



ANIMAL CARE AND USE GUIDELINES

Executive Summary

The University of Toronto is committed to the highest ethical standards of animal care and use of animals for the pursuit of knowledge in a diversity of disciplines. Animals are recognized as creatures of great intrinsic value, remarkable complexity and inherent dignity.

The use of animals in research has resulted in incalculable benefits for human and animal health, and has significantly contributed to the advancement of knowledge in the biological and health sciences. The University of Toronto is associated with many important achievements in health research. The best known are the discovery of insulin to treat diabetes and the identification of the gene that causes cystic fibrosis, but there are many others. These include many “firsts” – among them the world’s first electronic heart pacemaker, artificial pancreas, single-lung transplant and nerve transplant.

3 R’s

Animals are used in research only when necessary. Scientists employ non-animal research methods whenever possible. The University is committed to the “3 R” tenet; that is, **replacement** of the use of animals by alternative methodologies when possible, **reduction** of the number of animals used to the extent possible, and **refinement** of animal care and research procedures to protect and enhance animal health and welfare.

Consideration of the “3 R” tenet constitutes an integral component of the review of every animal use proposal by the University’s Animal Care Committees.

Animal Care Committees

All animal use for research, teaching or testing purposes at the University requires the prior approval of the appropriate Local Animal Care Committee (LACC). As required by provincial legislation (the *Animals for Research Act*), and the Canadian Council on Animal Care’s Guide to the Care and Use of Experimental Animals, the University Animal Care Committee (UACC) serves as the institutional ACC. The UACC operates under the authority of the Vice-President, Research and Innovation, and is responsible for oversight of all aspects of the University’s animal research operation at its 3 campuses.

The University has 5 LACCs which oversee the day-to-day operation of the individual research facilities for which they are responsible, and review/approve local facility Animal Use Protocol Forms.

The membership, duties and responsibilities of the LACCs and UACC are documented in separate Terms of Reference. These Terms of Reference are

reviewed by the UACC on a regular basis, ensuring compliance with the most current regulatory standards.

Ethical/Regulatory Standards

Animal procurement, care and use is regulated by the provisions of the *Animals for Research Act* and its Regulations, the CCAC's Guidelines, including ethical guidelines, and University of Toronto policies.

The *Animals for Research Act*, administered and enforced by the Ontario Ministry of Agriculture and Food and Rural Affairs (OMAFRA) is the primary legislation governing the use of animals for research, and the operation of research facilities in Ontario. This law sets standards for the annual registration (licensing) of the University's research facilities.

At the national level, the CCAC conducts site visits to the University, and carries out an assessment of all facilities. Facilities in compliance with the CCAC's standards receive a "Good Animal Practice" certificate.

The University has a robust post-approval monitoring program in place, and specially-trained staff members perform monitoring visits to ensure that animal-based research is being conducted in a manner that is congruent with what was approved by the LACC.

Physical Plant

Well planned, well designed, well-constructed and properly maintained facilities constitute an important component of good animal care and use.

All animal facilities meet relevant physical plant performance standards. The University assures that veterinary and management staff, the institutional animal care committee and facility users have input into facility planning, design and construction to ensure that new or remodelled facilities meet the animal care program's needs.

Animal Environment, Housing and Management

Proper housing and management of animal facilities are essential to animal well-being, to the quality of research data and teaching or testing programs in which animals are used, and to the health and safety of research and animal care personnel.

The provision of appropriate animal housing considers the animals' primary enclosures (cage, pen, aquatic unit, etc.), temperature, humidity, ventilation and lighting, and behavioural management, including any needs for social housing and/or activity and the application of enrichment strategies.

Adequate management of animal facilities includes appropriate physical, procedural and human resources to meet the needs of a diversity of facilities and species of animals used at the University.

Personnel Qualifications and Training

All personnel involved with the use of animals are trained in the principles of laboratory animal science and the ethical issues involved in animal use. The

University of Toronto strives through its training program to sustain an institutional culture of respect for animal life.

The University's animal user training program is mandatory for research staff identified in Animal Use Protocol Forms (including faculty, graduate students, research technicians/technologists, research assistants/associates, postdoctoral fellows and undergraduate students).

The University's animal user training program (primarily provided by the Division of Comparative Medicine), as well as undergraduate/graduate ethics and other courses, complies with the CCAC's recommended Syllabus for an Institutional Animal User Training Program (1999).

Personnel caring for animals also have appropriate training, and participate in continuing education activities that are relevant to their responsibilities.

Animal care technicians (registered with the Canadian Association for Laboratory Animal Science) earn continuing education (CE) credits each year. These CE credits may be acquired through attendance at conferences/symposia/courses, speaking engagements, submission of an educational article or poster related to laboratory animal science, reading of scientific papers, membership to associations/groups/committees etc.

Occupational Health and Safety

An occupational health and safety (OHS) program constitutes an integral part of an animal care and use program. An effective program relies on strong administrative support, and regular coordination and communication among several institutional functions: the research program, animal care and use program, the environmental health and safety program, occupational health services, and the University's administration.

Veterinary Care

Exemplary veterinary care is provided. Veterinary care encompasses all aspects of the procurement, care and use of research animals. The laboratory animal veterinarians' duties include preventive medicine, as well as health surveillance, diagnosis, treatment and control of disease, management of experiment-associated disease, disability or sequelae, assessment of animal well-being, zoonosis control, hazard containment, establishment of appropriate surgical and post-surgical care (including appropriate use of anaesthetics and analgesia), and the proper selection and conduct of euthanasia. Veterinary staff participates in protocol development, review and approval, facility design and creation of Standard Operating Procedures. Veterinary staff also ensure compliance with applicable federal, provincial and local policies, guidelines and legislation, oversees pilot studies, are actively engaged in design and delivery of the training program, and are available for consulting on experimental design, experimental surgery, selection of animal models, and species-specific biotechnology.

Veterinary staff have access to all animals for evaluation of their health and welfare. Veterinary staff follow contemporary standards of veterinary care as

defined by the CCAC's Guidelines and the Canadian Association for Laboratory Animal Medicine Standards of Veterinary Care.

Mechanisms are in place for direct and frequent communication to ensure that timely information is conveyed to the veterinary staff about problems associated with animal health and welfare.

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