Introduction

There is substantial research being performed today involving many types of biohazardous materials. Many of these materials could cause diseases in animals or plants. However, for those working with biohazardous materials in the laboratory, there are established practices and procedures, personal protective equipment and containment devices that will protect against infection if properly followed and used.

Scope and Application

The procedures described in this section apply to anyone working in the laboratory with live viruses, retro viruses, recombinant DNA or any other type of human pathogen.

Program Description

The purpose of the Biosafety Program is to establish safe handling procedures, including the use of engineering controls (e.g., biosafety cabinets) and personal protective equipment, and to ensure that workers understand and accept the risks associated with the work. This is accomplished by having workers review all provided health and safety information and discussing the reviewed material with the principal investigator.

Procedure

Requirements

Principal Investigators conducting research involving the use of potentially biohazardous materials must complete and submit a biosafety questionnaire to the Biosafety Committee. All research of this nature must be approved by this committee before work is begun.

Biosafety Levels

All research involving any type of human pathogen must follow the Centers for Disease Control (CDC) Biosafety Level guidelines spelled out in "Biosafety in Microbiological and Biomedical Laboratories." This information can also be found in the USC Health and Safety Manual. Any research laboratory at which
research at Biosafety Level 2 (BL2) or higher is being conducted, must be audited and signed off by USC's Biosafety Officer.

**Bloodborne Pathogens**

Laboratory workers conducting research with human blood or body fluids must follow OSHA's Bloodborne Pathogen Standard. More information on this standard can be found in Section E.1. In addition to the requirements of the Bloodborne Pathogen Standard, all research must be conducted at the minimum of Biosafety Level 1 (BL1).

**Waste**

Laboratories generating infectious waste must follow the guidelines of the Infectious Waste Policy in the USC Health and Safety Manual. Any waste generated by laboratories conducting research at Biosafety Level 2 must have a quality control procedure in place to ensure a complete kill when autoclaving the waste.

**Roles and Responsibilities**

**Principal Investigator**

- Complete and sign Biosafety questionnaire
- Ensure all safety procedures are being followed in the laboratory
- Provide the appropriate training and orientation to laboratory workers
- Provide proper PPE to employees
- Ensure the laboratory is properly posted

**Occupational Medicine**

- Arrange appointments and provide for medical review, serum antibody titers, or any other additional medical surveillance required by the Biosafety Committee.
- Administer the vaccination program

**EHS**

- Routinely inspect laboratories
- Maintain database for the biosafety committee
- Provide audits for Biosafety Level 2 work
Individual

- Review the provided health and safety information
- Carefully follow procedures necessary for safe work with biohazardous materials in the laboratory

For More Information

- Contact USC's Biosafety officer at 777–5269.
- The *NIH Guidelines for Research Involving Recombinant DNA* is available on the World Wide Web.
- The *CDC/NIH Biosafety in Microbiological and Biomedical Laboratories* is also available on the Web.