

TITLE: BIOSAFETY

POLICY STATEMENT:

All individuals working with or manipulating biohazardous materials or notifiable biological substances (see definitions on page 2 and 3) that are in Risk Group 2 (RG2) or higher must adhere to the administrative procedures and rules for the acquisition, use, storage, transportation, and disposal of the above materials, as set forth in this Policy as well as the related Plan for Administrative Oversight of Pathogens and Toxins, the Biosafety Code of Practice, the Biosafety Plan & Permit Application and Biosafety Containment Level 2 Standard Operating Procedures. The Health, Safety and Wellness Centre has the authority to enforce the Policy and Regulatory Standards.

Consistent with the objectives of the Red Deer College's (RDC) Health and Safety Policy, the Biosafety Advisory Committee (BAC) is established as a sub-committee of the Health and Safety Committee. The BAC is authorized by the Health and Safety Committee to approve and advise on the safe use of biohazardous materials and notifiable biological substances, to make recommendations on policies, procedures, and guidelines related to biosafety, to issue Biosafety Permits and to ensure compliance with regulatory requirements.

PURPOSE:

RDC is committed to providing a safe working environment for all staff, students, contractors and visitors, to incorporating health and safety practices into all aspects of research and teaching, and to protecting the environment. This policy addresses provisions for the safe use of biohazardous materials and notifiable biological substances.

This policy provides guidelines for working with pathogens and toxins safely and includes the terms of reference for the BAC. The policy is revised as codes and regulations are altered in the field of biotechnology, biosafety and biosecurity.

SCOPE:

This policy applies to all staff, students and contractors, and any person who visits, rents or leases College facilities. In addition, the policy applies to any facility rented or leased by the College.

PRINCIPLES:

All Permit Holders, Supervisors, Principal Investigators, and Lab Instructors have the moral and legal responsibility to ensure the health and safety of employees and students working under their jurisdiction, in addition to protecting the environment. It is the duty of all Supervisors and Lab Instructors to comply with federal, provincial, and municipal regulations and standards. It is the duty of all authorized workers and authorized service personnel to conduct themselves in a safe and responsible manner by incorporating safety measures as an integral part of daily work and training.

DEFINITIONS:

Authorized Worker: a person who is authorized to work with permitted materials under the supervision of a Permit Holder.

Authorized Service Personnel: any person who is authorized to work in areas where biohazardous materials or notifiable substances are used or stored. These may be maintenance workers, equipment technicians, cleaning staff, security staff, etc.

Biohazardous materials: is any biological material, which is potentially harmful to humans, animals, plants and/or the environment. These include but are not limited to any organism (bacteria, protozoa fungi, algae, viruses; and human 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 or human oncogenes, are also considered to be biohazardous materials. Any cases where it is uncertain whether the material is a biohazard should be referred to the Biological Safety Officer.

Biological Safety Cabinet (BSC): an engineered safety control device that is used to provide an aseptic work area as well as contain biohazardous materials or notifiable biological substances in order to protect the health of the worker and the environment.

Biological Safety Officer (BSO): an individual appointed by the Chief Officer (VP Human Resources) in charge of Health and Safety in consultation with the Dean and Associate Dean responsible for Science. This individual must have the qualifications as set out in the federal regulations of the *Human Pathogens and Toxins Act* ([section 8 of the HPAT regulations](#)) and they will exercise the powers and shall carry out the functions set out in the regulations.

Biosafety Permit: a document presented to a Permit Holder by the Biosafety Advisory Committee when all regulatory requirements have been met for working with biohazardous materials or notifiable biological substances.

Biotechnology: the application of science and engineering in the direct or indirect use of living organisms or parts or products of living organisms in their natural or modified forms.

Containment Level 2: the primary exposure hazards associated with organisms requiring containment level 2 are through the ingestion, inoculation and mucous membrane route. Agents requiring containment level 2 facilities are not generally transmitted by airborne routes, but care must be taken to avoid the generation of aerosols (aerosols can settle on bench tops and become an ingestion hazard through contamination of the hands) or splashes. Primary containment devices such as BSCs and centrifuges with sealed rotors or safety cups are to be used as well as appropriate personal protective equipment. As well, environmental contamination must be minimized by the use of hand washing sinks and decontamination facilities (autoclaves).

[Human Pathogens and Toxins Act](#) (HPTA): the Federal Act with its purpose being to establish a safety and security regime to protect the health and safety of the public against the risks posed by human pathogens and toxins.

[Human Pathogens and Toxins Regulations](#) (HPTR): the regulations that set out how the HPTA is to be enacted and enforced.

Notifiable Biological Substances: genetically modified micro-organisms or genetic combinations which are not known to occur naturally.

Pathogen and Toxin Licence: a licence required in order to acquire, grow, or store human pathogens and toxins under the HPTR.

Permit Holder: a Principal Investigator, Faculty Member, or Laboratory Supervisor who is authorized to work with Biological Substances and/or Biohazardous Materials by the Biosafety Advisory Committee.

Risk Groups: as defined in the [Canadian Biosafety Standard 2nd Edition -2015](#) and in the HPTA.

Supervisor: a person who is authorized by the College to oversee or direct the work of employees and students. The authority to supervise employees and students is inherent in their job function. Although the College recognizes the ultimate responsibility of performing work in a safe manner lies with the individual employee, supervisors have additional responsibilities which arise from their role as persons responsible for providing training, competent supervision and managing the workplace under their authority.

GUIDELINES:

1. Role of the Health, Safety and Wellness Centre

The Health, Safety and Wellness Centre (HSWC) is committed to helping the College community conduct their activities in a safe manner. HSWC acts as a resource for faculty, staff, and students to meet their responsibilities pertaining to federal, provincial, and municipal legislation and safety standards. HSWC strives to reduce risks by ensuring training sessions are held and by conducting periodic workplace inspections, inventory audits, and consultations with the College community. HSWC has the authority to take any action deemed necessary and appropriate to meet all health, safety, and environmental regulatory requirements.

2. Plan for Administrative Oversight for Pathogens and Toxins

RDC maintains a current Plan for Administrative Oversight for Pathogens and Toxins as required in the HPTR. The Biological Safety Officer is responsible for providing guidance on the Plan elements and for initiating annual reviews to update the Plan. The VP Human Resources is responsible for approving the Plan and revisions to the Plan as this position is administratively responsible for all aspects of health and safety at RDC.

3. Biological Safety Officer's Responsibilities

The BSO is responsible for administering the Biosafety Program and acts as a resource to the College community in assisting Permit Holders to meet regulatory compliance and Biosafety Policies. The BSO also acts as the liaison between the Biosafety Advisory Committee and Permit Holders.

As prescribed in the HPTR, the BSO is responsible for (a) verifying the accuracy and completeness of HPTR licence and biosafety permit applications (b) serving as the point of contact between RDC and the Public Health Agency of Canada (PHAC) (c) promoting and monitoring compliance with the HPTA, the HPTR, conditions of the Pathogen and Toxins licence and applicable biosafety and biosecurity standards at RDC, (d) developing and maintaining the Biosafety Code of Practice, the Biosafety Plan & Permit Application and Biosafety Containment Level 2 Standard Operating Procedures and (e) assisting with internal investigations of reportable incidents. The BSO has the authority to access any records that are required to carry out these functions.

4. Inspections

Monitoring for compliance is necessary to maintain the accountability and integrity of the Biosafety Program, which also serves to demonstrate due diligence in the workplace.

This is accomplished through inspections. The BSO conducts inspections at least twice a year. In order to verify compliance, Regulatory Inspectors or members from the Health and Safety Committee are authorized at any reasonable time to enter and inspect a biohazardous work area(s). Deficiencies are rectified within the time frame indicated by the inspector or the member of the HS committee. The HSWC staff assist, where possible, to improve safety in the work area. However, when items of non-compliance are not rectified or non-compliance is ongoing, the matter is referred to the BAC and the Health and Safety Committee.

PROCEDURES:

The procedures that direct the Biosafety Program are found on the RDC portal (The Loop) under the Health and Wellness Channel. They include the Plan for Administrative Oversight for Pathogens and Toxins, the Biosafety Code of Practice, the Biosafety Plan & Permit Application and Biosafety Containment Level 2 Standard Operating Procedures.

OFFICER RESPONSIBLE: Vice President, Human Resources

RECOMMENDING AUTHORITY: Service Council

CONSULTATION FOR REVIEW: Health & Safety Committee, Biosafety Advisory Committee, Biological Safety Officer, Laboratory Instructors

POLICY REVIEW DATE: September 2021

EFFECTIVE DATE: September 28, 2016

REVISION HISTORY: September 1, 2009
October 21, 2011
September 28, 2016

RELATED POLICIES:

- [Health and Safety](#)
- [Hazardous Material Disposal Standard Practice](#)

CONNECTION TO BOARD POLICIES:

All RDC policies support relevant Board of Governors policies.