

**CANISIUS COLLEGE**  
**APPLICATION FOR USE OF LABORATORY ANIMALS IN**  
**RESEARCH, TEACHING, OR DEMONSTRATION**

In order for a project to gain approval, the college IACUC must determine that it is an ethically acceptable endeavor, that it is not unreasonably duplicative, and that there are no acceptable alternatives. The IACUC consists of at least one scientist, veterinarian, ethicist, lay person, and a member representing the general community. The information you provide should be intelligible to this mixed audience, but that does not mean you should gloss over details when they are pertinent.

You are encouraged to consult with the IACUC Chair as you prepare your application. He/she will be pleased to help you prepare it and will try to minimize the inconvenience the review process may impose.

Please complete all applicable sections. Please provide your responses in the shaded boxed areas. Expand each answer box as needed to contain all pertinent information. Include all applicable appendices; omit those appendices that are not applicable.

1. Principal Investigator:

2. Address:

3. Telephone and email contacts:

4. Title of Project:

5. Anticipated duration of project (give dates):

6. Program Type/Sponsor: check one

<input type="checkbox"/> Teaching/Demonstration
<input type="checkbox"/> College Sponsored Research
<input type="checkbox"/> Externally Sponsored Research
<input type="checkbox"/> Other

7. List all funding agencies to which this protocol will be submitted.

8. **Overview of Proposed Research and/or Teaching Demonstration.** Provide in LAY TERMS, a description of the specific aims of the research or instructional course. Include information on the

hypothesis and/or rationale for the study, objectives of the study and its significance. Please limit your response to no more than 500 words.

### 9. Animal Population

A. State type and quantity of animals requested.

Species/Strain	Age	Sex	# of Animals
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B. Specify the source of these animals?

C. Will animals be bred or stock animals kept at Canisius?  No  Yes

D. Justify the number of animals listed. According to the federal regulations the IACUC needs assurance that a reasonable but not excessive number of animals is used to satisfactorily answer the scientific question posed. Describe how the number of animals needed was determined, including proposed subgroups and number of animals necessary for each subgroup.

**10. Consideration of Alternatives.** Investigators are required to conduct an up-to-date literature search specifically related to the proposed research protocol. The search is meant to exclude the possibility of reasonable alternatives such as less sentient species, procedures that would be less invasive or painful, or non-animal techniques. (Please note: Questions A through D must be answered for each species of animals requested in this protocol.)

A. Indicate which source (e.g. Medline) and **specify** the key words that were used in your search.

Source:

Keywords:

B. Why was this (these) species selected?

C. Explain why non-animal alternatives cannot be used for this protocol.

D. Justify any procedure that may cause pain and/or distress even if momentarily.

**11. Disposition of Animal Subjects.** (For guidance, please refer to the Canisius College Policy statement on the disposition of animal subjects.)

A. Euthanasia. If applicable, specify the method of euthanasia for each species employed. If applicable, indicate the anesthetic agent, dose and route of administration. Please note that any method not sanctioned in the AVMA Panel on Euthanasia must be justified.

B. Disposition of animals not euthanized.

**12. Housing of Animals.**

A. State building and room(s) for housing of animals:

B. Briefly describe the housing conditions and husbandry plans for your subjects.

C. Will animals be transferred from the Animal Facility to another location? This includes taking live animals to investigator laboratories.

No \_\_\_ Yes \_\_\_

If yes, specify transportation arrangements. Include location of transfer site, how long animals will be kept at this location, which procedure(s) will be performed at this location and how frequently animals will be transferred to this site.

**13. Animal Health Monitoring:** Document how, and how often, your subjects will be monitored for health problems.

**14. Identify All Personnel Working with Live Animals.** Provide the name of each individual involved, and give their status/position on campus (faculty, student, etc.), state whether they have attended the IACUC GTS, and briefly summarize their qualifications. (Note: All personnel must have appropriate

training specific to their duties and ordinarily will be expected to have attended the IACUC-sponsored general training session (GTS). For guidance on this issue, please see the IACUC Policy Statement on Personnel Training.)

**15. Will animals be used for antibody production?**

No  Yes  If yes, complete Appendix A. If no, remove Appendix A and discard.

**16. Will animals be used for tissue harvesting?**

No  Yes  If yes, complete Appendix B. If no, remove Appendix B and discard.

**17. Will non-recovery procedures be performed, including non-recovery surgical procedures?**

No  Yes  If yes, complete Appendix C. If no, remove Appendix C and discard.

**18. Will recovery surgery be performed?**

(i.e., any surgical procedure from which animals will recover from anesthesia for any period of time.)

No  Yes  If yes, complete Appendix D. If no, remove Appendix D and discard.

**19. Will infectious agents, radioisotopes, carcinogens, or toxic chemicals be used in live animals?**

No  Yes  If yes, complete Appendix E. If no, remove Appendix E and discard.

**20. Will aversive conditioning be involved?** (E.g., food, nutrient, or water restriction; sensory deprivation or prolonged restraint; foot shock or any aversive stimulus.)

No  Yes  If yes, complete Appendix F. If no, remove Appendix F and discard.

**21. Is morbidity and/or mortality expected during the course of the study aside from the planned euthanasia of the animals as specified in the protocol?**

No  Yes

**Will unrelieved pain and/or distress occur?**

No  Yes

**Does this protocol include LD<sub>50</sub> assessments?**

No  Yes

If yes, to any of the above, complete Appendix G. If no, remove Appendix G and discard.

**22. Will other procedures be carried out which are not included in the above Sections.**

No  Yes  If yes, complete Appendix H. If no, remove Appendix H and discard.

**23. Permits:** Depending on the nature of your project, permission may also be necessary from other intramural or extramural regulatory bodies. List all permits (permissions) which are applicable to your project, and provide the dates applicable to each approval/permit.

**24. DECLARATION:**

I certify that the animals to be used in this study will be used in accordance with regulations and standards as promulgated by the New York State Department of Health, the United States Department of Agriculture, the Public Health Service, and Canisius College. I certify that any pain or discomfort to the subjects will be limited to that which is unavoidable in the conduct of this project. To the best of my knowledge, the studies proposed do not unnecessarily duplicate any other in the published literature. I certify that the use of non-animal-based procedures, and of less invasive, alternative techniques have been considered. I have concluded that the species, numbers and procedures to be used are the most appropriate for the proposed activity.

Signature of Principal Investigator  Date:

**APPENDIX A**  
**ANTIBODY PRODUCTION**

Complete a separate Appendix A for each species employed (unless all aspects of immunization procedures will be the same).

A1. State who will be performing the immunization procedures.

A2. State where the immunization procedures will be performed.

A3. State what species and how many animals will be used for antibody production.

A4. Immunization protocol.

a. State the antigen(s) that will be used.

b. State the number of sites, concentration per site, and volume per site.

c. State time, frequency, and duration of administration.

d. State route. (e.g., intraperitoneal, intravenous, subcutaneous, or intradermal)

A5. Are adjuvants used?  Yes  No  If yes, state type:

If complete Freund's adjuvant or foot pad injections are used, provide justification. (Please note, complete Freund's adjuvant cannot be injected intravenously (IV) or intradermally (ID). Foot pads injections are strongly discouraged.)

A6. Test bleeds.

a. State frequency of sampling.

b. State amount collected at each sampling.

c. State method of sample collection.

**APPENDIX B**  
TISSUE HARVESTING

B1. State who will be performing the procedures.

B2. State how many animals and what species will be used for tissue harvesting.

B3. State the location where harvesting of tissues will be performed.

B4. State what tissues are harvested.

B5. Describe procedure(s), including method of euthanasia. If an anesthetic is used provide dose in mg/body weight, route of administration, and frequency.

**APPENDIX C**  
NON-RECOVERY PROCEDURES ON ANESTHETIZED ANIMALS

Complete a separate Appendix C for each species employed (unless all procedures are the same).

C1. State who will be performing the procedures.

C2. State what species and how many animals will be used for non-recovery procedures.

C3. State where the procedures will be performed.

C4. State the anesthetic(s) that will be used. Include drug, dose in mg/body weight, route and frequency.

C5. Describe supportive monitoring while animals are under anesthesia.

C6. How long will animals be maintained under anesthesia before euthanasia?

C7. Describe all procedures (both surgical and non-surgical) that will be carried out while the animal is alive.

**APPENDIX D**  
**RECOVERY SURGICAL PROCEDURES**

Complete a separate Appendix D for each species (unless all procedures are the same).

D1. State the species and number of animals that will be used for recovery surgical procedures.

D2. State where the surgical procedures will be performed.

D3. Pre-operative procedure(s).

a. State who is responsible for pre-operative care.

b. Are animals fasted? Yes  No

If yes, state length of time. Food  Water

c. Are pre-op antibiotics given? Yes  No

If yes, specify drug, dose in mg/body weight, route and frequency.

d. Is a pre-anesthetic given? Yes  No

If yes, specify drug, dose in mg/body weight, route, and frequency.

e. Other pre-operative procedures.

Is hair/fur shaved or clipped? Yes  No

Specify antiseptic scrub/solution.

Describe other pre-operative procedures that you perform. e.g. CBC, physical exam.

D4. Anesthetic.

a. State who will be administering the anesthesia.

b. Injectable. Provide drug, dose in mg/body weight, route, frequency, and duration.

c. Inhalant. Include precautions used to protect personnel. Provide drug, concentration, duration, and method of delivery (spontaneous free breathing or assisted ventilation).

D5. How is the surgical plane of anesthesia determined and monitored?

D6. How and with what, is the initial anesthetic dose supplemented, if necessary?

D7. Which vital signs are checked during the surgical procedure? How often?

D8. Describe supportive care during surgery. Include fluids that are given and control of body temperature. (This information must be included for any surgery over 1/2 hour in duration.)

D9. State who will be performing the surgery.

D10. Describe surgical procedures to be performed in sufficient detail to allow the IACUC to evaluate it. Include site(s) of incision, operative manipulations, method(s) and layer(s) of closure, suture materials and suture patterns to be used.

D11. What is the anticipated duration of surgery?

D12. Are multiple surgical procedures performed? Yes  No

If yes, provide justification and include length of time between surgeries.

D13. State what precautions are used to reduce risk of post-operative infection.

D14. Immediate post-operative procedures.

a. State who will be responsible for the immediate post-operative monitoring.

b. State where the animals will be monitored.

c. What specifically will be monitored? (e.g. vital signs, activity, etc.)

d. How long, immediately post-operatively, will animals be monitored and with what frequency?

D15. Will operated animals receive monitoring after hours, holidays or weekends?

Yes

No

State who will be responsible for daily monitoring.

In case of emergency, state contact person and telephone number where that person can be reached 24 hours a day.

D16. At what time post-operatively will skin sutures or wound clips be removed?

D17. State who will be responsible for suture/wound clip removal.

D18. What is the length of survival after surgery?

D19. Describe possible adverse effects that may be anticipated as a result of the surgical procedures and the steps that will be taken to minimize the adverse effects (including discomfort, pain, or suffering).

**APPENDIX E**  
USE OF INFECTIOUS/HAZARDOUS AGENTS/SUBSTANCES

E1. State what species and how many animals will be exposed to hazardous agent(s).

E2. State what agent(s) will be used.

E3. State what dose is given per animal.

E4. State the type/class of agents used (e.g. teratogen, carcinogen).

E5. Is the agent shed (eliminated) into the environment? Yes No

What is excreted? (e.g. agent, degradation product, etc.) By what route?

E6. What personnel will be handling the hazardous agents?

E7. Who will be handling the animals once they have been exposed?

E8. Where will hazardous agents be used?

E9. Where will biohazardous animals be housed?

E10. Will biohazardous animals be transferred from one location to another? Yes No

If yes, provide details of transport.

E11. How long will the exposed animals be housed in the Laboratory Animal Facilities?

E12. Specify precautions to be used to reduce risk to personnel?

**APPENDIX F**  
**ADVERSE CONDITIONS**

F1. State who will be performing the procedures.

F2. State what species and how many animals will be used for these procedures.

F3. State where these procedures will be performed.

F4. Describe the food, nutrient, water restriction, sensory deprivation, or aversive conditioning procedures to be performed. Include information on the duration of the procedures. If food or water is restricted, describe in detail the criteria used to determine if the animal receives adequate diet and fluid intake.

F5. Provide special justification for the use of aversive conditioning or food, nutrient, water restriction, or sensory deprivation in animals.

F6. What adverse effects/reactions, if any, are expected?

F7. How will animals be monitored for adverse effects/reactions?

F8. Describe the schedule for the monitoring of adverse effects/reactions. (Include after-hours and weekend monitoring if applicable.)

F9. State who will be carrying out the monitoring of subjects. (Include after-hours and weekend monitoring if applicable.)

F10. Describe the management of adverse effects.

**APPENDIX G**  
Morbidity/Mortality

G1. Provide justification for use of morbidity and/or mortality as an endpoint.

G2 Provide justification for unrelieved pain and/or distress.

G3. What are the possible adverse physiological, pathological or behavioral events that may occur as a result of this study?

G4 What will be done to alleviate pain or discomfort?

G5 If death is not an endpoint, but moribund, tumor burdened or morbid animals are endpoints, describe how these end points will be observed and handled.

G6. Documentation must be provided to the veterinarian that animals will be monitored three times daily. State who will be responsible for the monitoring of the animals.

G7. Indicate that the PI or his/her staff member will be available 24 hours a day in case of emergencies for after hours, weekends and holidays. Provide names and contact telephone numbers for all applicable personnel.

**APPENDIX H**  
**ALL OTHER PROCEDURES**

H1. State who will be performing the procedures.

H2. State what species and how many animals will be used.

H3. State the location of procedures that will be performed.

H4. Describe any handling and/or restraint of animals.

H5. State anesthetics that will be used. Include drug, dose in mg/body weight, route of administration, and frequency.

H6. State other medications/drugs that will be used. Include dose in mg/body weight, route of administration, frequency and duration.

H7. Describe any additional procedure(s) and the approximate duration of the procedure(s).

H8. What is the length of survival?

H9. Will animals need monitoring after hours, holidays or weekends?

Yes	No
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If yes, state who will be responsible and how often will animals be monitored.