Institutional Animal Care and Use Committee		UNT Health
Title: Hazardous Materials used in Animals		
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A. BACKGROUND INFORMATION

a. Hazardous materials are biological, chemical, radiological or physical items that have the potential to cause harm to humans, animals, or the environment. These materials are either hazardous on their own or they have the potential to be hazardous through interaction with other factors.

b. The use and disposal of hazardous materials are regulated by several agencies, including: the National Institutes of Health (NIH), Center for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA), Texas Commission on Environmental Quality (TCEQ) and the Department of Health and Human Services (DHHS). These regulations must be followed by all personnel who may have contact with hazardous materials and DLAM facilities are capable of containing such hazards. For this reason, Principal Investigators must discuss the use of any biohazardous, radioactive, or chemical materials with the relevant safety committees and the veterinarian before submitting an animal use protocol.

B. RESPONSIBILITIES

a. It is the responsibility of the Principal Investigator to receive approval from the Institutional Biosafety Committee (IBC) before using biological and chemical hazardous materials and from the Institutional Radiation Safety Committee (IRC) prior to using radioactive material/ radiation.

b. It is the responsibility of the Principal Investigator, students and staff to receive proper training for the hazardous material to be used.

C. DEFINITIONS

a. **Biohazards:** Biological agents and materials which are potentially hazardous to humans, animals, or the environment. This includes: microbial pathogens, parasites, recombinant DNA, synthetic DNA, cell cultures containing potentially infectious agents (ie. viroids, prions), and other infectious agents as outlined by the IBC. Biohazardous agents must be approved on an IBC protocol, before approval can be granted on an IACUC protocol proposing to use biohazardous agents.

b. **Radioactive Material:** Any material that spontaneously emits radiation. Exposure is the term used to describe the amount of ionization produced in air from a radiation source. Exposure to radiation could pose serious health risks to personnel and to the community if used or disposed of improperly. Radioisotopes are an unstable isotope of an element that decays or disintegrates spontaneously, emitting radiation. Radioisotopes must be approved by the Radiation Safety Committee (RSC) before approval can be granted to the IACUC protocol.

c. **Chemical Hazards:** Any chemical that has the potential to cause harm to people, animals, or the environment. These can include: flammable liquids or solids, corrosives, oxidizers, toxins, carcinogens, flammables, corrosives, mutagens, reproductive hazards and sensitizers. Researchers must monitor the use and disposal of chemical hazards in the laboratory. The IACUC may require justification in the protocol as to why a safer compound cannot be used. Hazardous chemicals must be approved on an IBC protocol before approval can be granted on the IACUC protocol.

D. PROCEDURES

a. Any time a hazardous agent is used in an animal protocol, the hazardous agent attachment must be completed and submitted to the DLAM Facility Manager and Biosafety Director for review and consultation. This completed form, along with any attachments from the review, must be attached to the IACUC protocol.
b. Additional trainings may be required based on the type of hazardous materials used. This training must be completed before IACUC approval can be granted.
c. Additional approvals from a safety committee (i.e., Institutional Biosafety Committee, Radiation Safety Committee, etc.…) may be required based on the hazardous agent used. If this is the case, this approval must be granted before IACUC approval is given.
d. Notification and Signage
    i. When animals are to be dosed with a hazardous agent, a lab member must complete the Hazardous Materials Form and send to the DLAM Facility Manager or designee at least five business days in advance.
    ii. The Hazardous Materials Form must be posted on the outside of the animal room door before dosing occurs and will remain until there is no longer a hazard.
    iii. The biohazard cage cards are available in the animal facility. A DLAM staff member may be available to assist in locating these cards. The lab staff is responsible for filling out the biohazard cage card and placing it on the animal cage. This way, the people changing the cages will know that the cage is considered hazardous. The biohazard cage card is located in the animal facility, and DLAM staff may be available to assist in locating these cards.
e. Cage Changing
    i. Unless otherwise noted in the approved IBC protocol, cage changes with animals that received a hazardous substance will be changed no earlier than 48 hours after the dosing has ceased.
    ii. The disposal of bedding based on the agent used will be disposed of as described within the Animal Hazard Control Form completed during the original consult.
    iii. If cage is mostly soiled (i.e. soon to require a cage change), change the cage prior to dosing or arrange with DLAM, if DLAM staff will be responsible for changing cages.
    iv. Only open cages under appropriate biosafety type cabinet and/or proper PPE.
    f. Please refer to the Institutional Safety Manuals (Chemical safety manual, Biological Safety Manual, Radiation Safety Manual at http://unthealth.edu/operations/safety/index.html) for more information on hazardous materials, including proper disposal.

E. **REFERENCES**

a. Hazardous Agent Attachment Form
b. Hazardous Materials Form
c. Biological Safety
d. Chemical Safety
e. Radiation Safety