

POLICY



CATEGORY	D. Student and Academic	
SUBJECT	Research Involving Animals	
POLICY NUMBER	D44	
CROSS REFERENCE	D9 Applied Research D38 Responsible Conduct of Research A20 Institutional Animal Care and Use	
ADMINISTRATIVE SERVICES COMMITTEE		ACADEMIC COUNCIL
February 12, 2018		
POLICY STATEMENT		
<p>Olds College is committed to ensuring the ethical and humane use and responsible care of animals in research, teaching and testing. Animals are used only for valid scientific studies with a reasonable expectation of obtaining knowledge for the potential benefit of people and/or animals. Olds College is committed to ensuring the highest possible standards in the care, well-being, quality of life and use of its animals in accordance with applicable laws, the Canadian Council on Animal Care (CCAC) guidelines and policy statements, and the Tri-Agency Agreement on the Administration of Agency Grants and Awards by Research Institutions.</p>		
GUIDELINES		
<p>This policy applies to all persons who use animals for research, teaching or testing.</p> <p>If Olds College uses animals in any of its research, whether in its own facilities, in other facilities or in the field, it shall:</p> <ol style="list-style-type: none"> a. Maintain a valid Certificate of Good Animal Practice from the CCAC and ensure that research fully complies with CCAC standards; https://www.ccac.ca/ b. Ensure, through the use of financial or other controls, that the Institutional Animal Care and Use Committee (IACUC) has approved the research project before research activities involving animals have commenced, and that IACUC approval is maintained as long as research activities involving animals are carried out. Where appropriate controls are in place, all grant funds may be released prior to (or pending IACUC approval). 		
IMPLEMENTATION AND ADMINISTRATIVE RESPONSIBILITY		
VICE PRESIDENT Responsible for:	Applied Research	
REVIEW PERIOD:	5 years	

PROCEDURE



SUBJECT AND POLICY NUMBER:	D44 Research Involving Animals
VICE PRESIDENT Sign Off Date:	February 12, 2018
<p>All Principal Researchers using animals in research must file an Animal Utilization Protocol (Appendix 1) with the Olds College IACUC and must be approved by the Olds College IACUC prior to the acquisition of animals for research purposes and/or the initiation of research. Please refer to the Olds College Policy A20- Institutional Animal Care and Use. The IACUC is mandated to approve, reject, propose modifications to or terminate the approval of any proposed or ongoing animal use that is subject to review under this policy. Animal use for research that has not been reviewed and approved by the IACUC will constitute non-compliance, representing a breach of responsible conduct of research (Refer to Policy D38- Responsible Conduct of Research). The Principal Researcher is responsible to follow up with the IACUC when the research project has been completed to ensure that protocols were followed and there were no concerns arising from the research and if so, the appropriate report has been filed.</p>	

APPENDIX A



SUBJECT AND POLICY NUMBER:	D44 Research Involving Animals
VICE PRESIDENT Sign Off Date:	February 12, 2018

Animal Utilization Protocol RESEARCH

ANIMAL CARE COMMITTEE

Please refer to the Olds College Institutional Animal Care Policy No. A20

An Animal Utilization Protocol (AUP) must be filed with and approved by the Olds College Institutional Animal Care Committee (ACC) prior to the acquisition of animals for teaching or research purposes.

1. PERSONNEL

Principal Investigator or Instructor	Department	Phone Number	E-mail
Designated Emergency Contact(s)	Work Hours Phone Number	After Hours Phone Number	E-mail
Associate(s)	Department	Phone Number	E-mail
Technical Staff	Department	Phone Number	E-mail

2. PROJECT OR COURSE INFORMATION

Descriptive Title

(Please give a descriptive title that indicates, in lay terms, the nature of the procedures used)

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Project Start Date:

Project End Date:

Does this application replace an existing AUP?

No

Yes - List previous AUP Number

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Research Funding Source(s): **(Please attach relevant portions of the grant proposal)**

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Has funding been approved for this study?

Yes No, applying for funds

Peer Review for Scientific Merit of Research Studies has been / will be performed by:

Granting Agency College Review Committee other (specify):

The results of internal College reviews initiated by the investigator must be copied to the Chair, Animal Care Committee

Starting Date:

Completion Date:

CANADIAN COUNCIL ON ANIMAL CARE CATEGORIZATIONS

Purpose of Animal Use (check one):

- (1) Studies of a fundamental nature in sciences relating to essential structure or function (i.e. biology, psychology, biochemistry, pharmacology, physiology, etc.)
- (2) Studies for medical purposes, including veterinary medicine, that relate to human or animal disease or disorders.
- (3) Studies for regulatory testing of products, for the protection of humans, animals, or the environment.
- (4) Studies for the development of products or appliances for human or veterinary medicine, animal nutrition, animal reproduction and/or animal care.
- (5) Education and training of individuals in post-secondary institutions or facilities.
- (6) General operating protocols (for routine management of herds / colonies), diagnostic testing.

Category of Invasiveness (check all that apply)

Refer to 'Categories of Invasiveness in Animal Experiments' (Appendix 1)

B C D E

Classification

- Acute** - Utilizing an animal for a brief period (less than 24 hrs.), followed by euthanasia or return of the animal to source, or humanely killing an animal upon receipt or after a brief housing period during which time no manipulations other than standard management procedures are performed, i.e. anaesthetized without recovery, euthanized for tissue collection, etc.
- Chronic** - maintaining the animal and performing experimental procedures during this time, i.e. feeding trials, antibody production, breeding colony, recovery surgery.

3. LAY SUMMARY / PUBLIC RELATIONS (250 words maximum)

The Animal Emergency Management Committee for public relations purposes may use this information.

In LAY TERMINOLOGY, please provide concise summaries of the following information:

a) Research problem(s) or Instructional principles(s) this project addresses (Background, Objectives, Methods)

b) Anticipated impact (specific), potential benefits to human and/or animal welfare (Relevance of Research or Instruction)

4. ANIMAL USE

List all animals involved in the study

Quantity	Species /Strain	Weight/Age	Gender	Accommodation Building & Room	Experimental Area Building & Room (surgery or procedure rooms)	Office use only

For RESEARCH projects, is this a pilot / preliminary study? YES NO OTHER

b) Explain how the total number of animals to be used was determined, i.e. number of groups, replicates, etc. Attach a flow chart or table outlining total numbers eg. 5 animals x 3 treatments x 2 replicates = 30 animals.

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c) Indicate consideration given to reduce the use of animals, i.e. minimize numbers and maximize education or research gain.

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5. SOURCE

Indicate the source or supplier

- Animal Care Services Client owned Client Donated Wildlife/field studies
 OC Colony / Herd / Stock* Teaching stock* Purchased (i.e. farms)*

* Please specify below

Source or Supplier	
Address / Location	
Phone Number	
Mode of Transportation	

6. ANIMAL MODEL

Explain the characteristics of the animal that make the species or strain appropriate for the research or teaching objectives, i.e. structural behavioural, physiological, biochemical or other features or considerations. Cost may not be used as a justification.

7. ALTERNATIVES

The Canadian Council on Animal Care requires that explicit reasoning be provided for the selection of an animal model over alternatives such as an in vitro biological system, a computer simulation, or mathematical model.

Explain the necessity of using animals in this study, and why alternatives (in-vitro and ex-vivo systems) would be inappropriate to meet your project or course objectives.

The CCAC requires more than a simple statement that a replacement alternative is not available.

Indicate any alternatives to animal use that are already incorporated into the project or course design (in vitro & ex vivo systems).

Specify the environmental enrichment provisions, i.e. social housing, specific materials, space, objects etc.

Refer to the Canadian Council on Animal Care's 'Social & Behavioural Requirements of Experimental Animals' (Appendix 2), or CCAC Guide to the Care & Use of Experimental Animals Vol. - 2nd Edition p.51-74.

8. PROCEDURES

List *all* procedures, manipulations, &/or measurements that will be performed on the animals. Indicate what measures will be taken to alleviate or minimize any pain, distress or discomfort. Include post-operative care, specify analgesics & anaesthetics with dosages and routes of administration, and special procedures used.

PROCEDURES INCLUDING INJECTION OF COMPOUNDS, E.G. ANTIBIOTICS, EXPERIMENTAL CHEMICAL, ETC.	Animals involved in each procedure (species/strain & quantity)	Distress or Pain (B-E)*	ANALGESIC / ANAESTHETIC		
			Drug	Dosage	Route

* Indicate the Category for each procedure listed (refer to the Canadian Council on Animal Care's 'Categories of Invasiveness in Animal Experiments', Appendix 1).

Specify the criteria that will be used to assess the level of analgesia / anaesthesia required.

Give a *sequential* description of the use of animals including frequency & duration in this teaching exercise or research project.

9. ANIMAL CARE

List all the individuals who will carry out the above procedures. Provide their technical qualifications and relevant experience in performing these procedures.		
NAME	PROCEDURE(S) TO BE PERFORMED	QUALIFICATIONS / EXPERIENCE WITH THESE PROCEDURES
Specify the frequency of observations and methods for monitoring the condition of the animals. Refer to the above listed procedures, e.g. anaesthesia & surgery, as well as the daily routine observations planned.		
Explain refinements that have been made to minimize pain, distress and/or discomfort to the animals, i.e. modified procedures.		

10. END POINT

Indicate the disposition of the animals following this study

Retained - <i>specify location:</i>	
Sold to:	
Donated to:	
Humanely euthanized - <i>specify method:</i> If a physical method of euthanasia is to be used, i.e. cervical dislocation, justify its use.	
Other - <i>specify:</i>	

Indicate any clinical conditions or abnormalities <i>expected or that could arise</i> as a result of the proposed study or teaching exercise (eg. behavioural changes such as increased grooming, vocalization or postural changes, or physical abnormalities such as anorexia, dehydration, diarrhea, etc.)
In terms of species-specific behavioural changes and physiological signs, what criteria will trigger the decision to remove an animal from the teaching exercise or experiment, or to terminate the teaching exercise or experiment?

11. EMERGENCY VETERINARY CARE

IN THE EVENT OF AN ANIMAL HEALTH EMERGENCY, IF CONTACT CANNOT BE MADE WITH THE LISTED INDIVIDUALS, THE DECISION OF A CLINICAL VETERINARIAN, OR THE DIRECTOR OF ANIMAL CARE SERVICES, WILL BE FINAL.

Is normal veterinary care appropriate for animals in this project? YES NO

If **NO**, attach specific instructions on any veterinary indications / contra-indications that are on file with the animal facility supervisor in case an emergency should arise.

12. HAZARDS

TYPE	SPECIFY AGENT
Radio-Isotope	
Other	

Specify what special animal care is required because of the hazard(s) involved

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ADDITIONAL INFORMATION

required by the Canadian Council on Animal Care

For studies involving the following, additional forms must be completed as appendices to your Animal Utilization Protocol.

CHECK OFF ALL / ANY THAT ARE ATTACHED:

Appendix 2: Teaching / Display

Appendix 3: Surgical Procedures

Comments

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APPENDIX 1

CANADIAN COUNCIL ON ANIMAL CARE

CATEGORIES OF INVASIVENESS IN ANIMAL EXPERIMENTS

The following list of categories provides possible examples of experimental procedures which are considered to be representative of each category.

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.

Note: Animal Utilization Protocols are not required for projects involving 'A' Categories of Invasiveness.

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 (venipuncture only, **not cardiac**);
- 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); (or intradermal);
- acute non-survival studies in which the animals are completely anesthetized and do not regain consciousness;
- approved methods of euthanasia following rapid unconsciousness, 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;
- treadmill for normal horses;
- digital retrieval of feces from calves, dogs, horses;
- obtaining rumen fluid samples through rumen fistula of cows;
- dip-netting fish;
- weighing fish by mass;
- measuring fish e.g. length, width under anesthetic;
- bleeding fish under anesthetic;
- ear treatments/medication;
- implantation of hormone e.g. cattle;
- Rectal and AI for management purposes (not research);
- feeding electrolytes to colostrum deprived calves;
- cannulating teats of cows;
- intermammary infusion of mastitis medications;
- less than ~18 hour fasting period in rodents;
- leg banding;
- colostrum deprivation of calves;
- removing calves from cows at birth;
- clipping ≤ 1 mm. of tail of tadpoles.

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

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.

Possible examples:

- cannulation or catheterization or catheterization of blood vessels or body cavities under anaesthesia;
- minor surgical procedures under anaesthesia, 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;
- behavioural experiments on conscious animals that involve short-term, stressful restraint; exposure to non-lethal levels of drugs or chemicals;
- nose bars in birds;
- wing banding in birds;
- intravaginal examinations;
- vaginal swabs;
- induction of general anaesthesia in horses;
- intubation;
- periorbital bleeding in pigs without anaesthetic; periorbital bleeding in other species under anaesthetic;
- pessaries in cows and sheep (intravaginal);
- ultrasound (per rectum);
- cervical dislocation of rodents without sedation; also chickens, turtles;
- decapitation of small rabbits and rodents;
- nylon bags incubated in rumen fistulated cattle;
- ear tagging;
- intradermal injections (ID injections) unless a significant inflammatory reaction will occur;
- gavage/orogastric tubing; stomach tubing;
- swim mills for fish;
- measurement (length and width) of individual fish without anaesthetic;
- tagging fish under anaesthetic;
- electroshocking fish;
- >24 hour fast for large mammals;
- > 18 hour fast for mice/rats;
- FCA, RIBI, titremax, Quil A if the adjuvant/antigen combination has few deleterious effects;
- castration;
- beak trimming;
- teeth clipping (piglets);
- tattooing;
- removal of calves from dams at birth (no suckling);
- multiple rectal examinations;
- metabolic caging if it is short term and animals are exercised regularly, do not show signs of distress and have olfactory, visual and auditory contact with conspecifics;
- delayed type hypersensitivity;
- Alzec (osmotic) pump;
- microchipping (<2mm diameter);
- euthanasia of young piglets using intracardiac injection of pentobarbital;
- dehorning calves with Lidocaine or other topical.

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

D. Experiments which cause moderate to severe distress or discomfort

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.

Possible examples:

- major surgical procedures conducted under general anaesthesia, with subsequent recovery; prolonged (several hours or more) periods of physical restraint;
- indication of behavioural 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);
- 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;
- Ascites production;
- creation of transgenic animals before phenotype is known;
- metabolic caging of longer duration or where animals are in isolation;
- subcutaneous xenotransplantation;
- laparotomy e.g. ovariectomy;
- FIA, RIBI, Quil A may be categorized as a "D" until the effects on animal welfare can be recorded;

E. Procedures which cause severe pain near, at, or above the pain tolerance threshold or 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;
- behavioural studies about which the effects of the degree of distress are not known;
- use of muscle relaxants or paralytic drugs without anaesthetics;
- burn or trauma infliction on unanesthetized animals; a 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).

Revised (CCAC) February 1991

Updated ACS June 28, 2001

APPENDIX 3

SURGICAL PROCEDURES

Provide a description of the preparative regimen which includes:

1. The patient preparation procedures.

2. The details on pain/distress management throughout the project.

Note: Analgesics should be given to animals prior to recovery from anesthesia & for a minimum of 24 hours following surgery. Thereafter, the animal(s) will be assessed and if there is continuing pain or distress, analgesics will be continued in conjunction with appropriate care.

3. The antibiotic to be administered (dosage and route).

4. If applicable, the ventilation procedures.

5. Instrumentation of the animal(s), such as IV lines, catheters, etc.

6. The type of monitoring during and following surgery.

7. A brief technical description of the surgical procedure(s).