Foreword

Biohazardous agents are infectious microorganisms, or their toxins, which cause or may cause human disease. Although the OSHA "Occupational Exposures to Hazardous Chemicals in Laboratories" (referred to as the "Laboratory Standard") does not apply to biological agents, the policy on this campus is to apply the same basic requirements - responsibilities, training, laboratory safety plan, reporting of accidents/exposures, etc. - to biological agents. This manual is intended to serve as a supplement to the UNC Laboratory Safety Manual, specifically addressing biological safety matters. In addition, laboratories that work with biological agents also use chemicals that are subject to the Laboratory Standard. Finally, the knowledge of the location and hazards of the biological agents used on campus are needed for emergency response planning purposes.


Responsibilities

Principal Investigator

The Principal Investigator has primary responsibility for assuring the safety of the laboratory personnel under his/her direction. This responsibility includes:

- Registration of potentially infectious agents with the Health and Safety Office;
- Assessment of the risks associated with the agents used and selection of appropriate safeguards;
- Preparation of a written safety plan;
- Training and supervision of staff and students in safe practices; and
- Reporting of accidents; exposures, clinical illnesses and sero-conversions of laboratory personnel to the Health and Safety Office.
Environment, Health and Safety Office

The Environment, Health and Safety (EHS) Office is responsible for the biological safety program within the institution and for implementation of policies established by the University. The duties include the following:

- Providing general surveillance over activities involving biohazardous agents, including routine inspections of all areas in which biohazardous agents are used.
- Determining compliance with University policies and safety guidelines.
- Monitoring and reviewing the performance and maintenance of containment systems designed for occupational or environmental protection.
- Providing consulting services on aspects of biological safety to personnel at all levels of responsibility.
- Providing guidance and assistance concerning the packaging and shipping of biohazardous agents leaving the institution.
- Maintaining records of agents used on campus, their risk classification, location and Principal Investigator.
- Serving as liaison with NIH, CDC, and other research organizations on matters pertaining to biological safety.

Laboratory Safety Plan

The Principal Investigator is responsible for preparing a laboratory safety plan and registering the human and animal pathogens used in his/her research and teaching laboratories with the Environment, Health and Safety Office. This is accomplished by completing the “Registration of Biological hazards” section in the Laboratory Safety Plan (chapter 2) of the Laboratory Safety Manual. The Environment, Health and Safety Office is available to assist investigators select appropriate safeguards. The contents are to be periodically reviewed with employees. The following information is to be included in the laboratory safety plan:

Agent Information: List specific agents, biosafety levels, diseases and symptoms caused by the agents.

Potential Risks for Laboratory Personnel: identify routes of exposure and high risk laboratory procedures
Medical Surveillance: vaccinations, pre-assignment and periodic serum samples.

Safety Precautions: List Precautions Safe Handling of Biohazardous Agents (e.g. use of biological safety cabinet, disinfection of work surfaces, hand washing, use of PPE, etc.)

Waste Disposal Procedures: procedures autoclaving and decontamination of waste

Emergency Procedures: Describe procedures to be followed in the event of personnel exposure or spills.

Safety Training and Education

Safety training of the laboratory staff is the responsibility of each principal investigator. All laboratory personnel are to be informed of the hazards associated with the work and proper safety precautions. It is a continuing process that begins before a new employee starts laboratory work and requires regular supervision and emphasis. Each employee is to receive a copy of the written safety plan describing the safety precautions observed in his/her laboratory. Safety should be a regular topic in laboratory staff meetings. Written information and reference material should be made available to lab personnel.

Medical Surveillance

All laboratory accidents which result in exposure of laboratory personnel are to be reported to the UNC Employee Occupational Health Clinic at 145 Medical Drive, 2nd floor (6-9119) and to the Environment, Health and Safety Office (2-5507). Accidents, exposures, potential exposures, clinical illness, and sero-conversions are to be reported. Exposures include inoculation through cutaneous penetration, ingestion, probable inhalation following gross aerosolization, or any incident causing serious exposure to personnel or danger of environmental contamination. Accidents resulting in personal injuries or occupational illnesses are to be reported on the Worker's Compensation Form 19 and sent to the Environment, Health and Safety Office. Employees who are required to have vaccinations or to have serum samples stored for the agents used in the laboratory are to contact the UNC Employee Occupational Health Clinic at 145 Medical Drive, 2nd floor (966-9119) to schedule an appointment. For after-hours exposures, call Healthlink, 966-7890, for consultation and assessment.

Billing: Charges for these services will be billed to the Environment, Health and Safety Office and paid from the University's workers' compensation account. Workers' compensation will also pay for any necessary follow-up. For further information, see the Environment, Health and Safety Manual Policy 2-1.