



Title	Animal Research Occupational Health and Safety Program SOP
Policy Number	CMU-P-031
Original Approval Date	April 5, 2016
Revision Date / Author Initials	April 21, 2023 / OLFS/ORC
Revision History Dates	4.5.16, 2.1.21, 7.11.22
Authorized by	OLFS/IACUC

I. PURPOSE

The CMU Animal Research Occupational Health and Safety Policy (13-6) requires that those individuals working with animals and having frequent animal contact participate in the Animal Research Occupational Health and Safety Program. This standard operating procedure is intended to provide procedures for doing so. Failure to follow these procedures will result in denial and/or loss of animal facility access until this requirement is met.

II. BACKGROUND

A complete risk assessment should take into consideration all hazards that an individual might be exposed to including chemical hazards, biohazards, radiation and radioisotopes as well as hazards associated with animal contact (Ref. 1,2,3,5). Exposure to allergens is the most common risk associated with animal contact (Ref. 6,8). The main source of allergenic proteins is the urine of rats and mice, however allergens may also be found in dander, hair, saliva, serum, and bedding (Ref. 9,10). Risk factors for developing allergic reactions include an allergic reaction to another animal species, the intensity of exposure, the duration of exposure and the route of exposure (Ref. 6,7). Duration of exposure may be a less significant factor than intensity or a personal history of allergy (atopy) although personal history alone is not a reliable predictor (Ref. 6,7,9). The most effective route of exposure (for the development of allergy or asthma) is respiratory (Ref. 6). Since animal allergens including proteins in urine can become aerosolized and remain airborne for extended periods of time, the use of engineering controls, personal protective equipment (PPE), cage-changing stations and ventilated or barrier top cages can significantly reduce the risk of exposure (Ref. 1,4,5,8).

III. DEFINITIONS

Animal: Any live or dead vertebrate animal used or intended for use in research, research training, teaching, experimentation, demonstration, or biological testing or for related purposes.

Animal Contact: Animal contact may be direct or indirect. Indirect contact is contact with animal products or items that have been in contact with animals. Animal products include unpreserved tissues, blood, excreta, body fluids or discharges, hair, dander, etc. Items that could be contaminated include sharps, pens and cages, bedding, clothing, gloves etc. (Ref. 11,12).

Animal Facility: Any and all buildings, rooms, areas, or enclosures, including satellite facilities, used for animal confinement, maintenance, breeding, or experiments inclusive of surgical manipulation. A satellite facility is any containment outside of a core facility or centrally designated or managed area in which animals are housed for more than 12 hours.

Animal Handler: Anyone who has animal contact related to classroom, teaching, research or outreach activities at CMU.

Risk Assessment: The process by which risks associated with working with animals (such as hazardous biological, chemical, or physical agents; allergens; or zoonosis) are identified.

Risk Management: The process by which identified risks are managed through such actions as education, training, personal protective equipment, zoonosis surveillance, or immunization.

Risk Training and Education: A program of training and education about areas of risk when working with animals in general or with specific species, conducting specific experiments, conducting specific experiments, or exposure to animal allergens.

Supervisors: Department chairs, faculty, and other CMU employees or affiliates who have oversight of University employees, students, or other individuals and who are involved with animals; those individuals who are not CMU employees but are affiliated through courtesy or adjunct appointments may serve as supervisors.

IV. POLICIES

- A. Individuals required to submit a medical questionnaire:
1. Those requesting key, badge, or fob level access to animal facility spaces are considered as having “frequent contact” with animals and are required to complete a medical questionnaire for review by the occupational health provider every year.
 2. Principal Investigators will be required to complete a medical questionnaire every year which will be reviewed by the occupational health provider due to their role in oversight of animal research projects.
- Note: Failure to complete the medical questionnaire and review process (initial/annual) may result in lack of, or removal of, animal facility access.
- B. Individuals without key, badge, or fob level access to animal facility spaces, who will be accessing the facility on an infrequent basis and will be escorted while in the spaces, will comply with the Vivaria Access: Visitors Policy university policy. These individuals may choose to complete a medical questionnaire which will be reviewed by the occupational health provider.
- C. Facilities management and other ancillary support entities which may have animal facility access but whose use is limited/infrequent and whose entrance into animal holding areas requires escort are not required to complete a medical questionnaire, but are offered the opportunity to do so.

V. PROCEDURES

- A. Individuals required or wishing to submit a medical questionnaire for review by the occupational health provider should complete the animal worker registration form and send to the Office of Laboratory and Field Safety, (labfieldsafety@cmich.edu) to obtain the **medical questionnaire**.
- B. Supervisors will provide the individual information regarding hazards specific to their animal use and the level of risk associated with the tasks the individual will be performing.
- C. Supervisors are prohibited from directing the responses of an animal handler regarding completion of their medical questionnaire. Questions are to be directed to the Office of Laboratory and Field Safety (989-774-4474, labfieldsafety@cmich.edu).
- D. Submit the medical questionnaire and complete additional screening, as necessary
- E. The occupational health provider will review the medical questionnaire and, in some cases, require further evaluation of the individual through in-person screening. The occupational health provider will:
1. Approve the individual to work with animals without restrictions.

2. Approve the individual to work with animals with restrictions.
 3. Not approve the individual to work with animals.
- F. Individuals will be contacted by the Office of Laboratory and Field Safety every year to submit a medical questionnaire for review.
- G. Per CMU's Guidelines for Handling Injuries on Campus, report any work-related illness or injury to the Workers Compensation Office (employee injuries) or the Office of Risk Management (student or visitor injuries), including:
1. Suspected zoonoses
 2. Work-related illness or work-related injury
 3. The onset or worsening of symptoms of allergy associated with exposure to animals.

VI. REFERENCES

1. Occupational Health and Safety in the Care and Use of Research Animals (NAS, 1997)
2. The Guide for the Care and Use of Laboratory Animals 8th Edition (NAS, 2011)
3. Institutional Animal Care and Use Committee Guidebook (OLAW 2008)
4. The National Institutes of Health Laboratory Animal Allergy Prevention Program (2014)
5. Preventing Asthma in Animal Handlers (CDC/NIOSH, 1998)
6. Allergies to Laboratory Animals A Significant Health Risk (2014)
7. Prevention of Laboratory Animal Allergy (Occupational Medicine, 2003)
8. Guidelines for Personnel Protection in Animal Facilities (NIH, 2014)
9. Exposure of Laboratory Animal Care Workers to Airborne Mouse and Rat Allergens (JAALAS, 2012)
10. Influence of 5 Different Caging Types and the Use of Cage-Changing Stations on Mouse Allergen Exposure (JAALAS, 2014)
11. Occupational Health Programs for Animal Workers, University of Michigan, Michigan State University, University of Massachusetts, Vanderbilt University and National Institutes of Health.
12. Central Michigan University Policy 13-6: Animal Research Occupational Health and Safety Program.