

POLICY AND GUIDELINES FOR OCCUPATIONAL HEALTH AND SAFETY IN THE CARE AND USE OF RESEARCH ANIMALS

In accordance with recommendations set forth in the NIH “[Guide for the Care and Use of Laboratory Animals](#)” (National Academy Press) and “[Occupational Health and Safety in the Care and Use of Research Animals](#)” (National Research Council), the University of Virginia provides an [Occupational Health and Safety Program](#) for individuals who have animal contact in the course of their employment or studies. As part of this program, policies and guidelines have been developed to reduce the risks to personnel associated with animal care and use.

The precautions identified in this document represent fundamental aspects of occupational health and safety that apply to a wide range of risks encountered in the care and use of research animals at the University of Virginia. Personnel who participate in research protocols that involve biological, radiological or hazardous chemical materials should refer to hazard-specific policies and guidelines provided by the [Office of Environmental Health and Safety](#) or [Institutional Animal Care & Use Committee \(IACUC\)](#). In addition to recognizing and adhering to the precautions identified in this document, it is essential that all personnel understand protocol-associated risks prior to initiating animal care and use activities.

Personal Hygiene

Do not eat, drink, handle contact lenses, use tobacco products or apply cosmetics in areas where animals are present. Eat, drink and store food in areas specially designated for these purposes.

Keep hands away from your mouth, nose, and eyes when handling animals.

Wash hands after handling animals and prior to leaving animal care and use areas. If a sink is unavailable for hand washing, an alcohol-based hand sanitizer may be used, but hands should be washed with soap and running water as soon as feasible.

Sharps

Avoid using sharps such as needles, scalpels and Pasteur pipettes whenever possible. Special care is required in the use of needles to avoid needle stick injuries. If needles must be used, consider the use of safer needle devices such as re-sheathing or retractable needle systems. Appropriate restraint or sedation of animals during procedures entailing the use of sharps decreases the risk of sharps injury.

Do not recap used hypodermic needles. In cases where recapping a needle is unavoidable, a one-handed scoop method should be used. Always dispose of needles, without recapping, directly into an appropriate sharps container.

Personal Protective Equipment (PPE)

Laboratory coats, scrub tops, gowns, disposable coveralls or other garments must be worn as appropriate to protect street clothes from contamination when handling animals. Gloves should be worn whenever handling animals, their fluids, tissues, excreta or soiled bedding to reduce exposure to allergens and potentially zoonotic agents. Follow requirements for additional protective equipment such as head covers, surgical masks or respirators, eye protection and booties as directed by your supervisor. Protective clothing and equipment must not be worn beyond the boundary of animal work areas.

Allergens

Allergic reactions to animals are among the most common conditions that adversely affect the health of personnel involved in the care and use of animals in research. Procedures should be performed to minimize contact with animal dander, hair, scales, fur, saliva, urine and feces. Investigators should ensure that filter tops are placed on mice and rat cages during storage and transport. Emptying soiled cages in appropriate containment, using filter top caging systems, and proper use of personal protective equipment are some measures that personnel should follow to reduce exposure to allergens. In some cases, medical staff or supervisors may recommend the use of respiratory protection when handling or working around laboratory animals in order to reduce inhalation exposure.

Allergies to latex gloves and latex-containing masks and respirators are also common. Personnel with latex allergies should use alternatives such as nitrile or vinyl gloves and latex-free masks and respirators.

Chemicals

Burns and irritation of the skin are the most common chemical injuries associated with animal care and use. Understand the risks and precautions for working with disinfectants, anesthetic gases, chemicals used for preserving tissues (e.g. formaldehyde), and other chemicals. Exposure to anesthetic waste gases must be minimized by using effective scavenging techniques. Contact the [Office of Environmental Health and Safety](#) (982-4911) for assistance.

Laboratory Animal Maintenance and Transport

Animals and animal cages must be stored and transported in a contained manner to protect personnel from potential exposure to animal allergens, bites and scratches. For example, in order to minimize liberation of airborne animal allergens, laboratory personnel should ensure that filter tops are placed on mice and rat cages during storage and transport. Soiled cages may also be contained in bags as a means of minimizing allergen exposure during transport. Personnel should use non-public corridors and service elevators to minimize potential exposure to the public. Animals that are to be moved through areas of access by the public should be visually obscured. Refer to the [Center for Comparative Medicine Policy for Transporting Animals](#) for more information.

Housekeeping

Poor housekeeping practices can increase the seriousness of other hazards associated with animal care and use. Housekeeping should be sufficient to keep work surfaces clean and clear of clutter, obstructions, waste, and other materials.

Pressure Vessels

Compressed-gas cylinders and other pressurized vessels present a substantial hazard to workers if uncontrolled or improper release of pressure occurs. Compressed-gas cylinders must be secured at all times and capped when not in use.

Electricity

Electrical equipment in labs and the vivaria must be grounded, with plugs and cords in good repair (i.e., no frayed cords or exposed wires). Ground fault circuit interrupters (GFCI) must be present on outlets or equipment used in wet environments (e.g. sinks or cold rooms). Extension cords must not be used as a long-term solution in place of permanent wiring, and can create other hazards such as tripping. A qualified electrician must make electrical repairs.

Ergonomics

Properly designed work spaces and practices reduce the risk of musculoskeletal injury. For example, storing heavy objects on the floor or above chest level should be avoided. Racks or carts should be pushed rather than pulled. The ability to change tasks within a workday helps to lessen static postures or repetitive motions that can result in injury or illness to tendons, ligaments, and/or nerves. Contact the [Office of Environmental Health and Safety](#) (982-4911) for assistance.

Noise

Excessive noise can result from animals, cage washers, and other sources. OSHA regulations impose limits to noise exposure. In cases where noise is considered excessive, the [Office of Environmental Health and Safety](#) (982-4911) should be contacted to conduct an assessment. When noise levels exceed OSHA permissible exposure limits and engineering controls are not feasible, protective equipment must be used to minimize exposures.

Waste Disposal

Uncontaminated (i.e. not containing hazardous chemical, biological or radiological materials) animal carcasses, tissues, body parts, blood and materials (e.g. gauze) visibly contaminated with blood must be placed into a non-transparent plastic bag. Note that red bags, which are used to dispose of infectious materials, are not to be used for this purpose. Bags used for uncontaminated waste disposal should be sealed and transported to the designated building storage area and placed into thick green bags as provided by Comparative Medicine. Refer to the [Office of Environmental Health and Safety Waste Management Decision Tree](#) for more information regarding waste disposal.

Reporting Animal Bites, Scratches or Other Incidents, Injuries and Illnesses

All exposures, injuries, illnesses, animal bites and scratches, needle sticks, accidents, etc. should be immediately reported to your supervisor. If medical assistance is needed, the supervisor will complete a [Treatment Authorization Form](#) and refer you to [Occupational Health Services](#) (951-

4655) or [The Student Health Center](#) (982-3915). After hours incidents should be referred to the Hospital Emergency Room.

Incidents involving macaques (monkeys of the genus *Macaca*) that potentially carry B-virus (*Herpesvirus simiae*) must also follow the emergency procedures detailed in SOP#702 and CDC, USPHS recommendations contained in the Monkey Bite & Scratch Kit maintained adjacent to these monkeys at their vivarium.

Individuals who observe conditions or work practices that pose a potential risk should notify their supervisor. Supervisors should communicate these observations to the [Office of Environmental Health and Safety](#) for further investigation and potential mitigation.