

GONZAGA UNIVERSITY
APPLICATION FOR USE OF LABORATORY ANIMALS IN
RESEARCH, TEACHING, OR DEMONSTRATION

The use of vertebrates or cephalopods by a member of the Gonzaga community requires approval from the Gonzaga Institutional and Animal Care Use Committee (IACUC). The only exceptions are non-manipulative observational field studies or research conducted off campus under the approval of a separate IACUC. Faculty are required to reapply each time their research design significantly changes, i.e., new taxa or methods, or every year if the design is unchanged. Students are required to reapply each time their research design significantly changes, i.e., new taxa or methods, or every four months if the design is unchanged.

In order for a project to gain approval, 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 three scientists, one veterinarian, and one ethicist. 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 Chairman, Dr. Hugh Lefcort (lefcort@gonzaga.edu, x6706) as you prepare your application. Please note that Gonzaga does not have approved facilities for housing birds and mammals. Researchers that need to house birds and mammals overnight should contact the appropriate authorities at Eastern Washington University or Washington State University.

Please complete all applicable sections. 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. Print and submit one hard and one electronic copy to Dr. Hugh Lefcort, AD 5, Biology Department, Gonzaga University, 502 E. Boone Avenue, Spokane, WA, 99258, lefcort@gonzaga.edu.

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"/> Gonzaga 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 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. Cite key references. Please limit your response to no more than 500 words not including references.

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 Gonzaga? No ___ Yes ___

D. Justify the number of animals listed. According to federal regulations the IACUC needs assurance that a statistically robust but not excessive number of animals is used to satisfactorily answer the scientific question posed. Describe how the number of animals needed was determined.

E. Is this a duplicative study, i.e., has this project been performed before? If so, justify why you are repeating a previous study and cite previous published studies.

F. If studying mammals, particularly primates, how will you minimize disease transmission such as respiratory infections from researcher to subject?

G. If studying mammals, particularly primates, how will you dispose of human wastes?

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.

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 (www.avma.org) 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. Include densities, descriptions of enclosures, schedule for changing bedding, water, etc. Cite studies that used similar conditions.

C. Will animals be transferred from the above room to another location?

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 his or her status/position on campus (faculty, student, etc.)

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. Are 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 LD₅₀ 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 National Science Foundation The National Institutes of Health, the United States Department of Agriculture, and Gonzaga University. 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 has been considered. I have concluded that the species, numbers and procedures to be used are the most appropriate for the proposed activity. I agree to visits from the IACUC that are mutually arranged.

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 footpad injections are used, provide justification. (Please note, complete Freund's adjuvant cannot be injected intravenously (IV) or intradermally (ID). Footpad 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.

Are hair/fur/feathers/scales 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?

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.