

9.4T MRI FACILITY
SOP# 400-03: ANIMAL EXPOSURE & HEALTH ISSUES

1. INTRODUCTION

- 1.1. 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.
- 1.2. 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". However, not all work conducted is Level 2. As such, consult each individual Animal Use Protocol to determine the appropriate Personal Protective Equipment required.
- 1.3. All employees and students working with animals must be enrolled in the Health Monitoring Program at UWO Workplace or Student Health.

2. ZOONOSES

- 2.1. **Definition:** The Canadian Council on Animal Care defines zoonosis as a disease of animals that may, under natural conditions, be transmitted to humans. The list of potential zoonoses related to research is quite long, however, the incidence of infection can be relatively low if the proper precautions are used.
- 2.2. **Precautions:** No eating or drinking or storage of food is allowed in the lab areas. Gloves must be worn when handling animals and animal related items. Hands must be washed upon removal of gloves, and again prior to leaving the facility. A lab coat, scrubs, or other protective clothing must be worn when working with animals.
- 2.3. **Prevention:** UWO Workplace Health oversees the preventative health program for all UWO employees and students who work with animals. It is important to update your Position Hazard Form if your duties in the lab change, or if the species you are working with changes.
- 2.4. **Laboratory Animal Allergy (LAA):** Although this is not a zoonotic disease, LAA may be the most prevalent occupational hazard facing people who work with research animals. The animal allergens are mostly small molecular weight proteins such as albumen. These proteins occur in the serum and tissues, but also in the saliva, urine and skin dander. The appropriate use of personal protective equipment such as good quality particulate masks and gloves can significantly reduce exposure to animal allergens.

3. IMMUNIZATION

- 3.1. Records on the vaccination status of all employees are maintained by UWO Workplace Health. Depending on the specific position and/or species handled, immunizations or tests may be warranted. Consult "UWO Preventative Health Program for Animal Handlers Policy" for more information.
 - 3.1.1. **Tetanus:** To minimize the risks associated with infections arising from any penetrating wounds such as animal bites or needle-sticks, all persons working in laboratory animal facilities should maintain their tetanus vaccination status.

- 3.1.2. Rabies Vaccination: All persons at risk of exposure to rabies from any animal that may be infected, should be vaccinated against rabies. Any animals brought into experimental animal facilities that might have been exposed to rabies should be considered risks. Staff may be required to have rabies vaccination as a condition of working with certain species.
- 3.1.3. Hepatitis B: Immunization is strongly recommended for all workers who routinely handle or who have occupational exposure to human blood, body fluids, organs or tissues. Employees may be immunized depending on the individuals risk group, as determined by contact.
- 3.1.4. TB skin test: Commonly performed on any personnel working with animals. Tuberculosis affects humans, primates, cattle and rodents.

4. PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 4.1. Due to the variance of work conducted in the 9.4T MRI Facility, the PPE necessary will depend on the specifics of each particular experiment. At a minimum, lab coats, safety glasses and gloves are recommended.
- 4.2. Consult SOP#210 “Personal Protective Equipment”, other related Facility SOPs and each individual Animal Use Protocol for specifics and clarification.
- 4.3. As stated in 1.2, the 9.4T MRI Facility is a Level 2 Biohazard Facility.

5. ANESTHETIC GASES

- 5.1. Isoflurane is provided for use in the 9.4T MRI Facility. When used properly, it is a very safe and effective means to keep animals asleep during imaging.
- 5.2. Safety precautions when using isoflurane include: using a precision vaporizer for induction and maintenance; using an appropriately sized induction chamber; using the lowest flow possible to maintain the animals; using and measuring charcoal scavenger canisters.

6. ANIMAL BITES

- 6.1. Personnel, who have not been trained to handle animals, should not do so. Animals can be very unpredictable and proper training is mandatory.
- 6.2. A bite from an animal can turn into a very serious matter. If an animal has bitten you, follow the procedures outlined below. These procedures are also posted throughout the 9.4T MRI Facility.
 - 6.2.1. Immediately wash the wound and surrounding area thoroughly with an antibacterial soap. It is recommended to scrub vigorously for 3-5 minutes, rinse, and repeat two more times.
 - 6.2.2. If the wound is bleeding, attempt to encourage bleeding by expressing the wounded area.
 - 6.2.3. Cover the wound with a dry, sterile dressing.
 - 6.2.4. Immediately inform your supervisor of the incident and fill out an incident report form and follow the instructions on that form.
 - 6.2.5. Seek medical attention from UWO Workplace Health. It is advisable to seek medical care in ALL bite cases. After hours, report to University Hospital Emergency Department.
 - 6.2.6. Contact UWO Workplace Health Services for more details.