LAURENTIAN UNIVERSITY ANIMAL CARE COMMITTEE

Procedures for the Completion of the Laboratory Animal Use Protocol

WE ADVISE YOU TO PRINT THIS INFORMATION MATERIAL TO HAVE ON HAND FOR REFERENCE AS YOU PREPARE THE PROTOCOL

Under the Ontario Animals for Research Act (Revised Statutes of Ontario, 1980, Chapter 22 as amended by 1989, Chapter 72, s6 and Regulations 16, 17, 18, 19. Revised Regulations of Ontario, 1980, March 1990), and the Canadian Council on Animal Care Guidelines for the Care and Use of Experimental Animals, it is a requirement that all researchers who will be conducting research, testing or teaching projects at Laurentian University involving the use of vertebrate and cephalopod animals must obtain the approval of the University Animal Care Committee (A.C.C.) before commencing the project or before ordering animals.

1. A Laurentian University Animal Use Protocol Form (available electronically – (ROMEO- ROMEO is the software used by the university for submission of animal use protocols)) from the Laurentian University Web Site must be completed and submitted by the Principal Investigator. Handwritten protocols will not be accepted.
2. Please complete all sections of the protocol. Incomplete protocols will not be accepted.
3. It is strongly recommended that researchers have their protocol reviewed by the University Veterinarian prior to the ACC submission so that minor issues could be addressed thus reducing possible time delays.
4. The protocol should then be forwarded to the Office of Research for full committee approval and signature.
5. Print a copy of your form, then submit electronically through ROMEO.
    a. To submit electronically, you will be asked to enter validation information. Use the Windows option when prompted. Follow all instructions on the screen. Your form will be sent electronically to the Office of Research.
6. Protocols are for a one-year period. After one year, a renewal is required (available on ROMEO). New AUP's are required after three renewals. Please note that progress reports are required every 6 months for post approval monitoring (see post approval monitoring forms on ROMEO).
7. Peer review is needed for all animal research. We recommend that the protocol is received one (1) month prior to anticipate approval if it has already been peer

reviewed. If the protocol has not yet been peer reviewed, we recommend that the protocol is received two (2) months prior to anticipated approval. (See Peer Review Forms on the University website). Peer review for scientific merit is explained in peer review documents. If the protocol involves teaching /training, the AUP will require pedagogical review (the documents on pedagogical review needs to be followed)

8. If a proposed project involves more than one (1) animal species, a separate protocol for each species should be completed with the exception of invertebrate species. Contact the Chairperson of the ACC or the University veterinarian prior to the preparation/submission of a protocol involving invertebrates.
9. There must be an approved protocol for all procedures involving the use of vertebrate and invertebrate (in categories B through E) [Note: this refers to the CCAC Categories of Invasiveness, see below] animals being performed by faculty members, graduate and undergraduate students, research associates, and all other personnel regardless of source of funding.
10. If breeding is anticipated, then you must fill out addendum 5. If breeding of transgenic animals is anticipated, you will also need to refer to the transgenic guidelines.
11. Protocols for non-faculty members must be submitted under the name of the senior faculty member supervising the project.
12. Any animal research or teaching project administered by the University which is to be conducted in the field or in a facility not owned by Laurentian University must be covered by an approved protocol.
13. Biosafety hazards must be approved by the Biosafety Committee and must be reported on the protocol.
14. Radiation hazards must be approved by the Radiation Safety Officer and must be reported on the protocol.
15. Chemical and carcinogen hazards must be reported on the protocol.
16. Modifications of protocol
    a. Any MAJOR modification to an approved project in progress (e.g. a change of species used, insertion of biohazard, radioisotope or chemical hazard, the inclusion of new procedures involving pain, surgery or anaesthetization, or a change in Principal Investigator or course director) must be described in a University Animal Use Protocol Form (available electronically on ROMEO. This protocol must be submitted and approved in the manner described above.
    b. Any MINOR modification to an approved project in progress (e.g. minor changes in number of animals to be used, location of experiment or changes in personnel) can be submitted by the Principal Investigator in writing on the modification form on ROMEO.
17. In the case of a research or teaching project administered by the University which is to take place at a hospital or related institution, approval for use of vertebrate and invertebrate animals must first be obtained through the Animal Care Committee connected with the hospital or related institution.

18. Use of transgenic animals will necessitate that the researcher fills out the appropriate AUP as well as the additional information required under “use of transgenic animal guidelines”.

CANADIAN COUNCIL ON ANIMAL CARE'S CATEGORIES OF INVASIVENESS (FEBRUARY 1991)

A. Experiments on most invertebrates or on live isolates.

POSSIBLE EXAMPLES: the use of tissue culture and tissues obtained at necropsy or from the slaughterhouse; the use of eggs, protozoa or other single-celled organisms; experiments involving containment, incision or other invasive procedures on metazoa.

B. Experiments which cause little or no discomfort or stress.

POSSIBLE EXAMPLES: domestic flocks or herds being maintained in simulated or actual commercial production management systems; the short-term and skillful restraint of animals for purposes of observation or physical examination; blood sampling; injection of material in amounts that will not cause adverse reactions by the following routes: intravenous, subcutaneous, intramuscular, intraperitoneal, or oral, but not intrathoracic or intracardiac (Category C); acute non-survival studies in which the animals are completely anesthetized and do not regain consciousness, such as anesthetic overdose, or decapitation preceded by sedation or light anesthesia; short periods of food and/or water deprivation equivalent to periods of abstinence in nature.

C. Experiments which cause minor stress or pain or short duration.

POSSIBLE EXAMPLES: cannulation or catheterization of blood vessels or body cavities under anesthesia; minor surgical procedures under anesthesia, such as biopsies, laparoscopy, short periods of restraint beyond that for simple observation or examination, but consistent with minimal distress; short periods of food and/or water deprivation which exceed periods of abstinence in nature; behavioral experiments on conscious animals that involve short-term stressful restraint; exposure to non-lethal levels of drugs or chemicals. Such procedures should not cause significant changes in the animal's appearance, in physiological parameters such as respiratory or cardiac rate, or fecal or urinary output, or in social responses.

NOTE: During or after Category C studies, animals must not show self-mutilation, anorexia, dehydration, hyperactivity, increased recumbency or dormancy, increased vocalization, aggressive-defensive behavior or demonstrate social withdrawal and self-isolation.

D. Experiments which cause moderate to severe distress or discomfort

POSSIBLE EXAMPLES: major surgical procedures conducted under general anesthesia, with subsequent recovery, prolonged (several hours or more) periods of physical

restraint; induction of behavioral stresses such as maternal deprivation, aggression, predator-prey interactions; procedures which cause severe, persistent or irreversible disruption of sensorimotor organization; the use of Freund's complete adjuvant (see CCAC Guidelines on Acceptable Immunological Procedures).

Other examples include induction of anatomical and physiological abnormalities that will result in pain or distress; the exposure of an animal to noxious stimuli from which escape is impossible; the production of radiation sickness; exposure to drugs or chemicals at levels that impair physiological systems.

NOTE: Procedures used in Category D studies should not cause prolonged or severe clinical distress as may be exhibited by a wide range of clinical signs, such as marked abnormalities in behavioral patterns or attitudes, the absence of grooming, dehydration, abnormal vocalization, prolonged anorexia, circulatory collapse, extreme lethargy or disinclination to move, and clinical signs of severe or advanced local or systemic infection, etc.

E. Procedures which cause severe pain near, at, or above the pain tolerance threshold of unanesthetized conscious animals.

This Category of Invasiveness is not necessarily confined to surgical procedures, but may include exposure to noxious stimuli or agents whose effects are unknown; exposure to drugs or chemicals at levels that (may) markedly impair physiological systems and which cause death, severe pain, or extreme distress; completely new biomedical experiments which have a high degree of invasiveness; behavioral studies about which the effect of the degree of distress are not known; use of muscle relaxants or paralytic drugs without anesthetics; burn or trauma infliction on unanaesthetized animals; an [*sic*] euthanasia method not approved by the CCAC; any procedures (e.g., the injection of noxious agents or the induction of severe stress or shock) that will result in pain which approaches the pain tolerance threshold and cannot be relieved by analgesia (e.g. when toxicity testing and experimentally-induced infectious disease studies have death as the endpoint).

LEVEL OF TRAINING

NOTE: Training is required for all researchers and students. For researchers in wildlife a requirement consists of Ia (field research) or Ib (lab animal) (Ia is the first three modules and Ib pertains to all 12 modules of the Web CT CCAC modules). For students intending to handle rodents or other procedures, they need to complete the applicable training (see training documents)

There will be other courses established if the need arises for specific procedures. Principal investigators are responsible to ensure that all those performing specific procedures are trained fully.

Those completing levels will be issued certificates and the log of who is eligible for facility procedures will be kept with the office of Research Services.

This permission may only be given by the Facility Director. Students are allowed to write the D2L test based on the CCAC modules as soon as they are included on an AUP even if the AUP is not yet passed. Once the AUP is approved by the ACC and is deemed to be active students who are listed on the AUP are allowed to apply for the ensuing wet labs/courses by applying to the facility director or the coordinator. If the AUP is not passed due to minor conditions to be met, the director can authorize attendance in the wet labs in certain cases in order to facilitate research timing.

DRUGS

Restricted drugs or narcotic drugs will only be allowed on university grounds with the express permission of the University Veterinarian. The researcher will need to keep proper records of use – see SOP for Drug Use Form (appendix B) -as well as ensure that storage complies with provincial and federal regulations (Double Locked Cupboard). Non-compliance will result in loss of drug use privilege.

HAZARDOUS AGENTS

Specify for <u>each</u> agent:

- amount of agent and dosage
- route of administration
- frequency of administration
- how agent is excreted by animal
- time period of excretion
- description of potential health risk(s) to humans or animals
- special animal care requirement(s)
- precautions to be taken by personnel
- special containment requirements (i.e. special storage, waste and animal disposal requirements, emergency procedures)

Revised March 25, 2010
Revised January 16, 2019