1. **PURPOSE**

This Standard Operating Procedure (SOP) describes the basic procedures for routine care and husbandry of macaques.

2. **RESPONSIBILITY**

Animal care staff, facility supervisor, facilities manager

3. **MATERIALS**

3.1. Personal protective equipment:
   - 3.1.1. Shoe covers
   - 3.1.2. Laboratory gown
   - 3.1.3. Hair bonnet
   - 3.1.4. N-95 Mask
   - 3.1.5. Gloves
   - 3.1.6. Face shield
   - 3.1.7. Protective Kevlar® sleeves (optional)

3.2. Diet:
   - 3.2.1. Appropriate animal diet (within six months of the milling date)
   - 3.2.2. Fresh fruits and other special treats (appropriate for human consumption)

3.3. Clean water bottles
3.4. Clean cage trays with bedding
3.5. Bedding
3.6. Clean environmental enrichment devices
3.7. Clean cages
3.8. Cage cards
3.9. Disinfectant

4. **PROCEDURES**

4.1. Observation of animals:
   - 4.1.1. Observe all animals daily for illness, injury and general condition, including weekends and holidays.

4.2. Emergency and holiday care:
   - 4.2.1. Provide routine care and husbandry for all animals on weekends and holidays.
   - 4.2.2. Make provisions for emergency care by providing both work and after hours contact information for Principal Investigators (PI’s) and their staff. Provide special requests or instructions if needed.

4.3. Animal identification methods:
   - 4.3.1. Identify all cages or enclosures with a cage card.
   - 4.3.2. Include, at a minimum, the following information:
     - 4.3.2.1. Investigator
     - 4.3.2.2. Protocol number
     - 4.3.2.3. Species
     - 4.3.2.4. Strain
     - 4.3.2.5. Sex
Identify individual animals as needed in accordance with SOP. Examples of individual identification methods include: tattoos, micro-chips.

Caging:
- Provide cages that are appropriate in size for the species, number and weight of the animals housed in them. Refer to CCAC recommendations.
- All macaque cage doors and cage dividers are locked with a padlock to prevent accidental opening and escape of the animal.

Food and water:
- Feed animals to meet current National Research Council (USA) recommendations for primate nutrition.

Food storage:
- Store feed on plastic pallets off the floor and 4-6 inches away from walls, in a vermin-proof storeroom.
- Store open feed bags in leak-proof containers with tightly fitting lids.
- Maintain temperature and humidity controls in the storeroom. Avoid temperatures above 21°C and extremes in humidity.
- Use feed within 6 months of milling date.
- Stack feed in a manner that allows easy reading of the milling date.
- Check automatic watering devices and flush them weekly for proper operation.
- Empty water bottles, rinse and fill with fresh water daily. Change bottles weekly.
- Monitor water quality routinely to ensure that it is free of contaminants that could potentially expose animals to chemical or infectious agents. Refer to SOP for water quality monitoring requirements.

Social and environmental enrichment:
- Group-house animals whenever possible.
- Provide environmental enrichment devices for all macaques.
- Refer to Environmental Enrichment Program for NHPs SOP.

Quarantine procedures:
- Refer to SOP.

Euthanasia and disposal of dead animals:
- Euthanize animals by overdose of anesthetics. Refer to Large Animal Euthanasia SOP.
- Ensure that euthanasia is conducted by trained and experienced staff.
- Dispose of dead animals by incineration.

Vermin control:
- Refer to SOP for a description of the vermin control program.

Environment and environmental control:
- Maintain room temperatures between 18 and 29°C.
- Maintain relative humidity between 30% and 70%.
- Maintain a daily log of room temperature and humidity.

Lighting:
- Provide a regular diurnal lighting cycle

Note: Lights are controlled by timers set at a photoperiod of 12 to 14 hours of light. Check the timer performance routinely.

Space requirements:
- Follow the Canadian Council on Animal Care (CCAC) recommendations for space requirements.

Bedding
- Provide approved bedding in enclosures (e.g., wood shavings). Cedar shavings are not recommended, due to the presence of aromatic hydrocarbons.
4.13.2. Use a sufficient quantity of bedding to keep the animals clean and dry.
4.13.3. Store the bedding off the floor on pallets and in such a manner to prevent contamination.

4.14. Cleaning and sanitation of cages:
4.14.1. Cage pans are cleaned three times per week, at a minimum.
4.14.2. Change cages once every two weeks, at a minimum:
   4.14.2.1. Cover cage and bring to cage wash area.
   4.14.2.2. Environmental enrichment devices are cleaned and replaced at the time the cages are changed.

4.15. Cleaning and sanitation of enclosures:
4.15.1. Enclosures are washed every two weeks, at a minimum:
   4.15.1.1. Remove soiled bedding.
   4.15.1.2. Clean the soiled cage thoroughly by hosing down and removing debris.
   4.15.1.3. Spray with disinfectant and let sit. Remove debris using a brush if necessary.
   4.15.1.4. Rinse cage thoroughly then add clean bedding.
4.15.2. Environmental enrichment devices are cleaned and replaced at the time the enclosures are cleaned.
4.15.3. Foraging treats can be added to the clean bedding before returning animals to the enclosure.

4.16. Cleaning and sanitation of housing room and equipment:
4.16.1. Daily:
   4.16.1.5. Clean walls surrounding the cages if necessary.
   4.16.1.6. Wash the floors with disinfectant solution.
   4.16.1.7. Bring waste to compactor.
4.16.2. Weekly:
   4.16.2.1. Flush the floor drains.
   4.16.2.2. Restock supplies (mask, gloves, feed, bedding, etc.)
   4.16.2.3. Launder lab coats, Kevlar® sleeves.
   4.16.2.4. Clean face shields.
4.16.3. Monthly:
   4.16.3.1. Clean the walls with disinfectant solution
   4.16.3.2. Wipe down all surfaces such as sinks, doors, door jams and doorknobs, windows, cart tops, shelves, etc. with the disinfectant solution.
   4.16.3.3. Run garbage container through cage washer.

4.17. Transportation:
4.17.1. Transport animals as per SOP.

4.18. Preparation disinfecting solution:
4.18.1. Wear personal protective equipment when preparing and using disinfectant solution.
4.18.2. Dilute according to manufacturer’s recommendation.
4.18.3. Clean surfaces prior to disinfection to remove any organic material.
4.18.4. Apply disinfectant and allow for adequate contact time.

4.19. Waste Management:
4.19.1. Deposit non-regulated or non-infectious Medical Waste and soiled materials in dumpsters.
4.19.2. Regulated or infectious Medical Waste is processed by McGill University's Waste Management program.

5. SAFETY

5.1. Observe the Macaque-Related Injury SOP.