

**VA NORTHEAST OHIO HEALTHCARE SYSTEM
Louis Stokes Cleveland DVAMC
Medical Research Service
Subcommittee on Research Safety Policy**

Effective Date: DECEMBER 14, 2022

Policy Title: INFECTION AND HAZARD CONTROL FOR THE ANIMAL RESEARCH FACILITY

Policy Number: SRS—009

Policy Version: .06

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1. **PURPOSE:** To prevent exposure of the animal care staff and others with animal contact to hazardous agents present in animal tissues, secretions, excretions, bite and scratch wounds, and elsewhere in the animal environment:

By delineating hazards in the use of animals in research.

By recommending actions to reduce biohazards which might lead to injuries and infectious diseases which might affect humans and animals.

By developing a safe environment in which to conduct research involving the use of animals.

By describing methods of infectious and other hazardous agents used in animal experimentation.

2. **RESPONSIBILITY:** All employees will receive an initial orientation as well as annual updates in biohazard control. The employees are responsible for compliance with this policy and all Medical Center Infection Control policies.

Supervisors of the area will monitor compliance with this policy. Compliance will be reflected in Employee's appraisals.

3. **POLICY:** To ensure that at the Louis Stokes Cleveland Department of Veterans Affairs Medical Center (LSCDVAMC) there is compliance with the most recent editions of:

- a. The Animal Welfare Act (7 USC 2131-2156) and Animal Welfare Act Regulations and Standards Title 9, CFR, subchapter A, parts 1,2,3,4, and subsequent amendments promulgated to enforce the Act.

- b. The Health Research Extension Act of 1955 (Public Law 99-158, "Animals in Research," and any subsequent amendments).

- c. Public Health Service (PHS) Policy, The Institute for Laboratory Animals Resources (ILAR) "Guide for the Care and Use of Laboratory Animals," known as the Guide.

- d. Interagency Research Animal Committee (IRAC) "Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training".

- e. Center for Disease Control/National Institutes of Health publication "Biosafety in Biomedical and Microbiological Laboratories".
- f. "NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules"
- g. "AVMA Guidelines for the Euthanasia of Animals"
- h. VHA Handbook 1200.7
- i. Other laws, regulations, guidelines, or documents that impact the use of radiographic equipment, workplace safety, endangered species, as well as any others added by the Chief Research and Development Officer (CRADO) or designee.

4. GENERAL INFORMATION AND GUIDELINES:

1. Hazards that exist in an animal research facility may be classified as:
 - a. Those that cause physical injuries, i.e. bites, scratches, cuts, abrasions, sprains, fractures, burns, and radiation exposure hazards.
 - b. Those that cause illness to personnel.
 - c. Those that cause illness to animals.
 - d. Those that cause damage to equipment and facilities.
2. Responsibility for maintaining a safe animal facility is shared by the Institutional Animal Care and Use Committee (IACUC), the investigators of record and their technicians, and the animal care staff.
3. The IACUC oversees the care and use of animals at facilities at the Wade Park unit. The IACUC is responsible for reviewing all protocols dealing with animals. VA Central Office requires a detailed report (Animal Component of Research Protocol - ACORP), which documents the proposed care and use of research animals and lists infectious, chemical, physical, and other hazards associated with the study. The ACORP must be reviewed and approved by the IACUC and training of all listed personnel must be completed before the project can begin. Newly added staff must be added to the ACORP by means of an amendment. This amendment can be approved prior to hands on training, but access is only granted after personnel have completed all IACUC-training. Online CITI program training provides species specific training in animal associated zoonotic and physical hazards caused by laboratory animals to personnel. The LSCDVAMC SRS reviews all study associated infectious hazards and approves safety procedures for personnel exposed to these hazards. The Principal Investigator is responsible for providing training in all hazards to personnel working on the protocol. The Radiation Safety Officer is responsible for providing training in radiation safety.
4. The VA Attending Veterinarian or his/her delegated backup may be contacted, via the ARF Supervisor or the Administrative Officer for Research (AO), for any questions about the care and use of animals. The Attending Veterinarian visits the LSCDVAMC ARF at least at least twice per month and is available for consultation and treatment of animals on an on-call basis.
5. The investigators are responsible for choosing the appropriate species of animal for their experiments. They are responsible for adhering to the animal handling, treatment, and use provisions in their IACUC-approved ACORP and submitting an Addendum to the ACORP prior to implementing any new

procedures. They are also responsible for observing the general health of their animals and taking appropriate measures when an animal becomes ill, including notification of/consulting with the veterinarian prior to instituting any medical treatment not specified in their approved IACUC ACORP. They are responsible for instructing their technicians on the proper handling of animals to prevent injury to the animals, themselves, or their technicians. They also are responsible for informing technicians and the animal care staff when they are using biohazardous agents and providing their staff members with agent specific training as well as ensuring that they have received training in and are compliant with ARF infectious agent containment SOPs. Use of these agents must have prior approval from the appropriate committees.

6. The ARF animal care staff is responsible for maintaining the housing, ancillary rooms, and for the general well-being of animals. A written work schedule for cleaning procedures is posted in a book located within, or immediately outside, each room in the ARF. The animal care personnel observe all animals in their care, treat animals as noted on a treatment list, and notify the supervisor of the ARF, the responsible investigators and technicians and the veterinarian of any unusual circumstances, signs of illness, injury or distress involving the animals. The ARF staff is responsible for handling animals appropriately to avoid bites and scratches, maintaining the veterinarian-prescribed room entry order to prevent room to room disease transmission and following all SRS and IACUC approved guidelines and standard operating procedures when handling animals known or suspected to be exposed to or shedding hazardous agents.

7. The ARF is a restricted area, open only to authorized personnel. The ARF is located in the basement of the medical center and is separated from the rest of the hospital by electronically secured keycard-operated doors.

5. PROCEDURES:

1. All employees are required to be familiar with and comply with all Medical Center Infection Control Policies, including:
 - a. Isolation and Infection Control Precautions, MCP 011-056
 - b. Tuberculosis Control Program, MCP 011-031
 - c. Bloodborne Pathogen Exposure Control Plan, MCP 011-039
 - d. Personnel Health Infection Control Policy
 - e. Specific procedures related to the Animal Research Facility.
2. All personnel handling animals should be currently (within 10 years) immunized against tetanus.
3. If rabies vaccinated purpose-bred cats are used as required by LSCDVAMC IACUC and SRS policy, the Personnel Health Services has determined that pre-exposure immunization with human diploid cell rabies vaccine is not required. All personnel whose duties require significant contact with cats shall be informed about the risk of rabies and receive training in appropriate procedures to follow in the event of a skin-penetrating bite wound. All skin penetrating bite wounds must be reported promptly to Personnel Health Services (See VHA Handbook 1200.07, Use of Animals in Research). The cat that induced the bite wound must be quarantined for 10 days and examined at the end of this period by the Veterinarian. Animals exhibiting neurological signs compatible with rabies infection will be euthanized and brains sent

to the Ohio rabies diagnostic laboratory for testing. Should the need for post exposure prophylaxis arise due to the finding of a rabies positive cat, or the failure of the biting animal to complete the quarantine process, Personnel Health Service shall procure and administer the vaccine at no cost to personnel. Prior to receiving the vaccine, employees will be informed of the risks and advantages of the procedure.

4. The animal care staff must wear uniforms provided and washed by the Medical Center or within the ARF. When working with the animals, all other personnel must don a freshly laundered surgical gown or a disposable gown, which is removed upon reentry into the hospital section. The animal care staff uniforms must be donned at the medical center before daily work in the animal facility and must not be worn out of the facility at the end of the day. A separate covering, such as a clean lab coat, should be worn over the uniform when the employee leaves the animal facility during the workday. All animal technicians and research personnel are required to wear protective clothing when entering biohazardous and/or rodent rooms; this includes disposable exam gloves, laundered or disposable gowns (fresh laundered surgical gowns are available at facility entrances), procedural masks, shoe covers, etc. when working in the animal facilities micro-isolator/ barrier rooms and with biohazardous animals. All personnel shall wash their hands before leaving a housing or treatment room in which they have worked with animals.

5. All personnel must wash their hands and other body parts which may be contaminated with hazardous agents (radioisotopes, infectious agents, potential carcinogens, etc.) following contact with animals or materials. Where designated, personnel shall wear protective clothing (i.e. gloves, face masks, gowns) when handling these animals or materials.

6. All personnel must use approved procedures for discarding animal carcasses. Carcasses must be placed in a sealed plastic biohazard-labeled bag, which is placed into a red biohazard barrel (lined with a red biohazard bag) located in the ARF postmortem room refrigerator until they are shipped out for disposal by an outside contractor. Carcasses to be saved are double-bagged and placed into a freezer in the ARF post-mortem room.

Just before they are picked up, biohazard-labeled bags will be packed in appropriately labeled red barrels. The animal care staff discards all waste generated in the ARF daily. Used bedding will be bagged and discarded in the hospital dumpster located on the first floor at the rear of the medical center. Bedding contaminated with infectious and/or hazardous chemicals is bagged within a BSC, properly labeled, and disposed as hazardous waste. When disposable caging is used to house rodents treated with infectious or chemical hazards, the entire cage is disposed in the same manner as the bedding.

6. SICK ANIMALS:

1. All sick animals identified with a potentially contagious illness will be isolated.

2. A rodent quarantine room is available for rodents obtained from non-standard vendors with a non-verified health status. Rodents are prophylactically treated for parasites and housed in this room until an acceptable health status is verified or a decision for re-derivation is made by the consulting veterinarian. Separate holding rooms for Specific pathogen-free (SPF) animals ordered from vendors are not available. Newly arrived animals are caged in general housing rooms. The animals are observed closely for the first week to ensure that they have acclimated to their new environment. A one-week acclimatization period prior to experimentation is required for all non-rodent mammals after arrival. A one-week acclimatization period after arrival is recommended for all rodents.

3. All animals in the facility are observed on a daily basis. If any animal appears sick, a pink medical record card is posted on the front of the cage card, the investigator and veterinarian are notified, and the treatment (approved by the veterinarian) is given. If an animal must be isolated, it is done on an as-needed basis.
4. Animal vaccines for selected species will be used where appropriate.
5. Investigators will be notified if they have sick animals. In conjunction with the Attending Veterinarian the investigators will determine if animals should be treated or euthanized.
6. The Attending Veterinarian shall be consulted before an investigator uses any antibiotics or other treatments not authorized on the approved ACORP on any animal.

7. PROCEDURE FOLLOWING ANIMAL BITES:

1. Most animals bite because of pain or apprehension resulting from improper handling techniques. Firm but gentle restraint is sufficient to accomplish the majority of procedures with complete safety to animals and personnel. However, if an employee is bitten, the employee should:
 - a. Allow the wound to bleed and then thoroughly cleanse the injured area with running water and antimicrobial hand-soap.
 - b. Identify the animal and all animals associated with it. If possible, the animal should be kept alive and not used in an experiment. If the animal is anesthetized, it should be allowed to recover.
 - c. Follow current procedures for an accident. Report the injury to: a) the supervisor, b) the Personnel Health physician or Urgent Care, and c) the Research Safety Coordinator. Submit appropriate forms to Human Resource Management Service.
2. Bites will be evaluated by Personnel Health, or the VA Emergency Department; antibiotics will be given if indicated (See VHA Handbook 1200.07, Use of Animals in Research). If appropriate, Personnel Health physician will submit an Animal Bite Report to the Cleveland Division of Environment, 1925 St. Clair Avenue, Cleveland, Ohio 44114, Phone (216) 664-2300.

8. CAT BITES:

1. If the bite was caused by a cat (even if purpose-bred and rabies vaccinated) the remote possibility of rabies exists. The veterinarian should:
 - a. If the animal is dead - remove the head and refrigerate. Submit the head, under refrigeration, to the Ohio Department of Health Laboratories for rabies examination.
 - b. If the animal is alive - perform a physical examination at the beginning and end of a 10-day quarantine.
 - c. At the first sign of illness suggestive of rabies, euthanize the animal, remove the head and submit it, under refrigeration, to the Ohio Department of Health Laboratories for rabies examination.
 - d. If the cat tests positive for rabies or if the quarantine cannot be completed the bitten person must undergo post exposure rabies treatment as described in 5.d.

2. Scratches are not a mode of rabies transmission unless there also is contact with infected saliva. Animals usually are not quarantined for scratches. Scratches are to be handled as in section a. above. It is highly unlikely that a rodent or lagomorph bred for research is a carrier of rabies. Injuries by these animals also should be handled as in section a. above.

9. USE OF HAZARDOUS MATERIALS:

1. The use of hazardous materials (radioisotopes, infectious agents, potential carcinogens, etc.) in animals must have PRIOR approval from the VA Research and Development Committee, the IACUC, the Subcommittee on Research Safety, and, if applicable, the Radiation Safety Committee and the CWRU Institutional Biosafety Committee (Recombinant or Synthetic Nucleic Acid Molecules). In many instances, these studies may require the use of special isolation hoods, disposable cages, protective garments, and a decontamination facility, which would be necessary to attain a moderate-to-high degree of containment. Studies requiring such specialized containment may not be approved if the ARF does not have adequate support facilities. Alternate resources should be considered.

2. The research ACORP should address all of the points above. The investigator also must describe procedures to contain biohazardous materials, including tissue residues and/or secretions and excretions, such as urine, feces, or exhaled air. The investigator must discuss how personnel will be protected and what precautions will be taken, including disposal of animals, bedding, and contaminated cages.

3. If the biohazardous agent is incorporated in food or added to drinking water, the investigator must address the problems of dust from the food and aerosolization. If animals are being exposed to a biohazard, this information is posted on the door to the animal housing room and on the cage(s) holding the biohazardous animal(s). The information includes the name of the biohazardous material, complete written instructions for who may enter, and what protective clothing/devices must be used while in that room. It is the responsibility of the investigator to discuss with the supervisor of the ARF all requirements for the study and to ensure that all the necessary supplies are provided. It also is the investigator's responsibility to determine, with the supervisor of the ARF, who is to be responsible for the daily care of those animals exposed to the biohazardous material. If the investigator's research team is to provide daily care, the team also is responsible for maintaining the husbandry records for each day, including weekends and holidays.

10. REFERENCE: VHA HANDBOOK 1200.7, Use of Animals in Research, Appendix C, Occupational Health and Safety for Research Personnel with Animal Contact.

11. RESCISSION: The rescission date for this policy is December 13, 2023.

12. FOLLOW-UP: Research Safety Coordinator/Chemical Hygiene Officer.