A. **Purpose:** The Purdue University Laboratory Animal Program strives to maintain animal facilities that are safe for both humans and animals. This policy serves as a basis for the biosafety and biosecurity within Purdue animal rooms and facilities.

B. **Definitions:**

**Biosafety:** practices that reduce or eliminate exposure of individuals and the environment to potentially hazardous biological agents

**Biosecurity:** practices that protect an animal colony from microbial contamination, and that prevent the loss, misuse, or theft of microorganisms, biological materials, and research-related information

**Personal Protective Equipment (PPE):** equipment designed to protect one from exposure to elements of the field; PPE can be used to protect humans from allergens and microorganisms harbored by the animals, or to protect immunocompromised animals from microorganisms harbored by humans

PPE can also be used to prevent the transmission of microorganisms, allergens, and pheromones from one animal room to another.

C. **Biosafety Cabinet and Animal Transfer Station Use:**

Biosafety cabinets or animal transfer stations are provided in most animal rooms that have ventilated caging. The use of ventilated caging combined with the cabinet/station provides superior allergen protection for humans, as well as protection of the humans, animals, and environment from contamination. Biosafety cabinets also provide protection from infectious agents.

The proper use of the biosafety cabinet or transfer station is REQUIRED in rooms with ventilated caging.

**Proper Cage Handling Technique in the Biosafety Cabinet/Transfer Station:**

1. Turn on cabinet for ~5 minutes prior to use

2. The sash must be down while in use for both biosafety cabinets and animal transfer stations; if the sash is up on a biosafety cabinet the unit will alarm, the alarm must not be turned off or silenced

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3. Spray down entire cabinet with disinfectant (Rescue/Peroxiguard, Defender, or Virkon)

4. Place cage and any other items to be used in the cabinet

5. Spray cage and other items with disinfectant

6. Open cage and flip the lid so the inside of the lid is facing up

7. Spray gloves prior to touching the wire bar/anything inside the cage

8. Place the wire bar inside of the lid (if removing the wire bar)

9. Each time an item outside of the cabinet is touched, spray gloves prior to touching the inside of the cabinet, or inside of cage again

10. When you are finished, spray the inside of the cabinet with disinfectant and wipe clean with paper towels

11. Turn off the cabinet and lights

**D. Facility Biosecurity**

In order to protect the research animals and equipment in the facilities, we ask that the following practices be adhered to when working in the animal facilities.

1. Facility access is provided after facility orientation has been performed by animal care management. Do not allow those without orientation training to enter animal facilities unattended.

2. Do not allow people without known facility access to follow you into an animal facility.

3. Do not prop open doors to animal facilities, or to animal rooms.

4. Be sure to lock animal room/research equipment room doors when you are finished using the room.

5. Dirty and in-use caging that is brought out of an animal room must be covered with a lid or drape/gown to prevent spread of allergens and contaminants.

**E. Personal Protective Equipment:**

1. Closed-toe shoes are required in animal rooms and laboratories.
2. A gown, lab coat, or coverall and gloves are required in all rodent, chinchilla, and rabbit rooms. Please refer to door signage for appropriate garb in each room.

3. A gown or lab coat is recommended for all other species.

4. Gloves are required for fish and amphibians.

5. Gowns and lab coats worn into animal rooms must be removed at the threshold upon exit and disposed of/laundered. Gowns and lab coats may be re-used for 7 days if stored in an individual container (i.e., Ziplock bag). Husbandry technicians should dispose of their gown on cage change or bottle fill days when handling large number of cages. In some areas (Bindley barrier; MJIS B063, B099-B107; VLAB, Hansen barrier, Biology 108 suite), gowns may be worn from room to room in the suite while following room order. Note: 7-day usage by PI staff may be extended to 1 month in cases of gown shortages.

6. Rodent health levels 1 and 2 require the use of a gown or coverall, gloves, surgical loop mask, hair bonnet, +/- shoe covers.

7. Rodent health level 7 requires the use of a gown or coverall, gloves, N95 respirator, hair bonnet, +/- shoe covers. Rodent health level 8 requires all of the above except for N95 respirator use.

8. N95 respirators and safety glasses are REQUIRED while administering biohazards/chemicals and while handling open cages (even under the cabinet) contaminated with these agents.

9. N95 respirators are REQUIRED in animal rooms housing rodents, rabbits, chinchillas, guinea pigs, and wild birds in open static caging.

10. N95 respirators are NOT required when working in an IVC rodent room in which the animal cages are only opened under the biosafety cabinet/transfer station and have not been exposed to biological or chemical hazards.

11. Shoe covers or dedicated boots are recommended when entering large animal runs.

12. In most cases, garb except gloves is to be donned prior to entering the room. Gloves may be put on once in the animal room.

13. Coats and jackets are not to be brought into animal rooms. They should be hung in the appropriate place within the animal facility prior to entering the animal room.

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14. All personnel working in animal rooms that require N95s must have N95 fit testing performed annually.

15. N95 respirators may be reused if stored in a sealed Ziploc bag labeled with the person’s name. The mask must be inspected for damage or gross contamination at each use and disposed of when it occurs. N95 respirators may NOT be reused when used after actively administering biological or chemical hazards to animals, or in ABSL2 room with static housed animals.

16. Exceptions for N95 use may be granted for occasional visitors of the animal rooms that will not be using animals, including but not limited to those performing maintenance or inspections.

F. PPE Compliance System

In order to encourage proper use of the animal facilities as listed above, the following compliance system is in place.

1. The first time a person is identified as not in compliance, a verbal warning will be given and the person will be required to be retrained by facility personnel.

2. A second offense will require a meeting with PACUC; this will result in revocation of facility access until PACUC reinstates access.

G. References

Biosafety in Microbiological and Biomedical Laboratories, 5th Edition