

**<sup>1</sup>UNIVERSITY OF MISSOURI-ST. LOUIS  
ANIMAL CARE AND USE  
HEALTH AND SAFETY PROGRAM**

**Information for Personnel Who Work with and Care for Laboratory Animals**

Introduction

The goal of the Health and Safety Program (HSP) is to prevent occupational (and repeated exposure) injury and illness. The program at the University of Missouri-St. Louis was developed and initiated by a committee that consists of representatives from:

- 1) University Health Services (a health professional)
- 2) Environmental Health and Safety
- 3) Risk Assessment
- 4) Animal Welfare Unit (Manager)

The program is also subject to approval by the Institutional Animal Care and Use Committee (IACUC) as part of its larger Animal Care Program Review. Overall responsibility for the program remains with the HSP committee and implementation is the responsibility of the Manager of the Animal Welfare Unit. Annual hazard assessments are conducted by the full committee following a walk-through of the Animal Facility.

A separate document titled “Information for personnel working in or visiting the Animal Welfare Unit (Fifth floor Stadler Hall) whose duties do not involve animal use” has been prepared for those with infrequent and/or brief but necessary visits to the facility. It follows this document, briefly describes the potential hazards of the facility and is part of this program.

General Hazards

Besides the typical hazards inherent to most workplaces (ergonomic, electrical, slip and fall, etc.) there are a number of hazards unique to an animal facility. These include exposure to animal allergens, chemicals, bites and scratches, zoonotic diseases and sharps hazards. These are explained in more detail below along with rules and preventative measures designed to reduce these exposures. There may also be hazards unique to individual protocols which are generally addressed in the design of the experiment which is subject to IACUC approval.

Please read the following information carefully so we can all work together in a clean and safe environment. If you require more information, contact:

Danielle Hunter  
Senior Manager, Compliance  
Office of Research and Economic & Community  
Development  
Campus Mail: 346 Woods Hall  
Office: (314) 516-5972  
E-mail: [Danielle.Hunter@umsl.edu](mailto:Danielle.Hunter@umsl.edu)

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**PERSONAL HYGIENE**

Personal hygiene is very important to the health and safety of laboratory animal users and the animals themselves. The following measures shall be followed by all who are exposed to laboratory animals:

1. There shall be no eating, drinking or smoking in areas where animals are used or housed. Do not apply cosmetics or contact medication in areas of animal housing or use.
2. Wash hands thoroughly before and after handling animals. Hands should also be washed each time one leaves the animal facility or a laboratory where animals are handled. Use common sense: do not touch facial areas (especially nose or mouth) after handling animals.
3. Always wear a laboratory coat over street clothes when working with laboratory animals. Do not wear laboratory clothing worn for handling animals outside of laboratory areas. Launder laboratory coats frequently to reduce the possibility of contamination.
4. Clean work surfaces touched by animals at least daily and after any contamination by animal material. A spray bottle of germicidal detergent is available for this purpose in all animal rooms and use areas.
5. Laboratory animals should not be housed overnight in any areas except specifically designated animal rooms. Any exceptions to this policy must be approved in advance by the IACUC and the Manager of the Animal Welfare Unit.
6. Wear gloves at all times when handling animals or animal-associated materials. This is particularly important when changing animal bedding.
7. Researchers or students involved in inoculating animals, drawing blood, or collecting body fluid or necropsy tissues should wear disposable gloves during the entire procedure. Syringe needles should be disposed of directly into appropriate sharps containers without recapping. Where possible use newer syringes that have additional protective safety features. Containers used to collect blood or tissue should be treated as contaminated with infectious material.
8. If handling infectious animals or animals treated with hazardous materials, or litter from animals in either of these categories, be sure to follow the special handling precautions prescribed by the Office of Environmental Health and Safety. When applicable, these special instructions will be posted prominently in rooms housing animals to which they apply.

## **HEALTH SURVEILLANCE OF ANIMAL USERS AND ANIMAL CARE WORKERS**

**Animal Welfare Unit employees** are required to have annual physical exams. These exams are conducted by Concentra Health Services; the University's workers' compensation provider. Employees should alert their personal health care provider that they work with animals and indicate the species of animals involved. They should specifically inquire about the potential for developing allergies to animals and seek their physician's advice about appropriate action. They should also make certain that their tetanus vaccinations are current and obtain a tetanus booster if they have not done so within the past five years.

**Students, investigators, research assistants, and animal caregivers not employed in the UM-St. Louis animal care unit** are advised very strongly to have annual physical exams. They should inform their health care provider that they work with animals, indicating species. They should inquire about the potential for developing allergies to animals and seek their physician's advice about appropriate action. They should also make certain that their tetanus vaccinations are current, and obtain a tetanus booster if they have not done so within the past five years.

### **SEEK MEDICAL ATTENTION FOR INJURIES**

**For an injury requiring an emergency response (i.e., ambulance, paramedics), dial 911.**

#### **For minor injuries,**

- 1) During regular school hours, students and employees can receive minor emergency medical attention from University Health Services, 131 Millennium Student Center, extension 5671.
- 2) When University Health Services is not open, contact the Campus Police, ext. 5155, for on-site assistance.

#### **For more serious injuries or other problems resulting from animal use,**

- (1) **University employees**, including animal care workers and researchers, should seek medical attention for job-related injuries at a facility of Concentra Health Services, which implements the University Workers' Compensation Program

The nearest Concentra Health Services treatment facility is the Airport **Concentra Medical Center, 463 Lynn Haven Drive in Hazelwood**, phone **314-831-8511**.

- (2) **Students** should seek medical attention from their personal health care provider or at an emergency treatment center. The most accessible emergency rooms are:
  - a. Christian Hospital Northwest on Graham Road in Florissant and
  - b. DePaul Hospital off St. Charles Rock Road in Bridgeton.
  - c. Treatment is also available at Concentra Medical Center, **463 Lynn Haven Drive in Hazelwood**; phone **314-831-8511**.

### **REPORTING ACCIDENTS OR INJURIES**

**Students** must report injuries related to the handling or use of animals to the faculty or staff member supervising their activities. The faculty or staff member will have the student prepare a **Form UM200** Injury Report (obtained from University Health Services or from Human Resource Services) to be filed with the Office of Environmental Health and Safety. A copy of the report must be forwarded to the Manager of the Animal Welfare Unit.

**University employees** must report injuries related to the handling or use of animals to their supervisor. The employee and the supervisor will complete a **Form UM WC-1** Report of Injury Form (obtained from University Health Services or from Human Resource Services). The Report of Injury will be filed with Human Resources. A copy must be sent to the Manager of the Animal Welfare Unit.

### **ANIMAL BITES AND OTHER WOUNDS CAN CAUSE SERIOUS INFECTIONS OR REACTIONS**

Even the most docile animal may bite a handler unexpectedly. One can minimize the chances of animal bites by handling animals gently, avoiding loud noises that might induce startle responses, and allowing an apparently agitated animal a few minutes to calm down before handling. Reasonable precautions notwithstanding, animal bites will occur.

If you are bitten by an animal, treat the bite like any puncture wound. Allow bleeding to clean the wound, then wash the wound thoroughly and bandage it. The bacteria injected with an animal bite and the tissue damage caused by the bite can cause a serious, painful tissue response. Therefore, it is a good idea to seek medical attention. *If you have not had a tetanus vaccination within the past five years, arrange for a tetanus booster as soon as possible.* Report the injury to your instructor or supervisor as well as the Animal Welfare Unit staff.

### **ANIMALS CAN CAUSE SEVERE ALLERGIC REACTIONS IN SOME PEOPLE**

Be aware that some laboratory animals (particularly rats, rabbits, hamsters, voles, and cats) are highly allergenic. Take precautions to avoid development of an allergy or allergic reactions: Wear gloves and lab coats when handling animals; avoid direct exposure to animal material, including animal urine; avoid inhaling contaminated material by wearing masks when changing cages or working with animals; make sure cages and litter are changed frequently.

People with a family history of hay-fever, asthma, or other allergies should be especially cautious and try to minimize their exposure to laboratory animals, because animal exposure increases the chance they will develop asthma. General rhinitis (runny nose and sneezing similar to hay fever) and allergic conjunctivitis (itchy and tearing eyes) are potential signs of allergic reactions and should be heeded regardless of family history.

**If you begin to display signs of allergy** related to animal exposure (rhinitis, conjunctivitis, dermatitis, or asthma), **seek medical advice immediately.**

### **SPECIAL PRECAUTIONS FOR HAZARDOUS AGENTS**

At present no toxic, infectious, or radioactive materials (TIRM) are used in any research projects involving animals in our animal facilities. Should any protocols for use of TIRM be approved, animal care workers will be instructed in the proper handling of animal wastes and bedding by a representative from the Office of Environmental Health and Safety. Principal Investigators have the responsibility of informing their research staff or laboratory assistants of the use of TIRM and educating them of the proper safety precautions to be exercised in animal handling areas and laboratories. The Office of Environmental Health will also provide training, as required. **Standard Operating Procedures** (SOPs) detailing any special handling instructions or precautions will be posted in animal rooms and labs where TIRM or animals treated with TIRM are handled.

Anyone who handles TIRM or animals exposed to them should exercise standard hygienic precautions. Work with toxic or radioactive materials only in an approved fume hood. Bench surfaces exposed to TIRM should be decontaminated after use. Anything contaminated by infectious materials should be autoclaved or disinfected chemically before reuse or disposal.

### **SOME DISEASES CAN BE COMMUNICATED FROM ANIMALS TO HUMANS**

In most cases, humans are not susceptible to diseases of animals. However, there are exceptions: some animal infections can cause serious human disease. Infections of animals that cause human diseases are called zoonotic diseases. In zoonotic diseases, the infected animal may not show any significant signs of illness (because of previously developed immunity and/or evolution of resistance to common infectious agents). In humans, however, the infection may be debilitating because humans are not natural hosts and because we have no protective immunity from previous exposure. Anyone working with animals should be aware of the potential for zoonotic disease and take common-sense precautions to minimize risk. If you become ill with a fever or some other sign of infection, it is important to inform your health care provider that you work with animals so the possibility of zoonotic disease can be considered.

One obvious precaution to guard against infection is personal hygiene. Wear laboratory coats and other appropriate clothing when working with animals. **Wash hands before and after** handling animals or animal bedding. **Wear gloves.**

Any animal user or worker who experiences flu-like symptoms that persist for longer than two to three weeks, or other unexplained persistent malaise, must consult a health care provider. Alert the health care provider that you work with laboratory animals and identify the species. Describe any unusual events that may have occurred. Students or employees must report any such illnesses to their supervisor and to the Manager of the Animal Welfare Unit.

**PARTICULAR DISEASE CONCERNS WITH VARIOUS ANIMALS**

Various rodents (e.g., rats, mice, voles, hamsters, guinea pigs, gerbils) can be potential sources of several zoonotic diseases: toxoplasmosis, tapeworm infection, fungal diseases such as ringworm, and lymphocytic choriomeningitis, which is a viral disease transmissible to humans. Wild-caught rodents can also be a source of leptospirosis and bubonic plague. Most laboratory rodents are bred in-house or obtained from commercial sources that screen for common pathogens. Therefore, the risk of transmission of zoonotic diseases to humans is small. However, animals brought in from wild populations or from uncertain sources can be potential reservoirs of disease and should be treated accordingly!

*Salmonella* and/or *Shigella* can be harbored by various rodents. *Salmonella* is also common in turtles and other reptiles and in amphibians.

Birds are potential sources of avian tuberculosis and psittacosis. Random-source birds to be used in research projects or teaching activities must be inspected for these diseases and quarantined before use.

**Rabies** can be a significant hazard to researchers performing field studies involving mammals or to students or staff working with wild mammals brought into the laboratory. Researchers, students, and animal care workers who will be involved in field studies of mammals or in care or use of wild mammals brought into the laboratory must read the document *University of Missouri-St. Louis Animal-Human Rabies Exposure Policy* and sign the associated training documentation form. You are very strongly advised to obtain prophylactic pre-exposure rabies vaccinations before working with wild mammals in the field or the laboratory; anyone electing not to obtain pre-exposure rabies vaccination must sign a waiver absolving the University of Missouri of liability before commencing work with wild mammals.

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**I hereby certify that I have received and read the document:**

**Information for Personnel Who Work With and Care for Laboratory Animals**

I understand that the University recommends that I participate in the Health and Safety Program when working with laboratory animals by reading the above-named document and following the guidelines set forth.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Name Printed \_\_\_\_\_

Department \_\_\_\_\_

Protocol Number(s) \_\_\_\_\_

If you are a course instructor or principal investigator, check here \_\_\_\_\_

If not, name the investigator(s) or course instructor(s) and provide in the space above the protocol number(s) for the project(s) in which you will be using animals.

Instructor/Investigator Name \_\_\_\_\_

Please Return Form To:

UMSL Compliance  
346 Woods Hall  
Attention: Danielle Hunter