

Policy for Protocols Using Biological Materials/Toxins in Animals (AVS-Operated Vivaria)

First Drafted 6/16/14, Revised: 10/14/14, 5/30/15, 6/24/15, 11/16/15, 10/29/18
IBC Approved: 6/24/15, 11/16/15 IACUC Approved: 2/18/16

In the course of research, laboratory animals may be inoculated with biological materials (refer to UH Biosafety web site for the definition of biological materials). The animals may excrete these materials, toxins, or their potentially dangerous metabolites.

This policy is designed to provide guidance to researchers when preparing their animal use protocols that involve the use of biological materials and/or toxins.

The following are general guidelines and Table BMBL MATRIX for Biosafety and Animal Biosafety Level determination (developed by Institutional Biosafety Committee (IBC)), which are applicable to projects involving biological inoculation of animals. The IBC protocols must be reviewed by UH Biosafety for animal activities occurring in Animal and Veterinary Services (AVS) operated facilities to determine any additional measures to prevent occupational exposure and environmental contamination on a case by case basis.

Principal Investigator Responsibilities:

1. Comply with guidelines and those specifically developed for their protocols.
2. Contact Biosafety for guidance as early as possible, as state or federal permits may be required for inoculation studies.
3. Provide a list of biological materials, toxins, and safety data sheets for each with information related to their hazards, and/or literature citation on the prior use of the particular materials in animals. Include appropriate PPE to use with the biological material, dosage, route of transmission, probability of exposure, and consequences of exposure. This information should be attached to the UH IBC protocol.
4. Provide an assessment of whether the wastes, including soiled bedding, cages, feed, water, and carcasses are considered hazardous. The assessment should include: (a) is the biological material broken down in the body? What are the metabolites? Are they hazardous? (b) is the material excreted intact? If so, how (urine, feces, exhaled, perspiration), and for how long? (c) How and over what period of time are the metabolites excreted? (d) is the decontamination procedure, the type of disinfectant and its metabolite (byproducts) cause more potential hazards and (e) will autoclaving cause additional issues.
5. Contact the AVS Operations Supervisor to arrange training at least 2 weeks prior to the start of the initiation of the project.
6. Provide protocol specific training to AVS staff and research staff and keep training records on file for reference during lab inspections.
7. IACUC activity involving special handling cannot begin before IBC approval

UH Biosafety Responsibilities:

1. Review the information provided by the PI and make assessment
2. Provide comments and recommendations regarding the protocol to the UH IBC.

AVS Responsibilities:

1. Inform PI of any additional costs associated with the safe handling of their animals prior to the start of the project.
2. Educate staff who will handle animals and/or caging used in the study on proper handling and disposal.

Elements of Best Practices for Inoculated Animals that *May* be Required:

1. **Personal Protective Equipment (PPE):**
 - a. Wash their hands before donning and after removing gloves.
 - b. Wear disposable gloves.
 - c. Inspect gloves for tears or holes prior to donning, changed frequently, and do not reuse.
 - d. Wear a closed-front gown and dispose of after each use.
 - e. Wear safety glasses
 - f. Wear a hair bonnet or tie long hair back away from face
 - g. Follow Respirator Safety Program requirements for the specific hazard

Policy for Protocols Using Biological Materials/Toxins in Animals (AVS-Operated Vivaria)

First Drafted 6/16/14, Revised: 10/14/14, 5/30/15, 6/24/15, 11/16/15, 10/29/18
IBC Approved: 6/24/15, 11/16/15 IACUC Approved: 2/18/16

2. Engineering Controls:

- a. Use cages with High Efficiency Particulate Air (HEPA) filters.
- b. House cages on a negative pressure, ventilated rack in a room under negative pressure.
- c. Handle cages in a ventilated cage changing station or biological safety cabinet, determined by Biosafety.
- d. Dump bedding in a ventilated dumping station or biological safety cabinet, which will be determined by Biosafety.
- e. Properly decontaminate the work area before and after use
- f. Take the “Understanding and Using Biological Safety Cabinets” informational course from UH Biosafety. Proficiency in properly working in a Biological Safety Cabinet must be provided by the PI and should be documented.

3. Signage:

- a. Label cages: PI name, agent name, biohazard warning symbol, and date/time of administration
- b. Place an “Active Manipulation” sign over the Edstrom keypad whenever infectious cages are opened to ensure no one enters the room.
- c. Place an ABSL2 sign on the animal holding room door listing the PI name, contact information and agent name.

4. Disposal:

- a. Place empty syringes/needles used to administer the biological materials in a red biohazard sharp's container.
- b. Place sharps contaminated with biologicals in designated biohazard, sharps containers to be autoclaved.
- c. Place carcasses in red carcass bags and decontaminate the outside of the bag prior to placement in refrigerator/freezer.
- d. Dispose of carcasses through alkaline hydrolysis (tissue digester).
- e. AVS disposes of bedding by (1) standard cage wash procedures, (2) autoclaving prior to washing, or (3) chemical decontamination prior to washing (determined by Biosafety).