

Animal Use Occupational Health and Safety Program (AUOHSP) Overview

This document refers to occupational health and safety for those who, in the performance of their employment, may come into contact with either wild or vivarium housed research animals. Other sections will cover the use of hazardous agents associated with but not directly used with animals. This direction is provided by the Institutional Animal Care and Use Committee (IACUC).

The ISU Animal Use Occupational Health and Safety Program consists of the following sections:

- 1) Administration and Management
- 2) Facility and Equipment Design and Operation
- 3) Risk Assessment
- 4) Exposure Control
- 5) Education and Training
- 6) Basic Occupational Health Practices
- 7) Personal Protective Equipment
- 8) Information Management
- 9) Emergency Procedures

Covered Personnel

“Covered personnel” includes: Animal Care Facility staff, Investigators and their technical staff, and Instructors and students involved with animal related work. Also covered are some personnel in facilities management, security, custodial services, and certain students, consultants, volunteers and visitors.

Assessment of individual’s risk is determined by frequency of contact, intensity of exposure, hazards associated with the animals being handled, hazardous properties of agents used in research/instruction, the susceptibility of individual employees, the hazard-control measures available, and the occupational history of individual employees.

Specifically included are

1) Administration and Management

The Animal Use Occupational Health and Safety Program (AUOHSP) will be administered through the ISU Environmental Health and Safety Department. The EHS representative assesses the risks associated with animal research protocols and serves on the IACUC. The Environmental Health and Safety Department (EHS), through the Department (EHS) representative, will:

- Perform initial risk assessments,
- Perform assessments of physical hazards, allergies, zoonosis, and occupational hazards,
- Oversee respirator use, including fit testing
- Provide training on physical hazard controls, PPE and Biosafety, and
- Perform environmental hazard monitoring.

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The Animal Facility Manager (AFM) will:

- Provide animal safety and handling training,
- Provide some PPE, and
- Provide forms and paperwork required for the AUOHSP.

The Occupational Health Medical Specialist (OHMS) will:

- Provide consultation as needed on health assessments according to risk assessment.

The Animal Facility Manager and the Attending Veterinarian both provide IACUC-approved training related to the appropriate animal handling and restraint in an effort to minimize the occurrence of injuries and exposures to disease. Questions regarding veterinary aspects of zoonotic diseases should be directed to the attending veterinarian. When necessary, the question will be routed to the medical services provider or to experts in the field of laboratory animal research.

Medical Support Options –

Idaho State University Family Medical Clinic (208-234-4700) and the ISU University Health Center (208-282-2330) offer professional medical support services. Injuries or illnesses sustained outside of the regular hours of the Family Medical Clinic (M-F 8:00-5:00), should be referred to the Emergency Department of Portneuf Medical Center.

Idaho State University follows *Occupational Health and Safety in the Care and Use of Research Animals, 1997*, and *Guide for the Care and Use of Laboratory Animals, Eighth Edition*.

2) Facility and Equipment Design and Operation

All employees and users of the Facility are to receive appropriate training before conducting work in the facility. When special equipment is needed, only properly trained individuals will operate the equipment. When a species involves inherent risk (e.g., rattlesnakes), the PI and other users are to be properly trained in appropriate hazard response. This training will be identified in the risk assessment.

Only facility staff are allowed to operate the cage washers. Staff are trained on-the-job by their supervisor about the emergency de-energizing mechanism and egress safety training. Staff are to use gloves, eye wear/face shields, closed-toed shoes and other Personal Protective Equipment (PPE) when operating the cage washers. Pertinent (i.e., regarding detergents) Safety Data Sheets (SDS) are posted in the cage wash room, and covered in the training. Eye-wash stations are in the area.

Procedures for the operation of the facility, as regards health and safety, are maintained at the Animal Facility and can be accessed through the Animal Facility Manager. These Standard Operating Procedures cover General Animal Care, Daily Care of the Facility, Animal Facility Incinerator, Incinerator Freezer, and Euthanizing Chamber. The Animal Care and Use Facility Handbook is accessed through the Using Animals webpage of the Office for Research, Research Outreach and Compliance.

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3) Risk Assessment

An AUOHSP Risk Assessment begins when a Principal Investigator (PI) develops and submits a protocol to the IACUC. The designated EHS representative will use the information from the protocol and consultation with the researcher as needed to complete the risk assessment and assign an overall risk level for the protocol.

- i. Negligible Risk
- ii. Low Risk
- iii. Medium Risk
- iv. High/Extreme Risk

The risk assessment cannot address every hazard and risk associated with a given protocol. It is the responsibility of the researcher to identify and control unanticipated hazards and maintain a safe environment for the protocol research.

The PI is informed of the risk assessment and any occupational health process recommendations or requirements determined by the EHS Representative. The PI and all workers on the protocol sign the risk assessment, acknowledging receipt. The signature page is returned to the EHS rep.

4) Exposure Control

As each project/activity is assessed the EHS Representative and the OHMS will recommend actions to control exposure to risks associated with animal contact, allergens, hazardous materials, etc.

The OHMS workflow includes:

- Individuals are evaluated by the OHMS with respect to the type and extent of his or her animal contact, and are advised on the inherent risks involved with the research involving laboratory animals and the recommended medical procedures in an effort to provide a healthy and safe work environment.
- OHMS makes any recommendations based on review of the form (shots needed, use of respirator, etc.)
- Recommendations given to AFM who in turn gives them to the faculty/student researcher.

The Researcher decides what recommendations to follow, seeks services from personal physician

- If physician recommendations are followed through on (ex: allergy testing), bring proof to AFM

It is the responsibility of all researchers submitting a protocol to identify all hazardous agents and assure that all issues of safety and compliance are addressed prior to submitting a protocol to the Institutional Animal Care and Use Committee (IACUC) for approval.

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Additional Exposure Controls

- Personal Hygiene

There are a number of personal hygiene issues that apply to all workers who are exposed to animals. There must be no eating, drinking, or applying of cosmetics in areas where animals are housed. All work surfaces must be decontaminated daily and after any animal-related spills or contacts. Gowns must be worn over street clothes. Employees can change into special designated clothing when working with animals. PPE must be used appropriately. Most importantly, thorough hand washing must be done after handling the animals and prior to leaving the laboratory/facility.

- Radioactive Materials

If Radioactive Materials are to be used, contact the Environmental Health and Safety Office to reach the Radiation Safety Officer. The Radiation Safety Committee is responsible for assessing the risks and will provide whatever forms are needed to receive clearance for radioactive materials use. Once approved, provide a copy of the approved Radiation Safety protocol to anmlcare@isu.edu

- Hazardous Chemical Agents

With the protocol submit a list of all chemicals and other hazardous agents (i.e. Asbestos) related to the protocol.

Stock bottles or solutions of hazardous agent are stored according to University policy within the laboratories. Only small aliquots of the stock solutions are permitted in the animal care areas. The EHS provides consultation on proper use and handling, while the IACUC will provide approval of the use and storage of hazardous agents used in an animal procedure. See the Chemical Storage Guidelines on the ISU EHS website.

- Biological Hazards

Biohazards include infectious agents; toxins derived from plants or animals; or hazardous biological materials that present a risk or potential risk to the health of humans, animals or the environment.

If biohazards are to be used, provide a copy of the Biohazard Procedures (*see the IBC Protocol page under the ROC website*) that were approved by the Institutional Biosafety Committee (IBC) and the letter of approval from the Biological Safety Officer to anmlcare@isu.edu.

ISU's EHS has developed a set of guidelines for assessing the health and safety of all individuals potentially affected by hazardous agents. The guidelines are adopted primarily from Section VI.C of the Laboratory Safety Monograph, a supplement to the NIH Guidelines for Recombinant DNA Research. The entire ISU Hazardous Waste Policies and Procedures Manual is available online through the ISU EHS webpage.

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- Animal Transportation

The ISU Animal Facility works from the Institute of Laboratory Animal Research *Guide for the Care and Use of Laboratory Animals* (“The Guide”). Expanding on The Guide’s description of the transport of animals in common use areas, ISU maintains that the only circumstances in which animals are transported into common use areas are when:

- a) new animals are brought into the animal facility,
- b) animals are transported to teaching or research laboratories, or
- c) deceased animals are transported to the incinerator (in the Biology Building) for disposal.

For new deliveries, the common areas affected include the corridors between the delivery entrance and the elevators, the elevators, and from the elevators to the entrance of the facility. Deliveries to teaching/research laboratories or the incinerator include these same corridors, plus corridors and elevators necessary to reach the final destination(s). Whenever possible, the Animal Facilities Manager (AFM) attempts to schedule transportation for times with low traffic. When being transported, all carts with cages are covered.

Deceased animals are transported in double plastic bags. Because the elevators are unable to be used solely for the Animal Facility, animals are transported in the general-use elevators only when the animal technicians are the only individuals in the elevators; i.e., no non-animal staff travel in the elevator with animals. Staff have (and follow) maps of the least-used common areas to reach their destinations.

When a motorized vehicle is used for live animal transport, the vehicle is appropriately ventilated and the animals are in the rear of the vehicle with covers on cages. The transport of live animals must be approved by the IACUC. The IACUC will inspect any vehicle used to transport live animals.

5) Education and Training

Education and training requirements are described in the program description. Each person working in the animal facility must complete the CITI training on animal care and use and species-specific modules. Each fall semester everyone working in the facility must attend a training provided by IACUC officials, the Attending Veterinarian and the facility staff. When new students/faculty/workers begin work in the facility the manager provides them with training specific to the facility and their projects. This includes proper PPE use, techniques for handling animals, etc.

6) Basic Occupational Health Practices

Everyone entering the Animal Facility must follow the steps appropriate to their role in the facility. The next steps are dependent upon on the role of the individual.

For Visitors (outside contractors, ISU employees, maintenance crews)

Complete the *AUOHSP Acknowledgement Form*, yearly.

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For Faculty and Student Researchers (Researchers) working in the facility:

Upon beginning work in the facility

- Complete the *AUOHSP Acknowledgement Form*
 - signed at the Animal Facility prior to access or provided in a protocol or completed from the website, signed, scanned and emailed to the AFM
- Complete the *AUOHSP Medical Surveillance Questionnaire*
 - These forms are available in a DocuSign form on the Webpage and are Stored encrypted on the online Box Cloud storage.

- If a **respirator** is recommended, or desired, the researcher is referred to the ISU EHS Respiratory Protection Manager, 208/282-2310. The major components of the ISU respiratory protection program include, respirator Hazard assessment, medical determination of fitness for respirator use, training, respirator/cartridge selection and fit testing of respirator. The cost of the medical determination, respirators and cartridges is the responsibility of the researcher or department.

- Complete the *AUOHSP Acknowledgement Form* when annual review is completed.

For Animal Facility Staff

- Complete the *Acknowledgement Form*

- Complete the *Medical Surveillance Questionnaire*

- Coordinate respirator use with EHS.

- Individuals are evaluated with respect to the type and extent of their animal contact, and are advised on the inherent risks involved with the research involving laboratory animals and the recommended medical procedures in an effort to provide a healthy and safe work environment.

- Animal Facility Staff will have a yearly work physical at Portneuf Work Med or through personal physician – take *Medical Surveillance Questionnaire* for review by the physician

- Respirator use for Animal Facility staff will follow the comprehensive ISU Respiratory Protection Program requirements outlined above

- Report any recommendations or changes to health to AFM.

- Records

Confirmation of services provided and results of authorized procedures undertaken because of the recommendations made by the OHMS will be maintained by the AFM in the Animal Facility.

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- Hazards Information

Information on animal allergies, bites and scratches, zoonoses, rabies, and precautions taken during pregnancy, illness or decreased immunocompetence are all available to everyone who enters the animal facility and through the Using Animals website.

Medical Monitoring Recommendations and Requirements based upon the animal or agent involved in potential exposure.

Table of Recommended and Required Medical Monitoring and Vaccinations for Animal Users

| If Work Involves Exposure to | Recommended | Required |
|--|--|---|
| Mink | Current Tetanus; Rabies Annual Influenza | |
| Rodents | Current Tetanus | Annual allergy questionnaire and review |
| All other laboratory mammals | Current Tetanus | |
| Birds & Fowl | Current Tetanus; Annual Influenza | |
| Bats, skunk, raccoons and other wild carnivores in research or encountered during field work | Current Tetanus, Rabies | |
| Human Cells used in animal work | Current Tetanus; Hepatitis B | |

7) Personal Protective Equipment (PPE)

PPE should be used accordingly, whenever animals are handled, transported, or restrained; when cages are cleaned; or whenever animal contact could occur. You may also consult the guide for *Occupational Health and Safety in the Care and Use of Research Animals* and *The Guide for the Care and Use of Laboratory Animals*, published by the National Research Council. Both of these guides are available on line at: <http://www.nap.edu/books/0309052998/html> and <https://grants.nih.gov/grants/olaw/Guide-for-the-Care-and-Use-of-Laboratory-Animals.pdf>, respectively.

Failure to use appropriate PPE may increase the chance of being exposed to potentially hazardous materials from animal contact; therefore the use of proper PPE is required.

Minimum Required PPE:

Researchers and Research Staff

- * yellow disposable gowns over street clothing,
- * hair/beard covers

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The Animal Facility will provide these items to researchers

Animal Facility Technician Staff

- * Scrubs and designated shoes are worn in the facility.
- * Hair/beard covers will be worn in animal rooms.
- * Gowns/lab coats will be worn when doing animal room change-outs and cleanings.

If a researcher needs more than the minimum PPE provided by the facility, they must provide it. The facility will not pay for PPE beyond the minimum required.

Lockers are provided (Outside of ACF) for yellow gown and designated shoes that remain in the facility.

Only essential research materials are to be brought into the facility. NO personal items (i.e. backpacks, coats, gloves, hats, food, drink, etc.) are allowed in the facility. Lockers outside the animal facility are available for personal item storage

In addition to the minimum required PPE described above, based upon animal and task, additional PPE may be required/recommended. See Risk Assessment Forms completed by EHS for details for your project. Additional items are not furnished by the Animal Facility.

8) Information Management

All *Medical Surveillance Questionnaire* forms are kept in Box and reviewed only by the OHMS. The AFM will have access to the forms only for record keeping purposes. The AFM and the IACUC secretary maintain records indicating who has received training.

9) Emergency Procedures

Generally, University employees report to the Health West/ISU Family Medicine (208) 234-4700, 465 Memorial Drive, Pocatello, ID or the ISU Health Center (208) 282-2330, 990 Cesar Chavez Ave, Pocatello, ID on weekdays during normal business hours, and go to the Portneuf Medical Center emergency room located at 777 Hospital Way after hours, weekends, and holidays.

Students should seek care at the ISU Health Center during working hours and the Portneuf Medical Center after hours. Care for students is covered by their personal health insurance policy. Students should see their preferred physician for follow-up treatment.

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Acronyms used in this document

ACF – Animal Care Facility

AFM – Animal Facilities Manager

AUOHSP- Animal Use Occupational Health and Safety Program

EHS – Environmental Health and Safety

IACUC- Institutional Animal Care and Use Committee

IBC – Institutional Biosafety Committee

OHMS – Occupational Health Medical Specialist

PPE – Personal Protective Equipment

PI – Principal Investigator

ROC – Research Outreach and Compliance

SDS – Safety Data Sheet