**Sentinel Health Program**

Last Reviewed: May 2, 2024

1. **Purpose**  
   The purpose of this document is to describe the sentinel program designed to monitor the health status of animals housed in LAR in an effort to prevent, detect and control the presence of specific infectious pathogens which may adversely affect animal health and/or influence research protocols. Sentinels cannot detect all pathogens but may serve as indicators of adherence to and effectiveness of barrier systems, containment areas, and preventive practices such as cage opening/changing, animal transport and procurement, use of protective equipment, and introduction of biological products.

1. **Procedures**
2. **SPF mice**
   1. A dirty bedding exposure sentinel program monitors the health status of mice in the SPF mouse facility (SB). The program employs semiannual serologic analysis of outbred mice in order to screen for the presence of pathogens that may confound research results. Once a year (first week of October) we test for MHV, MVM, MNV, MPV, Sendai, TMEV, EDIM, and *Mycoplasma pulmonis*.  Once yearly (first week of April), we test for these same agents as well as PVM, Reo3, LCM, and Ectromelia.
   2. Ectoparasite examination (microscopic examination of fur plucks on cellophane  
      tape) and endoparasite examination (perianal cellophane tapes for *Syphacia obvelata* eggs, fecal flotation for *Aspicularis tetraptera* eggs, and direct examination of cecal and proximal colonic contents for adults of both species) are conducted semiannually on sentinel mice as well. Blood is collected on opti-spot dried blood spot paper for serological testing. Ectoparasite and endoparasite exams are done on site using a stereomicroscope and an optical microscope, depending on the testing methodology.
   3. Serology analysis is conducted by IDEXX-RADIL
3. **Rats**
   1. All rats are purchased from an approved vendor (i.e., Envigo CRL). They are monitored semiannually for *Syphacia muris* using the cellophane tape test. Serology is performed semiannually on extra rats from the primary population and includes RCV, Sendai, PVM, Parvo, TMEV, and *Mycoplasma pulmonis* (the first week of October). In the spring (first week of April), the serologic panel includes these agents as well as Reo3, LCM, MAD1, CARB, Hantaan, and Tyzzer’s disease. Extra rats used for serology are necropsied and visual examination of cecal and colonic contents done for adult pinworms.
   2. Serology analysis is conducted by IDEXX-RADIL
4. **Rabbits**
   1. Rabbits are acquired from Myrtle’s Rabbitry. When rabbits are in the animal facility, one rabbit is tested semiannually (not the same rabbit each time) for Tyzzer’s disease, Treponema, and *Encephalitozoon cuniculi*, depending on whether rabbits are being housed long-term (> 4-6 months) or not.
   2. Serology analysis is conducted by IDEXX-RADIL
5. **Guinea pigs**
   1. Guinea pigs are acquired from Charles River Laboratories. There are currently no  
      guinea pigs in the animal facility. We do not house guinea pigs long-term in a breeding or long-term experimentation situation at this time. If this situation changes, we will expect to monitor semiannually for Sendai, PVM, PI3, and *Encephalitozoon cuniculi* while adding once annually to this screen SV5, LCM and Tyzzer’s disease
6. **Dwarf Hamsters**
   1. Dwarf hamsters were obtained from a closed colony.  One dwarf hamsters is tested semiannually for Sendai, LCMV and *Clostridium piliforme*.
   2. Serology analysis is conducted by IDEXX-RADIL
7. **Degus**
   1. Degus were acquired from a closed colony.  The blood panel used for rats will be  
           used for the degus.
   2. Endo and ectoparasite checks will be conducted the same for degus as other  
           species
   3. No degus will be euthanized for serology
   4. Blood samples will be drawn from saphenous vein and sent to IDEXX-RADIL
8. **Quarantine Sentinel Procedures**
   1. Mice received from vendors or sources other than those on the preferred list must  
      be quarantined for 6 weeks in a quarantine cubicle in HSB 004. Sentinel mice will be used just as described above for mice in the SPF facility. Blood samples for  
      serology may also be taken directly from the new mice using lateral saphenous vein collection methods. For additional quarantine procedures, see guidelines for quarantine.
9. **Grain Mite Surveillance**
   1. On a semiannual basis, barrels containing animal feed are tested for grain mite infestation.  Clear tape is stuck on the bottom inside of each barrel liner and placed on microscope slides.  The slides are examined via microscopy for the presence of grain mites or other parasites.

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