University Animal Care Committee

Policy on Animal User Training

All personnel involved with the use of animals in science must be adequately trained in the principles of laboratory animal science and the ethical issues involved in animal use. An appropriate training program is an essential component of any institutional animal care and use program. The CCAC Guidelines on: training of personnel working with animals in science (2015) is the basis for the Animal User Training Program at Queen's University.

The purpose of the animal user training program is to foster a culture of compassion and respect for the animals that are used in science, while providing the necessary knowledge (including an understanding of the Three Rs) and skills to ensure competency and proficiency in performing animal protocol approved procedures.

The tenet of the Three Rs is embedded in the conduct of animal-based science in Canada and at Queen's University, and encourages individuals to:

- *Replace – avoid or replace the use of animals wherever possible;*
- *Reduce – employ strategies that will result in fewer animals being used and which are consistent with sound experimental design; and*
- *Refine – modify husbandry or experimental procedures to minimize pain and distress.*

Following training, all personnel involved in the care and use of animals for science must possess:

- *An understanding of the ethical issues of using animals for scientific purposes in Canada and an understanding of the 3 Rs tenet;*
- *Adequate knowledge of the principles of experimental animal science relevant to their area of work (laboratory, field, or agriculture); and*
- *Adequate knowledge, skills and competency required for any and all technical procedures that personnel will be responsible for, including general handling.*

Personnel includes individuals intending to use or assist in the use of animals as part of a research, teaching, regulatory testing or production (of animals or biologics for scientific purposes) project, or who are involved in breeding as part of a project. This includes investigators, post-doctoral fellows, research staff, graduate students, teachers and study directors, as well as undergraduate students, volunteers, veterinarians and animal care technicians who take part in animal-based research projects.

Competency refers to the ability to effectively perform a particular task in relation to the care, maintenance or use of the animals, while ensuring their welfare is protected as far as possible within the constraints of any approved studies that the animals are involved in. Focusing on

competency rather than training, it is acknowledged that there may be a variety of ways of acquiring the necessary knowledge and skills, and emphasis is placed on learning outcomes. Until personnel have had their competency assessed and been found to be competent to perform the relevant tasks or procedures, any work with animals must be carefully supervised. This supervision will aim to reinforce understanding and ensure tasks and procedures are conducted according to the university standard. The duration of supervision required for competence to be attained will vary with the frequency of the procedure, the technical complexity of the procedure, and the technical ability of the individual.

Training programs contribute to the development of knowledge, skills and competency relevant to procedures that will be undertaken. The program will ensure the availability of both theoretical and practical training and recognize that a flexible approach is required to address the training requirements of individuals with various needs and levels of experience. Queen's University sustains an active training program for all users that includes:

- Open dialogue with the University and Clinical Veterinarian during design and implementation phases of research
- Online standard operating procedure (SOP) bank (multi-species and facilities)
- Online Biomethodology manuals
- Online Theoretical (Ethics) Training program
- Practical workshops
- Individualized training for specific technical procedures (following initial participation in a training program, it is recommended that individuals attend additional training sessions as their activities or responsibilities change, or as new and relevant requirements and guidelines come into effect).

Core Training
Online courses are based on modules from the CCAC's Training Program and must be completed by all individuals prior to being listed on an animal use protocol (AUP). This includes Principal Investigators, research associates, veterinary technicians, research assistants, post-doctoral fellows, graduate students, undergraduate students, volunteers, and any other individuals as deemed appropriate. A minimum grade of A- (80%) in each of the first five module quizzes) is required to pass the course(s).

The courses offered include:

- *QACS 799 – Introduction to Animals in Science*
- *QACS 800 - Introduction to Non-Human Primate Safety in Science*
- *QACS 801 – Introduction to Fish in Science*
- *QACS 802 – Introduction to Birds in Science (in development)*

All courses contain the following modules, with species-specific information where relevant:

- Guidelines, Legislation, and Regulations
- Ethics in Animal Experimentation
- The Three Rs of Humane Animal Experimentation
- Occupational Health and Safety

- Pain, Distress and Endpoints

The following topics are also modules included in the courses but are not mandated quizzes at this time:

- Research Issues
- Basic Animal Care
- Environmental Enrichment
- Basic Diseases and the Animal Facility
- Analgesia
- Anesthesia
- Euthanasia of Experimental Animals

Lab personnel from other Canadian Universities that provide a copy of a certificate confirming completion of the NAIUT Training Program **may** be exempt from theoretical training. Requests for exemption are reviewed on an individual basis by the University Veterinarian and Training Coordinator on behalf of the UACC.

Practical Training Workshops
The Office of the University Veterinarian offers a series of practical workshops which are available year round. Attendance in workshops should be timed in relation to when performance of the skills is required. It is recommended to be using the skills acquired through practical training within 3-6 weeks of completing training. Users must have completed theoretical training and be listed on an active Animal Use Protocol (AUP) prior to attending any workshops. Practical training is mandatory for all personnel responsible for the care, handling and use of rodents at Queen's University, regardless of the level of expertise acquired elsewhere. This initiative is to assist the UACC in ensuring standardization of technical skills across campus and supports compliance with SOP's. Practical training for species other than rodents will be mandatory as courses are developed to ensure that standard methods of performing routine procedures are in place. Workshops for non-traditional species will be held on an as needed basis. Until a level of competency is obtained, the Training Coordinator can recommend additional training sessions and withhold access to animal facilities. Once a level of competency is obtained with the Training Coordinator, the new lab member will require supervised practice to become efficient in needed procedures.

Rodent users will attend Queen's Practical Workshops – Small Animals (available year round).
Large animal users will attend Queen's Large Animal Surgical Workshop (held annually).
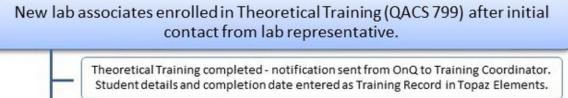Fish users will attend Queen's Practical Fish Workshop (held annually).

Record of Completion
Completion of all training (theoretical and practical) is recorded and maintained in the Topaz Elements database. Principal Investigators and their respective staff/students are issued a confirmation of training with a synopsis of what was covered in the workshops.

Appendix 1. Flow of Animal User Training
Rodent users at Queen's University should follow a standard protocol to ensure all training objectives are completed prior to any in vivo work within the animal facility or laboratories.

Because this process requires involvement from many stakeholders (Students/Trainees, Principal Investigators, Training Coordinator, UACC Coordinator, OnQ and Topaz Elements), it is recommended that the flow schedule below be referenced to ensure an efficient and expeditious training experience.

New lab associates enrolled in Theoretical Training (QACS 799) after initial contact from lab representative.

Theoretical Training completed - notification sent from OnQ to Training Coordinator. Student details and completion date entered as Training Record in Topaz Elements.

PI and student sent notification of Theoretical Training completion and Workshop Request Form. PI must add student to AUP prior to practical workshop participation. Student granted access to Topaz Elements. Student submits completed Workshop Request Form to Training Coordinator.

UACC Coordinator sends notification to PI and Training Coordinator when personnel amendment has been approved (adding new student).

Training Coordinator and student schedule practical workshops.

Upon completion of practical workshops, Training Coordinator sends an email to PI and student summarizing the session(s). Practical workshop completion dates entered in Topaz Elements. Student names, affiliations forwarded to Animal Care for orientation.

The new lab associate (with training complete) is mentored in the lab by PI's, senior students and technicians to practice techniques and learn lab-specific procedures.

Revision History:

Date	New Version
02/01/2010	Policy Created and Approved
05/22/2012	Revised to remove reference to placement students; Removed statement that course offered 4 times/year in line with academic calendar; Removed requirement for refresher every 5 years (no longer requested by CCAC); Removed reference to UPEI fish course; Clarified passing grade of 80%
10/20/2015	Triennial Review; Revised to address changes made in CCAC Guidelines on Training of Personnel Working with Animals in Science
06/28/2018	Triennial Review
04/22/2021	Triennial Review; Revised to clarify specific streams of training available (lab animal vs. wildlife)
04/24/2024	Triennial Review; New Template; Recommendation to use skills acquired within 3-6 weeks of training; Reminder that supervision still required following training