

OCCUPATIONAL HEALTH PROGRAM  
FOR RESEARCH PERSONNEL EXPOSED TO  
ANIMALS OR ANIMAL PRODUCTS

*UNIVERSITY OF SOUTH  
ALABAMA*



**July 2021**  
(Revised)

**OCCUPATIONAL HEALTH PROGRAM**  
**For Research Personnel Exposed to Animals or Animal Products**  
Table of Contents

Introduction .....	1
<b>Eligibility and Identification of Participants.....2-5</b>	
Class Categories .....	2
Inclusion in the Program.....	3
Continuing Health Assessment .....	4
Records and Files .....	4
Medical Exclusion.....	4
Employee Electing Non-participation in the Occupational Health Program .....	5
<b>Work-Related Injuries and Illnesses</b>	
Evaluation of work-related injuries and illnesses .....	5
Reporting Injuries.....	5
<b>Components of OHP Risk Indicators.....6-9</b>	
Components of the OHP for Class <b>A</b> Participant.....	6
Components of the OHP for Class <b>B</b> Participant .....	6
Components of the OHP for Class <b>C</b> Participant .....	6
Components of the OHP for Class <b>D</b> Participant.....	7
Components of the OHP for Class <b>E</b> Participant.....	7
Components of the OHP for Class <b>F</b> Participant.....	7
Components of the OHP for <b>ABSL3</b> Participant .....	7
<b>References</b>	
1. Additional documents and publications .....	8
<b>Appendix</b>	
1. Summary of Occupational Health Program (Table 1) .....	10

## OCCUPATIONAL HEALTH PROGRAM FOR RESEARCH PERSONNEL EXPOSED TO ANIMALS OR ANIMAL PRODUCTS

### Purpose

The Occupational Health Program (OHP) covers individuals with potential exposure and contact with animals, body fluids, tissues, wastes, contaminated living quarters, or using infectious agents in animals. The OHP manual has been developed in accordance with the *Occupational Health and Safety in the Care and Use of Research Animals* document prepared by the National Research Council (NRC), the *Guide for the Care and Use of Laboratory Animals 8<sup>th</sup> edition* (Institute of Laboratory Animal Resources [ILAR]), the *Biosafety in Microbiological and Biomedical Laboratories*, CDC•NIH, and the *Biosafety Manual and Exposure Control Plan* (University of South Alabama). This document reflects current information and services for those persons at risk. In addition, the OHP is described in Section E of the [USA Animal Welfare Assurance](#).

There are times when research involves the deliberate infection of animals with biological materials capable of causing adverse effects to human health. Therefore, biohazardous research must be registered and approved for use at specific biosafety levels and by the Institutional Biosafety Committee (IBC).

Chemical hazards (includes chemotherapeutic compounds) used in animal research are overseen by the Office of Safety and Environmental Compliance (SEC). The Institutional Animal Care and Use Committee (IACUC) requires an acknowledgment letter from SEC stating that the Investigator has included the compound on their "chemical inventory" list. The letter provides the IACUC to ensure that the Investigator is aware of the chemical hazard safe handling and disposal requirements.

Nothing in this document intends to be **contrary** to the Family and Medical Leave Act of 1993 (FMLA) provisions or the Americans with Disabilities Act (ADA). Accommodations are in accordance with these acts and with the guidance of the Human Resources department. However, due to the nature of animal care and use activities, such accommodations may be difficult to achieve and still ensure the person's safety.

The USA Office of Research Compliance and Assurance administers the OHP in cooperation with the Attending Veterinarian (AV) and USA Health Industrial Medicine health provider. The USA Health Industrial Medicine provides input and oversight of medical assessments for the OHP. The Office of Research Compliance's IACUC/IBC Administrator is responsible for monitoring and documenting OHP enrollment. Research personnel included in the OHP program are animal care and support staff (including maintenance personnel), IACUC investigators and protocol associates, committee members, and visitors as applicable.

The purpose and intent of the OHP are to help provide a safe and healthy work environment. Occupational exposure to laboratory animals, body fluids, tissues, wastes, chemical hazards, or biohazardous materials may present potential problems. Therefore, the OHP is an essential component for developing and sustaining a helpful program.

## Eligibility and Identification of Participants- Risk Assessment

### A. Class Categories

Program participants are assigned to class categories that reflect specific preventative maintenance care or medical surveillance based upon occupational exposure. The **USA Health HCA Industrial Medicine** provider reviews the health screening questionnaire and assesses if the individual has direct or indirect exposure to animals used in research. In addition to evaluating the individuals' exposure risks, the provider may also perform a physical exam or order diagnostic tests such as titers. In addition, all participants are offered a tetanus vaccination. The healthcare provider is responsible for clearing participants based on the designated occupational activity(s). The criteria and class categories are listed in the sections below.

The OHP for personnel who work and have contact with animals in laboratory research facilities is risk-based. Evaluating the hazards, health concerns, and necessary training has led to developing a tiered, categorical method to assess risk. The risk assessment shall consider the following factors: animal contact; exposure intensity; exposure frequency; physical and biological hazards presented by the animal; hazardous properties of the agents used in the research protocols; susceptibility of the employee; occupational-health history; and hazard-control measures available.

Below is a list of the categories:

<i>Category</i>	<i>Risk Indicator</i>
A	Rodents, Rabbits, Swine
B	<i>Dogs, Cats, Ruminants</i>
C	Non-Human Primates
D	Other or Human Pathogens
E	Maintenance/Support Personnel
F	Fish, Reptile, Amphibian
ABSL-3	Rodents infected w/ BSL-3agents

## **B. Inclusion in the Program**

All personnel at the University of Alabama who work with research animals or plan to do so may participate in the OHP. Occupational exposures include employees who feed and handle animals, clean animal cages, and are exposed to unfixed animal tissues and animal wastes and/or bodily fluids. These individuals generally include:

- Veterinary staff at the Department of Comparative Medicine (DCM)
- Animal caretakers and technicians
- Animal facility managers
- Principal Investigators on animal protocols
- Graduate students, undergraduate students, post-doctoral fellows, visiting scientific personnel, and other laboratory personnel listed on IACUC protocols.

## **C. Enrollment in OHP**

Enrollment in the OHP occurs before the participant's contact with animals. A new employee who will handle animals, their tissues, body fluids or wastes, will complete the **Occupational Health Screening Questionnaire** form via **REDCap**. An [OHP REDCap User Guide](#) was developed to aid in accessing and submission of OHP questionnaires. This guide is available on the [Occupational Health Enrollment](#) webpage. The USA Industrial Health provider oversees the review of questionnaires. After the healthcare provider completes the assessment, a determination to clear or not provide medical clearance to work with research animals is made. If it is determined that the individual requires an in-office consultation for further assessment, the individual will be contacted to schedule an appointment. The additional evaluation may include prescribing risk-specific preventative measures, including additional tests, immunizations, or other services recommended based on the risk and health history of the enrollee. Clearance for work with animals is based on information collected from the OHP screening questionnaire and the healthcare provider's knowledge of occupational health risks the OHP is designed to mitigate.

The health questionnaire provides USA Industrial Health with the participant's medical history, including;

- General history
- Occupational exposures
- Biological hazards
- Immunization history
- Allergies

The industrial healthcare provider communicates the status of an individual's clearance to work with animals to the IACUC Administrator and Compliance office. The IACUC Administrator is responsible for verifying that individuals listed on IACUC protocols have complied with the Occupational Health Program requirements. In addition, enrollment dates are provided to the IACUC office by email notification and documented in the **REDCap** electronic portal.

#### **D. Triennial Review (Continuing Health Assessment)**

Personnel whose work strictly involves animal research and **no** work involving BSL-3/ABSL-3 activities will require an update to their health status every three years after initial enrollment. Individuals will receive an email notification via the **REDCap** portal requesting completion of the OHP Triennial Review form. The USA Industrial Health provider reviews the triennial form and may approve continued work with animals or require the participant to see an in-person office visit.—An in-person office visit or consultation will be strictly at the discretion of the healthcare provider and not the IACUC nor the Office of Research Compliance and Assurance.

#### **E. Annual Reviews**

Individuals that work in the BSL-3/ABSL-3 facility handling select agents and/or animals are required to update their health status on an annual basis. In addition, yearly reviews apply to maintenance workers who enter areas where research is being conducted with select agents. The process for Annual reviews is the same as the Triennial review process noted above in section D of this manual.

#### **F. Records and Files**

**USA Health HCA Industrial Medicine** will oversee medical records for occupational health program participants. Copies are available to a participant and their primary healthcare physician upon request. The employee's information through the **REDCap** system is protected from unauthorized or indiscriminate use of personal health information (PHI). The participant's personal health information is not shared or maintained by the IACUC office.

#### **G. Medical Exclusion**

The healthcare provider, at their discretion, may restrict clearance to work with animals. This determination is based on the risk assessment and health status of the OHP participant. Risk assessment and medical exclusion are solely at the discretion of a medical professional, not the IACUC or the Office of Research Compliance.

All reasonable efforts will be made to resolve short-term medical conditions (e.g., pregnancy) through temporary reassignments to other duties, increase the use of personal protective equipment (PPE), including respiratory protection, or medical leave of absence, if available. In cases where permanent or long-term medical conditions may happen (e.g., immunosuppression due to long-term chemotherapy, chronic illness, or severe allergies to animals), every effort will be made to accommodate the participant's non-hazardous duties or the use of specific PPE. However, other steps (including disability retirement or dismissal) may be necessary to protect the employee.

## H. Electing Non-participation in the Occupational Health Program

Personnel may decline participation in OHP. To do so, they must sign a waiver documenting their refusal. The waiver request is completed via the **REDCap** electronic platform. Refusal to participate in the OHP may be grounds for disapproval of authorization to work with animals and potentially infectious materials. This request is submitted to the Attending Veterinarian (AV) for review and approval. Approval is rarely granted and only when risk is negligible. The A.V. does not access the health status of the participant.

## Work-Related Injuries and Illnesses

### A. Evaluation of work-related injuries and illnesses

First aid should be given immediately if an individual is injured or exposed to potential hazards while working with or around animals. On-the-job injuries and/or exposures must be reported to the supervisor on duty. The employee may be referred to the Industrial healthcare provider's office, University Hospital (if after-hours), or the nearest E.R. (if the injury/exposure is life-threatening). USA Industrial Health or the attending E.R. physician will arrange a referral to the kind of clinical expertise needed to manage the injured employee (e.g., exposure to infectious agents used in animals will be referred to the Infectious Disease Clinic). If human biohazardous materials are involved, personnel must meet OSHA-required medical consultation requirements specified in the OSHA Bloodborne Pathogen Standard.

### B. Reporting Injuries

The employee must complete an [incident report form](#) soon after the accident; regardless of the species, Incident-reporting instructions are located on the [Research Compliance & Assurance](#)

### **Components of the OHP for Class A Participants**

**Class A participants anticipate handling only rodents, rabbits, swine, and/or their tissues, body fluids, or wastes.**

#### **A. Occupational Health Screening Questionnaire**

Upon enrollment in the OHP, participants are required to complete an Occupational Health Screening questionnaire form. In addition, the healthcare provider may require a physical exam or titers/tests, as appropriate.

#### **B. Tetanus Immunization**

According to the Public Health Service Immunization Practices Advisory Committee (IPAC) of the Centers for Disease Control and Prevention (CDC), immunization with tetanus toxoid is updated. Booster doses are administered every ten (10) years or as needed during any of the following:

- ~ following the report of an injury
- ~ as needed

#### **C. Hepatitis-B Vaccination Program**

The OHP offers a voluntary Hepatitis-B vaccination program for all personnel handling animals. The Hepatitis-B program includes two-three (2-3) injections over six months. The vaccination is administered following the appropriate Hepatitis-B vaccine protocol by USA Health HCA Industrial Medicine.

### **Components of the OHP for Class B Participants**

**Class B participants anticipate handling dogs, cats, or ruminants and/or their tissues, body fluids, or wastes.**

*There are currently no dogs, cats, or ruminants housed/used by USA.*

### **Components of the OHP for Class C Participants**

**Class C participants anticipate handling or working with nonhuman primates and/or their tissues, body fluids, or wastes.**

*USA does not use nor house nonhuman primates.*

### Components of the OHP for Class D Participants

**Class D participants anticipate working with, handling animals not previously discussed, or animals or tissues from animals experimentally infected with human pathogens.** Personnel participating in field studies or IACUC-approved observational studies are included in this category.

Because it cannot be anticipated in a general program description what pathogens may be used experimentally in animal research, specific OHP requirements will be reviewed on a case-by-case basis. However, all previously discussed OHP requirements for Class A participants and particular recommendations from the IBC will apply as appropriate.

### Components of the OHP for Class E Participants

**Class E participants do not work directly with animals but may have exposure during their regular duties.**

Maintenance workers and other support staff complete the occupational health questionnaire for review by the Industrial healthcare provider. The level of participation is assessed on a case-by-case basis. If a potential hazard exists, the employee will be scheduled for an in-office medical evaluation.

### Components of the OHP for Class F Participants

**Class F participants are those who anticipate handling fish, amphibians, or reptiles.** All previously discussed OHP requirements for Class A participants will apply as appropriate.

### Components of the OHP for Animal Biosafety Level 3 (ABSL-3) Workers

All previously discussed OHP requirements for Class A participants will apply as appropriate. In addition, personnel must be enrolled in the *Occupational Health Program for Laboratory Exposures to BSL-3 and Select Agents*. Employees working with these select agents are provided a copy of the manual and receive additional training.

## References

Additional documents and publications:

1. [\*Occupational Health and Safety in the Care and Use of Research Animals\*](#) National Academy Press, 1997
2. [\*Guide for the Care and Use of Laboratory Animals, 8th edition\*](#) National Academy Press, Washington, D.C.
3. [\*Biosafety in Microbiological and Biomedical Laboratories\*](#) CDC•NIH, 6th Edition
4. [\*Biosafety Manual and the Exposure Control Plan\*](#) University of South Alabama.

## SUMMARY OF OCCUPATIONAL HEALTH PROGRAM

Class	Health Screening Questionnaire	Physical Exam <sup>1</sup>	Hepatitis B Immunization	T.B. Skin test (PPD)	Chest X-Ray (T.B. Reactors)	Tetanus	Serum Storage	Other	Medical Health Update
A--Rodents, Swine, & Rabbits	Initial Employment		Optional			@ 10 years	N/A		Triennial
B—Dogs, Cats, & Ruminants	Initial Employment		Optional			@ 10 years	As necessary <sup>6</sup>	Q-Fever titer <sup>2</sup> Toxoplasmosis counseling <sup>3</sup>	Triennial
C—Nonhuman Primates	Initial Employment	Pre-assignment @ 2 years	Optional	Pre-assignment Annually	Note <sup>4</sup>	@ 10 years	As necessary <sup>6</sup>		Biennial
D—Other species or those infected with human pathogens	Initial Employment		Optional		As Required	@ 10 years	Before exposure	Exposures documented	Triennial
E—No direct animal contact (maintenance)	As warranted <sup>5</sup>	As Required	Optional	As Required	As Required	N/A	N/A		N/A
F—Fish, Amphibians, & Reptiles	As warranted <sup>5</sup>		Optional			@ 10 years	N/A		Triennial
<b>BSL-3</b> or <b>ABSL-3</b> workers	Initial Employment <b>(In-office visit is REQUIRED)</b> <sup>7</sup>		Optional				Initial Employment		Annual

1. Includes medical history, examination of pertinent body systems. Additional tests are performed if indicated. T.B. testing for Class C participants only.
2. If working with livestock (sheep, goats, or cattle) or their waste products.
3. For women (up to age 45) working with cats or their waste products.
4. Participants with positive tuberculin tests may be excluded from nonhuman primate protocols. Chest x-rays are required at initial examination if previously positive for T.B.
5. The healthcare provider determines the level of risk.
6. Titers will be checked as necessary for classes B and C.
7. **BSL-3** and **ABSL-3** employees are required to not only complete the Initial Enrollment Health questionnaire but are also required to be seen by the health care provider.

THIS PAGE IS INTENTIONALLY BLANK