Center for Biomedical Research Animal Care Policy

This document is written with the purpose of describing the specific methodology for laboratory animal care in the institute. It is a practical interpretation of applicable federal policies governing the care and use of research animals. All animal care functions within the institute fall under the jurisdiction of the United States Department of Agriculture (USDA). The USDA maintains full authority to conduct random inspections and enforce government policy. The Institutional Animal Care Committee (ACC) is responsible for oversight of animal care within The Queens Medical Center. Within this oversight group is a licensed veterinarian and is augmented by emergency veterinarians. When animals are on the premises for 24 hours or more, the veterinarian is on site regularly and is responsible for technical oversight of the animal care. An on-site technician within the Center for Biomedical Research assists him.

The Center for Biomedical Research Animal Care Policy is divided into three parts as follows:

Part 1: Standard Operating Procedures.
Part II: Long-term Laboratory Animal Care.
Part III: Surgical Facilities.

The use of laboratory animals during experimental procedure is not within the scope of this document, but can be found in the approved protocol.

Part I: Standard Operating Procedures.

1. Standard operating procedures are defined as general laboratory practices common to all aspects of laboratory animal use and care. Standard operating procedures are complementary to parts II and III. Personnel working with laboratory animals must maintain a high standard of cleanliness and be careful not to take any unnecessary risks. Standard operating procedures promote safety and cleanliness, and may be amended as necessary to ensure appropriate animal care.

2. All personnel must receive training by the primary veterinarian before handling research animals in any capacity.

3. There is no smoking, eating, or drinking in any part of the facility where laboratory animals are or may be present.

4. A laboratory coat/gown and gloves should be worn at all times when handling research animals. Laboratory coats must be washed as soon as possible when soiled with blood or feces. Gowns must be disposed of when soiled.

5. Sharps (needles, scalpel blades, broken glass, etc) must not be left out in the Surgery/long-term care areas, but disposed of properly in a designated container. Needles must be capped if they are to be re-used at a later time. Cap needles using the single hand technique.

6. Used/dirty animal cages are to be found only in designated areas separate from the long-term care room or the surgical room. Room 815 adjacent to the surgery room is designated as drop points for dirty cages. Dirty animal cages and their components must not be found in any other part of the institute. Dirty/used cages and components include plastic cages, metal cage tops and floors, water bottles, and used animal bedding/food.

7. Medical waste (i.e. blood products, tissue, and any materials contaminated by blood/tissues) will only be disposed of in trashcans designated by red infectious waste bags. The bags will then be disposed of in the typical manner authorized by the Queen's Medical Center. The bodies of sacrificed animals will be placed in clear bags, frozen, and disposed of by housekeeping

8. Rodents are to be handled gently in an effort to minimize stress at any level of consciousness. Rodents can be picked up by the tail or by the loose skin of the neck. Heavier gloves are suggested for agitated, sick, or post-operative animals to reduce the chance of an animal bite. In the event of an animal bite, laboratory personnel should initiate proper first-aid care immediately, notify supervisor, then report to Employee Health.

9. Cleaning procedures will be as follows: daily sweeping of both surgical and long-term care (when applicable) rooms. Mopping of surgery and long-term care (when applicable) rooms three days a week. This process will be confirmed by written log in the case of the long-term care room (when applicable). 10% bleach is used to disinfect surfaces contaminated with blood. Surgical instruments are cleaned with 90% ethanol and sterilized using the QMC central autoclave (if necessary). When working with disinfectants it is important that the manufacturer's indicated precautions are taken to ensure the good health of workers and animals.

10. Food stored in vermin-proof containers in a cool, dry area adjacent to the animal enclosure (when applicable).

11. Illness and death:
    A. In case of unanticipated animal illness, notification is to caretaker, researcher, and veterinarian.
    B. In case of unanticipated animal death notification is made as above and shall be verified in writing in the animal log by the researcher or manager.

12. The research lab is no longer authorized to use radioactive material in animal studies.

13. The procurement (when applicable) of animals shall be done with notification of consulting veterinarian and the Office of Research, Planning and Development, and the Hawaii State Department of Agriculture.

14. When animals are housed on the 8th floor of University Tower, the research staff is responsible for assuring continuity of care of the animals over weekends and vacations. The research staff can also be reached by cell phone in case of emergency. Emergency numbers shall be available and posted.

Part II: Long-term Laboratory Animal Care (when applicable)

Long-term laboratory animal care encompasses all animal care activities occurring outside the experimental protocol. Surgical procedures and other such manipulations are not to occur in the long-term care (when applicable) facility. Research animals will be acquired under a specific protocol that has been approved by the ACC. The research animals will include rats, mice, and possibly rabbits at a future date. Rats are acquired from a commercial source with health certificates. The animals will have a clean and, to the extent possible, stress free environment. Research animal health and infection control issues will also be addressed.

A. A clean environment will be ensured by:

1. Housing animals in an appropriately designed room, i.e. tile with basin style flooring and a drain in the center. There is a hose available.
2. Separating the surgical area and the soiled cage storage area from the long-term animal care room.
3. Maintaining a capacity of 12-15 air exchanges per hour in the long-term care rooms, augmented by a vented cabinet that will filter animal dust particles and smell (HEPA filtration).
4. Removing soiled bedding and replacing it with new material as often as necessary to keep the animals clean and dry.
5. Using a high-heat cage washer (180 degrees Fahrenheit) to clean soiled cages, water bottles, metal cage tops and floors. Soiled cages will be washed with detergent, and all metal components will be cleaned with detergent plus acid.

B. A stress free and physiologically appropriate environment will be ensured by:

1. Isolating animals in the long-term care room away from human activity.
2. Providing ample social conditions. There will be no more than three rats to a cage and not more than five mice to a cage. Two animals per cage will be maintained whenever possible.
3. Using a timer driven cycle of 12 hours of light in the day and 12 hours of darkness at night.

4. Maintaining a constant temperature at 70 degrees Fahrenheit ±4 degrees. Humidity will be maintained at 60% ± 10%. Both temperature and humidity will be confirmed with regular log entries.
5. Allowing constant access to clean and palatable food and water (except fasting animals according to experimental requirements).
    A. Rabbits: 4% body weight rabbit pellets and 16 ounces water will be provided daily via water bottles or ad lib from bottled water which should be at least 60% full.
    B. Pigs: Food is provided at 4% body weight daily, and water shall be accessible at all times.
    C. Rats and Mice: food provided via food dispenser which should be at least 60% full, and water should be accessible at all times.
6. Affording species proper isolation from other laboratory animals by housing in separate rooms.

C. Research animal health and infection control will be ensured in several ways:

1. All animals from the same supplier, same species, and same strain will be grouped together under a batch number from the day they enter the facility. A discreet group of animals can be tracked if necessary until all are sacrificed. In the event of a sick animal, the animal will be isolated and the veterinarian called immediately.

2. A primary visual check of the animals will occur every day.

3. Regular secondary inspections will be conducted Monday through Friday. These will consist of a visual check for sick animals, recording of room temperature, and a check on food and water levels. Secondary inspection information will be conveyed in a daily written log.

Part III: Surgical Facilities.

1. The Center for Biomedical Research surgical facility is limited to room 815 for euthanasia of mice and rats, 803 & 804 for tissue slices, and room 815 includes a surgery table for live animals. Surgical activities should not occur in any other part of the facility. Research animals must not be housed overnight in surgical or procedure rooms.

2. Only those persons with proper training are authorized to perform surgical procedures. These persons are listed in the individual protocols. All research activities in the surgical area involving animals must fall under a specific protocol. Conversely, no activity involving animals outside the established protocol may occur. Before any changes to experimental animal protocol can be made, such changes must be clearly delineated and submitted to the ACC for approval. These documents are available in the Principal Investigator's office.

3. Surgeons are obligated to maintain a post-operative record (when applicable) on each animal. They must make these records available for inspection by the USDA/ACC.

4. All drugs for use with animals must be fresh. Expired and unlabeled chemicals/solutions must be discarded immediately.

5. Surgical facilities are at all times subject to aseptic practice and procedure when performing survival surgery. The surgical areas (walls, floors, countertops, sinks, shelves, etc.) will be appropriately cleaned at all times to maintain the capacity for aseptic technique. Air conditioning allows for 12-15 air changes per hour to allow for a clean facility as well. Aseptic practice will be maintained with an emphasis on cleanliness for the purpose of reducing the transmission of disease from animal to animal and human to animal infections. Aseptic practice and procedure for the surgical work station may be defined as the use of a `wiped clean' surface with an alkaline based phenolic detergent and 10% bleach. The use of cold or steam sterilized surgical instruments, as well as all other applicable guidelines in this document will complement this practice. Aseptic practice in surgery can be found in a number of standard medical texts and is left to the discretion of the surgeon in consultation with the primary veterinarian. The procedure room is not subject to aseptic practice and procedure, but should be maintained at the same level of cleanliness as the rest of the laboratory space.

6. Researchers will ensure the good health of workers and animals by restricting their activities that generate blood to the steel countertops and basins in the surgical area and the animal cages. Tainted instruments and medical waste should be restricted to these areas as well. Blood products, animal excrement, and medical waste in these areas must be removed at the first available opportunity after experimental procedures are complete. Experimental machines of a portable nature must be cleaned of residual blood products at the first available opportunity. Researchers are expected to immediately remove any blood products found in other areas (non-surgical), with the exception of tissues extracted for the purpose of experimentation.

7. Surgical Procedures:
    A. All animals are sedated with appropriate tranquilizers and anesthetics at a dose appropriate for weight and species as appropriate per protocol. Additional drugs and preparations according to protocol. Post operative care according to protocol. Additionally, all animals fasted 24 hours prior to surgery must have water available.
    B. Recovery from major surgery is not permitted in any species other than rat or mice.
    C. Methods of euthanasia used will be consistent with the recommendations of the American Veterinary Medical Association Panel on Euthanasia, unless a deviation is justified in writing by the investigator for scientific reasons, and approved by the Animal Care Committee.
    D. Animal Surgery and euthanasia are conducted in an area separate from that in which the animals are housed.

References:

Animal Welfare Institute. Comfortable Quarters For Laboratory Animals. Self Published, 1997.

National Institutes of Health. Public Health Service Policy on Humane Care and Use of Laboratory Animals. GPO, 1996.

National Research Council. Guide for the Care and Use of Laboratory Animals. National Academy Press, 1996.

United States. Congress. Animal Welfare Act - Public Law 89-544 (and amendments). 7 USC 2131. GPO, 1992.

United States. Congress. Code of Federal Regulations, Title 9, Subchapter A, Part 1. GPO, 1997.

United States. Congress. Health Research Extension Act of 1985 - 99-158. GPO, 1992.

Last updated: January 15, 2000
August 15, 2001
July 2, 2003
10-8-04
11-26-08
April 8, 2010