

EXPERIMENTS INVOLVING INFECTIOUS AGENTS

Introduction

All work with infectious agents, Risk Groups 2, 3, and 4 as listed in [Appendix B](#) of the *National Institutes of Health (NIH) Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules*, at ASU must be approved by the Institutional Biosafety Committee (IBC).

Applicable ASU Policies

- EHS 101 - Bloodborne Pathogens and Needlestick Prevention
- EHS 112 - Biosafety and the Possession, Use, and Transfer of Select Agents and Toxins
- EHS 405 - Shipping and Receiving Hazardous Materials

Applicable ASU Guidelines

- Biosafety Manual
- Bloodborne Pathogens Exposure Control Plan
- Bloodborne Pathogens Compliance Guidelines
- Biological Hazardous Waste Management Compliance Guidelines

Lab specific standard operating procedures (SOPs) are required; [EH&S](#) has a template that can be used to generate [SOPs](#).

Applicable Regulations

Biosafety in Microbiological and Biomedical Laboratories (BMBL, from CDC/NIH): Defines four levels of biological containment and recommends levels to be used with specific infectious agents.

- **Biological Safety Level 1 (BSL-1)** is required for work involving well-characterized agents not known to consistently cause disease in immunocompetent adult humans, and present minimal potential hazard to laboratory personnel and the environment (low individual risk/low community risk)
- **Biological Safety Level 2 (BSL-2)** is required for work involving agents that pose moderate hazards to personnel and the environment (moderate individual risk/low community risk).
- **Biological Safety Level 3 (BSL-3)** is required for clinical, diagnostic, teaching, research, or production facilities where work is performed with indigenous or exotic agents that may cause serious or potentially lethal disease through the inhalation route of exposure (high individual risk, low community risk).
- **Biological Safety Level 4 (BSL-4)** is required for work with dangerous and exotic agents that pose a high individual risk of aerosol-transmitted laboratory infections and life-threatening disease that is frequently fatal, for which there are no vaccines or treatments, or a related agent with unknown risk of transmission (high individual and community risk).

Summary of Requirements

- IBC registration and approval of all work with infectious agents.
- Containment level for work with infectious agents is determined by IBC based on a risk assessment and recommendations in the BMBL.

Training

The Principal Investigator provides or arranges appropriate training of all employees, students and visitors who work in BSL-1, BSL-2 or BSL-3 laboratories. Biosafety Training is offered through ASU Blackboard. ASU requires specific training for work involving biohazards, and this training is provided by [EH&S](#); however, the Principle Investigator is responsible for lab-specific training.

Registration for Biosafety Training: Contact biosafety@asu.edu.

Reporting

- The Principal Investigator must report all research-related accidents or illnesses to [EH&S](#) and the IBC. The IBC is responsible for reporting any significant problems with or violations of the *NIH Guidelines* and any significant research-related accidents or illnesses to NIH within 30 days, unless the IBC determines that a report has already been filed by the Principal Investigator.
- **It is highly recommended that post-exposure treatment be started as soon as possible following an exposure incident.** If an exposure occurs, the individual should immediately go to ASU Health Service. If ASU Health is closed, follow-up care may be obtained at the nearest emergency room and reported to ASU Health Service and [EH&S](#) the next business day.

Recordkeeping

The ASU Office for Research Integrity and Assurance maintains records of registrations approved by the IBC.

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