

University of Central Florida

Animal Exposure Program

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Animal Exposure Program

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Introduction

The National Institutes of Health (NIH), the United States Department of Agriculture (USDA), and the accreditation criteria from AAALAC International require that all universities receiving federal support for research involving animals and must have an occupational health and safety program for personnel involved in animal research. Following the guidelines of the NIH and the National Research Council (NRC) publication, *Occupational Health and Safety in the Care and Use of Research Animals*, the University of Central Florida (UCF) has developed and implemented the Animal Exposure Program (AEP).

The purpose of the AEP is to identify and limit adverse health effects to animal exposure including individuals who may have casual exposure in the work area where animal work is conducted.

The program is designed to meet health and safety requirements established by the NIH/NRC, and protect individuals working with animals. These individuals are evaluated with respect to the type and extent of their animal contact, advising them on the inherent risks involved with animal research and the recommended medical procedures in an effort to provide a healthy and safe work environment.

This document outlines the administration of UCF's Animal Exposure Program for all personnel who may be exposed to animals at UCF facilities or as part of research activities with the university.

Definitions

Animal User: An individual that handles animals, animal tissues and/or is involved in animal husbandry as part of their employment or educational program.

Casual Exposure: The indirect or potential exposure which can result from being in the vicinity where animal work is being conducted or coming into contact with animal wastes.

Decontamination: The use of physical or chemical means to remove, inactivate, or destroy pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles, and the item or surface is rendered safe for handling, use, or disposal.

Personal Protective Equipment (PPE): The special clothing and equipment worn by an employee to protect against a hazard. General work clothes (uniforms, pants, shirts, blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment. Employer (Principal investigator (PI) or the department) must provide PPE at no cost to the employees/students in the lab.

Zoonotic Diseases: Diseases transmitted between animals and humans.

AEP Eligibility

All UCF faculty, staff, students, volunteers, visiting researchers, maintenance personnel or any other person with exposure to animal work or casual exposures in UCF facilities, including all UCF leased spaces and UCF affiliated field research are to be enrolled in the Animal Exposure Program (AEP).

Responsibilities

The Animal Exposure Program at UCF is administered in conjunction with Environmental Health and Safety (EHS), licensed physicians at Centra Care, and in partnership with the UCF Institutional Animal Care and Use Committee (IACUC). Any personal information provided as part of enrollment in the program is kept strictly confidential between enrollees and physicians at Centra Care in accordance with applicable laws and regulations.

Environmental Health and Safety (EHS)

Environmental Health and Safety is responsible for the following:

- Administration of the AEP and establishment of administering guidelines
- Coordination of the activities of the program
- Maintenance of records generated by the program (excluding medical and other Health Insurance Portability and Accountability Act -HIPAA- protected records)
- EHS will provide a copy of the completed medical clearance form after receipt from Centra Care to the PI or supervisor
- Enforcement of the AEP program

Specific services provided by EHS include, but are not limited to:

- Educating UCF departmental and laboratory contact representatives about the AEP
- Providing the necessary forms used in the AEP to the Principal Investigators (PI)
- Providing information on additional Occupational Health Programs
- Providing job safety analysis and safety consultations

Questions concerning administration of the AEP should be directed to Environmental Health and Safety at 407-266-7080.

Centra Care

- Offer professional medical support services for the AEP
- Consult with EHS to determine the risks associated with animal contact/exposure
- Answer participants' questions about how to fill out the AEP Medical Questionnaire
- Evaluate animal exposure, review medical questionnaires, provide physical examinations as necessary, and administer appropriate immunizations
- Providing Clearance forms documenting animal species

Principal Investigators, Supervisors or Designated Contact Person

- Identify eligible participants and ensure their enrollment in the AEP
- Complete and sign the Medical Surveillance Form
- Inform the EHS Laboratory Safety Coordinator of new individuals who may be exposed to animals and provide notification for those who no longer work with animals
- The PI, supervisor, or the designated contact person must notify EHS whenever an individual working with animals or with potential exposure to animals, is about to terminate his or her association with the PI, supervisor, or ceases animal contact

IACUC

- Communicate to EHS the individuals approved on protocols or seeking approval

Scientific Director, Scientific Transgenic Facility

- Approve entry into the animal facilities to only those enrolled in the AEP
- Ensure that animals are not delivered to animal facilities where individuals are not enrolled in the AEP

Identifying Participants in the AEP

When an individual becomes associated with a PI or a supervisor, and there is a reasonable expectation of exposure to animal(s) and/or direct involvement in animal handling/husbandry, the PI or the supervisor should enroll in the AEP themselves along with all personnel listed on active, approved IACUC protocols as authorized to work with animals before beginning work.

Note: Personnel shall not begin work with animals or be occupationally exposed to animals until they have been cleared through the AEP and completed any required training.

Enrollment Packet for AEP

New participants working with animals can be sent an Animal Exposure Program Enrollment packet by requesting it from the EHS Biological Safety Officer, or may download the forms from the EHS website. The packet includes:

- Animal Exposure Program Enrollment Checklist
- Centra Care Medical Surveillance Form
- Animal Exposure Program Medical Questionnaire Form

Animal Exposure Program Enrollment Checklist

1. All personnel whose job duties involve working with or casually exposed occupationally to animals at UCF are to enroll in the Animal Exposure Program as part of UCF's Occupational Health and Safety Program. Personnel shall also enroll initially when listed on an IACUC protocol.

Note: Questions or concerns about the AEP or the broader Occupational Health and Safety Program at UCF can be addressed directly with EHS Biological Safety Officer. Personnel with concerns or objections about how their private information is handled shall be given every opportunity to discuss their concerns directly with Centra Care.

2. Personnel are required to re-enroll in the AEP only when there is a change in job duties or animal species in research, or personal health status.
3. Personnel shall not incur any costs or fees as part of their enrollment in the Animal Exposure Program.
4. To begin the enrollment process, Personnel can download the AEP enrollment forms from the EHS website by clicking on the "Research and Environmental Support" section of the toolbar and scrolling down to the "Animal Exposure Program" heading. The three required forms are:
 - Animal Exposure Program Enrollment Checklist
 - Centra Care Medical Surveillance Form
 - Animal Exposure Program Medical Questionnaire
5. Principal Investigators, Supervisors or Designated Contact Person should fill out and sign the Centra Care Medical Surveillance Form for their personnel.

Note: If you arrive at a Centra Care location without a supervisor completed and signed Centra Care Medical Surveillance Form, your forms will not be accepted and you will be directed to report to your supervisor to obtain a signature and then return to Centra Care.

6. Personnel should fill out their own Animal Exposure Program Medical Questionnaire Form to the best of their ability and sign it. Questions about personal medical history contained in the Animal Exposure Program Medical Questionnaire Form are considered confidential and should only be shared directly to Centra Care, not the PI or supervisor.

7. It is important for the enrollee to provide all requested information on the forms so that he or she can be properly evaluated by the physician. The information gathered will help identify existing conditions that may influence the health of the individual with potential animal exposure. For example, if the participant works in a room that houses two or more species, he or she will be potentially exposed to all species present. Also, whenever a participant works with a different species in the future (or taxonomic group for wildlife studies), a new questionnaire must be completed and sent for evaluation by the Centra Care physician.
8. If additional services other than screening for animal exposure are needed, select the appropriate section on the Centra Care Medical Surveillance Form. Please call the AEP Program Coordinator at 407-266-7080 if you have questions on which additional EHS services may be applicable to your research. These services may include:
 - Respirator Medical Evaluation Questionnaire, if respiratory protection is needed
 - Hepatitis B/Tetanus immunizations
 - QuantiFERON®-TB Gold Test for BSL-3 access
9. The PI or supervisor shall **only** complete, sign and date the Centra Care Medical Surveillance Form to authorize medical evaluation and service by Centra Care. The PI may sign her or his own Centra Care Medical Surveillance Form when self-enrolling.
10. The Animal Exposure Program Medical Questionnaire Form is to be completed by the enrollee and remain confidential between the enrollee and Centra Care. It should not be reviewed by the PI or supervisor.
11. Bring both completed forms to a Centra Care location at either University, Conway, South Orange or Employer Care for processing. A medical evaluation may also be requested by the occupational physician during your visit or you may be requested to return for an additional visit. If further evaluation is required, Centra Care will reach out to the enrollee directly. Most individuals will not require a physical exam. The Occupational Health Physician will determine if further evaluation(s) or testing are necessary.
 - a. For individuals at UCF Main Campus, the forms can be brought to the University Centra Care at 11550 University Boulevard, Orlando; phone: 407-384-0080
 - b. For individuals at Lake Nona Campus, the forms can be brought to the Conway Centra Care at 5810 South Semoran Blvd, Orlando; phone: 407-207-0601
12. Once the evaluation is completed, Centra Care will issue an Occupational Health Clearance Form identifying animal species evaluated. Centra Care will send a copy to EHS to be filed. EHS will additionally provide a copy of the completed form to you and your PI or supervisor.

Note: No confidential medical information is present on the Occupational Health Clearance Form.

Records

Centra Care will maintain permanent medical records for each individual evaluated under the AEP. Any individual may request a copy of their medical information by completing the necessary forms. EHS will maintain a copy of the Occupational Health Clearance Form and will provide a copy to the PI or supervisor who authorizes the enrollment into the AEP.

Termination of Animal Use

The PI, supervisor, or the designated contact person must notify EHS whenever an individual working with animals or with potential exposure to animals, is about to terminate his or her association with the PI, supervisor, or ceases animal contact.

Allergies

Animal care staff and others who handle animals may be sensitized to animal dander or other allergens. Individuals at risk of developing allergies or experiencing the onset of existing allergic reactions include those with preexisting allergies, asthma, seasonal rhinitis, or eczema. Individuals with preexisting allergies are encouraged to seek help from their family doctor. Likewise, individuals with work-related allergies are encouraged to seek advice from the Centra Care Physician. During the evaluation, the physician will offer counseling on prevention of work-related allergies. Preventing exposure to the allergens may require the use of personal protective equipment such as gowns, gloves, and respiratory protection.

Allergic reactions to animals are among the most common conditions that adversely affect the health of workers involved in the care and use of animals in research. The manifestations of animal allergies range from rhinitis and eye discomfort to respiratory distress. In the United States, 46% of the 90,000 laboratory animal workers develop allergies to laboratory animals. Of the laboratory animal worker who do develop symptoms, 10% of them develop occupationally-related asthma with symptoms that persist even after exposure ceases. For example, more than one third of laboratory animal workers at the National Institute of Health has reported loss time from work due to their symptoms from laboratory animal allergies (*Allergy to Laboratory Animals in Health Care Personnel*. Bland SM, Evan R III, Rivera JC. 1987. *Occupational Medicine* 2:525-546).

Impairment of the Immune System

The risk of contracting a disease from animals (zoonosis) is minimal. However, individuals with an impaired immune system, due to medication or disease, may be at a significantly greater risk of acquiring a zoonotic disease. It is important for animal users to understand this and provide the Centra Care Physician with any information related to such risk factors.

Tetanus Vaccination

A tetanus vaccination should be administered to all animal users at ten-year intervals. Tetanus is normally associated with wounds contaminated with dirt or the feces of some animals. All bite wounds, cuts, scrapes, abrasions, and punctures either in the laboratory or field study collections may carry the risk of tetanus and should be reported to EHS.

Note: If it has been seven to ten years since vaccination, a booster may be administered at the time the person is seen for evaluation.

Accident and Illnesses Related to Animal Exposures

Individuals must promptly report any injuries or illnesses that result from animal exposure to the PI or supervisor. These injuries include bites or scratches from animal contact without regard to how minor they may seem. The PI or supervisor should notify Human Resources as soon as possible to begin the process of submitting a workers compensation claim. Contact AmeriSys (1-800-455-2079) as soon as possible to initiate post-exposure evaluations and seek treatment. EHS also requires the incident be documented using the Incident Report Form available on the EHS website. All notifications must be completed and submitted within 24 hours of an incident occurring. Students and student volunteers should report to UCF Student Health Services for treatment in the event of injury.

Preventive Measures

In order to ensure animal users maintain their highest level of health and safety, the following preventive measures are required.

Primary Containment

Laboratory safety equipment provides a barrier and protection for personnel, product and/or the environment. For allergy prevention, the goal is to reduce or eliminate direct contact with the allergen while minimizing the presence of the allergen in the environment. Safety equipment generally includes exhaust ventilation and/or a filtration containment systems.

Types of primary containment include:

- Biological Safety Cabinets (BSC) – containment devices that are designed for work involving biological procedures and microorganisms, and includes a high efficiency particulate air (HEPA) filtration system. BSCs provide excellent containment of animal allergens when used in accordance with the manufacturer’s instructions. For additional information on the different types and classes, see [“Biosafety in Microbiological and Biomedical Laboratories \(BMBL\), 5th ed., Appendix A”](#).

- Local Exhaust Ventilation (LEV) System – a ventilation system that is designed to capture contaminants at their source and exhaust directly out of the work area and into the outdoor atmosphere. LEV systems may help to reduce contact with animal allergens by decreasing the level of allergens in the macro environment.
 - Chemical Fume Hood (CFH) – most common LEV system; its primary goal is to provide personnel protection for work involving chemicals (e.g. gases, vapors, etc.).
 - Downdraft Table – table designed with ventilation slots on the table work surface with air exhausted from below the work surface.
 - Downdraft Sink – sink designed with ventilation slots around the sink surface and/or internal components.
 - Snorkel – flexible duct or hose designed to capture contaminants directly at the source.
- Micro Isolator Cage – an animal cage composed of both a cage bottom and ventilated filter topped lid. When closed, animal allergens are contained within the microenvironment of the cage. When opened in a BSC using appropriate technique, environmental allergens can be eliminated or reduced if using a ventilated cage change station.
- Individual Ventilated Cages (IVC) – A mechanical ventilated rack and micro-isolator caging system that provides and maintains a stable environment for the animals while producing a safe and comfortable working environment for staff and researchers. The supply and exhaust air are commonly high-efficiency particulate absorption (HEPA) filtered and maintain a single pass air stream through the individual cages. Ventilation of the cage may be either positive or negative to the macro environment of the animal holding room. In both situations, allergens leaving the cage are prevented from entering the macro-environment of the animal holding room by exhausting the air into the outdoor atmosphere or HEPA-filtering the air leaving the cage into the animal holding room.
- Ventilated Cage Change Station – a stand-alone product protection workstation which commonly contains a blower and filtration system to help in the capture and containment of particulates from spreading outside of the unit. Unlike a BSC, change stations are less efficient in the containment of animal allergens and can increase the level of animal allergens in the macro environment of the animal holding room. Some stations (Cage Dump Stations) commonly have a small opening inside the work area to permit the dumping of dirty bedding material into a waste disposal vessel.

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 or handled. All work surfaces must be decontaminated initially and after any animal-related contact or use. Laboratory coats must be worn over street clothes or employees may change into special designated clothing when working with animals. Personal protection equipment (PPE) must be used appropriately. Most importantly, thorough hand washing must be done before and after handling the animals and prior to leaving the laboratory.

Personal Protective Equipment (PPE)

Appropriate PPE should be provided at no cost to the individual with direct or potential animal contact and/or exposure. Appropriate PPE includes gloves, face shields or masks, eye protection, scrubs, gowns, aprons, laboratory coats, or any other appropriate PPE. The department, laboratory, PI, or supervisor is also responsible for cleaning, laundering, disposal and replacement of the PPE.

- Use of respirators (devices designed to protect the wearer from inhaling harmful dusts, allergens, fumes, vapors, or gases depending on the respirator and required protection) require medical clearance by a physician and annual fit testing as required by federal Occupational Safety and Health Administration (OSHA) regulations.

Failure to use appropriate PPE in the laboratory or in field studies may increase the chance of being exposed to potentially hazardous materials from animal contact and/or exposure, so the use of proper PPE is required. PPE should be used accordingly whenever animals are handled, transported, or restrained, when cages are cleaned, or whenever animal contact and/or exposure could occur. For more information on the proper use of PPE, consult the [Occupational Health and Safety in the Care and Use of Research Animals](#) guide and the [Guide for the Care and Use of Laboratory Animals](#).

Appendix A

Laboratory Animal & Field Study Allergens – Information Guide

Laboratory Animal Allergies (LAA) and Field Study Allergens (FSA) develop from occupational exposure to animal allergens and are the most common and serious occupational condition experienced by workers exposed to animals in research settings. Over a period of time, an individual may be exposed to sufficient amount of allergens to become sensitized. Once sensitized, this individual's next exposure to a specific allergen will cause an allergic reaction.

Symptoms of LAA & FSA:

- Sneezing
- Runny nose
- Itchy/irritated eyes
- Skin rashes
- Wheezing
- Shortness of breath
- Asthma

Sources of LAA & FSA:

- Dander
- Urine and feces
- Saliva
- Hair
- Bedding
- Serum
- Plants
- Pollen
- Dust
- Molds
- Mildew
- Bacterial Spores

Route of Exposure:

- Inhalation of animal allergens
- Direct contact of allergens with skin, eyes and mucous membranes

Risk Factors for LAA & FSA:

- **Exposure:** working with & handling animals
- **Genetics:** predisposal to developing allergies and asthma
- **Environment:** working in animal-associated areas without proper ventilation or potential inherent hazards associated with field study research

Prevention of LAA & FSA:

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- Use a biological safety cabinet (BSC) or chemical fume hood (CFH) when working with animals or manipulating them in a laboratory setting.
 - Use ventilated animal cage racks or filter top animal cages.
 - Wear dedicated PPE, protective clothing when working with animals and leave work clothes at the workplace to be laundered.
 - Wear proper PPE including long sleeve outer protective gown, gloves, masks, and eye protection to reduce skin contact of animals and animal allergens.
 - Reduce inhalation of animal allergens by using a respirator. Users who want to wear a respirator, must contact the Biological Safety Coordinator at 407-266-7080.
 - Wash hands before and after working with animals or their tissues.
 - Keep cages and work area clean.
 - Avoid high particulate producing bedding in animal cages.

What to do if you are experiencing a LAA:

- Discuss the symptoms with your supervisor.
- Seek medical counsel
 - **Employees:** Contact Centra Care.
 - **Students:** Contact the UCF Student Health Services.
- Report any incidents to the UCF Biological Safety Officer.