

INTRODUCTION

Approved Animal Use Protocols (AUPs) require submission of a modification when changes in personnel, animal numbers or strains, or in animal procedures occur. The Animal Research Ethics Board (AREB) must approve these modifications prior to their implementation. Depending on the magnitude of the modification and the implications for animal welfare, the Principal Investigator (PI) may submit an AUP Modification Form, or may be required to submit a new AUP Form.

PURPOSE

1. To provide guidance to PI and the AREB with respect to how to proceed with a protocol modification.
2. To provide more clarity to the statement found on the AUP Modification Form:
Use this application form during the course of the year (prior to the annual review), if any changes (e.g. different species or strain, increase in numbers of animals, change in animal procedures) are required for an active Animal Use Protocol (Research or Teaching).

PROCEDURE

The AREB delegates responsibility to the University Veterinarian and the AREB Chair to determine whether a new AUP or modification of existing AUP is sufficient to address the proposed change in an existing approved AUP. Changes that negatively impact animal welfare or multiple changes in a number of AUP elements are normally referred to the full AREB. Changes that deviate substantially from the existing protocol are more likely to require completion of a new AUP. The number of changes throughout the history of the protocol is also considered. Modifications are not allowed to protocols approved as pilot studies.

I. “Minor”, “Moderate” and “Substantial” Modifications (examples provided below)

Such modifications will normally require an [AUP Modification Form](#), which can be found on the [Research Ethics Office website](#). Submit the form electronically to uacc.office@usask.ca to the Research Services and Ethics Office (RESO).

A. Minor Modifications to an Animal Use Protocol:

Minor animal use protocol modifications are reviewed in the RSEO, with consultation of the AREB Chair, as required. Minor modifications are usually assessed within a week of receiving the modification form in the RSEO.

1. Examples of Minor Modifications:

- a. Changes in personnel (removing or adding personnel) involved in animal procedures.
 - o The UACC allows the addition or removal of personnel on animal use protocols by way of a modification form or email. Education and training information is required for new personnel as well as the identification of what procedures these individuals will perform on the AUP. Furthermore, new personnel must complete the online UACC Animal Care Course and be listed as an authorized worker on the associated biosafety permit before the new personnel are added to the AUP. As per the *UACC Procedures for Training Required for Approval of Animal Use Protocol Applications* undergraduate and graduate students may be added to the AUP provided they complete the online Animal Care Course within one and two months, respectively. During this time, the principal investigator provides supervision. Confirmation of the addition of new personnel will be sent via a Certificate of Approval to the principal investigator and copied to the facility manager and new personnel.
- b. Change in strain of animal or adding strains without changes in the total number of animals per year according to the *UACC Procedures for Categorizing Animal Strains and Allowing for Exchange of Strains on Animal Use Protocols*.
- c. Change in supplier of animals.
- d. Increase of animal numbers by less than 10%.

B. Moderate Modifications to an Animal Use Protocol

The AREB Chair and the University Veterinarian, or delegates, review moderate modifications to an animal use protocol. Moderate modifications are usually assessed within a week of receiving the modification form in the RSEO. At the discretion of the AREB Chair and the University Veterinarian, or delegates, moderate modifications may be referred to the full AREB for review. This adds further time to the review process.

1. Examples of Moderate Modifications:

- a. Addition of animal species / strains that are not known to have specific housing / care requirements (e.g., isolator housing) or health problems (e.g., immuno-compromised)
- b. Change in drug(s) used, where the effects on the animal are equivalent.
- c. Change in a procedure in a live animal, where the effects on the animal are equivalent.
- d. Changes in the use of hazardous agents. These changes must be cleared through the facility manager and Workplace Safety and Environmental Protection (WSEP) before being instituted. Submission of a modification form does not constitute such clearance.
- e. Increase in animal numbers by more than 10% but less than 25%.
- f. Small pilot studies that complement the existing research.

C. Substantial Modifications to Animal Use Protocols

The AREB Chair, the University Veterinarian, or delegates, and a community member representative review substantial modifications to an animal use protocol. Based on their judgement, a substantial modification may be approved by the subcommittee or referred to the

full AREB for review. Substantial modifications are usually assessed within a week of receiving the modification form in the RSEO. A modification tabled until the next meeting of the full AREB adds further time to the review process. Some substantial modifications may result in a request to submit a completely new AUP form. For time sensitive requests requiring full AREB approval, substantial modifications may be circulated electronically for review at the discretion of the AREB Chair, the University Veterinarian, or delegates and the community member representative.

1. Examples of Substantial Modifications:

- a. Change in species/sex/breed/strain/age/genetic manipulation
 - Assessment depends on the degree to which the proposed changes alter animal manipulations and procedures, introduce earlier endpoints, or have a negative impact on the animal well-being.
- b. Addition of animal species / strains that are known to have specific housing / care requirements (e.g., isolator housing) or health problems (e.g., immuno-compromised)
- c. Increase in animal numbers by more than 25%
- d. Change in the anesthetic agent or in the use of analgesic agents
 - The degree of difference in efficacy, titration and difficulty in administration of the agent will be considered.
- e. Change in method of euthanasia
 - A change from a non-physical to a physical method will generally require review by the full AREB.
 - A change from a recognized to a new or not normally recommended method will usually require review by the full AREB.
- f. New procedure / manipulation, particularly ones judged to result in increased potential for pain and distress.
- g. Change in the duration, frequency or number of procedures performed [generally relates to Canadian Council on Animal Care (CCAC) Category “D” and “E” protocols]
 - The probability and degree of increased distress for the animal will be the deciding factor.
- h. Change in early endpoints
 - Changes in early endpoints likely to produce an alteration in welfare will be more likely to require review by the full AREB.

II. “Major” modifications (examples provided below)

Major modifications will normally require submission of a [new Animal Use Protocol Form](#) available from the [Research Ethics Office website](#). Submit the form electronically to uacc.office@usask.ca.

1. Examples of Major Modifications to Animal Use Protocols

- A change in the main objective of the study or a change in the direction of the research (hypotheses and objectives) from those described in the grant request and/or in the existing animal use protocol.

- A change from non-survival to survival surgery.
- A change in the degree of invasiveness of a procedure or discomfort to an animal (e.g B→C or D; C→D or E).
- Addition of a new D procedure to a D protocol. Exceptions: Addition of a new transgenic to a protocol already approved for use of transgenics.
- Withholding, or reducing substantially, the use of analgesics or other drugs or procedures that provide comfort or safety for an animal or handler.
- Addition of an E Category of Invasiveness procedure.

III. Emergency/Provisional modification approval under extraordinary conditions

The AREB recognizes that unforeseen circumstances may arise in a research environment. The AREB Chair or University Veterinarian may provide emergency approval following contact (phone or email) by the PI. Appropriate forms must be subsequently submitted to the AREB in a timely fashion.

IV. Changes which can be made on the AUP Annual Review Form and do not require submission of an AUP Modification Form mid-year:

- Title change or change in source of funding
- Reduction in numbers of animals used
- Procedures at the higher level are completed and only lower level of invasiveness procedures are being performed; note this may result in a decrease Category of Invasiveness (COI) placement (from C to B for instance),
- Information on changes in animal tissue use post euthanasia.

Approved by the UACC, 30 June 2016