

University of Prince Edward Island	Policy No. admordgn10007	Revision No: 2
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1. Purpose

The University of Prince Edward Island is committed to incorporating health and safety practices governing all personnel working with biohazardous materials at UPEI, and thereby protecting the safety of University faculty, staff, and students, the public at large, animals and the environment. The University will comply with the guidelines of Health Canada, the Canadian Food Inspection Agency, Fisheries and Oceans Canada's National Code on Introductions and Transfers of Aquatic Organisms, Human Pathogens and Toxins Act, as well as all applicable federal and provincial regulations that govern biohazardous material management.

In order to meet these commitments, the University has appointed an Institutional Biosafety Committee (IBC) which, in conjunction with the UPEI Biosafety Officer, will administer the Biosafety Program at UPEI and ensure adherence to this policy.

2. Scope

This policy applies to all UPEI faculty, staff, students, contractors, and visitors involved in the use of biohazardous materials on the UPEI campus or other officially affiliated institutions.

3. Responsibilities

The Vice-President, Research and Graduate Studies has overall responsibility for this policy, its implementation, and review.

4. Policy

4.1 Definitions:

- 4.1.1 **Authorized Personnel:** A person who has completed the required biosafety training and is named in the approved Biosafety Permit. Authorized personnel can be faculty, staff, contract personnel, graduate students, undergraduate students, or authorized visitors.
- 4.1.2 **Biosafety:** Containment principles, technologies, and practices that are implemented to prevent unintentional exposure to infectious material and toxins, or their accidental release.
- 4.1.3 **Biosafety Officer (BSO):** The designated individual responsible for overseeing the university's biosafety and biosecurity practices.

- 4.1.4 **Biohazardous Material (BHM):** Any biological materials which are potentially harmful to humans, animals, plants and/or the environment. These include, but are not limited to, any organism (bacteria, mycoplasma, viruses, metazoan and protozoan parasites, fungi, algae, prions, human and animal blood, cells, body fluids and tissues) or their toxic metabolites believed to be potentially harmful to humans, animals, or plants. Certain types of nucleic acids, such as DNA derived from pathogenic organisms and human oncogenes, and recombinant DNA are also considered to be biohazardous materials. In addition, this may include genetically engineered organisms that have the potential to express biotoxins or pathogenic states in genes that are associated with harm to humans, animals, plants and/or the environment. Any cases where it is uncertain whether the material is a biohazard should be referred to the BSO, or one of the members of the IBC.
- 4.1.5 **Containment Level:** The minimum physical containment and operational practices required for handling biohazardous materials safely in lab and animal work environments.
- 4.1.6 **Decommissioning:** The formal process through which an existing laboratory space is decontaminated and any hazardous material (such as sharps and radioactive, chemical, and/or biological materials) removed prior to vacating the laboratory to assure the safety of the space for further cleaning, renovation or future occupants. This process could also apply to large pieces of equipment.
- 4.1.7 **Principal Investigator (PI):** A PI is an individual responsible and accountable for conducting the proposed research. The PI assumes full responsibility for the adherence to UPEI policies and procedures and the integrity of research data and results. The PI will normally hold a faculty appointment, or be a person who is otherwise approved by the IBC to hold a Biosafety Permit.
- 4.1.8 **Risk Groups:** Biohazardous materials are classified on the basis of their particular characteristics such as pathogenicity, infectious dose, mode of transmission, host range, availability of effective preventative measures and the availability of effective treatment. Risk Group 1 presents the lowest risk and Risk Group 4 presents the highest risk.
- 4.1.9 **Recombinant DNA:** Genetically engineered DNA prepared by transplanting or splicing genes from one species into the cells of a host organism of a different species.
- 4.1.10 **Supervisor:** A person who oversees or directs the work of employees and students by virtue of their job function.

4.2 Policy Statement

- 4.2.1 The University of Prince Edward Island requires that all PIs assume the primary administrative responsibility for the proper acquisition, the storage of inventory, and the use, transfer and disposal of BHM in their activities. In addition, all individuals working with these materials must adhere to the same procedures and rules.
- 4.2.2 No research or teaching involving BHM, including human blood, may be undertaken, until a Biosafety Permit has been obtained by the PI. It is the authority of the Vice-President, Research and Graduate Studies, through the IBC and BSO, to review and monitor all activities involving BHM for the protection of faculty, staff, students, the public at large, animals, and the environment.
- 4.2.3 All activities require compliance as per the following regulatory standards:
- Human Pathogens and Toxins Act (HPTA);
 - Canadian Biosafety Standards and Guidelines (CBSG);
 - CFIA Containment Standards for Facilities Handling Aquatic Animal Pathogens;
 - Containment Standards For Facilities Handling Plant Pests (1st edition, 2007);
 - and
 - UPEI Policies and Procedures.

4.3 Duties and Responsibilities

- 4.3.1 Research and Graduate Studies - The Office of Research Services is the main administrative unit of the Office of the Vice-President, Research and Graduate Studies. Research Services ensures that all researchers have proper biosafety approval prior to releasing the funding for grants and/or contracts. The Vice-President, Research and Graduate Studies will serve as the license holder for UPEI under the HPTA. The Research Compliance Coordinator reports directly to the Vice-President, Research and Graduate Studies. The Coordinator is the primary point of contact for researchers during the IBC application and review process, and provides administrative support to the IBC.
- 4.3.2 Biosafety Officer - The Biosafety Officer (BSO) oversees the daily operation of the biosafety program as outlined in this policy on behalf of the IBC. Duties and responsibilities include, but are not necessarily limited to the following:
- 4.3.2.1 To promote and monitor compliance with all requirements applicable to the University;
 - 4.3.2.2 To act as the main point of contact between the University, the PHAC and the CFIA, and other government agencies as necessary;

- 4.3.2.3 To notify the PHAC in the event of any situation as described in the HPTA (e.g. inadvertent possession of BHM, loss of BHM in transit);
 - 4.3.2.4 To deliver and/or coordinate and document biosafety and biosecurity training;
 - 4.3.2.5 To perform annual laboratory inspections for compliance and report these findings to the IBC and to the Vice-President, Research and Graduate Studies;
 - 4.3.2.6 To report any unresolved noncompliance issues to the IBC and to the Vice-President, Research and Graduate Studies;
 - 4.3.2.7 To assist in the development and maintenance of the UPEI Biosafety Guidelines and associated standard operating procedures;
 - 4.3.2.8 To oversee the movement of incoming and outgoing pathogens and toxins from the University;
 - 4.3.2.9 To assist in internal investigations of incidents and near misses involving biohazards such as inadvertent release or production of BHM, missing or stolen BHM, potential laboratory acquired illness, etc.;
 - 4.3.2.10 To assist with decommissioning procedures;
 - 4.3.2.11 To serve as a resource and/or as a member of the UPEI Animal Care Committee, Occupational Health and Safety Committee, and other relevant committees;
 - 4.3.2.12 To act as the Responsible Individual under the UPEI Biosecurity Plan;
 - 4.3.2.13 To verify the accuracy and completeness of the applications under the HPTA.
- 4.3.3 Institutional Biosafety Committee (IBC): The IBC, administered by the Vice-President, Research and Graduate Studies, has the authority to implement and enforce policies and procedures relating to the handling and use of BHM at UPEI. The mandate of the committee is to ensure containment of BHM, and to protect faculty, staff and students, the public at large, animals and the environment from their associated risks.
- 4.3.3.1 **Membership:** Members of the committee are appointed by the Vice-President, Research and Graduate Studies, and will appropriately represent the various departments at the University that are involved in work with BHM.
 - 4.3.3.2 **Members:**

- 4.3.3.2.1 A minimum of three UPEI faculty members with expertise in microbiology and other pertinent areas of biological research who work with BHM;
 - 4.3.3.2.2 One member of UPEI Staff (technician) working in a laboratory associated with biohazards;
 - 4.3.3.2.3 One graduate student working in a laboratory associated with biohazards;
 - 4.3.3.2.4 One NRC representative;
 - 4.3.3.2.5 One representative from Central Services;
 - 4.3.3.2.6 UPEI Biosafety Officer (ex officio);
 - 4.3.3.2.7 UPEI Health & Safety Advisor (ex officio);
 - 4.3.3.2.8 UPEI Veterinarian (ex officio);
 - 4.3.3.2.9 Vice-President, Research Services and Graduate Studies (ex officio).
- 4.3.3.3 The Committee may invite resource people from within or outside UPEI with the necessary expertise to attend meetings or provide input as required.
- 4.3.3.4 Chair: The Vice-President, Research and Graduate Studies will appoint a faculty member as Chair of the Committee.
- 4.3.3.5 Term: The Chair will serve for a three-year term. Faculty and staff committee members will serve for a three-year term, initially staggered to ensure continuity. The graduate student will serve for a two-year term. Membership in the committee may be renewed.
- 4.3.3.6 Quorum: A quorum will consist of four (4) members, plus the BSO or BSO's designate, and the Chair or Chair's designate. Other ex officio members can contribute to quorum and are considered as voting members.
- 4.3.3.7 Duties and Responsibilities: The duties and responsibilities of the IBC are to:
- 4.3.3.7.1 Review, amend and/or develop policies and procedures governing the acquisition, use, handling, disposal and storage of BHM;
 - 4.3.3.7.2 Review applications for the use of BHM, approving those protocols which, based on the local risk assessment, meet all university, legislative, and granting agency requirements as laid out in the current Canadian Biosafety Standards and Guidelines (CBSG), CFIA Containment Standards for Facilities Handling Aquatic Animal Pathogens, Human Pathogens and Toxins Act (HPTA),

Containment Standards For Facilities Handling Plant Pests (1st edition, 2007), Environment Canada and UPEI Policies and Procedures as appropriate;

- 4.3.3.7.3 Make decisions and resolutions normally by consensus. When a vote is required, the majority will prevail (50% plus 1), but minutes must indicate the minority position. The Chairperson has the deciding vote in the event of a tie;
- 4.3.3.7.4 Ensure that inspections of areas involving Risk Group 2 materials are conducted and review relevant reports of such inspections;
- 4.3.3.7.5 Ensure appropriate training is made available to all personnel and students who may be exposed to BHM at UPEI;
- 4.3.3.7.6 Ensure that a mechanism is in place to monitor adherence to policies and procedures;
- 4.3.3.7.7 Review reports of incidents and spills relating to BHM as appropriate, using the UPEI Incident Report and Investigation Form at: <http://www.upei.ca/hr/forms>
- 4.3.3.7.8 Investigate issues of reported non-compliance through the BSO and the Health & Safety Advisor, and ensure that corrective action is taken, as required;
- 4.3.3.7.9 Require that the complete inventory database of all BHM, including Risk Group 1 and 2 materials, be maintained by the individual PI;
- 4.3.3.7.10 Serve as a resource for faculty, staff and students, and encourage the dissemination of information. Support an atmosphere of biosafety and biosecurity awareness and a level of compliance that meets or exceeds all relevant standards;
- 4.3.3.7.11 Maintain complete records of meetings and activities, including but not limited to minutes of Committee meetings, biosafety applications, permits, and training certificates;
- 4.3.3.7.12 Normally meet monthly, excepting December;

- 4.3.3.7.13 Generate an annual written report to be presented to the Vice President, Research and Graduate Studies.
- 4.3.4 Department Chairs and Facility Directors (or Designate) - Chairs are expected to be knowledgeable about ongoing activities in their department/facility. The duties and responsibilities of Chairs and Directors are to:
- 4.3.4.1 Require compliance of PIs in their department/facility with UPEI's safety, health and environmental practices in accordance with this policy;
 - 4.3.4.2 Review all Biosafety Protocol Submission Forms as prepared by PIs in their department;
 - 4.3.4.3 Participate when concerns of non-compliance are identified within their department or facility, and address violations of this policy by taking corrective actions in cooperation with the UPEI IBC and other appropriate University officials.
- 4.3.5 Principal Investigator (PI) - Principal Investigators have the primary responsibility for compliance with the UPEI Biosafety Policy, including maintaining current Biosafety Permits for all lab activities. Therefore, the PI is responsible to ensure a safe workplace for himself/herself and all personnel and students listed on the application. The specific duties and responsibilities of the PI are detailed in *Appendix "A"*.
- 4.3.6 Authorized Personnel - All personnel are expected to take a proactive role in educating themselves about the agents, materials and equipment with which they are working. They will conduct their work in a safe and responsible manner so as to protect their own health and safety, as well as that of others, who could be affected by their acts or omissions. The duties and responsibilities of the authorized personnel are to:
- 4.3.6.1 Comply with all applicable rules and regulations set forth by regulatory agencies and this Policy as well as the valid Biosafety Permit;
 - 4.3.6.2 Complete appropriate training to safely and effectively perform required duties. This includes UPEI WHMIS and Biosafety Training, and the site specific training as provided by the PI;
 - 4.3.6.3 Cooperate with their supervisor, members of the IBC and all other persons exercising duties imposed by regulatory agencies;
 - 4.3.6.4 Notify their supervisor when they become aware of any unsafe act, condition, or incident, accident or spill; if the supervisor is unavailable, it is his/her responsibility to notify the Department Chair and BSO or the

Health & Safety Advisor, and submit a UPEI Incident Report and Investigation Form.

4.3.7 Authorized Maintenance and Cleaning Personnel - Authorized maintenance and cleaning personnel who are required to enter facilities where BHM are being used or disposed of, must be informed of the hazards that may be encountered. They must be trained in general workplace safety, and any other practices or procedures required for the safe execution of their work. Authorized maintenance personnel include those who perform routine cleaning and maintenance duties at UPEI. The duties and responsibilities of authorized maintenance and cleaning personnel are to:

- 4.3.7.1 Ensure they have received and understood appropriate safety training;
- 4.3.7.2 Notify the laboratory supervisor of their intent to enter the lab for non-routine maintenance and cleaning;
- 4.3.7.3 Carry out their work in a safe and responsible manner;
- 4.3.7.4 Notify their supervisor when they become aware of any unsafe act or condition.

4.4 Biosafety Permits

4.4.1 Materials Requiring a Biosafety Permit - The University requires that PIs obtain a Biosafety Permit for all projects where they want to use, work with, release or store BHM as listed below. No material designated as, or knowingly harbouring organisms or materials classified under Risk Groups 3 or 4 may be brought into the University for the purposes governed by this policy.

- 4.4.1.1 The use of the following materials in research or teaching will require a Biosafety Permit from the UPEI Biosafety Committee **IF** those materials fall under **ANY** of the following groups:
 - 4.4.1.1.1 Organisms or materials classified under Risk Group 1, and organisms, materials, or pathogens classified under Risk Group 2;
 - 4.4.1.1.2 Unfixed animal (or human) blood, tissues, cells and body fluids which may be biohazardous;
 - 4.4.1.1.3 Any teaching activity that involves the use of human blood;
 - 4.4.1.1.4 Non-indigenous entities or life forms (i.e. animals, plants, micro-organisms not known to be found in PEI);

4.4.1.1.5 Procedures involving large-scale (>10 L) production of micro-organisms;

4.4.1.1.6 Genetically modified micro-organisms, animals or plants.

If further clarification is required, the BSO must be contacted.

4.4.2 Exclusions for projects of very low risk: Research projects involving laboratory animals that are obtained from a laboratory supply company no longer require a Biosafety Permit provided that the following criteria regarding biohazards are met:

4.4.2.1 The animals are not transgenic;

4.4.2.2 The research does not include biohazardous organisms (bacteria, viruses, parasites, etc.) or toxins;

4.4.2.3 None of the collected material is used in cell culture, organotypic culture, etc.

4.4.3 Research projects involving laboratory fish obtained from a commercial fish hatchery or a pet store are exempt, given that the above criteria regarding biohazards are met.

4.4.4 Research projects involving healthy AVC teaching animals, under the care of the University veterinarian are exempt, given that the above criteria regarding biohazards are met.

4.4.5 Research projects that include the collection of tissue and/or blood or other body fluids for the purpose of measuring various parameters are exempt, given that the above criteria regarding biohazards are met.

4.4.6 The BSO should be contacted if there are any questions about the application of the UPEI Biosafety Policy.

4.5 Permit Application Procedure - To use biological materials, the "Biosafety Protocol Submission Form", which can be found at <http://research.upei.ca/forms> must be completed and submitted at least two months in advance of the commencement of research to the IBC. The application must include the required supporting documentation. If applicable, the appropriate Import Forms must be completed and submitted with the Biosafety Protocol Submission Form. Under exceptional circumstances an application may be considered for expedited review. The IBC will review the submission and approve the application if it fulfills applicable requirements of the CBSG and CFIA Containment Standards for Veterinary Facilities (1st edition, 1996), and UPEI Policies and Procedures. All information provided by the applicant will be treated as confidential. Approved applications permit the applicant to begin the proposed work.

4.5.1 Submitted protocols may be approved, conditionally approved, deferred, or rejected by the IBC. Conditional approval is given to protocols in which some detail is missing. Conditional approval may be changed to an approved status when the additional information requested from the PI by the IBC has been received.

4.5.2 Deferred status is given to protocols that require major revisions.

4.5.3 If revisions are requested, they should be submitted to Research Services as soon as possible. Minor revisions will be reviewed and responded to by the BSO and/or the Chair whereas major revisions will be considered at the next monthly IBC meeting.

4.5.4 No research or teaching involving BHM may be undertaken, until a Biosafety Permit has been obtained by the PI.

4.6 Permit Renewal Procedure - The IBC will be responsible for administering and initiating the permit renewal process. The PI will be responsible to respond to the notification of permit renewal within 30 days of receipt of the written notification with either a renewal or cancellation notification. The following items apply to the renewal process:

4.6.1 Permits issued for Risk Group 1 or Risk Group 2 biological materials are issued for **2 years** and may be renewed once prior to expiry;

4.6.2 The IBC may require a review of the facilities and procedures if deemed necessary at the time of renewal;

4.6.3 If the application includes changes at the time of renewal, then it will be considered as a Permit Amendment. Please see Section 4.7.

4.7 Permit Alterations

4.7.1 Permit Amendments - Any requests to amend a current Biosafety Permit must be submitted to the IBC on the appropriate form, which can be found at: <http://research.upei.ca/forms> prior to the change coming into effect. An amendment is required for any change in the following:

4.7.1.1 BHM to be employed (regardless of the source);

4.7.1.2 Risk Group level;

4.7.1.3 If a Permit Holder is going on sabbatical or extended leave (> 30 days), then a responsible designate must be appointed to oversee the activities under the permit;

4.7.1.4 Work area;

- 4.7.1.5 Equipment;
- 4.7.1.6 Experimental protocol or procedures;
- 4.7.1.7 Quantities (between regular and large volumes);
- 4.7.1.8 Authorized personnel.

The IBC will review the requested amendment and notify the Permit Holder of its' decision. Significant amendments may require a new application.

- 4.7.2 Permit Suspensions - The IBC has the authority to suspend the Biosafety Permit which will require the PI to cease all work involving the BHM, work area and authorized personnel. Typically a suspension is a result of non-compliance with recommendation of the BSO, IBC, and after thorough and fair investigation.
- 4.7.3 Permit Cancellations - Initiation for cancellation of a Permit may be made either by the PI or the IBC. The PI should submit notification to cancel a Permit to the IBC at least 30 days prior to the last day of work. Cancellation of a permit could include setting a schedule to decommission the work area in accordance with the procedures set forth in Section 4.7.4. This move will ensure that all hazards are removed from the facility prior to the cancellation of the Permit. The work must be completed prior to the Permit Holder's last day of employment.
- 4.7.4 Decommissioning of Biohazardous Work Areas - A work area must be decommissioned when the space is no longer required for work with Risk Group 2 agents, when space is re-allocated, and/or major renovations are to be undertaken. While this is a primary responsibility of the PI, the process is not completed until the work space is inspected by and approved by the BSO and one member of the IBC.

4.8 Procurement Procedures

- 4.8.1 Permit Holders are authorized to purchase or use only such BHM as are specified in their permit. **No material designated as Risk Groups 3 or 4 may be brought into the University for research or teaching purposes.**
- 4.8.2 It is the responsibility of the Permit Holder to obtain all documentation required for the acquisition of BHM. If these materials are to be obtained from outside Canada, an import permit from the Canadian Government may be required. The two government agencies involved with importation of pathogens, animals, and other materials (certain cell lines, biological toxins, and potentially infected animal material, for example) are the Public Health Agency of Canada (PHAC) and the Canadian Food Inspection Agency (CFIA). Terrestrial animal pathogens, including human pathogens, are handled by the PHAC while the CFIA issues import permits for aquatic animal pathogens. Please contact the BSO for information on the import process.

4.8.3 All transfers of infectious agents must be documented and signed by the BSO prior to the transfer.

4.8.4 The University of Prince Edward Island requires that all import permit applications be signed by the UPEI BSO.

4.9 Transport of Hazardous Materials

4.9.1 Whenever BHM are moved, it is important to take precautions to reduce hazards associated with a potential spill or leak. The precautions used should reflect the risks associated with the microbiological agent being transported.

4.9.2 All hazardous goods transported to and from the University, and between buildings on the UPEI campus, must comply with the Canadian Transportation of Dangerous Goods Act and Regulation (TDG). Personnel shipping or receiving dangerous goods must have a valid training certificate from their employer. Training for TDG certification is available to UPEI personnel through the Health and Safety Advisor.

4.9.3 If transporting biological materials within or between buildings on the UPEI campus, the transport must adhere to regulations outlined in *Appendix "B"*.

4.10 Audits and Inspections

4.10.1 Internal inspections are conducted in person, scheduled regularly, thoroughly documented, follow a documented procedure, and clearly specify the corrective actions to be implemented.

4.10.2 Internal audits are more periodic, focused, and can be carried out in person or be paper-based.

4.10.3 Monitoring for compliance is important for maintaining the accountability and integrity of the Biosafety Program. Permit Holders must review and monitor activities and work procedures in their laboratories, and ensure that authorized personnel practice self-assessment of compliance.

4.10.4 More formal monitoring is accomplished by a combination of both audits and inspections. In order to verify compliance, Regulatory Inspectors and/or members of the IBC are authorized at any reasonable time to enter and inspect a biohazardous work area.

4.10.5 Deficiencies shall be communicated through a written report to the Permit Holder and shall be rectified within the time frame as indicated by the report. Serious deficiencies shall be communicated to the PI's Department Chair. The IBC and the BSO may act as a resource to the PI when deficiencies are identified.

4.11 Non-Compliance

4.11.1 All UPEI personnel must comply with the terms and conditions of various licenses issued to the University, and also with the applicable Federal and Provincial Statutes pertaining to the use, handling, storage, and disposal of hazardous agents. **Non-compliance is the failure to adhere to this policy. All reports of non-compliance will be investigated by the BSO and the IBC.**

4.11.2 When, in the opinion of the BSO, the Health & Safety Advisor, or the Chair of the IBC (or the Chair's designate), there is unacceptable risk to employees, the public, animals, the environment or University Property, this person shall take appropriate action which may include the immediate suspension of research activity, prohibited entry to the laboratory, and/or removal of hazardous material from the premises. This policy is to be used in conjunction with the UPEI Health and Safety Policy, Section 3.10 'Policy Compliance and Enforcement' (www.upei.ca/policy).

4.11.3 Deficiencies shall be communicated by the IBC through a written report to the Permit Holder and the Chair of his/her Department, and deficiencies shall be rectified within the time frame as indicated by the report.

4.11.4 If work with BHM is conducted with no Biosafety Permit in place, the IBC has the authority to require the PI cease all work involving that BHM, and potentially other BHMs, until the matter has been investigated and resolved. This work cessation may involve the work area and authorized personnel.

4.12 Forms - The following forms can be found at: <http://www.upei.ca/research/forms>

4.12.1 Biosafety Protocol Submission Form

4.12.2 Exposure Control Plan

4.12.3 Biosafety Permit Amendment/Renewal form

4.12.4 Biosafety Resume for Authorized Personnel

4.12.5 Temporary Transfer of Biosafety Approval Due to Sabbatical or Extended Leave

4.13 Useful Website addresses

4.13.1 UPEI Health and Safety:
<http://www.upei.ca/research/health-and-safety>

4.13.2 Canadian Biosafety Standards and Guidelines (CBSG):
<http://www.phac-aspc.gc.ca/ols-bsl/lbg-ldmbl/index.html>

- 4.13.3 Containment Standard for Veterinary Aquatic Facilities:
<http://www.inspection.gc.ca/english/sci/bio/anima/convet/convete.shtml>
- 4.13.4 Index to PSDS compiled by Health Canada:
<http://www.hc-sc.gc.ca/pphb-dgsp/psds-ftss/index.html>
- 4.13.5 CFIA - Facility Certification for the Importation of Aquatic Pathogen(s)
<http://www.inspection.gc.ca/english/for/pdf/c5083apaze.pdf>
- 4.13.6 CFIA – Containment Standards For Facilities Handling Plant Pests:
<http://www.inspection.gc.ca/plants/plant-protection/biocontainment/containment-standards/eng/1412353866032/1412354048442>
- 4.13.7 Public Health Agency of Canada - Application for Permit to Import Terrestrial Pathogen(s)
<http://www.hc-sc.gc.ca/pphb-dgsp/ols-bsl/pathogen/hc4324.pdf>
- 4.13.8 Public Health Agency of Canada - Application for Permit to Import Human Pathogen(s) and Level 2 Checklist
<http://www.phac-aspc.gc.ca/lab-bio/permits/imp-permit/index-eng.php>
- 4.13.9 Occupational Health and Safety Act of PEI
<http://www.gov.pe.ca/psc/index.php?number=1033036&lang=E>
- 4.13.10 Fisheries and Oceans Canada – National Code on Introductions and Transfers of Aquatic Organisms
<http://www.dfo-mpo.gc.ca/science/enviro/ais-eae/code-eng.htm>
- 4.13.11 Canadian Council on Animal Care
<http://www.ccac.ca/>

5. Review

This policy is to be reviewed every three years. The Vice-President, Research and Graduate Studies is responsible for initiating that review.

Appendix A: Duties and Responsibilities of Principal Investigators

The duties and responsibilities of the Principal Investigator (PI) are to:

Remain current with this policy;

Ensure that a printed copy of this policy is available in the laboratory manual that is stored in the lab;

Obtain approval from the UPEI Institutional Biosafety Committee (IBC) for all work that uses biohazardous material (BHM) prior to acquisition of the material and/or the initiation of the work, by submitting the appropriate documentation by the posted submission deadline for review at the committee meeting at least two months prior to the expected start date;

Ensure any proposed changes (e.g. protocols, personnel, pathogens) to an active Biosafety Permit are approved in advance by the IBC;

Ensure compliance with the regulations as required by regulatory agencies and the University policies and procedures;

Ensure all other required certifications are in place;

Cooperate with members of the IBC, the BSO and the Health & Safety Advisor and all other persons exercising duties imposed by regulatory agencies;

Ensure that a printed copy of the Biosafety Permit is available and easily accessible in the laboratory where the BHM is used;

Ensure biohazard warning labels and appropriate signage are posted where required;

Ensure all personnel are authorized to handle the biohazardous material by attending the required training offered by the University and site specific laboratory training;

Develop a training needs assessment for his/her laboratory;

Provide competent supervision of laboratory personnel;

Communicate risks to the supervisor of Central Services as appropriate;

Ensure that all personnel under the supervision of other PIs working in shared laboratories are informed of all activities involving BHM in the laboratory, including the hazards, risks and symptoms of exposure therein;

Ensure all biological waste is handled according to University guidelines as per the UPEI Waste Disposal Protocol described at: <http://www.upei.ca/research/health-and-safety/lab-safety>;

Develop a controlled access SOP for the lab area which includes guidelines for visitors and other non-authorized personnel. Ensure that minors are not permitted in Level 2 laboratories without University permission and waivers;

Develop and maintain up-to-date Laboratory Biosafety binders containing all documentation appropriate to the laboratory containment level and specific to the work conducted in the lab;

Maintain an up-to-date list of persons with authorized access to all Containment Level 2 labs for which the PI is responsible and share this list with UPEI Security and the BSO;

Ensure all authorized personnel are familiar with the contents of the Laboratory Biosafety binders and the UPEI Biosafety Guidelines;

Ensure all safety devices, including Biosafety Cabinets, are certified as required, and all personal protective equipment is present and in good working order;

Ensure any equipment or area used within a biohazardous work zone that requires service, transfer or disposal is appropriately decontaminated, and labeled as such, prior to these actions taking place;

Report immediately all incidents, accidents, spills, or malfunction of biocontainment equipment, laboratory acquired infections, or biosecurity incidents in writing to the Health & Safety Advisor for action by the IBC as appropriate, using the University's Incident Report and Investigation Form. In such instances direct communication with the BSO must be made immediately;

Ensure precautionary medical practices for authorized personnel are in place as required;

Ensure that standard operating procedures are developed and implemented for work being done in his/her labs/areas;

Confirm annually to the UPEI BSO the security and complete inventory of **ALL** BHM being used or stored. Any theft or loss of biological materials must be reported to the BSO and the Health & Safety Advisor immediately upon discovery;

Notify the BSO in advance of your intention to bring a BHM (pathogen or toxin) onto UPEI, or to send BHM off campus, in advance of such activities;

Notify the BSO if the material does not arrive at the expected time;

Immediately notify the BSO if you become aware of the inadvertent possession of a human pathogen for which the University is not licensed;

Submit a new Biosafety Resume form every three years;

Ensure that each refrigerator, freezer, liquid nitrogen canister or other storage units with biohazardous material has a Biohazardous label and a UPEI reference number, and is visually numbered specifically for the area;

Include the name and contact information of a designate on the Biosafety protocol. The designate must assume responsibility for the work described by the protocol in the event that the PI is away for more than 30 days;

Ensure that the appropriate decommissioning procedures are undertaken when necessary after consultation with the BSO.

Appendix B: Transportation of Biohazardous Materials on the UPEI Campus

When transporting biohazardous materials (BHM) between laboratories, within a building, or between buildings on campus, it is important to take steps to reduce the risk associated with these transports. Arrangements should be made to limit the number of moves, reduce any possibility of breakage, and if breakage should occur, to contain the material. The precautions taken should reflect the risk associated with the properties of the BHM to be transported.

Between Laboratories Within A Building

- Place the biological material in a breakage-resistant primary container;
- Where possible, close the container securely with a screw cap rather than a snap cap;
- Place the primary container in a secondary breakage-resistant, leak-proof container;
- If the load is to be carried, ensure that the secondary container has secure handgrips;
- A laboratory cart must be used for the transport if the load:
 - contains materials with a Risk Group > 1,
 - is heavy, or
 - is to be transported between different floors within the building;
- Use a cart with a lip around the edge, and load the cart so the contents will not fall or spill if the cart should get bumped;
- Ensure the material is supervised continuously between origin and destination.

Between Buildings On Campus

When moving BHM from one building to another:

- Place the biological material in a breakage-resistant, leak-proof primary container;
- Cushion the primary container in absorbent material, and place it into a secondary leak-proof container that can withstand dropping or being crushed while being transported;
- Attach a label to the secondary leak-proof container including the name of the material and the Risk Group. As well, the outside of the package must be clearly labeled with recipient and sender information (name, phone number, room and building);
- Place the coolant (e.g. dry ice, crushed ice) inside an insulated tertiary vessel, if the material must stay refrigerated or frozen during transport;
- Place appropriate biohazard labels on the secondary leak-proof container, if the shipment contains materials with a Risk Group > 1;
- Ensure the material is supervised continuously between origin and destination.

Packaging or transportation of biohazardous goods between buildings on campus or off campus must comply with the Transportation of Dangerous Goods (TDG) regulations. See the following website: www.tc.gc.ca/eng/tdg/clear-tofc-211.htm

Appendix C: Biosecurity Plan

For a copy of the *UPEI Biosecurity Plan*, please contact the Office of the Vice-President, Research Services, or the Biosafety Officer.