ANIMAL-RELATED RISK FACT SHEET for those working with or around animals

POSSIBLE CONSEQUENCES OF EXPOSURE:

Laboratory animal allergens induce allergic reactions in susceptible individuals. Therefore it is mandatory that you complete the occupational health documents provided to you as part of the security access card requirement and/or your conditional job offer. The occupational health documents are part of your Facility Security Access Form process. With this information, an occupational medical health professional will assess your risk for allergies and inform you of the proper protective equipment you may require. Once, on the job, if allergies occur, inform your Supervisor or Principal Investigator/Administrator immediately so that you may either receive proper protective equipment and/or be referred to an occupational health professional. Laboratory animal allergies may also develop after a variable exposure period. Symptoms of laboratory animal allergy include: urticaria (itchy skin, hives), conjunctivitis (irritated eyes), sneezing, nasal drainage, nasal congestion, asthma (cough, wheezing, shortness of breath) or in extreme cases anaphylaxis (shortness of breath, fainting, vomiting).

RISKS ASSOCIATED WITH ANIMAL AREAS:

The main risk you may encounter is that animal fur and/or dander is present in your work area when animals are transported nearby or cages are opened in adjacent laboratory areas. It is critical that research staff transport animals only in closed and covered rodent transport containers in order to minimize personnel exposure to laboratory animal allergens. If you see animals transported in open containers or cages or cartons that are not placed in a plastic bag for the transport, call the Manager of Animal Care (HCCM) at 432-1285.

Allergies to Animals: If you experience any of the symptoms listed above or have concerns related to possible animal exposure in the workplace, inform your Supervisor or Principal Investigator. If you develop laboratory animal allergies, you may require a NIOSH-approved respirator to continue to be able to work safely with animals. The respirator must be fit-tested to each individual after successful medical evaluation. “Comfort” or surgical facemasks do not adequately filter animal fur and dander and may not be used to protect against respiratory allergies. If you think you may have allergies to animals, phone: 617-432-1285 and ask for the occupational health administrator. All BWH employees must phone 617-732-6258 to speak directly to their own occupational health administrator.

Zoonoses:

Although modern laboratory animal breeding and production has greatly improved the microbiologic quality of research animals, some animals are naturally infected with viruses or bacteria that may cause severe disease in people. Protection of research and animal care staff requires strict adherence to standard work practices and protective clothing requirements, prompt reporting of all animal-related injuries, compliance with OSHA and the mandatory occupational health processes which may include allergy testing and, when appropriate, vaccination. Specific information relevant to using laboratory non-human primates or sheep is provided below. Studies using experimental pathogens or wild-caught animals, which may harbor zoonotic agents, require separate approvals by the Committee on Microbiological Safety (COMS) as well as the IACUC (Institutional Animal Care & Use Committee). All animals at Harvard Medical School are obtained solely under the aegis of the Longwood Medical Area’s Institutional Animal Care and Use Committee (IACUC) (also known as The Standing Committee on Animals) for the purposes of animal experimentation described in an approved Animal Experimentation Protocol.

Sheep:

Sheep may be infected with Coxiella burnetti, the infectious agent responsible for Q fever. Infected sheep are often clinically normal, but may shed large numbers of bacteria during the birthing process. Infected people may have mild flu-like illness or develop pericardial or pleural effusion or other serious disease. Persons with heart conditions or who are immunosuppressed are particularly vulnerable to infection. The infectious organisms are persistent in the environment and may be carried out of the research area on contaminated clothing and equipment. If your research requires the use of pregnant sheep, you must follow all posted protective clothing requirements and comply with annual antibody surveillance testing by an occupational health medical professional.

Laboratory Safety
46 Blackstone Street, Cambridge, MA 02139 | T: 617.496.3797 | F: 617.496.5509
107 Avenue Louis Pasteur, Boston, MA 02115 | T: 617.432.1720 | F: 617.432.4730
www.ehs.harvard.edu | email: lab_safety@harvard.edu
**Protocol-related Risk:**
If your research requires introducing hazardous, infectious, toxic, or radioactive materials, human blood cell lines and/or tissues, and/or human or monkey cell lines into animals, your activities must be approved both by the IACUC (Institutional Animal Care & Use Committee) and the Committee on Microbiological Safety (COMS) before beginning this work (websites: hms.harvard.edu/HMA and www.hms.harvard.edu/orsp/coms, respectively). In addition, all rodent-origin tumor and cell lines must be tested and certified to be free of rodent pathogens before use in rodents. Transplantable tumor cell lines, rodent tissue or serum derived material administered parenterally to rodents, are a potential source of infectious disease. Once approved, the IACUC requires that you receive specific training before you may begin work with these agents. This training will be given by EHS and HCCM personnel (email: arcmtraining@hms.harvard.edu). Most hazards associated with these materials and agents occur during preparation and administration of the materials. Special attention is required to avoid accidental injection, splashing or ingestion of the materials or contamination in surrounding workspace. You must also plan for contamination of cages, bedding and carcasses. You must assure that safe handling practices for these items are developed before any work begins. The HCCM and EHS will work with you to develop these procedures.

**NON-HUMAN PRIMATES:**
Handling non-human primates (NHP) involves special risks in the laboratory because they can transmit serious infectious diseases to research and animal care staff. In addition, nonhuman primates are physically strong and can exhibit aggressive behavior and may inflict painful injuries if the NHP escapes or is improperly restrained. Macaque monkeys may be infected with Herpes B (Cercopitechine herpes virus B), which is an especially dangerous virus transmissible to man. Herpes B virus is in the same viral family as the human cold sore virus (Herpes simplex). Infected monkeys may be normal, or may have vesicles or ulcers in the mouth, conjunctiva or genital area. A high percentage of people infected with Herpes B die of rapidly progressive encephalitis unless they receive prompt first aid and antiviral treatment.

*Follow these general safety principles when working with nonhuman primates:*
Wear all required protective clothing at all times when working with or near monkeys. This includes safety glasses or safety goggles, hair bonnet, shoe covers, face shield and facemask, gloves, and a fully buttoned laboratory coat. Protective clothing will help you to avoid bites or scratches. If you are bitten or scratched by a macaque, secure the animal and obtain first aid immediately and refer to the guidelines set forth in the Monkey Bite & Scratch kit, which is available in every monkey room. In addition, each monkey room contains an SOP for post exposure to a monkey bite or scratch. Mandatory training, including biannual tuberculosis testing, will be provided to all non-human primate personnel.

**INSTRUCTIONS:**
Once you have obtained your Harvard ID card – go to the HCCM website at arcm.med.harvard.edu for animal facility access instructions. At the website, go to: Getting Started, Facility Access, Instructions, and go to the form called “Animal Facility Access Request Form” to print the mandatory access & training form. **You cannot have access to any animal facility without completing the “Animal Facility Access Request Form”!**

**KEY CONTACT INFORMATION:**
Harvard Center for Comparative Medicine (617) 432-1285 – arcm.med.harvard.edu
Harvard Center for Comparative Medicine Training Classes email: arcmtraining@hms.harvard.edu
Harvard Environmental Health and Safety Department (617) 432-1720 – www.ehs.harvard.edu
Occupational Health Program (617) 432-1285 - arcm.med.harvard.edu/
Harvard Longwood Campus ID Office at HSPH (617) 432-0389- www.hsph.harvard.edu/administrative-offices/operations/
Harvard Medical Area Standing Committee on Animals (IACUC) (617) 432-4886 hms.harvard.edu/HMA
Harvard Committee on Microbiological Safety (COMS) 617-432-4899 www.hms.harvard.edu/orsp/coms