

COMPARATIVE MEDICINE
LABORATORY ANIMAL FACILITIES

STANDARD OPERATING PROCEDURES
For
HUSBANDRY OF ANIMALS EXPOSED TO ROTENONE OR MPTP

- 1.0 Purpose
This procedure details the husbandry/safety precautions needed to safely/humanely house animals exposed to Rotenone or MPTP. Significant exposure to MPTP or rotenone is known to cause an irreversible Parkinson's Disease-like state.
- 2.0 Scope
This procedure applies to all CMLAF and Principal Investigator staff who will work with animals receiving MPTP.
- 3.0 Procedure
 - 3.1 All animals designated to be exposed to Rotenone or MPTP will be housed in the 305 Biosafety Suite in the Biomedical Education Building.
 - A. Animals will be housed in microisolators during exposure period.
 - 3.2 Entrance and personal protection requirements will remain standard for the unit (see SOP 3.E.1) with the exception of:
 - A. An N-95 mask will be used instead of the normal dust mask.
 - B. Nitrile gloves will be used instead of latex gloves for handling MPTP exposed animals.
 - C. Goggles shall be worn when handling MPTP exposed animals.
 - D. Rotenone surgical animals shall be handled with double gloves
 - 3.3 Personnel must partake in a pre-screening evaluation by Dr. David Hughes at ECMC, before exposure to affected animals.
 - 3.4 The room housing the animals will be posted with a Hazardous Substances Information Sheet.
 - A. Additional information included on the sheet will be a list of principal investigators' emergency names and contact phone numbers.
 - 3.5 Room environmental conditions will be maintained as per species specific husbandry SOPs (see 1.B.12-1.B.25), unless otherwise requested in approved animal protocol.
 - 3.6 Procedure for dealing with an exposure to MPTP: An exposure is defined as:
 - A. A skin puncture with materials contaminated with MPTP.
 - B. Ingestion of MPTP
 - C. Mucous membrane exposure to MPTP (e.g. Eyes, nose, mouth)
 - D. Inhalation of MPTP powder
 - E. Cutaneous exposure to MPTP if skin is broken (e.g. Wound)
 1. Immediately ingest four (4) selegiline HCl 5 mg capsules.

2. Selegiline will be located in the blue cabinet in the main work area in the BSL-2 unit. The cupboard will be clearly marked.
 3. Initiate first aid at the worksite: Contaminated skin should be washed with copious amount of soap and water for 15 minutes; contaminated eyes and mucous membranes should be irrigated for 15 minutes, using normal saline or water.
 4. Notify PI and your supervisor immediately.
 5. Call Dr. David Hughes, ECMC Occupational Health Physician 898-4153 to arrange a follow-up consultation, or have PI or your supervisor call to determine what additional steps are warranted. It is important that you obtain a prescription from Dr. Hughes for selegiline 5mg, 2x/day for the next 4 weeks. If you have difficulty obtaining this prescription, you can use the LAF selegiline 5mg supply until your prescription is obtained and filled.
 6. While you are taking selegiline, you should avoid drinking alcohol or eating foods high in tyramine (such as cheese and processed meats) or taking decongestant medications (eg, pseudoephedrine) or any stimulant medications (e.g. Ephedrine, cocaine, ecstasy). Rarely, the combination of selegiline with these products can lead to a dangerous elevation of blood pressure. If you are taking an antidepressant, you should let Dr. Hughes know. Rarely, the combination of selegiline with an antidepressant can lead to a condition called Serotonin Syndrome.
- 3.7 Procedure for dealing with a possible MPTP exposure:
- A. Immediately initiate first aid at the worksite, as outlined above.
 - B. Notify PI and your supervisor immediately.
 - C. Contact Dr. David Hughes, ECMC 898-4153 to determine whether presumptive therapy is warranted.
- 3.8 Principal investigator will inform animal care staff of all MPTP injection/Rotenone surgical dates and clearly identify the animals' cages that have been exposed.
- A. Rodents will excrete MPTP in urine and feces for no longer than 72 hours post injection.
 - B. An MPTP exposed animal will NOT be handled by the CMLAF staff within the first 72 hours of exposure.
 1. If an animal needs husbandry/veterinary care within this first 72 hour period, the principal investigator emergency contact person will be called to perform/assist with the procedure.
 2. If the animal must be removed from the cage, place it on a blue underpad. When finished, spray 5% bleach solution on the underpad prior to disposal in a hazardous waste bag. Spray the outside of the bag with bleach and incinerate immediately.
 - C. Rotenone surgical implanted animals will be handled by CMLAF staff always under a hood and while wearing double gloves.
- 3.9 Changing of cages.

- A. Animals exposed to MPTP will not have cages changed until after the initial 72 hour period has elapsed.
 - 1. The first cage change immediately following the initial 72 hour period will be performed inside a Class II changing hood.
 - 2. The animal will be placed in an entire clean cage set up.
 - 3. The dirty cage/lids, bottle and cage card holder, will be sprayed with 5% household bleach solution and let stand for 10 minutes.
 - 4. After at least 10 minutes dirty bedding will be scraped into a hazardous waste bag and the cage will once again be sprayed with 5% bleach (for at least 10 minutes).
 - 5. Waste will be sealed, the outside of the bag sprayed with bleach and immediately incinerated.
 - 6. Cage, lid, water bottle and cage card holder will be taken to cage wash for processing.
 - 7. Animals changed after the initial time can be handled as uncontaminated.
 - a. After initial 72 hour period microisolator is not necessary.
 - B. Animals receiving the surgically implanted osmotic pump containing Rotenone, will always be considered “contaminated” and handled as such.
 - 1. Microisolation will remain a constant.
 - 2. The entire cage will be changed when necessary.
 - 3. All cages will be handled inside the hood.
 - 4. All dirty cage parts will be sprayed with 5% bleach and allowed to stand for at least 10 minutes.
 - 5. Bleach soaked bedding will be removed from the cage and placed in a hazardous waste bag.
 - 6. Empty cage will be resprayed with 5% bleach and allowed to stand for 10 minutes.
 - 7. Waste material will be sealed and then immediately incinerated.
 - 8. All cages and accessories will be taken to cage wash for the cleaning process.
- 4.0 Rack changing.
- A. Entire empty rack will be sprayed with 5% bleach, including the wheels.
 - B. Bleach will be allowed to stand for at least 10 minutes.
 - C. The rack will be taken downstairs for washing.
- 4.1 Room cleaning.
- A. To be performed during a break in the study or when study is complete.
 - 1. Personnel must don protective apparel (goggles, N95 mask, gloves, gown, foot covers)
 - 2. All walls, ceiling and floor will be sprayed with 5% bleach and let stand for at least 10 minutes.
 - 3. All surface areas then soaked with PV-15 and let sit for 10 minutes.
 - 4. All surface areas power sprayed with clean water.

