

IACUC GUIDELINES FOR RODENT DISEASE SURVEILLANCE PROGRAM

Last Approved: 08/25/23

Last Review: 08/25/23

Revision History:

Standard Operating Procedures

Overview Rodents entering colonies maintained at the University of Wisconsin – Milwaukee Animal Resource Center (ARC) may originate from one of three sources:

1. University of Wisconsin list of approved vendors
2. ARC quarantine program for non-approved vendors or other institutions
3. On-site breeding programs

The primary objective of the Health Surveillance Program is to monitor colonies for the presence of agents that would compromise the health status of our animals and/or negatively impact research. Rodents used will be verified to be free of a defined set of adventitious pathogens upon entry into a colony. Several policies will also be in place to assist in the maintenance of ARC colony status. Also, colonies that are housed for more than six (6) months will undergo annual health surveillance testing. In addition to the above, the Principal Investigator (PI) has the option to work with the veterinarian to determine if certain pathogens can be eliminated from a testing panel based on animal health and research objectives. Please note that all pathogens listed on the exclusion list below (Table 1 and Table 2, Page 2) must be tested on an annual basis. Short-term colonies, though, will be tested on a case-by-case basis.

Rodent Colony Health Reports

Any rodent colony health reports can be requested by contacting the University of Wisconsin - Milwaukee veterinarian at acp@uwm.edu.

Rodent Colony Health Surveillance Program Overview

Rodent health surveillance can be conducted by utilizing one or more of the methods listed below:

- Individually Ventilated Cage (IVC) Microbiological Monitoring – inline plenum exhaust testing
- Fur swab Polymerase Chain Reaction (PCR)

- Fecal pellet PCR
- Flocked swabs used as dirty bedding sentinels.
- Serology
- In-house testing for parasites
- In-house necropsy

The rodent health surveillance program monitors for the presence of specific viral, bacterial, and parasitic infections for rodents. IVC Microbiological Monitoring uses an ‘interceptor’ that collects particles that move from the cage to that unit’s exhaust filtration system. The interceptor media filter is collected and submitted to a commercial laboratory for PCR diagnostic analysis. If an animal is held in static caging, flocked swabs are used in place of dirty bedding sentinels (please reference Flocked Swabs SOP). When needed for quarantine or isolation testing, fub swabs, oral swabs, blood samples, and/or fecal pellets will be collected and submitted for PCR testing. Additional testing may include in-house parasite checks and necropsy.

Table 1: Agents Excluded in Mouse

Organism
Sendai Virus (SEND)
Mouse Hepatitis Virus (MHV)
Mouse Minute Virus (MVM)
Mouse Parvoviruses
Mouse Rotavirus (EDIM)
Mouse Adenovirus (MAV 1& 2)
Fur Mites
Pinworms
LCMV
Citrobacter rodentium
Clostridium piliforme
Mycoplasma pulmonis
Mouse Theiloviruse (TMEV)
Filobacterium rodentium
Corynebacterium Bovis
Salmonella spp.
Encephalitozoon cuniculi
Ectromelia virus
Reovirus 3
PVM
Polyoma virus
Lactate Dehydrogenous Elevating Virus
Pneumocystis
K Virus
Hantaan
Mouse Thymic Virus

Table 2: Agents Excluded in Rat Colonies

Organism
Filobacterium rodentium
Pneumocystis carinii
Filobacterium rodentium
Clostridium piliforme
Mouse Adenovirus (MAV 1& 2)
Mycoplasma pulmonis
Kilham's Rat Virus (KRV)
Rat Minute Virus (RMV)
Rat Parvoviruses
RPyV2 (Rat polyomavirus 2)
Encephalitozoon cuniculi
Sialodacryoadenitis virus (RCVSDAV)
Rat Theilovirus (RTV)
Pinworms
Fur Mites
IDIR- Rotavirus
Hantaan
LCMV
Salmonella spp.
PVM
REO3 (Reovirus 3)

Table 3: Agents Present in the Facility

Mouse Rat	Rat
MNV	Staphylococcus aureus
Helicobacterspp.	Beta Strep Group B
Staphylococcus aureus and xylosus	
Pseudomonas	
*Bordetella pseudohenzii	
Beta Strep Group B	

*: animals quarantined when present

Agents currently not excluded:

- MKPV (Mouse Kidney Parvovirus) aka Murine chapparvovirus
- MNV (Murine Norovirus)
- Helicobacter
- Other opportunistic bacteria (eg. Staphylococcus, Streptobacillus, Streptococcus, Pseudomonas, Pasteurella/Rodentibacter, Salmonella, Corynebacterium, Klebsiella, microbacterium, proteus)

- Opportunistic parasites (eg. Demodex, Chilomastix, Hexamastix, Entamoeba, Tritrichomonas genus)
- Murine Astrovirus

Definition of Excluded

Actions are taken if a positive result is found. Actions include researcher notification, room quarantine, and additional testing of animals within the affected colony to confirm the positive test and its source. The processes themselves are unique to the agent and circumstances of the positive result.

Rodent Quarantine

Rodents that are received from non-approved vendors are to be quarantined upon arrival. The quarantine period is anywhere from seven to fourteen (7-14) days. Upon reception of animals, the animals are allowed an acclimation period before diagnostic testing is performed. Animals are to be tested from the Charles River*, IDEXX**, or VRL***. If negative test results are returned, the animals are released from quarantine. Positive test results are handled on a case-by-case basis.