

Institutional Animal Care and Use Committee

Instructions for the Application to Use Living Vertebrate Animals in Research or Classroom Situations

General

1. The Institutional Animal Care and Use Committee Application to Use Living Vertebrate Animals in Research or Classroom Situations (the Application) must be completed by the Principal Investigator and approved by the Institutional Animal Care and Use Committee (IACUC) prior to obtaining animals or beginning a project that involves animal use.
2. The most recent version of the Application can be obtained from the IACUC Office located at:

Michigan Technological University Research Integrity and Compliance Office
Administration Building, Room 317A
1400 Townsend Drive
Houghton, MI 49931
(906) 487-2902
(906) 487-2245 (fax)

or from the Michigan Tech University IACUC web site:
<http://www.admin.mtu.edu/research/vpr/reviewboards/animal.htm>
3. Completed Applications must be submitted to the IACUC Coordinator. Send Applications to: IACUC Office, Attn: Cheryl Gherna, 317A Administration Building

The Application (for new projects, revisions to existing protocols, and three-year renewals) must be submitted to the IACUC Office at least two weeks prior to the start date of the project.
4. All Applications are subject to committee review. There are two types of committee review process:
 - a. **REGULAR REVIEW:** This type of review will apply to the majority of Applications submitted to IACUC.
 - b. **EXEMPT REVIEW:** This type of review is informational for the IACUC.
5. Answer all questions on the Application, indicating those that are not applicable (NA). Contact the IACUC Coordinator if you have any questions or need assistance.
Handwritten applications will be returned.
7. Use simple nontechnical language. If a non-scientist cannot readily understand the Application, it will be returned to the Principal Investigator for clarification and re-submission.

GENERAL INFORMATION

Principal Investigator: Provide the Principal Investigator's name, department, and e-mail address. This is the individual who is responsible for implementing the procedures outlined for the project, monitoring treatment of the animals by other project staff, and providing accurate information to IACUC. The Principal Investigator may also be the individual through whom funds are channeled.

Co-Investigator: Provide the name, department, and e-mail address, of all other staff involved in the project. All individuals participating in the project as outlined in the Application must be listed. Attach additional pages if necessary to provide the required information.

Title of Project: Provide a descriptive title for the project (if this project is associated with a proposal submitted through the Sponsored Programs Office, use the same title used on the proposal).

Type of Application:

- a. New application - A first-time submission for a specific protocol or project.
- b. Teaching Only - If you are using the animals only for teaching purposes, check here (you also need to indicate if this is new, revision, or renewal).
- c. Revision to an existing protocol - A submission revising and replacing a previously approved protocol within the three-year approval period. Provide the previous protocol number.
- d. Three-Year Renewal - A submission to renew a previously approved protocol prior to the end of the three-year approval period. Provide the previous protocol number.
- e. Information Only - If you are using non-regulated animals (e.g. turtle, amphibia, fish, frog), check here.

Project Duration: Provide the time period for the project, giving a month and year for the anticipated beginning and end of the project. The dates must be future dates. An approved protocol is valid for a maximum of three years and must be resubmitted to IACUC if revised during that three-year period. (A protocol needs to be reviewed annually within the three year approval period - use the Continuing Review form)

Anticipated Funding Agency: List the funding agency supporting this research. If submitting to multiple agencies, you are responsible to notify the IACUC Coordinator of each agency.

PROPOSED ANIMAL ACTIVITY

Animal Housing Location: Identify the facility where the animal(s) will be housed. Animals must be housed in a Michigan Tech-IACUC approved facility if held for more than 12 hours.

Record Keeping: Identify ALL locations where records will be kept during the protocol period.

Categories of Research: Select a category that best describes your experiments, carefully examining all procedures to be applied to animal(s) in reaching your conclusion. Identify all species of animal(s) to be used. For each, enter the number of animals you anticipate using each year during the three-year approval period, and the total number of animals you expect to use during the approval period.

REQUIRED INFORMATION

In completing this section, the Principal Investigator should review the U.S. Interagency Research Animal Committee's Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training, which can be found in:

The Public Health Service Policy on Humane Care and Use of Laboratory Animals

<http://grants1.nih.gov/grants/olaw/references/phspol.htm>

and the *Guide for the Care and Use of Laboratory Animals* (the Guide)

<http://oacu.od.nih.gov/regs/index.htm>

1) Animal Use Justification:

a. Justify the use of Animals: Explain why it is necessary to use live animals in this project and why alternative approaches have been found unsuitable. Alternatives to vertebrate animals include microorganisms, plants, invertebrates, eggs of birds and reptiles, as well as mathematical or computer models. When a research question can be meaningfully pursued using reasonably available alternatives, the Principal Investigator should choose these alternatives.

b. Justify the selection of the particular species/strain requested: Explain why the particular species of animal chosen is being used over another. You should choose the most appropriate species for the project based upon anatomical, physiological, or other characteristics in consideration of the scientific objectives and the need to obtain valid results.

2) Description of the Proposed Activity:

Describe the proposed use of the animals. Describe all conditioning or preoperative procedures, all surgical procedures, and, in the case of survival surgery, all postoperative and recovery procedures. Use non-technical language.

3) Assurance of Humane Treatment:

For each procedure that might cause more than momentary or slight pain or distress, include a description of the monitoring plan to identify discomfort and pain and procedures used to minimize discomfort and pain. Provide written justification of the scientific reasons if analgesics, sedatives, or anesthetics will not be used during any procedure that may cause more than momentary or slight pain or distress to the animal(s), and the necessary period of time during which such agents will be withheld.

a. Surgery

Category: Identify whether the surgery is non-survival, survival, or multiple. Non-survival surgery is any procedure during which the animal will be euthanized without recovery from anesthesia state. Survival surgery is any procedure from after which the animal will recover from anesthesia, including procedures that penetrate or expose a major body cavity or produce permanent impairment of physical or physiological function. It includes major survival surgery, which penetrates or exposes a major body cavity or produces permanent impairment of physical or physiological function. Multiple surgery indicates the involvement of using an animal in more than one procedure from after which it is allowed to recover.

Description: The description should be in layperson's terms and should include animal restraint methods, incision site(s), and the exact nature of the procedure. Indicate the room number and building where the surgery will be performed. Major operative procedures on non-rodents must be conducted in facilities intended for that purpose as outlined in the facilities' policies and procedures. Indicate whether any paralytic agents will be used without analgesics. If survival surgery is performed, include the aseptic methods to be used and describe postoperative care required; identify frequency of observation; and identify the responsible individual(s). Include detection and management of postoperative complications during work hours, after hours, and on weekends and holidays. For multiple surgical procedures provide written justification. No animal shall be used in more than one major survival operative procedure except in cases of scientific necessity, as justified by the Principal Investigator, or veterinary care. (See USDA Policy #14, Major Survival Surgery, Single vs. Multiple Procedures, www.aphis.usda.gov/animal_welfare/downloads/policy/policy14.pdf).

List all tranquilizers, analgesics, and anesthetics you will use. Include the dose, frequency, and route of delivery. Indicate whether any paralytic agents will be used without analgesics. Surgical or other painful procedures should not be performed on un-anesthetized animals paralyzed by chemical agents. Provide written scientific justification if tranquilizers, analgesics, or anesthetics will not be provided because they interfere in the research.

b. Non-surgery surgical procedures

Description: Describe any methods of restraint (e.g., restraint chairs, collars, vests, harnesses, slings) and the duration of any restraint to be used. Include how animals will be restrained for routine procedures like blood withdrawals. Describe any potential stressors (e.g., food or water deprivation, noxious stimuli, environmental stress) and procedures to monitor and minimize distress.

Drugs or chemicals to be used: Provide written justification if paralytic agents will be used without analgesics or if tranquilizers, analgesics, or anesthetics will not be provided to minimize pain, discomfort, or distress.

c. Post-conditioning/post-surgical care: Appropriate procedures for postoperative care of the animals must be provided in accordance with established veterinary medicine.

Veterinary care - Indicate desired plan of action in case of animal illness, (e.g., initiate treatment,

call investigator prior to initiating treatment, euthanize).

4) Method of Euthanasia:

Euthanasia is the act of inducing humane death. Whether or not euthanasia is planned as part of the research, indicate the method of euthanasia to be used should it be required, including the criteria that will indicate that death has occurred. Indicate the species, dose, and route of administration for any inhalant or injectable agent to be used. Indicate the species, anesthetic agent and rationale for any physical method. If a physical method is used, explain and justify such use. The proposed method of euthanasia must be consistent with the recommendations of the American Veterinary Medical Association Panel on Euthanasia, March 2000 (these recommendations are available at http://www.avma.org/issues/animal_welfare/euthanasia.pdf). Any deviation from these recommendations must be justified.

Describe the final disposition of any animals that will not be euthanized.

5) Search for Alternatives to Painful Procedures

Per the Animal Welfare Act regulations for procedures that MAY cause more than momentary or slight pain or distress, the Principal Investigator must provide a written narrative description of the methods used to determine that less painful/distressful alternatives are not available. A search for alternatives must be provided. If alternative procedures are discovered, you must identify them and justify why those procedures are not being considered. Indicate what search strategy was used and describe your findings.

6) Special Questions:

Answer each question. If you answer yes, please give a description or explain why.

7) Researcher Qualifications:

State each individual's role in the project. For each, describe training and experience with animals and with the proposed species. A listing of an individual's education or degrees is insufficient. Provide Curriculum Vitae (CVs) for all personnel who have not previously submitted a CV to IACUC. Indicate any planned training to remedy deficiencies. If the research involves hazardous materials, describe the qualifications of personnel regarding knowledge of potential dangers and selection and implementation of appropriate safeguards.

RESEARCHER'S ASSURANCE

Investigator(s) Certification: The Investigator(s) must sign the certification before IACUC reviews the Application. The signature of the Investigator(s) on the Application indicates that the Investigator(s) has read and understands the information and assurances contained in the Application and that it is an accurate description of the proposed use of animals.