

Implement a sound, cost-effective biosecurity program

Laboratory Biosecurity Handbook

Reynolds M. Salerno and Jennifer Gaudioso
Sandia National Laboratories, Albuquerque, New Mexico, USA

New!

Laboratory
Biosecurity
Handbook

Reynolds M. Salerno and
Jennifer Gaudioso,
Sandia National Laboratories

CRC Press
Taylor & Francis Group

A FROM-THE-TRENCHES GUIDE TO LABORATORY BIOSECURITY

By achieving a delicate balance between systems and practices, proper laboratory biosecurity reduces the risk of legitimate bioscience facilities becoming sources of pathogens and toxins for malicious use. Effective design and implementation of laboratory biosecurity depends on cooperation among individuals from diverse communities, including scientists, technicians, policy makers, security engineers, and law enforcement officials. Providing guidance to the broad international community, **Laboratory Biosecurity Handbook** addresses the objectives of biosecurity and the ways in which they overlap with those of biosafety.

The book describes the risks of working with dangerous pathogens and toxins in the current era of international terrorism. The authors characterize the global spread of legitimate biotechnology and relate it to the rise of transnational terrorism, emphasizing the need for biosecurity measures even in legitimate bioscience. The book discusses biosecurity risk assessment—a practical methodology that allows laboratory management and biosafety/biosecurity officers to analyze and determine the level of risk, and serves as a basis for managing those risks. The book includes questionnaires that can assist the process of collecting data for a biosecurity vulnerability assessment, example standard operating procedures and memoranda of understanding, and other useful reference material.

Addressing a variety of operating environments and the particular challenges they face when designing and implementing laboratory biosecurity, this book can assist bioscience facilities ranging from the large to the small, from those that focus on diagnosis or vaccine development, to those only minimally involved with infectious diseases. The detailed recommendations help avoid a “one-size-fits-all” approach to security and save limited resources. The book shows institutions how to develop and implement a biosecurity plan, and helps ensure that all components are included in the overall system, whether existing or new.

FEATURES

- Covers the various components of laboratory biosecurity, their function and implementation
- Discusses the concept of laboratory biosecurity risk and describes a proven methodology for conducting a biosecurity risk assessment
- Presents specific recommendations on laboratory biosecurity implementation measures for a wide range of facility types
- Provides information to implement a sound, cost-effective biosecurity program
- Outlines the similarities and differences between biosafety and biosecurity
- Discusses how to work with local law enforcement officials and response forces
- Contains a comprehensive listing of US biosecurity regulations and a broad listing of biosecurity regulations in other countries
- Provides a detailed template and outline for a laboratory biosecurity plan, as well as vulnerability assessment questionnaires, standard operating procedures for testing access control systems, and an example memorandum of understanding with local law enforcement

CONTENTS

INTRODUCTION

Laboratory Biosecurity and the Risks of Bioterrorism
Laboratory Biosecurity and International Obligations
Laboratory Biosecurity and National Regulations
Approach/Objectives of this Book

RISK ASSESSMENT

Overview of Biosecurity Risk Assessment Methodology
Characterize Assets and Threats
Evaluate Scenarios
Characterize the Risk
Risk Reduction

COMPONENTS OF BIOSECURITY

Physical Security
Personnel Security
Material Control and Accountability
Transport Security
Information Security

PROGRAM MANAGEMENT

Role and Responsibilities
Biosecurity System Design
Response Force
Performance Testing

See reverse side for continuation of Contents,
Other Titles of Interest and ordering information

