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ORA POLICY AND PROCEDURE:

UM-St. Louis Animal-Human Rabies Exposure Policy

Rabies is a relatively rare but devastating viral disease that can result in severe neurologic problems and death. Most cases of rabies occur in wild animals, although any mammal can contract the disease. The disease is virtually unheard of in common laboratory animals, with the exception of dogs and cats.

At the University of Missouri-St. Louis, research animals belonging to species that commonly carry rabies are vaccinated against rabies and are quarantined for 14 days. Theoretically, these animals could be infectious for the first several days before the vaccine has taken effect. The chances of this are very small; nevertheless, all bites of any type should be reported immediately.

Rabies occurs most frequently in Missouri in raccoons, skunks, foxes, coyotes, and bats. Sporadic cases have been well documented in other species of wildlife, as well as domestic animals. Animals and animal tissue field-collected in Missouri should be handled with care. Precautions should take into account that infected animals may shed the virus in the saliva before visible signs of illness appear, and that a bite is not required to contract rabies - contact with saliva may be sufficient and that rabies virus can remain viable in frozen tissues for an extended period.

Animal researchers and handlers have to be aware of the potential risks involved with the specific type of research that is being conducted. Potential exposure to serious zoonotic diseases such as rabies is monitored by the UM-St. Louis IACUC. Faculty, staff and students who might potentially be exposed to rabies must sign a letter of acknowledgment verifying that they have read and understand this policy.

The following presents an overview of this disease and a description of University policy on immunization and animal exposure procedures.

Rabies Virus

Rabies is a viral infection that is transmitted when saliva, tissue, or nasal discharge from a rabid animal is introduced into the human body by a bite or scratch, or through exposure to the mucous membranes. The rabies infection is a fatal acute viral encephalomyelitis that is characterized by headache, fever, and sensory changes that progress into paralysis, delirium, convulsions, and,

almost always, coma or death within 10 days after the first symptom appears. There is no known effective treatment once symptoms have appeared.

Disease Exposure

Most exposures are an "animal bite exposure." An animal bite exposure is defined as having one's skin pierced or abraded by animal teeth or claws. Other exposures may occur through "non-bite" mechanisms. A non-bite exposure is defined as having abraded skin, open wounds, eyes, and mucous membranes contaminated with animal saliva or other potentially infectious materials, i.e., neural tissue. This could result from direct contact with the material or from accidents involving sharps (needles, broken glass, etc.). In addition, aerosol exposures in laboratories and in caves with high numbers of bats are included in the non-bite exposure potential.

Rabies pre-exposure series immunizations

Faculty, staff and students who, for research purposes, will have or are likely to have contact with bats and/or wild terrestrial carnivores and omnivores, should make arrangements with their health-care provider to obtain the rabies pre-exposure immunizations. This procedure consists of three injections spanning 21-28 days and is given intradermally or intramuscularly. A titer should be drawn every two years on personnel whose risk is rated frequent or continuous. Side effects include injection site irritation, itching, or flu-like symptoms. If an animal bite/exposure occurs after the pre-exposure immunization series is complete, two additional post-exposure intramuscular rabies immunizations should be administered after each exposure. If a bite exposure occurs without the pre-exposure immunization series, one rabies immune globulin and five intramuscular immunizations are necessary. Actions following a non-bite exposure should be determined by the victim's physician.

Immunization Funding

Animal Welfare Unit employees – the UM-St. Louis Occupational Health Program

Others – the department, grant, or individual.

Non-Immunized Individuals

The University cannot require any person to submit to this immunization. However, the University strongly recommends the immunization series for faculty, staff and students who may be at risk of exposure to rabies virus (see [Collected Rules and Regulations, Chapter 400.010](#), part E).

Individuals voluntarily rejecting the immunizations must sign a waiver that releases the Curators of the University of Missouri (for UM-St. Louis) and its employees from any claim of liability resulting from exposure to, or death from, rabies virus or any animal suspected of harboring rabies virus. In risky situations, the instructor, investigator, or IACUC have the authority to deny access to a project or an animal to any person who has not received the immunizations.

Bite Prevention

Species specific animal handling techniques are taught by the animal facility management staff. If possible, direct handling of wild animals or any animals suspected of being infected should be

avoided by using tongs, bite gloves, squeeze cages, shields, or other protective equipment. Animals known to be aggressive should always be handled by a minimum of two people.

Post-Bite Procedures

If possible confine the animal to prevent any further injuries and to allow quarantine or immediate rabies testing. Label the enclosure "RABIES OBSERVATION" to warn others of the situation.

Wash the wound thoroughly with warm water and soap. Use a disinfectant if available.

Immediately report the incident to the UM-St. Louis facility animal care supervisor and the Principal Investigator (PI), who should immediately notify the University Health Center that an animal injury has occurred and determine and document the victim's rabies pre-series immunization status.

The "[Report of Injury](#)" form [UMWC1 \(06/07\)](#), available from Human Resources, must be filed by the supervisor or P.I. within 24 hours of the occurrence. In addition, because rabies is a Category I disease, the incident must be reported to the local health authority or to the Missouri Department of Health within 24 hours of first knowledge.

If the animal cannot be confined and escapes, or if the health status of the animal cannot be determined for any other reason, treatment will be determined by the bite victim's physician.

Animal Disposition Procedures

Upon report of an animal-human bite incident, the veterinarian member of the IACUC will determine the fate of the animal based on the following criteria:

- 1) Domestic dogs, cats, and ferrets will be labeled "Rabies Quarantine" and quarantined for 10 days. Otherwise the animal will be submitted to the Missouri State Diagnostic Laboratory for rabies testing.
- 2) A 30-day quarantine may be used for other research species meeting all the following criteria:
 - a) Acquired from USDA licensed Class A closed colony breeding facilities;
 - b) The breeding colony meets USDA indoor housing requirements, with no open wire exposure to bats or other wild susceptible species;
 - c) The University research housing meets USDA indoor housing requirements, with no open wire exposure to bats or other wild susceptible species;
 - d) The breeding colony has been closed to introduction of new animals for a minimum of three years and three generations;
 - e) Annual rabies health monitoring data provided to IACUC for a minimum of prior three years; and
 - f) Health certificate signed by a licensed, accredited veterinarian provided at acquisition prior to entering the University colony and prior to bite exposure.
- 3) If the biting animal is a particularly rare or valuable specimen and the risk of rabies is small, post exposure treatment may be administered to the bite victim in lieu of killing

the animal for rabies testing. The biting animal will be quarantined for at least 30 days, determined by the IACUC based on risk analysis. Treatment will be determined by the bite victim's physician. Again, since rabies is a Category I disease, the possibility of potential exposure should be reported to the local health authority or to the Missouri Department of Health within 24 hours of first knowledge or suspicion.

4) All other animals, including animals used in field studies, are considered wild and will be submitted to the Missouri State Diagnostic Laboratory for rabies testing. The Missouri State Department of Health requires wild animals to be euthanized and then tested for Rabies.

5) The brain of any animal in quarantine will be submitted to the Missouri State Diagnostic Laboratory at the discretion of the IACUC consulting veterinarian or at the request of the exposed victim.

6) Quarantined animals will be kept in strict confinement and cared for by the professional husbandry staff only. These animals are exempt from the USDA exercise requirements and will not be removed from the primary enclosure during the quarantine period. Feed, water, and sanitation will be provided in such a manner as to minimize any potential contact. Petting will NOT be allowed. Animals may only be released from quarantine following examination by a qualified veterinarian.