

RESEARCHERS' GUIDE TO REGULATIONS: Animals in Teaching

All University of Toronto researchers, faculty and staff utilizing live animals in teaching courses are under the authority of a University Local Animal Care Committee (LACC). The LACC ensures that the regulations set forth by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Canadian Council on Animal Care (CCAC) are adhered to by all Principal Investigators (PIs), their staff members and students.

All teaching protocols involving the use of live animals must undergo pedagogical merit review and approval prior to the submission of an animal use protocol. The pedagogical merit review is conducted by a specialized University-wide committee that is tasked with determining whether the proposed use of animals in teaching is necessary to convey the learning outcomes or whether alternatives methods could be explored instead. Proposals for the use of animals in teaching should be submitted early enough to allow the committee to review the proposal in advance of the course start date, as any changes or modifications requested by the committee must be addressed prior to submitting an Animal Use Protocol (AUP) for ethics approval by the LACC.

General Guidelines

According to the CCAC, "the use of animals in...teaching is acceptable ONLY if it promises to contribute to understanding of fundamental biological principles, or to the development of knowledge that can reasonably be expected to benefit humans or animals".

Animals should be used only if the PI's best efforts to find an alternative have failed. A continuing sharing of knowledge, review of the literature, and adherence to the Russell-Burch "3R" tenet of "Replacement, Reduction and Refinement" are also requisites. Those using animals must employ the most humane methods on the smallest number of appropriate animals required to obtain valid results.

When developing teaching protocols, the PI must attempt to determine if the procedures can be videotaped or recorded in some other way so that future students can learn through audio-visual or other alternative methods, rather than continuing to use live animals for each course.

General Responsibilities

- ❖ Investigators are responsible for their conduct and safety as well as that of all personnel and students under their supervision. They are responsible for ensuring that the hazards and risks involved with animal use are identified and that proper training is provided for everyone involved.
- ❖ Protocols must be designed to ensure the least amount of stress and disturbance to the animals as well as minimizing the chances of animal injury, morbidity and mortality. Animals may experience a greater degree of pain and/or distress when subjected to experimental procedures by inexperienced individuals who do not possess the appropriate knowledge, skills and competency.
- ❖ Investigators are responsible for ensuring that they have an approved AUP in place and that all staff (e.g. faculty, teaching assistants (TAs), graduate students) are listed on the protocol and fully trained prior to beginning any teaching procedures involving animals.
- ❖ Investigators must be aware of what procedures are approved on their AUP and ensure that all staff and students are also aware.
- ❖ When transporting animals, personnel must ensure that the care, caging and mode of transportation is suitable for the species and that the method chosen minimizes the stress and avoids injury of the animals. Any applicable University Standard Operating Procedures (SOPs) regarding animal transport must be followed.

The Essentials of Regulatory Compliance

Education and training: U of T faculty and any staff working with live animals must complete mandatory training through U of T before commencing animal-based work. Each person must be competent in the procedures they are required to

perform. Surgical procedures should only be performed by a veterinarian, under a veterinarian's supervision, or by a person whose competency has been approved by the veterinarian. All animals must be properly monitored while under anesthetic and appropriate records must be kept each time anesthesia is performed. Students should be provided with a modified ethics and animal use session as well as handling and procedural training before the course work with animals begins. Fully trained staff (PI, faculty, TA) must be available at all times to supervise the students when working with live animals.

Authorization or approval: Before a project begins, approval is needed from the Pedagogical Merit Review Committee, LACC and any other relevant committees or offices (e.g. Biosafety, Radiation Protection Authority, Health Canada). Grant funds cannot be released until approval is granted.

Expiration dates and resubmissions: Local Animal Care Committee approvals are valid for one year. Protocols must be resubmitted for review on an annual basis and can be renewed up to four times before full re-submission is required.

Approvals for modifications: Any changes to an approved protocol must be reviewed and approved by the Local Animal Care Committee before being implemented.

Post-Approval Review: Ongoing compliance support for active protocols is provided by scheduled Quality Assurance visits and active collaboration with veterinary, animal care, and administrative staff.

Compliance Essentials

Treat animals with respect. Working with live animals is a privilege, not a right. Laboratory animals are living creatures that deserve to be treated with care and compassion.

Perform only those procedures approved in the AUP. Ensure that everyone on the protocol is familiar with all its procedures and that they understand that protocols must be followed to the letter. All procedures performed on an animal should be recorded on a document (e.g. cage card) that is accessible by the veterinary staff.

Submit amendments for any changes to the AUP. If a change or addition to a protocol is required, an amendment must be submitted to the LACC for approval.

Follow institutional Standard Operating Procedures (SOPs) and Guidelines. SOPs and guidelines incorporate current best practices for animal welfare as well as institutional and facility specific information.

Wear Personal Protective Equipment (PPE). Know what protective equipment is required for the specific procedure and workspace. Items such as gloves, masks, gowns, and lab coats protect both users and the animal from hazards. This is especially important when teaching students who may not be aware of all hazards associated with the animals.

Consult with the veterinarian for any health concerns with teaching animals. If any health concerns arise, the veterinarian must be consulted and a sick case opened for tracking and treatment purposes.

For recovery procedures: Any observations or procedures must be properly documented. All procedures performed on an animal should be recorded on a document (e.g. cage card) that is accessible by the veterinary staff. Monitor post-procedure animals according to the schedule outlined in the approved protocol. Communicate with veterinary staff regarding the health status of post-procedural animals.

Develop and follow a reliable system for endpoint monitoring. Ensure that everyone working with the animals can recognize signs of animal distress and/or compromised health that would necessitate intervention or euthanasia.

Maintain a valid exemption for controlled substances. The use or possession of controlled substances, including many anesthetics and analgesics, requires an annual exemption from Health Canada.

Store controlled substances in secured locations. Always keep controlled substances double-locked. Keep accurate and current records of use.

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