

University of Guelph

Biohazard Permit**BIOSAFETY COMMITTEE**

INSTRUCTIONS FOR RISK GROUP 2 BIOHAZARD PERMIT APPLICATION FORM**General Instructions.**

Permits are issued to Principal Investigators (PI) and give authorization to conduct *research or teaching projects* and manage *diagnostic laboratories* utilizing biohazardous materials. Work may not commence until approval has been granted by the Biosafety Committee. Laboratories are inspected to fulfil the requirements of obtaining import permits; facility inspections do not constitute permission to use biohazardous materials.

Permits are issued by research program/ individual project to an individual PI. Projects/program with similar risk group/containment level and/or scope or intent of research can be consolidated as a single biohazard application.

Risk group 2 form is to be completed for work involving Risk Group 2 (RG2) materials and/or both Risk Group 1 (RG1) and RG2 materials. For e.g., if you have three RG1 & one RG2, complete this [RG2 application form](#).

Projects involving RG 1 materials **only** are to be registered using the [BSC-11 Risk Group 1 application](#). Applications for storage of biohazardous materials are to be registered using the [BSC-13 Storage application](#) form.

Supplementary Attachments: Naming convention


To accelerate the review process, follow these instructions to label each form in accordance to their name and function, e.g. as follows:

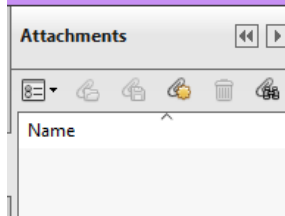
- Main application – “title of project (can be shortened to give gist of it)”
- BSC-1 - “Name of Organism”
- BSC -3 – “Name of material”
- BSC-4 – “Name of cell line”
- BSC-7 – “Name of animal (e.g. chicken/ mice)”
- PSDS – “Name of organism”
- Reference 1 – “topic of article”
- Lab Safety manual – “name of PI” (always review and updated manual, SOPs etc. in accordance to the current requirements and safe practices)



Form Limitations:

This form may have restricted functionality when accessing through mobile devices e.g. In **Adobe reader App**: Attach file tab and digital signature are not available

Form features:




- Many sections of the form use checkbox.
- For **Yes or No, Applicable, or Not Applicable** choices, only **one choice** at a time can be selected. To deselect a choice, simply click it again on the checkbox.
- Supplementary forms can be attached using  feature. Click grey button, a side bar attachment window will pop up:



- Select the icon  on extreme left and click **Add attachment** to select your files.
- To add a link, type the link into applicable field: link:
- Attachments are more preferred as compared to links.
- Save the form as you proceed to avoid losing filled information.
- To clear filled information on the form, use the  button to clear the form. All information will be cleared.
- This form is capable of multiple electronic signatures

Forms must be completed in full and submitted to the Biosafety Officer, Environmental Health and Safety Department. Incomplete forms will impede the review process and delay issuance of the biohazard permit.

How to submit:

- Use the  button on the right hand corner of page 1 OR Email completed form with all accompanying documentation to bsso@uoguelph.ca.
 - Use the   file button to attach your documents OR Submit **each document as an individual file**, if emailing – do not merge. Size restrictions may apply if you have many documents. PDF or Word or Excel are suitable file types. **Paper copies are not required.**
 - In the event of insufficient space in any section, please attach additional pages as necessary, labelled with the section number.
-

Please note that all required check boxes need to be completed. Hovering your mouse over text or check boxes provides further guidance related to that section.

1. DOES THIS APPLICATION REPLACE AN EXISTING BIOHAZARD PERMIT?

Select the check box No Yes, accordingly, if previous permit holder, provide previous permit # in the text box provided.

PROPOSED START AND COMPLETION DATES. Indicate the estimated dates of starting and completion. On-going projects such as diagnostic laboratories may indicate a period not to exceed four years.

2. Principal Investigator

The **Principal Investigator** must be a member of faculty or professional staff (with the approval of Dept. Head). Only one person can serve as Principal Investigator. Co-investigators are named under **Associates**.

For first time biohazard permit applicants, the PI's background regarding work with biological materials covered under the Biosafety program (microorganism, cell lines, recombinants, etc.) is to be included. Please indicate by checking any one of the boxes below. **First time permit applicants can attach their CV** Curriculum Vitae (CV) attached **OR** type the link to faculty webpage.

3. PROGRAM SUMMARY (Research, Teaching Course or Diagnostic Program). Using plain language, please provide an overview of the research, teaching course or diagnostic program.

Title. Indicate the title of the course, research project, or diagnostic program.

Objectives/Intent: Indicate the objective of conducting the proposed work using the biohazard.

Description of the proposed biohazard use: Provide an experimental summary with respect to the use and/or manipulation of the biohazards involved.

Example 1: Pathogens XXX XXX will be isolated from human fecal samples, cultured and their antibiotic sensitivity testing would be done by the Kirby-Bauer method. In addition, strain XXX.XXX will be used to propagate plasmids for cloning and mutagenesis purposes. The lysogenic strain will be used to express toxin genes for purification of the toxin proteins for a full characterization.


Example 2: These XXX drugs will be injected into human cell lines and patient derived leukemia cells. Later these cells will be injected subcutaneously into mice to study the carcinogenic effect. After 3 days, the mice would be sacrificed to isolate the tissue or bone marrow for the drug effect study.

4. PERSONNEL

A. Associate/ Designate must be a regular member of faculty, professional staff, or senior

technician. Students, post-doctoral fellows, casual workers, and unpaid persons, e.g., visiting faculty, may not be named as designates.

Emergency contact(s) must be available to attend to after-hours problems. There must be an adequate number of contacts to cover for vacation, illnesses, and other absences. Emergency contacts will be registered with Campus Community Police who are the first responders to campus incidents. All contact numbers will be kept confidential. If you haven't already submitted Emergency Contact information to your dept. then

complete an Emergency contact form and attach using  Attached button.

B. Investigative Staff. List all persons who will be working with the biohazardous materials.

Position of investigative staff can be selected easily using the drop down button.



List qualifications/experience whichever is most relevant.

Provide completion dates for all (Biosafety, WHMIS, Lab Safety and Workers Health and Safety training) in the format as follows: YY-MM-DD. **Note:** EHS Biosafety training must have been completed within the **past 3 years** i.e. Online Biosafety training after June 2017

5. **CERTIFICATIONS.**

For inoculation of biohazards in animals, use of radioisotopes along with biohazards, and/or use of human subjects as source of biological material, indicate relevant AUP/approval/permit numbers.

6. **BIOHAZARDOUS MATERIALS.**

Refer to Biosafety Program to have a better understanding of materials included within the Program.

Previous biohazard permit holders, must attach BSC- 9 Pathogen status update inventory form. To view a blank and/ or complete the BSC -9 form, select button. To attach a completed BSC – 9 form, use . Form can also be linked

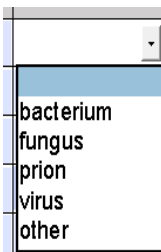
Link:

Risk Groups and Containment Levels. Risk groups can be obtained by referring to [ePATHogen](#) database for human and animal pathogen classification. Containment levels may be obtained from the Pathogen Safety data sheets obtained from Public Health Agency of Canada Office, and suppliers such as American Type Culture Collection.

6.1 Microorganisms. Microorganisms (include bacteria, fungi, viruses, and parasites (protozoa and helminths). **Note:** If not handling or working with microorganisms directly, select not applicable. For instance, handling human feces/manure/ industrial sewage but not isolating/ enriching/ growing microorganisms. Complete section 6.3 and list potential microorganism over there.

If working with microorganisms directly, specify genus and species.

Type: specify bacteria, virus, etc. Type can be selected by drop down menu as shown below:



Risk Group classification: specify all that apply. Refer to [ePATHogen](#) database for human and animal pathogen classification. *Proposed Containment Level:* indicate containment level.

If applicable, complete Form BSC-1 for each/multiple similar organism(s). Multiple species sharing the same properties can be listed on a single BSC- 1 form. Strains of the same species sharing the same properties should be grouped accordingly.

BSC -1 form (s) can be attached using **or** **Linked:**

6.2 Cell Cultures. *Cell type:* indicate species; *Primary or Established:* indicate whether it is a new cell line or an established one;

Selection can be done using the drop down menu

A screenshot of a web form's dropdown menu. The menu is open, showing two options: 'primary' and 'established'. The 'primary' option is currently selected and highlighted in blue.

Known Pathogens: if the cell line is known to be infected with pathogens, indicate which pathogens; *Risk Group:* specify the risk group; *Proposed Containment Level:* Specify the proposed containment level at which your work will be conducted. Refer to the Safety Data sheets for risk group classification and biosafety/containment levels required.

If applicable, complete Form BSC-2 for each material

BSC -2 form (s) can be attached using Attach BSC-2 form(s) or

Linked:

6.3 Human and Non-Human Primate Source Material. *Substance:* indicate the type of material (organ, blood, bone, etc); *Species:* indicate whether human or species and common name of non-human primates; *Source:* indicate from where the material was obtained; *Risk Group:* specify the risk group; *Proposed Containment Level:* indicate containment level.

If applicable, complete Form BSC-3 for each material

BSC -3 form (s) can be attached using Attach BSC-3 form (s) or

Linked:

6.4 Potentially Infectious Animal Source Material. *Substance:* indicate the type of material (organ, blood, bone, etc.); *Species:* indicate the species and common name; *Source:* indicate from where the material was obtained; *Risk Group:* specify the risk group; *Proposed Containment Level:* indicate containment level.

If applicable, complete Form BSC-4 for each material

BSC -4 form (s) can be attached using Attach BSC - 4 form(s) or

Linked:

6.5 Biological Toxins. *Toxin:* specify the name of the toxin; *Source:* indicate from where the material was obtained; *Risk Group:* specify the risk group; *Proposed Containment Level:* indicate containment level.

If applicable, complete Form BSC- 5 for each material

BSC - 5 form (s) can be attached using Attach BSC - 5 form(s) or Linked:

6.6 Recombinant DNA. *Host organism:* specify the name of the host; *Vector:* indicate the corresponding vector; *Gene(s):* indicate the source of the genes to be cloned or expressed; *Risk Group:* specify the risk group; *Proposed Containment Level:* indicate containment level.

If applicable, complete Form BSC-6 for each material

BSC -6 form (s) can be attached using Attach or Linked:

6.7 Environmental samples

Environmental samples include soil, plant or food, etc. on which microbiological analysis including culturing; isolation, testing and/or enrichment of samples will be done.

If applicable, complete BSC-1 Form for each or multiple similar RG2 microorganisms.

BSC -1 form (s) can be attached using Attach BSC -1 form (s) or Linked:

7. LOCATION OF PROJECT.

7.1 Campus sites.

Building. Select building location using the drop down menu. Buildings included in the drop-down menu are those included in the University’s Pathogens and Toxins License. Other University of Guelph locations are not currently approved for RG2 work. Please describe any other locations in the text field provided. License amendment application may be required and will require a further discussion with the BSO.

Building Name
▼
Agronomy, Ridgeton
Alexander Hall #37
Animal Science and
Bovary Lab Bldg #8
Bovary Plant Growth
Central Animal Faci
CFIFS #43
▼

Room Number. Indicate each room in which the biohazardous material is used or stored.

Room Type. Select the room type using the drop down menu

The image shows a form field labeled 'Room Type'. Below the label is a dropdown menu that is currently open, displaying a list of room types: 'lab only', 'small animal ro', 'large animal ro', 'lab and storage', 'storage only', and 'other'. The first option, 'lab only', is highlighted in blue.

Shared space. Indicate if the areas where biohazardous materials are used and/or stored are shared with other University personnel. Use drop down Menu to indicate your choice.

The image shows a form field labeled 'Shared Space'. Below the label is a dropdown menu that is currently open, displaying two options: 'yes' and 'no'. The first option, 'yes', is highlighted in blue.

If the area is under the control of another Principal Investigator (PI), then shared PI's signature is required.

Eyewash: Use the checkbox to indicate if eye washes are available.

Safety shower: Use the checkbox to indicate if safety showers are available.

If eyewashes are available then they must be flushed weekly and a person must be a designated to perform this task weekly. Responsible person should keep signed, dated records which must be displayed/maintained.

7.1.1 1 Security Measures

Select checkboxes to reflect security measures available to prevent unauthorized access

7.2. Off-campus sites.

Name of the institute or organization. List the name of university, hospital, clinic, etc

Room Type. Select the room type using the drop down menu

A screenshot of a web form field labeled "Room Type". The field is a dropdown menu with a grey header. The menu is open, showing a list of options: "lab only", "small animal ro", "large animal ro", "lab and storage", "storage only", and "other". The first option, "lab only", is highlighted in blue.

Shared space. Indicate if the areas where biohazardous materials are used and/or stored are shared with other University personnel. Use drop down Menu to indicate your choice.

A screenshot of a web form field labeled "Shared Space". The field is a dropdown menu with a grey header. The menu is open, showing two options: "yes" and "no". The first option, "yes", is highlighted in blue.

8. LOCATION OF BIOLOGICAL SAFETY CABINETS. Indicate location of the biological safety cabinets by room, class and type and date of last certification.

Building : Select building location using the drop down menu. Buildings included in the drop-down menu are those included in the University's Pathogens and Toxins License.

A screenshot of a web form field labeled "Building Name". The field is a dropdown menu with a grey header. The menu is open, showing a list of building names: "Agronomy, Ridgeto", "Alexander Hall #3", "Animal Science and", "Boverly Lab Bldg #8", "Boverly Plant Growt", "Central Animal Faci", and "CFIFS #43". The first option, "Agronomy, Ridgeto", is highlighted in blue.

Room Number. Indicate each room in which the biohazardous material is used or stored. Use a separate line for each room number.

Class and Type: Select from the drop down menu. *Refer to the manufacturer's leaflet/sticker on BSC or annual certification report to find the class and type. Type A are recirculation units and B are hard ducted.*

Class and Type
Class 2 Type A1
Class 2 Type A2
Class 2 Type A3
Class 2 Type B1
Class 2 Type B2

Date of last certification. Indicate the date of last certification as recorded on the certificate/sticker posted on the cabinet.

9. **STEAM STERILIZERS (AUTOCLAVES).** Please provide the information indicated for any autoclaves used for decontamination purposes. Autoclaves not used for waste decontamination do not need to be included. Indicate the location, last inspection date, responsible party, and biological indicator verification information.

Building: Select building location using the drop down menu. Buildings included in the drop-down menu are those included in the University’s Pathogens and Toxins License.

Building Name
Agronomy, Ridgeton
Alexander Hall #31
Animal Science and
Bovary Lab Bldg #8
Bovary Plant Growth
Central Animal Faci
CFIFS #43

Room Number. Indicate room number in which autoclave is placed.

Frequency of Biological Indicator Verification. Indicate how often the sterilizer is tested using spore strips/vials. If autoclave is used routinely, then **weekly verification** is required. If autoclave is used periodically, then verification **with each use** is required. Select your choice using the drop down menu.

Frequency of Biological Indicator Verification (spore test)
weekly verification
verification with each use

Cycle and verification records: Visit your autoclave room or your dept. personnel to seek this information. Verify with your person responsible if these records are maintained prior selecting the checkbox.

Person Responsible. Indicate the person responsible for sterilization verification, and record keeping for the sterilizer.

10. **EXPERIMENTAL PROCEDURES AND SAFETY MEASURES.** Indicate by selecting checkboxes how the biohazard will be handled safely. For each procedure, multiple safety choices are available. Choose all relevant, safety measures and/or specify the other methods used in the lab to prevent exposure and/or release of the material as applicable. **Hover your mouse over check boxes to know minimum, preferred, additional, alternate or optional safety measures.** Sufficient guidance or instructions are provided to make appropriate choices. Only identify the safety measures that **will be used in your lab to perform a task/procedure or use an equipment.** Selected safety measures will be verified during biosafety lab inspection.

For more information regarding -safety considerations and equipment used for biological work, refer to the Canadian Biosafety Handbook.

Standard Operating Procedures (SOPs) and/or workplace-specific safety manuals for each location applicable to this project. (Laboratory, animal facility, field site) using

Attach SOP/manual

11. **PERSONAL PROTECTIVE EQUIPMENT.** Select personal protective equipment, e.g., gloves, goggles, lab clothing, eye, respiratory protection and footwear that will be used while working with biohazards. For respiratory protection, please note that all persons using respiratory protection must be fit tested annually. To register, contact Occupational Hygienist for the same. Register at

12. **DECONTAMINATION AND WASTE MANAGEMENT PROTOCOLS.**

12.1 Select checkboxes for chemicals, dilution, potency and shelf life of chemicals used in your lab for decontamination of reusable or disposable contaminated materials. If your dilution, potency, or choice of chemicals differ than the ones listed, use text boxes to provide correct info. For various classes of chemical disinfectants, advantages, disadvantages and their relative susceptibility, please refer to disinfectant tables in the Biosafety manual.

12.2 **Waste management:** All contaminated or potentially contaminated materials are to be decontaminated prior to disposal, reuse or removal from service. For each type of material, select using check boxes, means of decontamination.

13. **EMERGENCY RESPONSE.** For biohazard project/lab specific emergency response plans can be outlined by completing and/or reviewing the corresponding templates.

Select checkbox and submit or attach only completed **Spill response template** using

Completed Spill Plan template is attached

Other templates must be reviewed but do not require submission or attachment with this application. All templates must be posted inside the lab.

14. **TRANSPORTATION/MOVEMENT**

14.1 Off site (Import/Export, Transfers, Purchase). Review instructions provided in the form and select the checkbox to agree to abide by the required procedures listed in the Quick reference Guide. This is a mandatory checkmark.

Additionally, persons transporting infectious or toxic materials (dangerous goods) require a Transportation of Dangerous Goods training certificate. Training can be arranged through Environmental Health and Safety. Its recommended that Dangerous Goods are transported by common carrier.

14.2 Movement on site. Describe type and how the material will be transported between room and/or buildings through public spaces. Include means of packaging, e.g., sealed plastic containers and means of transport, e.g., walking, using a cart, using a university vehicle.

15. **INVENTORY RECORDKEEPING AND CONTROL.** Select the checkbox to indicate the method of recordkeeping, e.g., electronic or hardcopy.
16. **MEDICAL SURVEILLANCE.** Select the checkbox to confirm that AOBs for all investigative staff and yourself have been completed. Please do not attach AOBs to the form. Send it via separate email to BSO@uoguelph.ca. Paper copies are not required. For more information, please see the [University's Medical Surveillance – Biosafety module](#).
17. **FINAL DISPOSITION OF MATERIAL UPON COMPLETION OF PROJECT.**
Select the checkboxes to indicate the intended final disposition of the biohazardous materials at the end of the project.
18. **DUAL USE RESEARCH CONCERN**
Select the checkboxes and answer questions accordingly to determine if there is a concern for Dual Use Research in this project. For more information on Dual Use refer to <https://www.uoguelph.ca/hr/hr-services-environmental-health-safety-programs/biosafety-forms>
19. **PRINCIPAL INVESTIGATOR'S CERTIFICATION.** Applications must be signed by all parties. Unsigned applications will not be processed. The PI may not also sign as the Chair/Head/Director. If the PI is also the Chair/Head/Director, this field may be signed by an associate/alternate Chair/Head/Director, corresponding ADR or AVP as appropriate.

Biohazard Permit

SUPPLEMENTAL FORMS

Forms BSC-1 to BSC-7: Biohazardous materials. Supplemental forms provide detailed information about the biohazardous materials to be used and the use of animals. Please attach any relevant information for the committee that is in support of the application.

Form BSC-8: Change Request form. Significant changes to the Biohazard Permit require approval by the committee before commencement of the changes.

Form BSC-9: Pathogen Status Update form. An Annual Status Report must be filed each year a project is active.

Form BSC-10: Laboratory Decommissioning Report. When closing down a project and/or vacating the premises, the decommissioning report must be completed.

Form BSC-11: Risk Group 1 *Only*. This must be completed when using Risk Group 1 organisms in order to comply with granting agency requirements.