

 <div> <div>DIVISION OF RESEARCH & INNOVATION</div> <div>Research Integrity & Compliance</div> </div>		Institutional Animal Care and Use Committee Standard Operating Procedures	
Title: Use of Appropriate Personal Protective Equipment in Animal Research			
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Approval/Date: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  _____ Jamie Peno Assistant Vice President, Research Integrity and Compliance </div> <div style="text-align: center;"> 09/22/2021 _____ Date </div> </div>			
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PURPOSE

This document provides information regarding use of appropriate personal protective equipment (PPE) that should be used by individuals working with and around research animals for the purpose of preventing or controlling personnel exposure to zoonotic organisms and allergens inherent in the animals. Additional PPE may be required to protect personnel from additional hazards that may be encountered in the research setting, including the following: chemicals, toxins, infectious organisms, or radioactive materials purposefully administered to animals in an approved animal use protocol; physical, chemical or noise hazards present in cage wash facilities or diagnostic laboratories; and hazards associated with field research or wild caught animals. PPE required for use in these settings must be determined after consultation with the Environment, Health and Safety (EHS) (940.565.2109, askRMS@unt.edu). Use of additional PPE may be required by the UNT Vivarium to help protect the health of the animals or humans. Personnel with compromised immune systems or who are pregnant may need additional protections as required by a physician or occupational health specialist. EHS and your healthcare provider may evaluate potential risks and make recommendations for individuals upon request.

SCOPE

It is the responsibility of the Principal Investigator to ensure that appropriate PPE and safety recommendations and training are provided to all personnel.

It is the responsibility of all lab staff and personnel to follow procedures and recommendations and use the PPE and safety measures provided.

It is the responsibility of the IACUC to ensure users of animals in research are able to work safely. According to the Guide for Care and Use of Laboratory Animals:

An animal care and use program comprises all activities conducted by and at an institution that have a direct impact on the well-being of animals, including animal and

veterinary care, policies and procedures, personnel and program management and oversight, occupational health and safety, institutional animal care and use committee (IACUC) functions, and animal facility design and management. A comprehensive Occupational and Health Safety Program (OHSP) should include a hierarchy of control and prevention strategies that begins with the identification of hazards and the assessment of risk associated with those hazards.

DEFINITIONS AND ABBREVIATIONS

UNT- University of North Texas, Denton

IACUC- Institutional Animal Care and Use Committee

USDA- United States Department of Agriculture

AUP- UNT approved Animal Use Protocol

SOP/SOP's- Standard Operating Procedure(s)

LAF- Laboratory Animal Facility

AV- Attending Veterinarian

PI- Principal Investigator

PPE- Personal Protective Equipment- protective coverings (e.g., clothing, gloves, hair covers, goggles, mask) designed to protect the wearer's body from exposure to infectious agents or allergens associated with animals.

Animal body substances – tissues or fluids of animal origin (e.g., urine, feces, blood, saliva).

Dedicated clothing- a garment (e.g., scrubs or laboratory coat) worn only in the animal facility or research laboratory but not in general public areas. These garments should not leave the workplace and should be laundered and stored in the workplace.

Face Mask- covering for the mouth or face that supplies splash and gross debris protection (should be water resistant), but is not intended to provide respiratory filtration (see EHS approved respirator). A surgical mask is not considered a respirator

Fixed tissue - tissues processed with a chemical substance (e.g., formalin, formaldehyde, glutaraldehyde) known to inactivate select biological hazards.

In-room observation – visual observation of an animal within a room (e.g., housing room, procedure room, behavioral suite) of the animal facility that does not include touching of the animal or, when applicable, opening of a microisolation cage.

EHS Approved Respirator- NIOSH certified N-95 or higher particulate respirator or positive air purifying respirator (PAPR).

Sealed eye protection- goggles with closed top, side, and bottom and indirect vents that fit snugly against the face forming a seal around the eyes, thus preventing liquids from splashing or dripping into the eyes. Goggles must meet standards described in 29 CFR 1910.133 Eye and Face Protection and ANSI Z87.1 - 1989.

PROCEDURES

- I.** Managing Risk at UNT involves
 - A.** the appropriate design and operation of facilities and use of appropriate safety equipment (engineering controls);
 - B.** the development of processes and standard operating procedures (SOPs; administrative controls)
 - C.** the provision of appropriate personal protective equipment (PPE) for employees.
 - D.** Special safety equipment should be used in combination with appropriate management and safety practices (NIH 2002; OSHA 1998a,b).
 1. Managing risk using these strategies requires that personnel

- a) be trained
 - b) maintain good personal hygiene
 - c) be knowledgeable about the hazards in their work environment
 - d) understand the proper selection and use of equipment
 - e) follow established procedures
 - f) and use the PPE provided
- II.** The IACUC has established the minimum required personal protective equipment (PPE) to be used by personnel while working with various species.
- A.** University of North Texas oversight committees (e.g. IBC), specific departments (e.g. EHS), specific animal housing facilities (e.g. SRB Vivarium) and the type of work being done in specific projects (e.g. the use of biological materials) may require the use of more PPE.
 - B.** Researchers must not use less than these standards without explicit approval from the IACUC. Please contact Environmental Health and Safety if you have questions on PPE.
- III.** PPE functions to reduce exposure to allergens and to protect animals and humans from infectious agents. Some activities may warrant additional PPE. The type of PPE needed depends on multiple factors including
- A.** the use of allergen reducing equipment such as ventilated racks and biosafety cabinets
 - B.** the susceptibility of the animal colony being housed or exposed to and the activity being performed.
 - C.** Additional PPE may be required if there are additional safety risks beyond just the presence of animals, such as hazardous chemical use or biological agent administration.
 - 1. A consultation with Environmental Health and Safety will be required to establish those special requirements.
 - 2. Additional room specific PPE requirements may be posted at the entrance.
- IV.** The tables below describe minimum PPE requirements for each species/ type of animal based on activity risk level.

- 1) **Minimum required PPE for all mammalian/avian species:** Gloves, outer-covering or disposable outer-covering with long sleeves, disposable closed-toed shoes, and long pants or equivalent leg covering.
- 2) Wear appropriate eye protection when there is a potential for splashes.
- 3) Refer to Table 1 for additional PPE requirements based on species and task
- 4) Always consult room specific PPE requirements posted at the entrance

Table 1

Tasks or Animals Involved	Direct contact with animals (including post mortem examination of animals “necropsy”)	Contact with animal caging, bedding or equipment	In room observation only	Handling or processing animal body substances or unfixed tissues
Working with Laboratory Rodents	Dust/surgical mask recommended	EHS approved respirator (only for husbandry and dirty cage wash staff changing/dumping cages w/out engineering controls)	Dust/surgical mask recommended	No additional PPE
Working with	Dust/surgical	EHS approved	Dust/surgical	No additional

Laboratory Rabbits	mask recommended	respirator (only for husbandry and dirty cage wash staff changing/dumping cages w/out engineering controls)	mask recommended	PPE
Working with Wild Rodents	<ul style="list-style-type: none"> • Dust/surgical mask required • Required (nitrile recommended +/- protective bite/scratch gloves) 	EHS approved respirator	n/a	No additional PPE
Working with Wild Mammals	<ul style="list-style-type: none"> • Dust/surgical mask required • Required (nitrile recommended +/- protective bite/scratch gloves) 	EHS approved respirator may be required (Consult with EHS)	n/a	No additional PPE
Birds	<ul style="list-style-type: none"> • Shoe covers or dedicated shoes • Dust/surgical mask recommended • Nitrile gloves recommended +/- protective bite/scratch gloves) 	<ul style="list-style-type: none"> • Shoe covers or dedicated shoes (only required when in the animal room & dirty cage wash) • EHS approved respirator may be required (Consult with EHS) 	Shoe covers or dedicated shoes	No additional PPE

1) **Minimum required PPE for Amphibian, Reptile, Aquatics:** Disposable gloves

2) Refer to Table 2 for additional PPE requirements based on species and task

3) Always consult room specific PPE requirements posted at the entrance

Table 2

Tasks or Animals Involved	Direct contact with animals (including post mortem examination of animals “necropsy”)	Contact with animal caging, bedding or equipment	In room observation only	Handling or processing animal body substances or unfixed tissues
Terrestrial Amphibians and Reptiles	nitrile gloves recommended +/- protective bite/scratch gloves	EHS approved respirator (only for husbandry and dirty cage wash staff changing/dumping cages w/out	No PPE required	No additional PPE

		engineering controls)		
Aquatic Amphibians, Reptiles, and Fish	I. Disposable gloves of suitable length to prevent skin contacting water (nitrile gloves recommended +/- protective bite/scratch gloves)	Disposable gloves of suitable length to prevent skin contacting water	No PPE required	No additional PPE

REFERENCES

1. The Guide for the Care and Use of Laboratory Animals.
2. National Institute of Health Office of Animal Care and Use Intramural Research Program. 2016. Guidelines for Personnel Protection in Animal Facilities: <https://oacu.oir.nih.gov/sites/default/files/uploads/arac-guidelines/ppe.pdf>
3. Biosafety in Microbiological and Biomedical Laboratories
4. NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules
5. This guideline contains information adapted from The University of Texas at Austin IACUC “Guidelines for the Use of Appropriate Personal Protective Equipment in Animal Research” and University of Michigan Environment, Health and Safety policy, “Animal Handler PPE Chart” found at: <https://ehs.umich.edu/wp-content/uploads/2018/05/Animal-Handler-PPE-Chart.pdf>.

APPENDECES

IACUC Standard Operating Procedures
 UNT Biosafety Manual
 UNT Biosafety Risk Assessments