

# *Welcome*

**International Biological Threat Reduction Department  
Sandia National Laboratories  
September 19, 2007**

**Overview of the Principles of Laboratory Biosecurity  
V Congresso Brasileiro de Biossegurança**

[www.biosecurity.sandia.gov](http://www.biosecurity.sandia.gov)

# Course Overview

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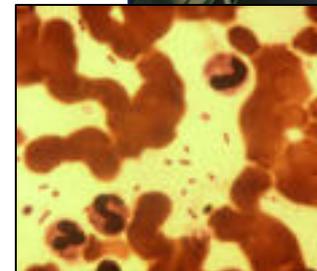
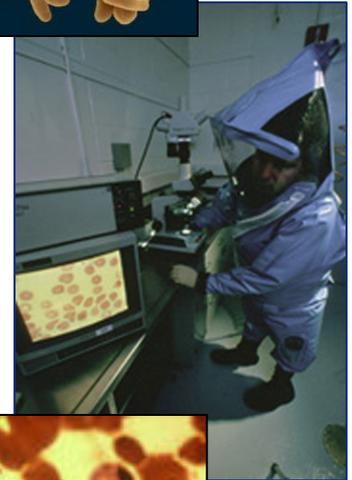
- **Introduction to Laboratory Biosecurity (19 September)**
  - Biosecurity aims to protect biological agents from theft
  - Biosecurity must be integrated with biosafety
- **Biosecurity Risk Assessment (19 September)**
  - Risk assessment and risk management key to developing a sustainable biosecurity program
- **Components of a Laboratory Biosecurity Program (20 September)**
  - Physical security, personnel security, material control & accountability, transport security, information security, and program management
  - Graded implementation based on results of risk assessment

# Laboratory Biosafety and Biosecurity

- **Laboratory Biosafety**
  - Objective: reduce or eliminate accidental exposure to or release of potentially hazardous agents
- **Laboratory Biosecurity**
  - Objective: protect biological agents against theft by those who intend to pursue bioterrorism or biological weapons proliferation
- **Common strategy**
  - Implement graded levels of protection based on a risk management methodology
- **Control of certain biological materials is necessary, but *how* that is achieved must be carefully considered**
  - Biosafety and biosecurity should be integrated systems that avoid compromising necessary infectious disease research and diagnostics



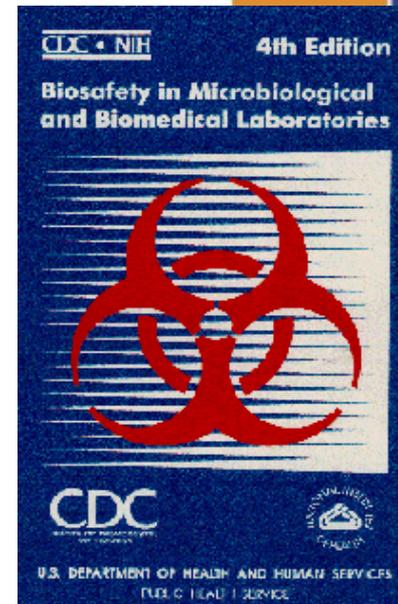
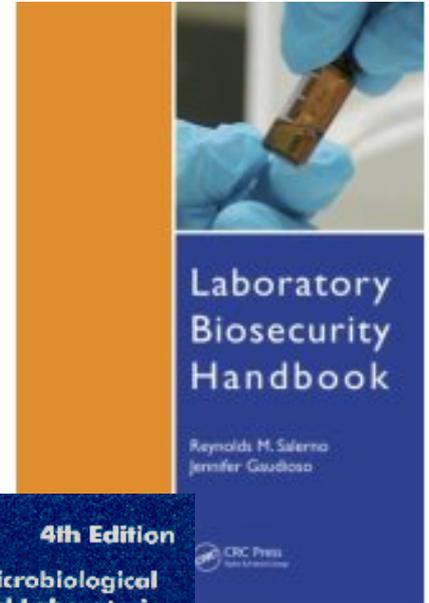
*Francisella tularensis*



*Yersinia pestis*

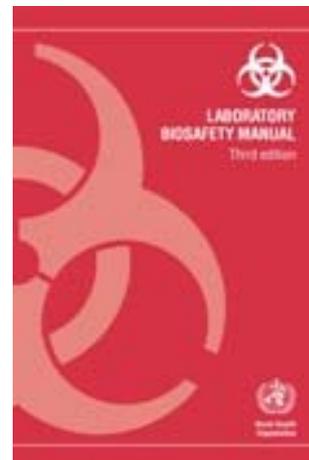
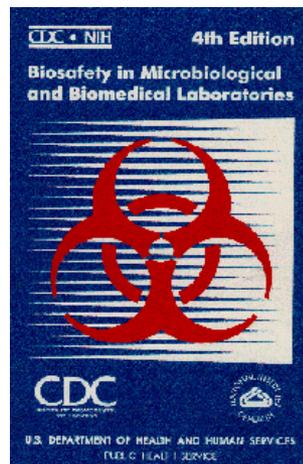
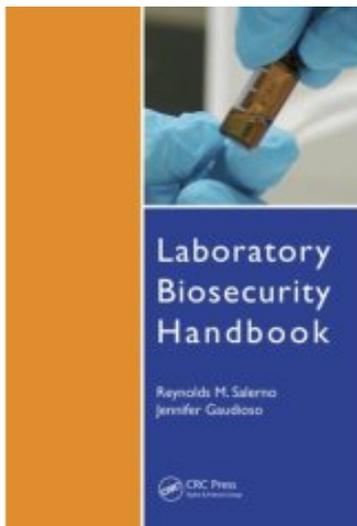
# Laboratory Biosecurity Supports Laboratory Biosafety

- **Laboratory biosecurity supports the laboratory biosafety agenda of preventing disease in people, animals, and plants and minimizing the risk of worker injury**
- **Safe and secure laboratories help**
  - **Ensure the containment of hazardous infectious substances in laboratories**
  - **Maintain citizens' confidence in the activities of the bioscience research community**
  - **Increase transparency to investors in the biomedical and biotechnology industries**
  - **Protect valuable research and commercial assets**
  - **Reduce the risks of crime and bioterrorism**



# Resources

- **Laboratory Biosecurity Handbook, CRC Press**
- **Biosafety in Bioscience and Medical Laboratories (BMBL) – 5<sup>th</sup> edition**
  - **Section VI: Principles of Laboratory Biosecurity**
- **WHO Laboratory Biosafety Manual – 3<sup>rd</sup> edition**
  - **Chapter 9: Laboratory Biosecurity Concepts**
- **WHO Guidance on Laboratory Biosecurity**
- **[www.biosecurity.sandia.gov](http://www.biosecurity.sandia.gov)**
- **[www.BEPstate.net](http://www.BEPstate.net)**



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## Acknowledgements

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