



Biosecurity Plan for Western University

Reviewed and Approved by Biohazards Subcommittee, April 7, 2017

1. Introduction:

In addition to the Biosafety Manual, the University Biosecurity Plan provides guidance to ensure all research using biological agents at Western is conducted in compliance with all rules and regulations that govern the use of biological agents and toxins.

The Canadian Biosafety Standard for Facilities Handling or Storing Human and Terrestrial Animal Pathogens and Toxins, 4th Edition, 2009 (CBS) requires Western University to have a biosecurity plan in place. The

3. Definitions

Biosafety deals with all aspects of containment to prevent any exposure and release of pathogens.

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- 5.1.1 Implementing a safety, security and emergency response plan (see Section 9)
- 5.1.2 Restriction or additional security approval of all individuals that have access to biosecurity agents of concern (see Section 7)
- 5.1.3 A process to immediately report any theft, loss or release of biosecurity agent of concern (see Section 9)
- 5.1.4 Detailed records of information necessary to give a complete accounting of all activities related to biosecurity agents of concern (see Section 7)
- 5.1.5 Medical surveillance for all workers as identified through the completion of the Hazard Communication Form from Workplace Health at Western.
- 5.1.6 Training including the safe storage, transport and use of biological agent
- 5.1.7 Physical security measures such as locked laboratories, restricted access, fridges and/or freezers.

6.0 Designation of a Responsible Officer

The Biosafety Officer is the Responsible Official (RO). The RO, : H V W H U Q 6 S H O H D O & R Q V 6 H U Y L F H : 6 & 6 and the HAZMAT accountable for the development, training and implementation of biosecurity and emergency response plans. As such, the RO is contacted as soon as possible in the event of any theft, loss or release of biosecurity agents of concern. The RO is also the person who is involved in the risk assessment process and the biosecurity measures taken such as inventory control, background checks, exposures, spill response, incidents of uncontrolled releases or transfers of biological agents.

7.0 Assessment of Biosecurity Risk

When performing a risk assessment to identify potential Biosecurity risk, the Biosafety Committee or the Biohazards Subcommittee will use the method set by the Public Health Agency of Canada's Office of Laboratory Security (please see Figure Assess Risk of Threat Scenarios) page 5, and implement a graded implementation approach to level risk and S

7.2.3 Low: Loss of asset could affect the local operations of an individual facility

7.3 Threat Identification

7.3.1 Establishment of threat scenarios

7.3.2 Definition of characteristics, motivations and capabilities of adversaries

7.3.3 Evaluate the probability and consequences of scenarios

7.4 Examples of Threats to Biosecurity

7.4.1 Access by unauthorized personnel

7.4.2 Theft, loss, misuse of agents

7.4.3 Intrusion, forced entry, compromised security detection system, compromised access code

7.4.4 Inventory not maintained

7.4.5 Transportation between buildings, facilities or institutions

7.4.6 Illegal use of personal devices

7.4.7

An effective oversight system is based on identifying and managing the risks associated with the potential of misuse or misapplication of organisms, knowledge, technology, and products of research resulting in the harm to the public health and safety, animals, or national security. Therefore, risk mitigation plans should be created and measures implemented to address the identified risks. This will be done through the CPTED review.

7.6 Considerations of the following questions can help in creating an effective risk mitigation plan:

7.6.1 What is the strategy or strategies being implemented by the institution/organization to address the risks (e.g., applying specific biosafety and biosecurity measures or modifying experimental design or methodology such that an attenuated strain is used or strain's ability to proliferate outside of the lab or within different hosts is limited by using a different technique)?

7.6.2

- 12.1.2 biological agents that must be ingested to cause pathogenicity or other harm
- 12.1.3 rodents or other animals not known to be infectious
- 12.1.4 level 1 microorganisms
- 12.1.5 other level 1 biological agents
- 12.1.6 other biological agents to be identified as lowest biosecurity risk
- 12.1.7 human and animal source materials such as tissues and blood

12.2 Biological agents of concern deemed to be possible biosecurity threats (High Risk):

- 12.2.1 toxins of biological origin
- 12.2.2 animals which may be infectious, including non-human primates
- 12.2.3 other Level 2 or higher organisms/biological agents
- 12.2.4 Security Sensitive Biological Agents (SSBAs)
- 12.2.5 other biological agents to be identified as low, medium or high biosecurity risk

13.0 References

Public Health Agency of Canada (2018). *Guidelines for the Management of Security Sensitive Biological Agents (SSBAs)*. Ottawa: Health Canada. (1-800-267-0874) <http://uwo.ca/hr/f>