UNIVERSITY OF MINNESOTA

Laboratory Animal Allergen (LAA)

Exposure Control Program

Revised July 2017

University of Minnesota
Laboratory Animal Allergen (LAA) Exposure Control Program

PURPOSE

The intent of this program is to minimize the risk of acquiring or exacerbating laboratory animal allergy (LAA.) The development of LAA often occurs after contact with allergens such as hair, dander, fecal proteins, endotoxin and urinary proteins. Exposure will be reduced through a variety of protective measures including PPE, ventilation, special practices, medical screening, and employee training. Dermal and aerosol exposures to allergens produced by rabbits or rodents should be reduced in University research settings to the extent feasible. This program does not supersede other requirements for personal protection.

SCOPE AND APPLICATION

This program applies system-wide to all University locations where research activities involving rabbits or rodents occur and where employees are exposed for more than one hour per week. These include Research Animal Resources (RAR), Investigator-Managed Housing Areas (IMHAs) and research laboratories.

Table: Animal exposure risk bands

Risk Level	Animal or Bedding Contact*	Near Animals or Bedding**	Respiratory protection
High	• Frequent handling of animals without LEV Frequent handling or changing cages or bedding without LEV	High density of animals	PAPR with HEPA (minimum)
Moderate	• Frequent handling of animals with LEV • Frequent handling or changing cages or bedding with LEV Infrequent handling or changing cages or bedding without LEV	• Unventilated, open cages Wood-based bedding	Respirator N-95 (minimum)
Low	Infrequent handling of animals with LEV	• Filter top cages • Positive pressure ventilated cages	Respirator N-95

		• Absorbent bedding Non-contact bedding	
Lowest	Infrequent handling of animals with LEV (less than one hour per day)	• Filter top cages • Positive pressure ventilated cages • Absorbent bedding • Non-contact bedding	Respirator N-95 (optional)

LEV = local exhaust ventilation (hoods or other devices to capture contaminant near its source).
Note: laminar flow work benches are not considered LEV.

RELATED

Consult the University's Respiratory Protection Program (https://ohs.umn.edu/respiratory-protection-program) for information about employee training, medical evaluations, fit testing, and respirator selection.

RESPONSIBILITIES

University Health and Safety (UHS) is responsible for:

1. Overall program administration and oversight;
2. Identifying areas where this program is applicable but has not been implemented;
3. Conducting exposure assessments on request;
4. Developing training materials and assisting with training;
5. Coordinating employee medical evaluations for respirator use, general LAA exposure, respirator fit testing, and maintaining related records;
6. Managing and coordinating medical screening and surveillance for animal exposures, and
7. Auditing and promoting overall compliance with exposure controls and other protective measures outlined in this program.

Supervisors and/or Principal Investigators are responsible for:

1. Identifying personnel who are covered by this program and communicating the program requirements;
2. Ensuring that covered personnel are medically evaluated as outlined in the Research Occupational Health Program;
3. Providing personnel with respirators as needed during their work;
4. Ensuring that covered personnel receive training, as outlined in this program, ensuring training is properly documented and training records are retained; and

5. Enforcing all applicable safety measures and use of personal protective equipment related to this program.

Employees are responsible for:

1. Reviewing the Lab Animal Allergen Exposure program;
2. Completing required training; and
3. Complying with all aspects of this program, including rules pertaining to the use of respiratory protection and safe work practices.

PROGRAM ELEMENTS

1. Occupational exposure guideline for laboratory rodent and rabbit allergens

1.1 General. Based on best practices, the University of Minnesota has adopted 5ng/m^3 of mouse urinary proteins (MUP) as an eight-hour Time Weighted Average (TWA) exposure guideline for the prevention of laboratory animal allergy.

2. Protective measures

2.1 Local Exhaust Ventilation (LEV). The University shall provide adequate local exhaust ventilation for high exposure activities. Cage dumping operations shall be performed with local exhaust ventilation.

2.2 Cage changing. Cage changing should be performed in a Class II BSC or a device designed for the purpose. Personnel performing cage changing without a Class II BSC shall be required to wear respiratory protection. The minimum level of respiratory protection is a filtering face piece respirator with N95 filters.

2.3 Bedding. All areas shall use absorbent bedding.

3. Respiratory Protection.

3.1 General. Personnel conducting activities with exposure potential greater than 5 ng/m^3 of mouse urinary proteins (MUP) as an eight-hour Time Weighted Average (TWA) shall be required to wear respiratory protection.

3.2 Requirements for respirator users. All respirator use, regardless of voluntary or mandatory nature, must comply with the University's respiratory protection program. Depending on the type of respirator in use, and other factors, employees may be required to attend new employee training with annual refreshers, annual fit testing, and periodic medical evaluation to ensure the employee is medically qualified to wear the respirator.

4. Occupational Health Screening

4.1 General. All personnel covered by this program must receive preliminary medical evaluation through the administration of the Animal Exposure Questionnaire (AEQ). Periodic re-evaluation may be necessary for personnel who are found to be at increased risk or have had a significant personal health condition change.

5. Training

5.1 General. All persons covered by this program must complete Lab Animal Allergen training. Employees who wear respirators as a part of their work assignment must also complete respiratory protection training as outlined in the University Respiratory Protection Program.

5.2 Frequency. Lab Animal Allergen and Respiratory Protection training shall occur prior to the initiation of work covered by this program, with annual refreshers. Refreshers may be a brief summary of the information covered in initial/new employee training.

5.3 Content. At a minimum, Lab Animal Allergen training must cover the hazards of exposure to Lab Animal Allergens, including signs and symptoms of exposure, the types of work creating a risk of exposure, protective measures, and how to report concerns. The content of respirator training is indicated in the University Respiratory Protection Program.

5.4 Documentation. All safety training shall be appropriately documented. At a minimum, training documentation will include the time, date, and length of training, a summary of the information presented, the name of the trainer, and name and job titles of those in attendance. Training records must be maintained by the employee's department.

Contact uhs@umn.edu if you have questions about this program.