



Animal Care and Use  
Occupational Health and Safety Plan

## PREFACE

The University of Puget Sound Occupational Health and Safety Plan (OHSP) for personnel (staff, faculty, and students) who work with live vertebrate animals is administered in conjunction with the Workplace Safety Policy by the university's Environmental Health and Safety Officer, and the Associate Vice President for Business Services, with assistance from the Institutional Animal Care and Use Committee (IACUC). Each Puget Sound staff member, faculty member, or student handling or working with live vertebrate animals must follow the processes and procedures outlined in the OHSP.

Puget Sound ensures that all teaching, research, and other activities involving live vertebrate animals are conducted in accord with the appropriate scientific, humane, and ethical principles while maintaining an environment that protects the health and safety of all members of and visitors to the Puget Sound community. The goal of the OHSP at Puget Sound is to prevent occupational injury, illness, and adverse exposure while maintaining a safe and productive environment for humans and other vertebrate animals.

Questions about the OHSP can be directed to the Environmental Health and Safety Officer (253-879-3933), the Business Services Office (253-879-2903), Security Services (253-879-3311), or the IACUC chair (253-879-3117).

## I. RESPONSIBILITIES

The purpose of the OHSP is to protect personnel (staff, faculty, and students) from the associated hazards of working with live vertebrate animals. To achieve this goal, the following responsibilities are maintained:

- A. The Principle Investigator/Faculty Mentor
  1. Assures compliance with the OHSP for all personnel under their jurisdiction.
  2. Trains personnel under their jurisdiction in the appropriate procedures for the safe and humane care and use of live vertebrate animals.
  3. Performs hazard assessments of tasks and activities by identifying potential hazards and implementing applicable controls to reduce the risk of personal exposure.
- B. Health Care Services Providers
  1. Medically certify staff and faculty members with a baseline health assessment.
  2. Administer immunizations, including tetanus vaccination, as needed, to staff and faculty members working with live vertebrate animals.
  3. Help identify further risks for personnel based on medical history or conditions (e.g., pregnancy, pre-existing allergies).

Note: The staff or faculty member uses their personal health care provider/facility for assessments and immunizations. In medical emergencies, the individual should visit the nearest emergency room for treatment of on-the-job injury or illness.

- C. Counseling, Health, & Wellness Services, University of Puget Sound
  1. At students' request, medically certify students working with live vertebrate animals.
  2. At students' request, administer immunizations, including tetanus vaccination, as needed and at cost, to students working with live vertebrate animals; or direct student to an off-campus site for immunization administration as needed.

3. Help identify further risks for student personnel based on medical history or conditions (e.g., pregnancy, pre-existing allergies).

Note: In medical emergencies, the individual should visit the nearest emergency room for treatment of on-the-job injury or illness.

D. Animal Care Workers

1. Comply with the OHSP.
2. Complete a *Medical History and Risk Assessment Questionnaire for Persons Handling or Working with Live Vertebrate Animals* and submit the questionnaire to Counseling, Health, & Wellness Services (Wheelock Student Center 216).
3. Consult with health care service providers to identify and address the hazards and associated risks of working with live animals.
4. Perform hazard assessments of tasks and activities by identifying potential hazards and implementing applicable controls to reduce the risk of personal exposure.
5. Undergo training in the appropriate procedures for the safe and humane use and care of live vertebrate animals and in the identification of hazards and associated risks associated with working with live animals.

E. Institutional Animal Care and Use Committee (IACUC)

1. Monitor adherence with the OHSP while conducting facility reviews and audits.
2. Ensure training is available for all animal program participants.

Note: Puget Sound's *Medical History and Risk Assessment Questionnaire for Persons Handling or Working with Live Vertebrate Animals* includes evaluated hazards and risks, relevant immunization history (specifically, up-to-date tetanus immunization), and health status including allergies.

## II. HAZARDS

This section identifies potential hazards encountered by personnel (staff, faculty, and students) working the live vertebrate animals. All personnel must complete a *Medical History and Risk Assessment Questionnaire for Persons Handling or Working with Live Vertebrate Animals* prior to working with live animals. All personnel must complete training in the appropriate procedures for the safe and humane care and use of live vertebrate animals as well as read and sign the appropriate Standard Operating Procedures (SOPs) for processes used in their work. Training via a trained faculty mentor, Collaborative Institutional Training Initiative (CITI) modules, and/or NIH DVDs on the appropriate care and use of animals, as well as the potential risks and hazards, must be completed prior to working with live animals. Potential hazards encountered in the care and use of vertebrate animals include, but are not limited to:

A. Biological Hazards

1. Allergies are a common health hazard caused by live vertebrate animals, especially rodents. Symptoms may include runny nose, watery eyes, sneezing, shortness of breath, and asthma. Hives or skin rashes have also occurred from direct contact with animal hair or skin. Personnel who have a history of allergies are at a higher risk of developing symptomatic reactions. Allergies to laboratory animals can be diagnosed based on patient medical history, physical examination, and skin testing.

2. Zoonotic diseases are diseases that are transmitted between animals and humans. Potential pathogens found in rodents that can cause zoonotic disease are the Lymphocytic Choriomeningitis Virus (LCMV) and the *Leptospiral* bacterium. The risk of disease with laboratory rodents is very low. Reputable vendors provide laboratory rodents that are practically free of human and most animal pathogens.
  3. Zoonoses transmitted by fish can be caused by viruses, bacteria, fungi, parasites, and dinoflagellates. Overall, the incidence of disease transmission from fish to humans in a laboratory setting is low when proper precautions are taken.
- B. Chemical Hazards
1. Many factors contribute to hazards associated with chemical use including chemical toxicity, the amount of the chemical used, and the physical properties of the chemical(s).
  2. Exposures from inhalation, skin contact, or ingestion can cause various health effects depending on the chemical.
- C. Radiological Hazards
1. Use of radioisotopes in animal-based research may present radiological hazards.
  2. The associated hazards depend on the amount and type of emitter of the radioisotope used.
- D. Physical Hazards
1. Animal bites or scratches pose a physical hazard to personnel.
  2. Exposure to bites or scratches can cause adverse health effects including pain, respiratory distress, infection, or disease transmission.
  3. Use of syringes and needles in animal-based research may present a physical hazard to personnel.
  4. Working with electrical implements near aquatic systems may pose a hazard of electric shock to personnel.

### III. HAZARD CONTROLS

- A. Engineering Controls: local exhaust ventilation (lab/fume hoods) and general room dilution ventilation will be used as necessary to control airborne contaminants.
- B. Personal Protective Equipment (PPE): personnel will use PPE (e.g., face masks, aprons, smocks, gloves) as needed and as required by SOPs. Training on the appropriate and required use of PPE from the Environmental Health and Safety Officer must be completed prior to use.
- C. Medical Screening: medical services providers will provide medical screening to personnel working with live vertebrate animals.
- D. Safe Practices:
1. Animals will be monitored for infection or anomalies.
  2. Personnel will comply with established laboratory rules and will practice appropriate personal hygiene.
- E. Institutional Programs:
1. The University of Puget Sound Chemical Hygiene Plan (CHP) provides for appropriate control measures for chemical hazards.
  2. While no radioactive material is currently being used at Puget Sound, the Radiation Safety Officer (RSO) oversees radiological hazards issues including personnel training and the use and disposal of radioisotopes, should they become necessary.

3. Review of Standard Operating Procedures (SOPs) for processes used during the care and use of animals is required.

#### IV. TRAINING

- A. Laboratory safety training is required for all personnel who directly handle animals.
- B. Training is provided by the Principle Investigator/Faculty Mentor, by the Environmental Health and Safety Officer, and/or by other training modalities such as training sessions via the Collaborative Institutional Training Initiative (CITI) and/or NIH DVDs.
- C. Radiological training is required whenever the user handles radiological material. Training is provided by the Radiation Safety Officer (RSO) or approved by the RSO if completed elsewhere.

#### V. REQUIREMENTS

- A. All persons working in rooms containing animals, including personnel not handling the animals, must be qualified as animal care workers. Qualifications include medical screening and appropriate training on applicable hazards and proper procedures.
- B. Individual medical screening will be provided by each person's health care services provider.
- C. Training will include information on the hazards associated with the care and use of animals and other applicable chemical, biological, and physical hazards.
- D. All visitors to the rooms containing animals will acknowledge that they understand the hazards associated with laboratory animals. All visitors must sign a declaration of understanding (see Appendix I), available in the animal facilities and on the Institutional Animal Care and Use Committee (IACUC) website (<http://www.pugetsound.edu/gateways/faculty-staff/institutional-animal-care-use/>), prior to entry into the room(s) containing animals. Signed declarations must be delivered to the IACUC chair (Biology Department, Room 223A).
- E. A qualified medical practitioner shall provide a baseline health assessment to determine if the worker is medically qualified to work with animals.
- F. Animal handlers will use appropriate Personal Protective Equipment (PPE; e.g., gloves, coats, gowns, goggles, and/or masks) to reduce the potential for contact with contaminated tissues and being bitten or scratched.
- G. All personnel will maintain good personal hygiene: hand washing, changing PPE as necessary, and washing affected areas that may have become contaminated with animal blood, urine, etc.
- H. Animal handlers will use proper animal restraint techniques and dispose of animal carcasses as instructed by supervision/training.
- I. Any person who experiences allergy symptoms or illness that they believe is occupationally related should notify their management immediately. Any person who is bitten or scratched by an animal should thoroughly clean and disinfect the wound and report to medical services as soon as possible for treatment. Students may consult Counseling, Health, and Wellness Services (Wheelock Student Center, Room 216; 253-879-1555) during working hours, contact the MultiCare (24 Hour) Consulting Nurse Service (253-792-6300) after hours, or be seen in an appropriate after-hours care center; staff and faculty members should be seen at the medical facility of their choice. The animal must be quarantined for veterinary assessment and review. All injuries should be reported to management within 24 hours of occurrence.

**Appendix I: Declaration of Understanding—Animal Room Visitor**

Laboratory animals can potentially cause an allergic reaction in some people. Symptoms may include a runny nose, watery eyes, sneezing, shortness of breath, and asthma. People who have a history of allergies are at a higher risk of developing symptomatic reactions. Allergies to laboratory animals can be diagnosed based on patient medical history, physical examination, and skin testing.

If you have any known allergies related to the subject animals or if you believe you may experience allergic reactions caused by your presence in the animal rooms, your visit is not advised. If you believe your visit would not present any health issues and you would like to visit the animal room(s), please sign this acknowledgement below.

I wish to visit the University of Puget Sound animal room(s) with the understanding that laboratory animals can cause allergic reactions. By signing this acknowledgement, I agree that I will visit the animal room(s) only when accompanied by someone trained in the appropriate care and use of laboratory animals, I will not handle or touch the animals, and I will wash my hands thoroughly after exiting the facility. I agree to be responsible for any medical treatment and expenses that may arise from my visit.

Printed name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed name of person accompanying the visitor: \_\_\_\_\_

**Deliver completed declaration to the Institutional Animal Care and Use Committee (IACUC) chair (Department of Biology; Thompson Hall Room 223A) prior to entering animal room(s).**