**Specific Pathogen Free (SPF) Animals**

Last Reviewed: February 6, 2024

**Standards of Care for Specific Pathogen Free Animals**

The Department of Laboratory Animal Resources (LAR) maintains a specific pathogen free (SPF) animal area for SPF mice. The LAR staff will implement and monitor compliance with SPF standards of care and use of all SPF-designated mice.

1. Specific pathogen free animals are mice that are free of pathogens listed and tested for during sentinel serology.
2. The LAR Attending Veterinarian and IACUC have established that ALL mice housed or entering the Skaggs Building animal facilities will be maintained under specific pathogen free (SPF or modified SPF) conditions. The rationale for this decision is based on:
   1. The need to maintain numerous mice under SPF conditions.
   2. Several investigators conduct experiments that require SPF mice. SPF mice are often shipped to other institutions for collaboration. Many institutions will not accept non-SPF mice.
   3. SPF mice are under high risk when housed near non-SPF rodents. Viruses, ecto- and endoparasites present a real risk to SPF mice that may be immunocompromised or have other specific traits, gene manipulations, etc.
   4. Contamination of SPF mice is very costly and results in an unacceptable waste of animals because contaminated mice must be sacrificed without good experimental purpose.
   5. It places an undue burden on the animal care staff to try and maintain SPF and non-SPF colonies in the same facility.
3. Personnel training for SPF animal care and use
   1. All SPF animal care and use personnel must be trained by LAR personnel on SPF protocols.
   2. All SPF trained personnel must follow the SPF care and use guidelines at all times.
4. Entering and leaving SPF facilities
   1. An LAR staff member who has worked that day in a non-SPF rodent room should change their scrubs before entering a SPF rodent room.
   2. Open-toed shoes are not allowed in the animal facility.
   3. Only LAR trained personnel or visitors accompanied by LAR trained personnel may enter the SPF facility and visitors must sign-in upon entering.
   4. Use your Griz card for access. If you do not have a Griz card or Griz card access, you must sign in and out, and you must be accompanied by trained users at all times.
   5. Outside lab coats are not allowed in the facility. These can carry unwanted contaminants in and out of the facility. White coats are provided inside the animal rooms and lab coats are provided for handling dirty animal contact materials in the cage wash room.
   6. Decontaminate all carts and outside materials that are brought in with Peroxigard RTU between the entrance doors.
   7. You must walk across the TechTrak Mat when you step into the main corridor of both SPF animal facilities.  As you exit the facility, you walk across the same TechTrak Mat.
      1. Shoe covers must still be worn before entering certain rooms (e.g., HSB 004, SSB 061)
   8. Once you enter a mouse room, put on a room lab coat (white) and gloves provided inside the individual mouse rooms.
   9. When leaving the mouse room, take off gloves and mask (if used) and dispose in garbage can. Wash hands with soap and water. Remove the room lab coat (white) and hang on rack in room.  Place all disposables in the garbage can provided for that animal handling room.
5. Receiving rodents under SPF conditions
   1. All rodents entering the facility must originate from an SPF facility. Health reports documenting the SPF condition and care of the rodents previous to shipping must be sent to the AV for approval before the shipment can be accepted.
   2. LAR staff will follow established procedures for unpacking SPF mice (see Unpacking Live Animals SOP).
   3. Once mice have left the SPF facility, they may not reenter without permission from the LAR manager.
6. SPF protocol for care and use of mice.
   1. All mice must be housed in microisolator cages. Each cage will need to have a cage card stating the number of animals contained in the cage, the PI, the IACUC protocol number, the strain of animal, birth date, wean date, and any other specific information. The cards must be completely filled out or this will be considered a violation.
   2. Because shoes are a means for spreading infectious agents, everyone walks across a TechTrak Mat prior to entering an SPF room. Once in a room, immediately put on a lab coat and gloves (and booties, if necessary). Follow the same procedure when you leave: First discard gloves, masks, etc., and leave the lab coat in that room. Do NOT wear the same lab coat in another room or outside of that room. The lab coats are dedicated to each room.
   3. Before beginning work, wear gloves and clean the working surface and your gloves with disinfectant. Avoid opening more than one cage at the same time. Disinfect your gloves between opening unrelated cages. Clean any bedding or feces from the working surface between unrelated cages and when you complete your work.
   4. Mice should not be transferred between rooms without consulting with LAR staff and both principal investigators involved in the transfer. Inter-room transfers may be included as part of the animal use protocol. All cages leaving the facility must be signed out. All cages leaving the facility must be returned to the dirty cage room in the Health Sciences building or to the dirty cage room in SB 068.
      1. Animals may only be returned to the facility with prior approval of the LAR director. This is discouraged, but may be necessary for certain experiments.
      2. Disinfect the cages and the wheels of the cart by spraying them with disinfectant before returning them to the SPF facility.
      3. Do NOT transfer these mice to any SPF housing room. Return to LAR can only be for procedures in SB009
7. Serology
   1. Each SPF room will have serology conducted every 6 months on either sentinel mice or a random selection of mice. The serum will be analyzed by the IDEXX RADIL for a "clinical" or better panel. Annually, a "basic" panel will be conducted in April.
   2. All health reports and serology reports and results must be provided by the Attending Veterinarian. They will be kept on file by LAR staff, and available to all investigators upon request.
   3. Sick mice must be immediately reported to the Attending Veterinarian, PI, and/or facility manager. Sick animals will be immediately treated or euthanized according to the AV's discretion.
   4. Any contamination or seropositive result will be confirmed, and then reported to all SPF investigators within 24 hours of confirmatory testing so that extra precaution may be observed.