** and place it in the large yellow 240L lined wheelie bins located in the PC2 lab areas and goods lift lobby.
- **'Sharps'** waste – anything capable of causing abrasion or puncture injury, or has the potential to pierce the yellow bin liners, must be disposed of in a **Sharps container** (available from the QBI store). Ensure nothing is protruding from the top of the sharps container. Once sealed, these containers can then be placed into a yellow clinical waste liner before being deposited in the large yellow wheelie bins. *Note – scalpel blades must only be removed from handles using the 'Qlicksmart' system (pictured), also available from the QBI store.

Transporting material

Transporting samples or chemicals within UQ must be done safely. Biological samples must be double contained within a sealed primary container (e.g. tube, culture dish sealed with parafilm, etc) and then within a sealed, unbreakable outer container (e.g. a hard plastic esky with a lock-down lid). The secondary container must be lined with absorbent material

(e.g. paper towel) and labelled correctly with your name, contact number and biosafety symbol if leaving QBI.

Transport of biological materials between institutions domestically and overseas is subject to several different regulatory regimes, including OGTR and Dept of Agriculture and Water Resources and depending on what type of transport is used. If you need to send materials to other institutions, please contact the Safety Manager a few days prior to dispatch for assistance to ensure the materials are packaged and labeled correctly, and appropriate paperwork is included with the package. If transferring GMOs to other Australian institutions you need to notify the facility receiving the material that they are required to have the appropriate approvals and ensure that the materials are handled and stored according to OGTR guidelines. You must keep a record of this transport.

University vehicles are available to designated drivers for transporting biologicals or correctly packaged chemicals within the local area. Training for this is available through UQs Staff Development website: www.uq.edu.au/staffdevelopment. Do not use private vehicles for this purpose as it may not be covered by the drivers insurance. Correctly packaged samples can also be transported accompanied via taxi or public transport

Unattended experiments

If you need to leave an experiment unattended, make sure you label it with your name and contact details, description of the experiment and its components, any associated hazards, emergency instructions (spill procedures or emergency contacts) and how long you intend to leave the experiment unattended.

Contacts

- QBI Microscopy Team Manager – Rumelo Amor – 0449 078 485
- QBI Microscopy Team – Contact numbers are on microscopes.
- QBI Safety Team or Building Related Emergency - 66418

Document History

Version	Date Approved	Author	Description of changes
1	23/10/2018	Ross Dixon	Creation of document

