The YARC will follow established regulatory policies. The outline listed below is the standard policy for handling of animals infected with BSL-2+ agents. Biological safety may advise additional procedures on a case by case basis, for larger animals or unique circumstances.

**NOTE:** PI must contact the YARC Facility Supervisor (72 hours-3 business days) prior to administering compound to ensure YARC husbandry staff are advised of the use of a (potentially) hazardous agent.

### Labeling
- Label animal room door with biohazard symbol and BSL-2+ sign w/ all information completed on sign.
- Cages must be labeled with "BSL-2+ Agent in Use" cage card. All information must be completed by P.I./researcher (agent, PI, day and emergency contact phone #s).

### Protective clothing
- Solid front, long sleeve gown with gloves (recommend double glove) pulled over gown sleeve cuff.
  - *Contaminated gown is removed in animal room and deposited in appropriate container.*
- Gloves should be removed, hands washed thoroughly before exiting room.
- A mask and eye protection must be worn if a Class II biosafety cabinet (BSC) is not available.
- Biological Safety will advise if additional personal protection is required (i.e. respirator).

### Engineering Controls
- A BSC is required for the handling of (small) animals and experimental manipulations. Biological safety will advise if not available or for unique circumstances.
- Air pressure differential of the animal room must be set at negative pressure.

### Housing
- Static Micro-isolator (MI) with filter top. Biological safety will advise if alternative is acceptable.

### Work Space/Practices
- Once animals are infected, cages should only be opened in the BSC.
- Decontaminate the BSC with Vimoba before and after use; allow 10 minutes contact time.
- Assess area prior to set up; ensure sharps containers are in the BSC.
- Place cage on disinfectant soaked paper towel prior to opening top and working with animals.
- Disinfect outside of cages prior to removal from the BSC by wiping with Vimoba or approved disinfectant soaked paper towel avoiding filter top (do not spray).
- Other work surfaces can be decontaminated with a 10% bleach, Vimoba, or approved disinfectant.
- Husbandry & experimental procedures should be conducted in such manner to minimize the potential release of aerosols into the environment (i.e. do not vacuum any BSL-2 waste or materials, caution when handling to prevent spills).
- Room sanitizing agent is Saniplex.

### Experimental Manipulations
- Use a separate syringe and needle for each animal.
- Dispose of sharps immediately in sharps container; do not rest down on work surface.
- Reusable sharps and instruments should be placed in a solid container for personnel safety.
- Soak in 10% bleach solution for 30 minutes and rinse well with ethanol.

### Decontamination Caging
- BSL-2+ cages should be autoclaved intact (MI filter bonnet in place, bedding in cage) prior to washing.
MI filter bonnet must remain on the soiled cage to minimize potential for contamination.

The BSL-2+ cage card must also remain on the cage.

Caging must remain in the animal room until YARC can immediately autoclave

In most instances, there will be a designated cart or rack in the animal room for soiled cages.

Cages cannot be power-sprayed prior to placement in rack washer or tunnel washer.

Caging must be washed in rack washer or tunnel washer at 180°F cycle for a minimum of 3 minutes.

Waste

Carcasses and soft waste are bagged in biohazard bags within the BSC.

Soft waste is bagged, labeled (PI, agent, BSL-2+), and left in BSC or on soiled cage rack for YARC pick up.

Wrap carcasses in opaque absorbent material and bag; label with PI, agent, and BSL-2+.

Disinfect outside of the bag prior to removal from the BSC.

BSL-2+ carcasses should be autoclaved immediately.

Contaminated gloves should be changed prior to handling outside of the bag.

If a deceased animal is found when YARC staff is unavailable, move remaining alive animals to clean cage, and leave carcass and soiled cage on BSL-2+ rack until autoclaving can be done. Label carcass with PI and agent.

All waste is autoclaved for 30 minutes at 250°F at 15 psi

After autoclaving, bedding is disposed of by YARC. Carcasses and soft waste are packaged and sent out as regulated medical waste.

Transportation of Supplies and Animals

Place supplies in a primary leak proof container, then in secondary containment lined with absorbent material.

Tubes and containers must be labeled with biohazard sticker with PI, agent, and phone number.

In the event of a spill, contain the spill and mark off the area. Either YARC (#785-2526) (if within animal Facility) and/or Biosafety Office should be notified (#785-3555).

Recommend carrying extra absorbent material during transport to contain a spill.

Cages are to be secured with cargo straps and placed in secondary container.

Emergency Response

Secure animal(s)

Apply first aid: Forced bleed and wash or flush mucous membranes.

Review the Procedures to Follow for Injuries Associated with Laboratory Animals: https://your.yale.edu/policies-procedures/other/4438-policy-and-procedure-follow-injuries-associated-laboratory-animals#3

Contact Employee Health #432-7978 or #432-0071 and EHS #785-3555, or 911 if after hrs.

Medical Surveillance

Case by case assessment of agent and personal health history must be conducted by Employee Health (EH) and Biosafety. Sera storage, consultations, sampling or immunizations may be recommended.

Immunosuppressed or immunocompromised individuals should not be assigned to this project without consultation with the EH Physician. Any individual with an immunosuppressive condition must notify EH (#432-7978 or #432-0071) for a confidential evaluation for clearance to work on this project.

If health status of any individual assigned to this project changes after initiation of the project, they must notify the Yale EH Office for a medical clearance review.

Please view Animal Biosafety Level 2 video at http://ehs.yale.edu/animal-biosafety

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