ABSL-2

Animal Biosafety Level 2 (ABSL-2) involves practices for work with those agents associated with human disease. It addresses hazards from ingestion as well as from skin contact or mucous membrane exposure. ABSL-2 builds upon the practices, procedures, containment equipment, and facility requirements of ABSL-1.

Standard Practices

Aside from the standard policies, procedures, and protocols for emergency situations established by the facility director, appropriate special policies and procedures should be developed on an as needed basis and approved by the Animal Care and Use Committee and the Biological Safety Committee.

Access to the animal room is limited to the fewest number of individuals necessary. Personnel who must enter the room for program or service purposes when work is in progress must first be advised of the potential hazards.

Personnel must be enrolled in the University's Medical Monitoring program and receive appropriate immunizations or tests for the agents handled or potentially present (e.g., hepatitis B vaccine, TB skin testing).

A safety protocol is prepared or adopted. Personnel are advised of special hazards, and are required to read and follow instructions on practices and procedures.

Eating, drinking, smoking, handling contact lenses, applying cosmetics, and storing food for human use should only be done in designated areas and are not permitted in animal or procedure rooms.

All procedures are carefully performed to minimize aerosols or splatters.

Equipment and work surfaces in the room are routinely decontaminated with an effective disinfectant after work with the infectious agent and especially after overt spills, splashes, or other contamination by infectious materials.

Equipment and cages are decontaminated in autoclaves or with an effective disinfectant before cleaning and washing.

All infectious samples and wastes must be collected, labeled and autoclaved prior to incineration.

All wastes from the animal room (including animal tissues, carcasses, contaminated bedding, unused feed, sharps, and other refuse) are transported from the animal room in leak-proof, covered containers for incineration.

Policies for the safe handling of sharps are instituted.

Needles and syringes or other sharp instruments are restricted for use in the animal facility only.

Syringes that re-sheathe the needle, needle-less systems, and other safe devices should be used when appropriate.

Plasticware should be substituted for glassware whenever possible.

Personnel must wash their hands after handling cultures and animals, after removing gloves, and before leaving the animal facility.

A biohazard sign must be posted on the entrance to the animal room whenever infectious agents are present. The hazard warning sign identifies the infectious agent(s) in use, the name and telephone number of the investigator, and indicates the special requirements (e.g., the need for immunizations and respirators) for entering the animal room.

Traffic flow should be limited to minimize the risk of cross contamination. A "clean/dirty hall" layout may be useful to minimize this risk.

An insect and rodent control program is in effect.

Special Practices

Laboratory Animal Resource and support personnel receive appropriate training on the potential hazards associated with the work involved, the necessary precautions to prevent exposures. Personnel receive annual updates, or additional training as necessary for procedural or policy changes. Records of all training provided are maintained. In general, persons who may be at increased risk of acquiring infection, or for whom infection might be unusually hazardous, are not allowed in the animal facility unless special procedures can eliminate the extra risk.

Only animals used for the experiment(s) are allowed in the room.

All equipment and cages must be appropriately decontaminated by autoclaving or with an effective disinfectant prior to release for other use.

Spills and accidents that result in overt exposures from infectious materials and/or animals must be immediately reported to the facility director. Medical evaluation, surveillance, and treatment are provided as appropriate and written records are maintained.

Safety Equipment (Primary Barriers)

All personnel entering animal rooms wear appropriate personal protective equipment.

Gowns, uniforms, or laboratory coats are worn while in the animal room. The laboratory coat is removed and left in the animal room. Gowns, uniforms, and laboratory coats are removed before leaving the animal facility. Gloves are worn when handling infected animals and when skin contact with infectious materials or animals are unavoidable.

Biological safety cabinets, other physical containment devices, and/or personal protective equipment (e.g., respirators, face shields) are used whenever conducting procedures with a high potential for creating aerosols.

When needed, animals are housed in primary biosafety containment equipment appropriate for the animal species. Filter top cages are always handled in properly designed and operating animal biosafety containment cabinets recommended for rodents.

Facilities (Secondary Barriers)

The animal facility is separated from areas that are open to personnel traffic within the building.

Access to the facility is limited. Doors should be secure and locked. External doors are self-closing and self-locking. Doors to animal rooms open inward, are self-closing, and are kept closed when experimental animals are present.

The animal facility is designed, constructed, and maintained to facilitate cleaning and housekeeping. The interior surfaces (walls, floors, and ceilings) are water-resistant.

Any windows must be resistant to breakage. Where possible, windows should be sealed. If the animal facility has windows that open, they are fitted with fly screens.

If floor drains are provided, the traps are always filled with an appropriate disinfectant.

Exhaust air is discharged to the outside without being re-circulated to other rooms. Ventilation should be provided in accordance with criteria from Guide for Care and Use of Laboratory Animals.

The direction of airflow in the animal facility is inward; animal rooms should maintain negative pressure compared to adjoining hallways.

Cages are washed in an appropriate cage washer. The mechanical cage washer should have a final rinse temperature of at least 180F.

An autoclave is available in the animal facility to decontaminate infectious waste.

A hand washing sink is in the animal room where infected are housed, as well as elsewhere in the facility.

Illumination is adequate for all activities, avoiding reflections and glare that could impede vision.