

STANDARD OPERATING PROCEDURE:
BIOSAFETY LEVEL 2 WORK IN THE 9.4T MRI FACILITY

1. INTRODUCTION

- 1.1. The static magnetic field in the 9.4T MRI Facility is always present. It is important that all those entering the facility be aware of the presence of the field, as it cannot be detected by our person in any way, i.e. magnetic fields cannot be felt, seen, or smelt.
- 1.2. Research involving animals presents unique hazards related to naturally occurring pathogenic organisms which may be transmitted from the animals and infect the people working with and caring for these animals. Similarly, humans may transmit diseases to animals.
- 1.3. The 9.4T MRI Facility, excluding the Tech office and the Control room, is considered a Level 2 Biohazard Facility as outlined by Health Canada's "Laboratory Safety Guidelines, 3rd edition". Work related to Centre for Brain Mind (CBM) animals involves extra procedures and precautions in addition to standard Biosafety Level 2 guidelines. Only authorized personnel will be admitted in procedure rooms and adjacent areas during these experiments or procedures.

2. GENERAL BIOSAFETY LEVEL 2 GUIDELINES

- 2.1. Biosafety Risk Group 2 represents pathogens that can cause human or animal disease, but, under normal circumstances, is unlikely to be a serious hazard to healthy laboratory workers, the community, livestock or the environment. Laboratory exposures rarely cause infection leading to serious disease. Effective treatment and preventative measures are available and the risk of spread is limited.
- 2.2. Each experimental protocol will be reviewed on an individual basis to assess any specific risks or hazards. A separate Standard Operating Procedure (SOP) will be designed for each protocol. New SOPs will be named "Biosafety Level 2 Experiment Guidelines: XXX" where XXX represents a unique identifier for the experiment, species, or biohazardous agent. In instances where new protocols require no modification of the existing SOP, the existing SOP(s) that apply will be used.

3. PERSONAL PROTECTIVE EQUIPMENT AND SAFETY

- 3.1. There is an eyewash station beside the sink in the 9.4T prep area.
- 3.2. Labcoats must be worn when working with Biosafety Level 2 pathogens. Labcoats are NOT to leave the 9.4T MRI Facility, and also, are NOT to be worn in the console room.
- 3.3. Similarly, gloves are to be worn during all manipulations, and removed before leaving the lab. Gloves are considered biohazardous waste, and should be disposed of in the Biohazard bin in the prep room.

4. PERSONNEL

- 4.1. Only persons cleared for Biosafety Level 2 work will be admitted into the 9.4T MRI Facility while experiments or procedures are underway in the facility. If there are any questions regarding access approval please contact the CFMM facility manager or head technician.
- 4.2. These persons will be enrolled in the UWO Preventative Health Program for Animal Handlers, OH&S monitoring program and be re-certified on a yearly basis.

5. CLEANING AND DECONTAMINATION

- 5.1. Consult SOP#415-01 “Cleaning and Decontamination – Biosafety Level 1 and 2 Experiments” for further details.

6. EXPERIMENTAL BOUNDARIES

- 6.1. Biosafety Level 2 authorized personnel may accompany visitors into the MRI console room only. This individual is responsible for ensuring the appropriateness of the time for tours, etc.

6.2. MRI / Prep Room Procedures:

6.2.1. Level 1

- 6.2.1.1. Optical Lab (OL) and/or Operating Room (OR) may operate as Level 1 or Level 2 when a Level 1 experiment is underway in the MRI or Prep Room (PR)
- 6.2.1.2. Magnet can be operated from Control Room (CR) or PR

6.2.2. Level 2

- 6.2.2.1. Signage must be displayed on both external doors to the facility indicating “Biohazard – Level 2 – Authorized Personnel Only”.
- 6.2.2.2. Only Level 2 authorized individuals are allowed into the facility.
- 6.2.2.3. The door from the CR and the MRI room must remain locked during all Level 2 experiments.
- 6.2.2.4. The MRI will be operated from the PR during MRI procedures.
- 6.2.2.5. The OL and OR may be used during MRI/Prep Room experiments at either Level 1 or Level 2 as long as 5 is satisfied.

6.3. *Optical Lab Procedures:*

6.3.1. Level 1

- 6.3.1.1. MRI, PR and OR may be used for Level 1 or Level 2 experiments. If it is a Level 2 experiment in the MRI, PR or OR then 5 as above must be obeyed and OL room door must remain closed.

6.3.2. Level 2

- 6.3.2.1. Signage must be displayed on the OL door during these procedures indicating “Biohazard – Level 2 – Authorized Personnel Only”.
- 6.3.2.2. MRI, PR and OR may be Level 1 or Level 2 during these procedures.

6.4. *Operating Room Procedures:*

- 6.4.1. The same rules apply to the OR as stated in 5, “Optical Lab Procedures”.

ROBARTS RESEARCH INSTITUTE
CENTRE FOR FUNCTIONAL AND METABOLIC MAPPING
9.4T MRI FACILITY

SOP#500-01

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SOP Approval Signatures

Dr. Robert Bartha, Facility Director

Date

Dr. Greg Dekaban, RRI Biosafety Officer

Date

Ron Noseworthy, RRI Occupational Health & Safety Officer

Date