I. Introduction

The Ohio State University is committed to providing a safe and healthy working environment for its employees. To meet this commitment, the University has developed and implemented Safety, Health and Environmental (SHE) Practices that address safety and environmental concerns for all University employees. Additionally, the University is subject to strict local, state and federal regulations promulgated by such agencies as the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency (EPA), and the Public Employment Risk Reduction Program which has adopted Occupational Safety and Health Administration (OSHA) standards. The University is also committed to complying with current safety regulations and guidelines as issued by the United States Departments of Health and Human Services and Agriculture, the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC).

This biosafety manual provides university-wide safety guidelines, policies, and procedures for the use and manipulation of biohazards and recombinant and synthetic nucleic acid molecules. Although the implementation of these procedures is mainly the responsibility of the Principal Investigator (PI), success in biosafety depends upon the combined efforts of everyone in the laboratory. Planning for and implementation of biological safety must be part of every laboratory activity in which biohazard materials are used. The purpose of the University’s overall biological safety plan is to ensure the safe handling of biohazardous materials in any work performed under University aegis and to thereby protect personnel, research outcomes and the environment.

The biosafety program consolidates the compliance programs for the Public Employment Risk Reduction Program adoption of the OSHA Hazard Communication Standard (29 CFR 1910.1200), the OSHA Occupational Exposure to Hazardous Chemicals in the Laboratory (29 CFR 1910.1450), the OSHA Occupational Exposure to Bloodborne Pathogens Standard (29 CFR 1910. 1030), the NIH’s NIH Guidelines for Research Involving Recombinant and Synthetic Nucleic Acid Molecules (NIH Guidelines) and the CDC/NIH publication Biosafety in Microbiological and Biomedical Laboratories (5th edition). Additionally, the Institution’s Safety Management Guidebook provides University
procedures for medical surveillance, sharps injuries, and working alone that are to be followed by principal investigators and laboratory personnel.

This *Institutional Laboratory Biosafety Manual* applies to all OSU faculty, staff, hosted visitors, students, participating guests and volunteers, contract laborers, supplemental personnel and employees of firms working at locations where the University has management control of specific biohazards.

**Biohazards** at The Ohio State University are defined as *infectious agents (i.e., pathogens) or materials produced by living organisms that may cause disease in other living organisms.* This definition encompasses not only the human pathogens, but also materials that may contain such pathogens (human-, nonhuman-primate- and other animal- and plant-sourced materials) that can cause disease in humans, animals or plants. Work with some experimental animals and arthropods also constitutes potential exposure to biohazardous materials since these animals may harbor infectious agents and/or proteins in their dander, urine, saliva, serum, etc., to which personnel may react or may become allergic.