Occupational Health and Safety Program for Animal Care and Use

Directions:

All principal investigators (PI's) submitting animal use protocols (AUP's) for institutional animal care and use committee (IACUC) approval are required to read the following document. PIs should also assign student-researchers and other personnel involved in working with the animals listed in the AUP's to read this document. At the end of the document is an agreement form stating that all individuals involved in the AUP have read it and understand its contents.

All copies of the agreement form should then be retained by the PI for a minimum of 3 years after the completion of the proposed research. Any questions or comments pertaining to animal research and teaching should then be sent to one of the following:

IACUC Co-Chairs:
Dr. Erica Kennedy
Psychology, ehkennedy@frostburg.edu, 301-687-4742
Dr. Karen Keller
Biology, klkeller@frostburg.edu, 301-687-4174

For administrative questions, contact the Office of Sponsored Programs at 301-687-7097.

If you have any questions about employee occupational health and safety, please contact:

FSU's Environmental Safety & Sustainability Officer
Mr. Marvin J. Parsons
University Police, mjparsons@frostburg.edu, 301-687-3976

For Frostburg State University's general safety policies, please refer to:

https://www.frostburg.edu/about-frostburg/Administrative-Offices/university-police/Safety%20Risk%20Management/safety-manual/risk-management-policy.php

Occupational Health and Safety Program – Rationale and Background

Rationale:

Public Health Service (PHS) states in its *Guide for the Care and Use of Laboratory Animals*:

"An occupational health and safety program must be part of the overall animal care and use program (CDC and NIH 1993; CRF 1984a,b,c; PHS Policy). The program must be consistent with federal, state, and local regulations and should focus on maintaining a safe and healthy workplace. The program will depend on the facility, research activities, hazards, and animal species involved." and; " Zoonoses and occupational health and safety issues should be reviewed by the IACUC to ensure that field studies do not compromise the health and safety of other animals or persons working in the field."

Background:

In order to use vertebrate animals in teaching and research Frostburg State University complies with a number of regulations, guidelines and policies. Many of those regulations and guidelines require the establishment of an occupational health and safety program for individuals who work with animals or their non-preserved tissues. The goal of the Occupational Health and Safety program (OHS) at Frostburg State University is to ensure that all persons who have contact with animals are made aware of the potential hazards of working with animals, procedures and equipment that should be used to reduce the risk of exposure to specific hazards.

Individuals working with animals in research or educational settings are potentially at risk of illness or injury. These risks include, but are not limited to: zoonotic diseases (diseases that are transmissible from animals to humans); animal allergen exposure resulting in mild to severe allergic reactions in humans; bites, kicks, and scratches; and injury from caging equipment and/or cleaning and maintenance materials.

Purpose:

The purpose of this document is to make faculty, staff and students aware of the risks that may be present in the animal facility, laboratories or in the field. The document is also intended to establish what precautions, procedures, and equipment may be used to minimize the risks to health and well-being.

Introduction:

It is the responsibility of the PI of each IACUC-approved protocol to ensure that all workers under PI's supervision (co-investigators, staff, students, and volunteers) or who are otherwise working on the PI's protocol(s) and who have contact with animals or their tissues are informed of the potential hazards or risks involved. They must also be made aware of the procedures and personal protective equipment (PPE) available to prevent and reduce hazards or risks of injury or exposure to infectious disease. Employees (hereafter "employees" will refer to student volunteers, student researchers, staff and faculty, including principal investigators) are expected to follow established safe work practices, to practice appropriate personal hygiene, and to properly use and care for required PPE. Employees having health and safety questions about their work tasks and work environment should ask their supervisor or the PI for answers to those questions. Employees must inform their supervisors of any accident or injury that occurs to them

and should advise their supervisors of symptoms they have that may be associated with a zoonotic disease. Employees who are pregnant, planning conception, or who are immune-compromised or immune-suppressed should consult with the FSU's Environmental Safety & Sustainability Officer, prior to handling animals or chemicals, to determine if any additional training, provisions, or consultation with a licensed physician is necessary for participation in the program.

Importance of Prevention

Accidents, injuries, and exposures can be prevented through use of appropriate practices, procedures, and PPE. Supervisors must ensure that the duties of their employees have been properly assessed to reduce employee risk. The supervisor or PI shall implement appropriate measures to ensure employee protection and workplace safety. The supervisor or PI shall ensure that the potentially exposed employee understands the use and care of PPE, personal hygiene, and proper safety practices essential to preventing animal\workplace injury or illness.

Personal Hygiene Practices

PIs and lab supervisors must establish hygiene standard practices for their respective areas and identify the hazard risks associated with those areas. Basic hygiene policies in animal housing or procedure areas include: no eating, drinking, smoking, applying of cosmetics, chewing of gum or tobacco use. Gloves, gowns, lab coats, bonnets, booties and other items of protective clothing must be worn where indicated by the PI and lab supervisor. Frequent hand-washing, both in and out of animal areas, must also be performed. Any protective clothing worn in an animal facility or procedure area must be removed before leaving the laboratory. These procedures prevent airborne animal dander and other contaminants from adhering to the employee's clothing, hair, and skin.

Similar practices should be observed in field studies whenever possible and employees should refrain from eating or drinking until hands are completely disinfected after handling any animals or animal equipment.

Availability and Use of PPEs

PPE includes but is not limited to: lab coats, gowns, scrub suits, latex gloves, safety gloves for handling hot items, goggles, safety glasses, face shields, head covers, hearing protection, shoe covers, safety shoes, "Tyvek" full-body suits, face masks, half-face or full-face respirators, and PAPR (Powered Air Purifying Respirator) devices. PPE protects animal handlers and research staff from a wide range of workplace risks, including animal allergens, disease exposure, and mechanical injury. The selection of appropriate PPE is based upon specific workplace risks as identified by the PI or lab supervisor and will also be reviewed by FSU's Environmental Safety & Sustainability Officer to confirm the assessment and assignment of appropriate PPE. It is important that employees work with their supervisor(s) and the ESS Officer to ensure that the tasks the employee is to perform have been assessed and that the proper PPE has been identified and provided for the employee's use.

Laboratory or Field Hazards

Equipment Hazards

Mechanical equipment may pose a risk of injury to employees. Supervisors must train all personnel in the proper operation, use, and maintenance of equipment. Employees are expected

to follow established Standard Operating Procedures (SOPs) that include information concerning safe use of equipment, recommended PPE and accident prevention.

Electrical Hazards

Wet conditions may be present during room and hallway cleaning and in cage-wash areas. The presence of electrical devices in those areas could pose a risk of electric shock. Areas where fish tanks or aquaria are maintained pose similar hazards. Ensure that electrical outlets in those areas are waterproof and are ground fault interrupt (GFI) circuits. Extension cords must not be used as a long-term solution in place of permanent wiring. Locations where a permanently wired in socket is necessary must be installed by a qualified electrician. Extension cords also create tripping hazards. A qualified electrician must make all electrical installations and repairs.

Chemical Hazards

A variety of chemicals are required in animal facilities for cleaning, disinfection, and sterilization. Those chemicals may cause irritation or burns to skin, eyes, and respiratory passages. Safety Data Sheets (SDSs) or Material Safety Data Sheets (MSDS) must be maintained for each chemical to provide both workers and emergency personnel with the proper procedures for handling or working with a particular chemical. SDSs include information such as physical data, toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill or leak procedures.

Physical Hazards

High noise from animal handling or noisy equipment use may also cause injury to employees. Proper hearing protection shall be selected to reduce the risk of hearing loss. Use of infrared or ultraviolet light (nonionizing) or ionizing radiation shall be discussed with Environmental Safety and Health prior to use.

Animal-Related Hazards

Physical Injuries

Workers risk potential injury from animal bites, kicks, scratches, and similar animal-inflicted wounds. Supervisors, PI's and instructors must train new personnel in proper animal handling and restraint procedures for each species the employee is required to work with **before** that employee begins work with animals.

Infectious Hazards

Most commercially-produced and supplied laboratory rodents are free of pathogens. However, rodents purchased from pet stores and other vertebrates, particularly animals captured during field studies may carry diseases that could be transmissible to humans (zoonotic, zoonoses).

Allergic Reactions

Allergens may be carried by air currents in the animal room and can come into contact with a person's skin, eyes, nasal passages, and lungs where allergic reactions may occur. For Example: People with allergies to rodents may have sneezing, congestion, itchy and watery eyes, and skin rash or itching when they are exposed to rodents or to rooms and equipment used to house rodents. In this example a surgical mask is not adequate to control allergen exposure while working with rodents.

Non-hazardous Carcasses
Animal carcasses may be disposed of in a landfill provided the animal does not contain infectious agents or hazardous materials creating a hazardous waste. Carcasses may contain small amounts of chemicals as long as the chemical does not meet the definition of a hazardous waste. Investigators should call the Environmental Safety & Sustainability Officer if they are unsure about whether a chemical is categorized as "hazardous waste."

Chemically Contaminated Waste and Carcasses
IACUC-approved protocols involving hazardous chemicals specify handling requirements for contaminated wastes and animal carcasses. In some instances, wastes and carcasses must be bagged and stored in designated barrels. If you have hazardous waste, call the Environmental Safety & Sustainability Officer for a pick up. Ensure that materials are stored properly. Do NOT pour hazardous waste down the drain or throw into trash cans.

Response to Injuries

Seek Medical Attention Promptly
If you are injured on the job, promptly report the incident to your supervisor even if it seems relatively minor. Your supervisor should fill out an Incident Report following the guidelines in the Accident Reports and Record Keeping section of the "on the job injury" (available on the FSU Human Resources) within 24 hours. Clean all minor cuts and abrasions immediately with antibacterial soap, and then protect them from dirt or animal secretions until they have healed. If the injured person is an employee (faculty/staff/student worker), he or she shall go to the Brady Health Center (or if after hours, the Emergency Room at the UPMC Western Maryland, and then the employee should contact the University Environmental Safety & Sustainability Officer. *Tell the physician that the injury was the result of working with an animal and specify the species and other related information concerning zoonoses, chemicals, etc. if known.*

Additional Reporting and Steps for Bites or Several Scratches
1. Where possible to do so safely, identify the biting animal and all associated animals. If captured in a live trap (particularly including potentially feral cats and all wild animals), DO NOT release the animal. Great care should be exercised when moving the live trap to avoid further bites from the animal inside it. **The live trap should only be handled by persons with adequate titer protection provided by a rabies prophylaxis vaccination.** If possible, preserve the life of the biting animal for diagnostic purposes. Any animal that bites and escapes shall be observed by the Principal Investigator, if it is safe and if it is possible to do so, for reporting purposes where appropriate.

2. For laboratory animals, observe 10 days for signs of abnormal behavior. Notify the Veterinarian if there is any sign of sickness or altered behavior in the biting animal during the quarantine/observation period.

   a. During the period of quarantine, the quarantine card, signed by the examining Veterinarian, shall remain on the cage. The animal shall not be removed from the cage or room and shall not be used for experimental purposes.

b. If the biting animal dies before or during the quarantine period, the Veterinarian must be notified, and the whole carcass shall be refrigerated. Do not freeze the carcass, as this interferes with diagnostic procedures.

c. Animals surviving the quarantine period will be released to the investigator for further use.

3. For wild animals, maintain custody where possible and safe to do so, and contact the Maryland Department of Health (MDH), per the Maryland Rabies Policy.

a. Instruction provided by MDH for wound care and other post-bite treatment, as well as for the disposition of the animal, must be followed.

b. A Veterinarian may examine the animal and institute the proper quarantine measures (not required for laboratory rats and mice).

c. However, the animal is most likely to be required to be taken promptly to the nearest state laboratory for examination.

Frostburg State University's Occupational Health and Safety Agreement

I have read AND UNDERSTAND the Frostburg State University Occupational Health and Safety Education document.
I agree to follow the recommendations and the warnings contained in the document.
I agree to revisit the document whenever I begin to work with new animal species and/or zoonotic agents.
Further, I agree to inform my primary physician, as well as any other appropriate medical professionals, that I work with research or wild animals when I visit said primary care provider(s).

Date: _____

Print/Type Name: _____

Signature: _____

Name of Faculty/Supervisor (if you're a student researcher): _____

Please print this page and send the signed Agreement form to the IACUC Administrator

Keep signed Agreements (this page) for PIs and other personnel working with the animals for at least 3 years after the project has been completed.