

QUEEN'S UNIVERSITY AT KINGSTON
UNIVERSITY BIOHAZARDS COMMITTEE

Preamble

In the early 1970's, techniques were developed by which genetic material (DNA) from virtually any species could be combined and caused to replicate in living systems. It was recognized that this work was of great theoretical and practical importance, but contained within it were certain potential hazards, not only to the investigator, but to the community at large. In several countries, scientists and concerned members of the community recognized the need to monitor and ensure that such work could proceed in an orderly fashion without creating a hazard to the investigator or to the environment. In several countries, regulations and directives have been developed for the guidance of individuals and institutions involved in this type of work and for the granting agencies responsible for their funding.

In 1977, the Medical Research Council first published Guidelines for the handling of recombinant DNA, and as well for the handling of animal viruses and animal cells in tissue culture. A revised version was issued in 1979 as well as a further supplement, entitled "The Biohazard Laboratory", in 1980. These regulations, which have subsequently been adopted by a number of granting agencies, including NSERC, require the Principal Investigator and the sponsoring institution to certify that the laboratories are appropriately designed and equipped for this type of work, the personnel are appropriately trained, and safety and emergency procedures are established and functional. In 1990, Health and Welfare Canada and the Medical Research Council jointly published revised guidelines "Laboratory Safety Guidelines". The new guidelines reduced containment levels from six to four, and expanded references to other human, animal and plant pathogens. The initial fears of possible risks arising from recombinant DNA and genetic manipulation were not justified. The 1990 Laboratory Biosafety Guidelines recommend that "each case needs individual assessment by the Biohazards Committee of each institution" as "the vast majority of this research involves only the remotest possibility of creating a hazard because the source of DNA being transferred, the vector and the host are all innocuous."

After several years of revising and updating, the 3rd edition of the Laboratory Biosafety Guidelines was finally issued in 2004 and transferred from the portfolio of the Medical Research Council (now Canadian Institutes for Health Research) to the Public Health Agency of Canada

(specifically the Office of Laboratory Safety). The 3rd edition was updated to reflect current biosafety and biocontainment principles and practices. The new guidelines were written using a performance-based approach that accommodates contemporary state-of-the-art technologies and ever-changing approaches to achieving containment as well as providing simple and sensible solutions. In addition to updating the previous sections, the 3rd edition has been reorganized and contains new sections concerning Health and Medical Surveillance, Management of Biological Safety and Biosecurity. The new section on management includes a description of the institution's responsibilities for the monitoring and oversight of biohazardous work. The University's responsibilities include assessment of specific safety problems and concerns, revisions to policies and protocols, risk assessment, resolution of disputes, and establishing procedures for record keeping and safe storage systems for all infectious material used at the University. At Queen's University, the Biohazards Committee and the Biological Safety Officer will act as this institution's agents in these matters. In addition the Biohazards Committee will oversee the monitoring, decontamination and disposal of biohazardous substances, advise in the development of Emergency response activities and participate in accident investigations, and education.

The University Biohazards Committee, on behalf of the University, will determine the nature of biohazardous work in progress or proposed, accredit the facilities on an ongoing basis, assist the design of appropriate laboratories and training of personnel, and serve as an educational resource to members of the University community. The University has adopted the Laboratory Biosafety Guidelines, whether or not the work is externally funded and whether or not the sponsoring agency requires such certification.

Members of the University community who are contemplating, or who are presently engaged in work which might fall within these Guidelines are required to contact the University Biological Safety Officer or Secretary of the Committee if they have not already done so.

1. Introduction

In July 1978, the Principal announced the formation of the University Biohazards Committee on the basis of a recommendation advanced by the previously existing Biohazards Committee of the Faculty of Medicine, through the Dean of the School of Graduate Studies and Research. The initial statement of the Structure and Terms of Reference of the University Biohazards Committee was published in the University Gazette for July 11, 1978.

The University Radiation Committee and the Joint Health and Safety Committee have clearly different activities than the University Biohazard Committee.

2. Membership of the University Biohazards Committee

The committee shall consist of eight ordinary members and six ex-officio members, all of whom shall have voting rights as follows:

a) Ex-Officio Members

- (i) Chair to be nominated by the Principal;
- (ii) The Director, Research Services or delegate;
- (iii) The Director, Physical Plant Services or delegate;
- (iv) The Director, Environmental Health and Safety;
- (v) The University Biological Safety Officer
- (vi) The Director, Animal Care Services.

b) Ordinary Members

The eight ordinary members shall include at least six faculty members, as well as one person not associated with Biohazards research, preferably from outside the University. They should have the following general attributes.

- (i) Four faculty members whose fields of expertise shall be such that these three areas of work are adequately covered:
 - 1) cell culture;
 - 2) recombinant DNA;
 - 3) microbiology;
 - 4) Nonhuman primates
- (ii) One faculty, without restriction on the field of expertise.
- (iii) One member of faculty from the Biosciences Complex.
- (iv) One person not associated with biohazards research, preferably from outside the University.
- (v) One member of Queen's University staff, working in a laboratory associated with Biohazards.

Note: The phrase "faculty member" means a member of the faculty of the University and

is not intended to be restricted to any particular Faculty within the University.

c) Quorum

A minimum of five members shall normally be considered a quorum.

d) Secretary

Administrative support will be supplied through Environmental Health and Safety.

3. Appointment

All members shall be appointed by the Principal on the advice/recommendation of the Vice-Principal (Research).

The Chair will be appointed to that position for a term to be recommended by the Principal. The other ex-officio members shall hold office for the duration of the tenure of their relevant appointments.

The eight ordinary members shall be appointed for three-year terms on a staggered basis, and shall be eligible for reappointment.

4. Reporting Channel

The Committee shall be classed as a "Principal's Committee" and shall make recommendations to the University through the Vice-Principal (Research), who will be expected to act in consultation with the Dean (Health Sciences).

5. Resources

A Budget shall be provided to cover support for the responsibilities set out in 6, below, within the jurisdiction of the Department of Environmental Health & Safety.

Access will be provided to a legal representative for the University who can review new or revised policies and procedures that are developed by the University Biohazards Committee.

6. Responsibilities and Functions

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In the course of making its recommendations to the University, the University Biohazards Committee shall be responsible for:

- a) Developing and maintaining University policies for handling biohazardous material, based on the "Laboratory Biosafety Guidelines" produced by the Public Health Agency of Canada and its Office of Laboratory Safety.
 - b) Serving on behalf of the University as the reviewing agency for all existing and planned work potentially involving biohazards, and acting as the certifying body concerning the Biohazard Risk Group and Containment Levels involved in the work and the adequacy of the procedures and facilities associated with the conduct of the work.
 - c) Making recommendations to the University through the Vice-Principal (Research), who will be expected to consult appropriately the Dean (Health Sciences), concerning the actions to be taken on specific aspects of biohazard matters as they arise;
 - d) Developing appropriate procedures for the handling of all kinds of emergency situations relating to biohazards;
 - e) Advising the University, its faculties, departments, and researchers of these policies and of the special requirements of Schedule 13 of the Tri-Council Memorandum of Understanding with the University relating to biohazardous research funded by the three federal granting agencies (CIHR (formerly MRC), NSERC, and SSHRC) and other granting and contracting agencies;
 - f) Providing at appropriate intervals to the University and to external agencies, as required, reports on:
 - (i) Situations and activities involving Containment Levels 1 and 2*
 - (ii) All Biohazard incidents and accidents that require reports on safety aspects;
 - (iii) Safety procedures and equipment used in various Levels of work, as a result of direct inspection by the Committee.
- *Containment levels 1 to 4 are discussed in detail in the Laboratory Biosafety Guidelines. Level 1 is the least dangerous. Note that currently there are no facilities to permit level 3 or 4 on Queen's University campuses.
- g) Acting as a resource body for the University and its staff to provide:
 - (i) Dissemination of up-to-date information regarding Biohazard Risk Group and Containment Levels, containment facilities, training procedures and other related

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matters as they arise.