

QUEENSLAND BRAIN INSTITUTE – TRAINING AND COMPETENCY RECORD

Working with Confocal Microscopes QBISOP#54

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 the Queensland Workplace Health and Safety Act and Regulations.

This form must be signed off by both the trainer and trainee and forwarded to the trainees QBI supervisor (generally the Chief Investigator). The supervisor must sign this form and forward it 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 the microscope  YES  NO

How to use objectives to prevent oil contamination of air objectives  YES  NO

How do you shut down the confocal?
.....
.....

When using an oil objective, what do you need to do if you want to go back to using an air objective?
.....

If you think you have damaged something on the microscope what should you do? .....
.....

STATEMENTS

Statement by Trainee:

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

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

Statement by Trainer:

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

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

Signature of Supervisor:..... Date:.....

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



## QUEENSLAND BRAIN INSTITUTE – STANDARD OPERATING PROCEDURE

### Working with Confocal Microscopes QBISOP#54

SOP Prepared By: Luke Hammond

SOP Reviewed By: Clare Seaman

SOP Version # 54

Date of issue: 10/01/2012

Date of next review: January 2014

Custodian: Clare Seaman

Expert User: Luke Hammond

## WORKING WITH GENERAL MICROSCOPES



**Ergonomics: Use of mouse and keyboard / viewing computer screen** – Prolonged use of the microscope and microscope computer without breaks can increase the risk of muscular strain.



**Eye strain and fatigue** – Viewing samples through microscope eye piece or computer monitor over lengthy periods of time can result in eyestrain and headaches.



**Exposure to sharps** – Exposure to razor blades, scalpels, forceps, cover slips, glass slides could result in cuts or puncture wounds to hands or other areas of the body. Any microscope slide shards or glass debris must be disposed of in the appropriate sharps disposable bin in accordance with PC2 regulations.



**Exposure to intense fluorescent and laser light** – Laser, mercury vapour, and xenon light sources including ultra-violet emissions are used to induce fluorescence. These sources can be intense and dangerous. Under no circumstances should any optical elements be removed from the microscope light path or fail-safe switches be circumvented. Avoid direct exposure to the light.

## Scope

This procedure details the method for using the confocal microscopes.

## Safety Considerations

### Personal Protective Equipment (PPE):

**Laboratory coat, latex gloves and closed in shoes** should be worn to prevent injury. Safety glasses must be worn if you are using glass pipettes.

### Ergonomics and Risk Exposure:

Appropriate ergonomics, including adjustment of the seat, computer screen and microscope oculars should be undertaken to reduce risk of strain injuries.

### Emergency Procedures:

#### First aid may be required for:

**Exposure to sharps** – Contact the nearest first aid officer from the list that is beside all first aid kits and on safety notice board.

**Exposure to intense fluorescent and laser light** – Seek immediate medical assistance if you have been exposed to intense direct light or laser light.

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

Contacts: Security x53333 or OH&S Manager Ross Dixon 0401 673 654

## Pre-start check

- **Risk Assessment #27004 must be read and checked off.**
- **Risk assessments for your own laboratory work must be completed.**

## PROCEDURES

**This sop is a general introduction to confocal microscope use at QBI. Ensure that you have completed the appropriate training session (with a microscope manager) for the microscope you intend to use.**

- Follow the safe start-up and shutdown procedures – these are outlined in the microscope instructions.
- Ensure the lasers have cooled down before turning off the main power.
- Any microscope slide shards or glass debris must be disposed of in the appropriate shapes disposable bin in accordance with PC2 regulations.
- Immersion oil, used sparingly and correctly, does not present an immediate hazard. If contact with skin occurs wipe off with tissue and wash hands as soon as convenient. Avoid contact with eyes and lips.
- The microscope must be booked prior to use.
- When using the microscope stretching breaks should be taken. It is recommended to spend roughly 1 minute stretching every 30 minutes on the microscope.
- If the microscope does not work or you encounter any problems **contact a microscope manager – do not attempt to repair a microscope**
- Biological and potentially infectious material is used on the scopes such as unscreened human tissue or samples that have been infected with viral vectors. All scope work should be performed following PC2 work guidelines and any biological material spilt must be cleaned up with 70% ethanol.