Laboratory Rats, Mice and other Rodents

The Occupational Health Program is designed to inform individuals who work with animals about potential zoonoses (diseases transmitted to humans from animals), personal hygiene and other potential hazards associate with animal exposure. This information sheet is directed toward those involved in the care and use of laboratory rodents (including rats, mice, hamsters, guinea pigs and gerbils).

Potential Injury and Zoonotic Diseases

Colony-born rodents are generally docile, but may occasionally inflict injury such as a bite or scratch. While rodents may carry organisms that may be potentially infectious to humans, the major health risk to individuals working with these rodents is the development of allergy. The development of disease in the human host often requires a preexisting state that has compromised the immune system. If you have an immune compromising medical condition or you are taking medications that impair your immune system (steroids, immunosuppressive drugs, or chemotherapy) you are at higher risk of contracting a rabbit disease and should consult your physician or Occupational Health physician. Prior to your assignment, you should receive training in specific handling techniques, and specific protective clothing requirements.

Colony-born rodents arrive disease free. Caretakers should be aware of infectious agents animals have been experimentally inoculated. The zoonotic diseases associated with handling laboratory rodents include the following:

Lymphocytic choriomeningitis: Lymphocytic choriomeningitis (LCMV) is carried by rodents and can be passed to humans. Not all people who are exposed to the virus will become ill. Sign and symptoms of LCMV infection are similar to those for influenza and include fever, stiff neck, malaise, anorexia (loss of appetite), muscle aches, headache, nausea, and vomiting. Symptoms occur 1-2 weeks after exposure.

Campylobacter: Campylobacteriosis is a bacterial disease cause by *Campylobacter jejuni* or *C. coli.* Campylobacter usually causes a mild to severe infection of the gastrointestinal system, including watery or bloody diarrhea, fever, abdominal cramps, nausea, and vomiting. A rare complication of *Campylobacter* infection is Guillian-Barre syndrome, a nervous system disease that occurs approximately 2 weeks after the initial illness develops. Animals can have *Campylobacter* in their feces, if people touch contaminated feces, they can get sick. Animals do not have to be ill to pass the bacterium to humans.

Allergic Reactions

By far the greatest occupational risk to working with rodents is allergic reaction or developing allergies. Those workers that have other allergies are at greater risk. Animal or animal products such as dander, hair, scales, fur, saliva and body waste, urine in particular, contain powerful allergens that can cause both skin disorders and respiratory symptoms. The primary symptom of an allergic reaction are nasal or eye symptoms, skin disorders, and asthma.

How to Protect Yourself

- Wear gloves and wash your hands.
- Wear respiratory protection. If respiratory protection is worn, it is mandatory that individuals enroll in the Respiratory Protection Program through EHS.
- Wear protective clothing. Avoid wearing street clothes when working with animals.
- Seek medical attention if you are injured. Contact your supervisor and Occupational Health and Safety to be instructed as to where to go to seek medical attention.
- Enroll in the Occupational Health and Safety Program. Update your information on an annual basis to ensure proper medical surveillance.