

Animal Biosafety Level 1 Laboratory Biosafety Compliance Inspection Checklist

Animal Biosafety Level 1 Section of the *Biological Safety in Microbiological Biomedical and Laboratories, 5th edition*.

Animal Biosafety Level 1 is suitable for work in animals involving well-characterized agents that are not known to cause disease in immunocompetent adult humans, and present minimal potential hazard to personnel and the environment.

ABSL-1 facilities should be separated from the general traffic patterns of the building and restricted as appropriate. Special containment equipment or facility design may be required as determined by appropriate risk assessment. (See Section 2, Biological Risk Assessment.)

Personnel must have specific training in animal facility procedures and must be supervised by an individual with adequate knowledge of potential hazards and experimental animal procedures.

The following standard practices, safety equipment, and facility requirements apply to ABSL-1.

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| Date | Laboratory Location |
| IBC Protocol # | IACUC protocol# |
| Person Interviewed: | |

Animal Biological safety level: ABSL-1 ABSL-2 ABSL-3

Biological materials manipulated in the laboratory: Bacteria Virus Protozoan

Cell lines Human derived materials Biologically active toxins Animals Species

Other potentially infectious materials

Animal species used: Mice Rat Rabbit Frog Dog Cat

Other

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|----------------------------|
| Organism / Material |
| Organism / Material |
| Organism / Material |
| Organism / Material |

A. Standard Microbiological Procedures

Circle the response that best describes the laboratory in which work will be performed. NA = not applicable

Yes

No

NA

| | Yes | No | NA |
|---|-----|----|----|
| <p>1. The animal facility director establishes and enforces policies, procedures, and protocols for institutional policies and emergencies.</p> <p>Each institute must assure that worker safety and health concerns are addressed as part of the animal protocol review.</p> <p>Prior to beginning a study animal protocols must also be reviewed and approved by the Institutional Animal Care and Use Committee (IACUC)^s and the Institutional Biosafety Committee..</p> | | | |
| <p>IACUC Protocol # _____ Date approved _____</p> | | | |
| <p>2. A safety manual specific to the animal facility is prepared or adopted in consultation with the animal facility director and appropriate safety professionals. The safety manual must be available and accessible. Personnel are advised of potential hazards and are required to read and follow instructions on practices and procedures.</p> | | | |
| <p>3. The supervisor must ensure that animal care, laboratory and support personnel receive appropriate training regarding their duties, animal husbandry procedures, potential hazards, manipulations of infectious agents, necessary precautions to prevent exposures, and hazard/exposure evaluation procedures (physical hazards, splashes, aerosolization, etc.). Personnel must receive annual updates and additional training when procedures or policies change. Records are maintained for all hazard evaluations, employee training sessions and staff attendance.</p> | | | |
| <p>Training records on file and available</p> | | | |
| <p>4. An appropriate medical surveillance program is in place, as determined by risk assessment. The need for an animal allergy prevention program should be considered.</p> <p>Facility supervisors should ensure that medical staff is informed of potential occupational hazards within the animal facility, to include those associated with research, animal husbandry duties, animal care and manipulations.</p> <p>Personal health status may impact an individual's susceptibility to infection, ability to receive immunizations or prophylactic interventions. Therefore, all personnel and particularly women of childbearing age should be provided information regarding immune competence and conditions that may predispose them to infection. Individuals having these conditions should be encouraged to self-identify to the institution's healthcare provider for appropriate counseling and guidance.</p> <p>Personnel using respirators must be enrolled in an appropriately constituted respiratory protection program.</p> | | | |
| <p>5. A sign incorporating safety information must be posted at the entrance to the areas where infectious materials and/or animals are housed or are manipulated. The sign must include the animal biosafety level, general occupational health requirements, personal protective equipment requirements, the supervisor's name (or other responsible personnel), telephone number, and required procedures for entering and exiting the animal areas. Identification of specific infectious agents is recommended when more than one agent is being used within an animal room.</p> <p>Security-sensitive agent information should be posted in accordance with the institutional policy.</p> | | | |

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| | Advance consideration should be given to emergency and disaster recovery plans, as a contingency for man-made or natural disasters. | | | |
| a. | Contingency / disaster plan | | | |
| 6. | Access to the animal room is limited. Only those persons required for program or support purposes are authorized to enter the facility. All persons including facility personnel, service workers, and visitors are advised of the potential hazards (natural or research pathogens, allergens, etc.) and are instructed on the appropriate safeguards. | | | |
| 7. | Protective laboratory coats, gowns, or uniforms are recommended to prevent contamination of personal clothing. | | | |
| a | Gloves are worn to prevent skin contact with contaminated, infectious and hazardous materials, and when handling animals. | | | |
| b | Gloves and personal protective equipment should be removed in a manner that minimizes transfer of infectious materials outside of the areas where infectious materials and/or animals are housed or are manipulated. | | | |
| c | Persons must wash their hands after removing gloves, and before leaving the areas where infectious materials and/or animals are housed or are manipulated. | | | |
| d | Eye and face and respiratory protection should be used in rooms containing infected animals, as dictated by the risk assessment. | | | |
| 8. | Eating, drinking, smoking, handling contact lenses, applying cosmetics, and storing food for human consumption must not be permitted in laboratory areas. Food must be stored outside of the laboratory in cabinets or refrigerators designed and used for this purpose. | | | |
| a. | Area for food storage | | | |
| 9 | All procedures are carefully performed to minimize the creation of aerosols or splatters of infectious materials and waste. | | | |
| 10 | Mouth pipetting is prohibited. Mechanical pipetting devices must be used. | | | |
| 11 | Policies for the safe handling of sharps, such as needles, scalpels, pipettes, and broken glassware must be developed and implemented. When applicable, laboratory supervisors should adopt improved engineering and work practice controls that reduce the risk of sharps injuries. Precautions, including those listed below, must always be taken with sharp items. These include: | | | |
| | Review of sharps on annual basis for improved method/equipment | | | |
| a. | Use of needles and syringes or other sharp instruments in the animal facility is limited to situations where there is no alternative for such procedures as parenteral injection, blood collection, or aspiration of fluids from laboratory animals and diaphragm bottles. | | | |
| b. | Disposable needles must not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal. Used disposable needles must be carefully placed in puncture-resistant containers used for sharps disposal. Sharps containers should be located as close to the work site as possible. | | | |

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| | Sharps containers available in areas where sharps are used | | | |
| c. | Non-disposable sharps must be placed in a hard-walled container for transport to a processing area for decontamination, preferably by autoclaving. | | | |
| d. | Broken glassware must not be handled directly. Instead, it must be removed using a brush and dustpan, tongs, or forceps. Plastic ware should be substituted for glassware whenever possible. | | | |
| e. | Equipment containing sharp edges and corners should be avoided. | | | |
| 12. | Equipment and work surfaces are routinely decontaminated with an appropriate disinfectant after work with an infectious agent, and after any spills, splashes, or other overt contamination. | | | |
| 13. | Animals and plants not associated with the work being performed must not be permitted in the areas where infectious materials and/ or animals are housed or are manipulated. | | | |
| 14. | An effective integrated pest management program is required. (See Appendix G.) | | | |
| 15. | All wastes from the animal room (including animal tissues, carcasses, and bedding) are transported from the animal room in leak-proof, covered containers for appropriate disposal in compliance with applicable institutional, local and state requirements. | | | |
| | Decontaminate all potentially infectious materials before disposal using an effective method. | | | |
| | Company contracted for disposal | | | |

| B. Special Practices | | Yes | No | NA |
|---|----------------------|-----|----|----|
| Circle the response that best describes the laboratory in which work will be performed. NA = not applicable | | | | |
| 1. | None required | | | |

| C. Safety Equipment (Primary barriers) | | Yes | No | NA |
|---|--|-----|----|----|
| Circle the response that best describes the laboratory in which work will be performed. NA = not applicable | | | | |
| 1. | A risk assessment should determine the appropriate type of personal protective equipment to be utilized. | | | |
| 2. | Special containment devices or equipment may not be required as determined by appropriate risk assessment. | | | |
| 3. | Protective laboratory coats, gowns, or uniforms may be required to prevent contamination of personal clothing. Protective outer clothing is not worn outside areas where infectious materials and/or animals are housed or manipulated. Gowns and uniforms are not worn outside the facility. | | | |
| | Required PPE for entrance to LARC | | | |
| | Animal room specific PPE | | | |

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| 4. | <p>Protective eyewear is worn when conducting procedures that have the potential to create splashes of microorganisms or other hazardous materials. Persons who wear contact lenses should also wear eye protection when entering areas with potentially high concentrations or airborne particulates.</p> <p>Persons having contact with NHPs must assess risk of mucous membrane exposure and wear protective equipment (e.g., masks, goggles, face shields, etc.) as appropriate for the task to be performed</p> | | | |
| | Protective eyewear used | | | |
| 5. | <p>Gloves are worn to protect hands from exposure to hazardous materials.</p> <p>A risk assessment should be performed to identify the appropriate glove for the task and alternatives to latex gloves should be available.</p> <p>Change gloves when contaminated, glove integrity is compromised, or when otherwise necessary.</p> <p>Gloves must not be worn outside the animal rooms.</p> <p>Gloves and personal protective equipment should be removed in a manner that prevents transfer of infectious materials.</p> <p>Do not wash or reuse disposable gloves. Dispose of used gloves with other contaminated waste.</p> | | | |

| D. Laboratory Facilities (Secondary barriers) | | | | |
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| Circle the response that best describes the laboratory in which work will be performed. NA = not applicable | | Yes | No | NA |
| 1. | <p>The animal facility is separated from areas that are open to unrestricted personnel traffic within the building. External facility doors are self-closing and self-locking.</p> <p>Access to the animal facility is restricted.</p> <p>Doors to areas where infectious materials and/or animals are housed, open inward, are self-closing, are kept closed when experimental animals are present, and should never be propped open. Doors to cubicles inside an animal room may open outward or slide horizontally or vertically.</p> | | | |
| 2. | <p>The animal facility must have a sink for hand washing.</p> <p>Sink traps are filled with water, and/or appropriate liquid to prevent the migration of vermin and gases</p> | | | |
| | Animal facility has sinks and adequate supplies | | | |
| | Animal rooms have sink and adequate supplies | | | |
| 3. | <p>The animal facility is designed, constructed, and maintained to facilitate cleaning and housekeeping. The interior surfaces (walls, floors and ceilings) are water resistant. Floors must be slip resistant, impervious to liquids, and resistant to chemicals.</p> <p>It is recommended that penetrations in floors, walls and ceiling surfaces be sealed, including openings around ducts, doors and doorframes, to facilitate pest</p> | | | |

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| | control and proper cleaning. | | | |
| | Cleaning | | | |
| 4. | <p>Cabinets and bench tops must be impervious to water and resistant to heat, organic solvents, acids, alkalis, and other chemicals. Spaces between benches, cabinets, and equipment should be accessible for cleaning.</p> <p>Chairs used in animal area must be covered with a non-porous material that can be easily cleaned and decontaminated. Furniture must be capable of supporting anticipated loads and uses. Sharp edges and corners should be avoided.</p> | | | |
| 5. | External windows are not recommended; if present 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. The presence of windows may impact facility security and therefore should be assessed by security personnel. | | | |
| 6. | <p>Ventilation should be provided in accordance with the <i>Guide for Care and Use of Laboratory Animals</i>.¹ No recirculation of exhaust air may occur. It is recommended that animal rooms have inward directional airflow.</p> <p>Ventilation system design should consider the heat and high moisture load produced during the cleaning of animal rooms and the cage wash process.</p> | | | |
| 7. | Internal facility appurtenances, such as light fixtures, air ducts, and utility pipes, are arranged to minimize horizontal surface areas to facilitate cleaning and minimize the accumulation of debris or fomites. | | | |
| 8. | If floor drains are provided, the traps are filled with water, and/or appropriate disinfectant to prevent the migration of vermin and gases. | | | |
| 9. | Cages are washed manually or preferably in a mechanical cage washer. The mechanical cage washer should have a final rinse temperature of at least 180°F. If manual cage washing is utilized, ensure that appropriate disinfectants are selected. | | | |
| | Method to validate 180°F water temperature | | | |
| 10. | Illumination is adequate for all activities, avoiding reflections and glare that could impede vision. | | | |
| 11. | Emergency eyewash and shower are readily available; location is determined by risk assessment. | | | |
| | Location of emergency eyewash stations | | | |
| 12. | The laboratory is equipped with Biological spill kit | | | |
| 13. | The laboratory is equipped with a general first aid kit | | | |
| 14. | Emergency contact information is posted near the entrance/exit or by telephones | | | |
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