



All personnel handling animals must have the required Animal Care and Veterinary Services (ACVS) training.

All animal work must be outlined in an approved animal use protocol.

All personnel using the Imaging facilities must be trained and follow the SOPs in place for each facility.

Supervisors must ensure that people using the Imaging facilities have the appropriate health and safety training for the work being performed, per [Health and Safety Training](#) requirements.

Personnel using each Imaging facility must wear the appropriate personal protective equipment. For more information, see the [Laboratory Health and Safety Manual](#), or contact the Lab Safety Coordinator.

Disposal of waste, including hazardous chemical waste, biomedical waste, animal waste and carcasses, must follow the [Hazardous Materials and Waste Management Handbook](#).

Work carried out must meet the requirements of the [Biosafety Guidelines and Procedures Manual](#).

Personnel should complete their [Hazard Communication Form](#) (Western login required) and have the appropriate medical surveillance. For information, please see [Workplace Health](#).

In case of an emergency, such as medical or fire, personnel follow the SOPs in place for the facility accessible on-line or in the Robarts Health and Safety Office:

- Preclinical Imaging Suite: SOP 900 – Emergency Procedures
- 9.4T MRI Facility: SOP 300 – Standard Operating Procedure: Emergency Fire Procedures
- 3T MRI Facility: SOP 3T 215, 210, and 205 – Standard Operating Procedures for Emergency Quench, Fire Code Blue
- Human High Field MRI Lab: SOP 220, 230, and 210 – Emergency Fire, Emergency Quench, Emergency Code Blue

Where there is an emergency invo

## 1.2 Transportation of Animals

### 1.2.1 Transportation of Level 1 Rodents

Level 1 rodents are those not exposed to a Containment Level 2 (CL2) or higher CL agent via ingestion, inhalation, injection, or absorption and are not known to carry a Level 2 zoonotic agents. Level 1 rodents may be transported to the Robarts imaging facilities and within the Robarts building using standard cages. Level 1 rodents may be transported to the University or within the University buildings in standard cages. During transportation, these cages should be covered with a blanket (or equivalent).

### 1.2.2 Transportation of Level 2 Rodents

Level 2 rodents are those which have been exposed to a CL2 agent. Level 2 rodents must be transported in a covered HEPA-filtered cage or an apparatus. The cages or apparatus must be approved by the Director, ACVS and the Biosafety Officer(s) for Robarts. The transportation of Level 2 animals by road, rail, water or air must also follow the appropriate transportation of dangerous goods regulations.

### 1.2.3 Transportation of Non Human Primates (NHP)

Transportation of non human primates is governed by a separate set of SOPs that have been approved by ACVS, members of the Centre for Brain and Mind, and the Biosafety Officers for Robarts. These SOPs are available in the Brain and Mind Facility or the Robarts Health and Safety office and are to be followed for the transportation of primates (NHP) to and from the primate (NHP) quarters and the MRI suites.

## 2.0 Introduction to Rodent and Non Human Primate (NHP) Imaging Research

Follow the SOPs for the decontamination of samples entering the facility and the clean-up of animal excrement, including surface disinfection. Disinfectants must be approved by the Biosafety Officer or in the SOP and must be effective and safe to use on the equipment. The SOPs are available on-line or in the Robarts Health and Safety Office:

Third Floor Preclinical [REDACTED] te: SOP 500 – Cleaning and Decontamination

First Floor 9.4T MRI Facility [REDACTED] 415 – Cleaning and Disinfection – Level 1 & 2 Experiments

Second Floor 3T MRI Facility: SOP 400 – Standard Operating Procedure for MRI Decontamination

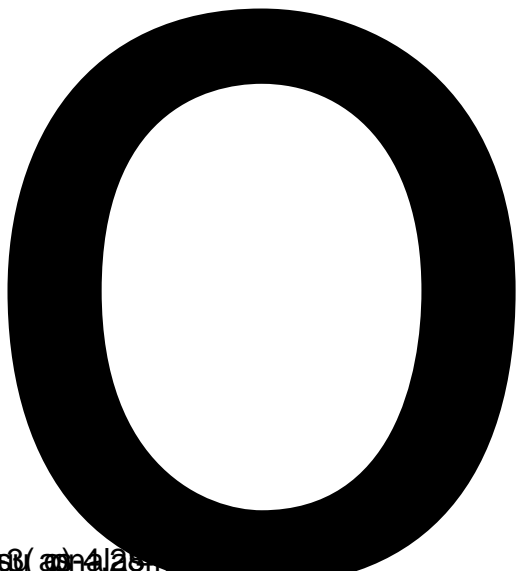
First Floor Human High Field MRI Lab: SOP 415 – Cleaning and Decontamination – Level 1 & 2 Experiments

Gloves and other personal protective equipment must be changed if they have been in contact with animal wastes.

Procedures such as injections, surgery, anesthesia, and euthanasia can be done on the open bench. Scavenging devices must be used in association with anesthesia or euthanasia with a gaseous agent. If a hazardous chemical or radioactive material is involved, this may require the use of a fume hood elsewhere and additional precautions/approvals.

The animal may be placed [REDACTED] or bed on the open bench.

In case of a veterinary emergency [REDACTED] -saving pro G[ca]-3(nc70.00000912 0 612 792 re



Contact the Biosafety Officer at [biosafety@uwo.ca](mailto:biosafety@uwo.ca) for the containment level of the project. For more information, please visit the [Biosafety website](#).

## 2.2.1 Safety Precautions

### 2.2.1.1 Projects Involving Level 2 Cell Lines, Primary Cells and Biological Toxins

Projects involving animals that are exposed to Level 2 cell lines or Level 2 primary cells, which do not contain viruses and/or are not shedding biohazardous agents, must follow the measures listed in Section 2.1.1. In addition to this:

Level 2 agents must be handled in a certified biological/ HEPA filtered safety cabinet

Personnel can transport the animals in a HEPA-filtered cage to the imaging facility. The cage must be opened in the certified biological safety cabinet to perform procedures such as injections, anesthesia and veterinary life saving measures. The animal is placed in a HEPA-filtered apparatus for imaging in the biological safety cabinet. After imaging, the rodent is transported to a biological safety cabinet in an approved Level 2 housing facility. The apparatus is never opened except in a biological safety cabinet.

The apparatus must be certified by a certified contractor such as HEPA Filters Inc. The apparatus must be approved by the Biosafety Officers for Roberts and Animal Care and Veterinary Services. The apparatus must maintain Level 2 containment, and requires safety features such as HEPA filtration, O-rings, threaded ends.

HEPA-filtered cages must be approved by the Biosafety Officers for Roberts and by Animal Care and Veterinary Services.

Waste is collected from the certified biological safety cabinet in bags. The bag is closed in the biological safety cabinet and disposed of by the research

Services. The apparatus must maintain Level 2 containment, and requires safety features such as HEPA filtration, O-rings, threaded ends.

#### 2.2.1.4.2 Approach #2

In some cases, approach #1 is impractical; approach #2 can then be used for Level 2 rodents. This is based on a case-by-case risk assessment and is approved by the Biosafety Officers for Robarts and Animal Care and Veterinary Services.

When the rodents have been previously exposed to a L

the adjacent corridor. Personnel must wear the appropriate personnel protective equipment as mandated by the MRI Facility's SOP 210-01. This includes the wearing of a fit-tested N95 respirator when working with Level 2 animals as a certified biological safety cabinet is not available. Protective clothing must be removed before leaving the MRI facilities as stated in SOP 210. Decontamination procedures for the MRI suites are outlined in the Facility SOP 415 and the MRI Suite Decontamination procedures for the suites are outlined in the Facility's SOP 415 and the MRI Suite Decontamination Procedures: SOP 3900 for the Center for Brain and Mind. Researchers must follow the Use of MRI Suite for NHP Imaging: SOP 4600 and other Center for Brain and Mind Rhesus Facility Standard Operating Procedures. Personnel must be specially trained to work in the MRI Level 2 containment suites.

### 3.0 Introduction to *In vitro* Research Involving Imaging

Samples are prepared for imaging in an approved biosafety laboratory. Samples are brought to the imaging facility in sealed leak- and shatter-proof containers. Samples are put in a coil or a bed and/or HEPA-filtered apparatus for imaging purposes.

#### 3.1 Imaging Involving Fixed Samples

Level 2 or Level 2plus samples fixed with chemicals such as formalin or comparable agent are no longer considered biohazardous. These samples can be imaged as Level 1 samples. If samples need to be opened, they should be opened in a chemical fume hood.

3.2]TETQq0.00000912 0 612 792 reW\*nBT/F1 12 Tf1 0 0 1 404.06 50es.



There are no biological safety cabinets in these facilities. Samples must be prepared in a biological safety cabinet in an approved Level 2 laboratory elsewhere. Sealed leak- and shatter-proof containers are not to be opened in the facilities. The sample is kept closed during transportation and imaging of the samples.

#### 4.0 Imaging Involving Work at Level 2 plus Level 3 Operations

The researcher must have an approved, current Biological

