

## **Biohazards Policy for Research and Teaching**

Nova Scotia Agricultural College

December 2008

Approved by Senior Management, December 17, 2008

### **1. Purpose**

The Nova Scotia Agricultural College (NSAC) will govern the usage of classified biohazards to ensure the safety of its faculty, staff, students, animals, the public, and the environment.

Biohazards are defined as biological materials that require administrative control, accountability, and specific protective and monitoring measures in laboratories to protect the population from their potential to cause harm. At NSAC, biohazards are considered as infectious agents of animals (bacteria, viruses, prions, fungi, and parasites), infectious agents of plants (bacteria, viruses, viroids, and fungi), recombinant DNA, cell lines, and microbial toxins.

The university will comply with provincial and federal guidelines, including the Public Health Agency of Canada's Laboratory Biosafety Guidelines, the Canadian Food Inspection Agency (CFIA) Containment Standards for Veterinary Facilities, the Transportation of Dangerous Goods Act, the Health of Animals Act, and the guidelines of the Canadian Council on Animal Care.

Currently, the need for biohazard review at NSAC can be handled by an Institutional Biosafety Officer (IBO). An Institutional Biosafety Committee will be formed as this need grows, and this policy will be revised at that time.

### **2. Scope**

This policy regulates the use of all biohazards for research or teaching.

### **3. Policy Statement**

The Nova Scotia Agricultural College requires all research and teaching involving the use of biohazards to be reviewed by the Institutional Biosafety Officer (IBO). Once the research or teaching plan has been certified by the IBO, the Principal Investigator (or faculty member) assumes responsibility to comply with this policy for the purchasing, storage, usage, and disposal of all biohazards.

Individuals working with these biohazards must prove relevant training and comply with all policies related to biohazards.

Failure to uphold this policy will be reviewed by the IBO and may result in disciplinary action, up to and including, the stoppage of the research or teaching program.

#### **4. Roles and Responsibilities**

4.1 The overall implementation, staffing and review of this policy are the responsibilities of the Vice President, Research, Extension, and Outreach. This policy will be reviewed annually.

#### 4.2 Institutional Biosafety Officer (IBO)

NSAC currently has an appointed Institutional Biosafety Officer (IBO) who will review all research and teaching applications for the use of biohazards.

Responsibilities:

- development and implementation of a Biosecurity
- development, training, and implementation of safety, security, and emergency response plans ;
- review teaching and research applications and grant certification for the usage of biohazards to Principal Investigator or faculty member;
- ensure that the requirements of the Laboratory Biosafety Guidelines, as set by the Public Health Agency of Canada, and the Containment Standards for Veterinary Facilities, as set out by the Canadian Food Inspection Agency, are met, and
- ensure that all personnel who have access to biohazards familiarize themselves with the contents of the Biosafety Plan and obtain biosecurity training.

#### 4.3 Level II Lab Manager (LM)

The Lab Manager (LM) is the official who is responsible for ensuring that activities undertaken in the Level II Microbiology Laboratory on a daily basis comply with the aforementioned regulations.

Responsibilities:

- maintain an up-to-date biohazard inventory list, and report biohazard transfers, destruction, and inventory anomalies to the IBO;
- monitor laboratory usage logs;
- maintain applicable up-to-date information within the lab;
- request changes to personnel access authorization, and
- conduct daily inspections of the Level II Lab.

#### 4.4 Principal Investigator (PI)/Faculty Member (FM)

The Principal Investigator (PI) is a researcher who requires the use of a biohazard within his/her research work. Alternatively, a faculty member is a professor at NSAC who wished to make use of a biohazard for teaching purposes.

Responsibilities, both PI and FM:

- obtain authorization from the IBO for all work involving biohazards, PRIOR to the acquisition of the material or the initiation of the work;
- control and accountability for biohazards used within their research or teaching project;
- provide detailed Standard Operating Procedures (SOPs) describing the use of biohazards;
- provide Material Safety Data Sheets (MSDS) for biohazards and chemicals used and stored in the Level II Microbiology Laboratory;
- ensure that his/her technical staff, graduate students, and other personnel are properly trained in microbiology and biosafety protocols and are familiar with the Biosecurity Plan, and
- ensure compliance with NSAC's Lab Access Policy.

#### 4.5 Individuals with Biohazard Access Authorization

The individuals with biohazard access authorization will have completed the screening and training process in order to gain access to the biohazards. The individuals granted this access would be Principal Investigators, Research Laboratory Technical staff, Graduate Students, Lab Manger, Responsible Official, and Department Technical staff.

Responsibilities:

- protect biohazards while in their physical possession;
- follow all security-related procedures related to biohazards, including those that apply to hosting and escorting procedures for visitors, and
- report incidents and/or breaches in security to the IBO and LM.

#### 4.6 NSAC Campus Security

The NSAC campus Safety and Security Office is responsible for off hour security of all campus buildings.

Responsibilities:

- maintain security of facilities after regular work hours, when building is open, with sign-in/out logs during high traffic periods. (e.g. Cox Institute where Level II lab is located), and
- activate NSAC's Emergency Response Plan when applicable.

## **5. Materials Requiring a Biosafety Certification**

NSAC requires Principal Investigators or faculty members to obtain Biosafety Certification from the IBO for any work with:

- infectious agents of animals (bacteria, viruses, prions, fungi, and parasites)
- infectious agents of plants (bacteria, viruses, viroids, and fungi)
- recombinant DNA
- cell lines
- microbial toxins

For research projects, Risk Group #1 materials can be used in a regular laboratory, where Risk Group #2 materials must be confined to the Level II Biohazard Laboratory.

For teaching purposes, only Risk Group #1 materials can be used for undergraduate courses. Risk Group #2 materials can be used for Graduate courses in the Level II laboratory.

No Risk Group #3 or # 4 can be used at NSAC.

## **6. Certification Procedure**

Prior to the release of research funds, PI wishing to use biohazards at NSAC must apply to the IBO for Certification.

This procedure includes:

- submission of the research proposal to the IBO, outlining appropriate protocols;
- consultation with the IBO to provide additional information as needed;
- completion of the forms for Public Health Agency of Canada's Laboratory Biosafety Guidelines and the CFIA Containment Standards for Veterinary Facilities as necessary;
- provide proof of biohazard training for self and all members of research team, and
- proof of NSAC Lab Access Certification.

For teaching purposes, a similar process must occur by the FM before the instruction occurs, including:

- submission of the teaching proposal to the IBO, outlining appropriate protocols;
- completion of the forms for Public Health Agency of Canada's Laboratory Biosafety Guidelines and the CFIA Containment Standards for Veterinary Facilities, as necessary;

- provide proof of biohazard training for self, and
- proof of NSAC Lab Access Certification.

## **7. Approval in Principle**

If a research project is multi-year or involves a number of experiments, not all of which involve Biohazards, then Approval in Principle may be applied for in order to release research funds.

The Approval in Principal process is the same as outlined above. The IBO will issue a “pending” Biohazard Certificate which can be activated in consultation with the IBO for the next two years. A delay of longer than two years may require renewal of the biohazard application.

## **8. Certification Renewal**

The process outlined above must occur for each research or teaching project undertaken by every PI or FM that involves the use of a Biohazard.

Research projects longer than two years in duration will require a renewal of the Biohazard Certification for continuation of the biohazard work.

## **9. Certification Amendments**

An application for amendments must be submitted to the IBO if, during the course of a research or teaching program, changes occur to the research/teaching protocol that effect the biohazard usage. These include changes to any of the following:

- type of biohazard used
- experimental protocols or procedures
- signing authority on research account
- list of authorized workers for the project

The IBO will review the requested amendments and notify the applicant of his/her decision. If significant changes are proposed, the IBO is authorized to request a full renewal application.

## **10. Certification suspensions**

### **10.1 Leave of Absence**

If the Principal Investigator (or Faculty Member) is on an extended leave or sabbatical and is not able to meet his/her responsibilities in accordance

with this policy, a responsible delegate must be appointed or the biohazard certification for that work will be suspended.

#### 10.2 Non-Compliance

The IBO has the authority to suspend any biohazard certification if, during an inspection, significant issues of non-compliance to the Biosafety Plan are discovered. If these concerns are not addressed in the time-frame specified by the IBO, the biohazard certification can be revoked.

### **11. Certification Cancellations**

All biohazard certifications are deemed cancelled when the specified research or teaching program is completed. The IBO and LM must be notified 14 days before the completion of the project in order to ensure a plan for removal of the project's biohazard(s).

### **12. Procurement of Biohazardous Materials**

PI/FM are only authorized to purchase the biohazards described on their Biohazard Certification.

All procurement of biohazards must be in consultation with the IBO. This includes both purchasing and external transfers from other institutions or research collaborators. The IBO is responsible for completion of specific forms for purchasing.

No materials in Risk Groups #3 or #4 may be purchased at NSAC.

### **13. Material Transfer Security**

Material transfers require authorization through the IBO, Health Canada and or CFIA.

#### 13.1 External Transfers

External transfers consist of sending or receiving a biohazard between NSAC and an external, authorized entity.

- No external transfer of biohazards will occur at NSAC without permission of the IBO. The IBO can withhold approval for external transfers.
- All federal regulations must be followed and the PI/FM interested in doing an external transfer must comply with all applicable federal authorities before consulting with the IBO.

### 13.2 Shipping and Receiving

NSAC complies with all applicable transportation, shipping, packaging, and export laws related to biohazards.

- All shipments of biohazards must be received by the IBO, the LM, or an authorized PI. Both the IBO and LM must have current Transport of Dangerous Goods Certification.
- Biohazards are to be moved to the Biosafety Lab immediately after receipt, in their original shipping containers, which can only be opened within the Level II laboratory.

### 13.3 Internal Transfers

Internal biohazard transfers are when scientists and technicians exchange materials under study or add/remove biohazards from the inventory through internal shipping and receiving processes.

Any movement of biohazard material into or out of the Biosafety Laboratory must be coordinated by a PI/FM and be preauthorized by the IBO or LM.

## **14. Inspections**

The IBO and LM are authorized to conduct formal inspections of any laboratory area used for work with biohazards. As well, audits of research and teaching programs may be performed.

Notice of non-compliance must be issued by the IBO in writing within five working days. A written response to a non-compliance report must indicate a plan of action to rectify the compliance issues and must be completed by the PI or FM within 10 working days.

The IBO has the authority to approve and oversee the compliance plan, or request full renewal application.