

**Application to Use Vertebrate Animals in Research, Testing or Instruction**

**Project Title (If using external funds, enter the title used on the grant application):** Click here to enter text.

**General Instructions**

**Shaded area for IACUC use only**.

Application Number: Click here to enter text.

Date Application Received: Click or tap to enter a date.

[ ] Approved [ ]  Denied on Click here to enter a date.

Please check the [IACUC website](https://www.nmu.edu/grantsandresearch/node/96) to ensure you are using the current version of the form. All parts of this form *must* *be submitted electronically* to the Institutional Animal Care and Use Committee (email: IACUC@nmu.edu) and the relevant Department Head or other departmental designee. Review of this application will commence upon receiving the electronic application, but the project may not begin until all required approval signatures are obtained via Right Signature. Please contact the IACUC chair (email: IACUCChr@nmu.edu) if you have any questions.

**Review Dates:**

Designated Member Review of applications (appropriate for USDA Use Categories B and C) will be completed within two weeks after receipt of the electronic application.

Full Committee Review of applications will take place on the last Friday of every month. Applications for Full Committee Review must be electronically received by the first Friday of the month. Full Committee Review is required for applications that fall under USDA Use Categories D and E. Applications that fall under USDA Use Categories B and C will receive Full Committee Review if requested by an IACUC member. Detailed procedures on the IACUC review processes are located at the [IACUC website](http://webb.nmu.edu/GrantsAndResearch/SiteSections/Compliance/AnimalSubjects.shtml).

**I. Principal Investigator** (Must be a faculty member or Department Head): Click here to enter text.

 **Co- Investigator:**

 **Department:**

 **Phone number:**

**II.** **Funding Sources/Course Information and Dates**

 **If the proposed work is for a course, please include the number of the course and title of the course**

 **Funding Sources** (External & Internal, if applicable)

 **Additional Funding Pending (click on the correct box)**? [ ] Yes [ ] No

 **Project/Course Start Date:** Click here to enter a date.

**End Date (three year maximum):** Click here to enter a date.

**This application is** (check one) [ ] New [ ]  Modification of an application currently approved by the Institutional Animal Care and Use Committee (a **new** protocol must be submitted after three years)

**III. SPECIES, NUMBER OF ANIMALS, AND USE CATEGORY**

**In the table below, provide the Species to be used, the Number of each Species to be used, and indicate the USDA Use Category for the proposed procedures. A rationale must be provided below the table for using USDA Categories D and E procedures.**

**Species**

Indicate the common name and scientific name of each animal to be studied. Use additional sheets if necessary. A rationale for choosing this species must be provided in Part V of this application.

**Number of Animals**

In the table below, indicate the maximum number of animals that will be used during the project period (up to 3 years) for each species.

**USDA Use Category**

For each species to be used, indicate the Use Category for the methods described in this proposal. A description of each USDA Category is given below. A rationale for Use Category D and E procedures must be provided.

USDA CATEGORY B: Animals that will be bred or purchased for breeding, but not used for experiments. This includes breeders, offspring that cannot be used because of improper genotype or gender and any other animals that will not participate in research studies.

USDA CATEGORY C: Animals used in research, experiments, or tests which involve no pain or distress or only momentary or slight pain or distress that WOULD NOT REQUIRE anesthetic, analgesic or tranquilizing agents (for example: s.c., i.m., i.p., or percutaneous i.v. injection, PIT tag insertion, a brief period of restraint, tissue harvesting after euthanasia).

USDA CATEGORY D: Animals used in research, experiments, or tests where appropriate anesthetic, analgesic, or tranquilizing agents are required to avoid pain or distress (e.g., major and minor surgery, tissue or organ collection *prior* to euthanasia, retro-orbital blood collection, prolonged restraint accompanied by tranquilizers or sedatives).

Animals used in research, experiments, or tests that *may* cause pain or distress, which cannot be treated with an anesthetic, analgesic or tranquilizer, but the agent or procedure producing the pain/distress is *immediately discontinued* or the animal is euthanized to prevent pain and/or suffering.

USDA CATEGORY E: Animals used in research, experiments, or tests involving pain or distress where the investigator is unable or unwilling to administer anesthetic, analgesic or tranquilizing agents (e.g., studies which allow endpoints that are painful or stressful, addictive drug withdrawals without treatment, pain research, noxious stimulation).

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| --- | --- | --- |
| Common Name + (*Scientific name*)  | Number of Animals  | USDA Use Category  |
| Click here to enter text. |       |       |
|       |       |       |
|       |       |       |
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**Justification for USDA Category D and E procedures:**

**IV. DESCRIPTION OF PROJECT**

(Use nontechnical language that a layperson can understand). Provide a summary description of this research, testing or instructional project, including:

1. The aims and objectives of the work.

Click here to enter text.

**B.** The significance of this work and expected outcomes.

Click here to enter text.

**V. JUDICIOUS USE OF ANIMALS**

Guidelines issued by the United States Government entitled Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training and University policy require that animals selected for a procedure should be of an appropriate species and that the minimum number required to obtain valid results should be used. Assistance is available at the University library and guidance may also be obtained from the IACUC web page or any IACUC member.

1. Provide a rationale for the selection of the animal species that will be used in this project. Describe the biological characteristics of the animal that are essential to the proposed study..

Click here to enter text.

1. Provide a rationale for the number of animals listed in question #1. Describe the size and number of experimental groups and the number of animals needed for the procedures.

Click here to enter text.

**C.** The Federal Animal Welfare Act requires that you describe how you determined that acceptable alternatives (e.g., mathematical models, computer simulation or in vitro biological systems) to the use of animals in this project are not appropriate. Provide date(s), database(s), search terms used for a documented literature search indicating that alternatives do not exist. For teaching projects, the search should include literature to address educational issues as well.

Click here to enter text.

**VI. SOURCES, HUSBANDRY, AND LOCATION OF ANIMALS**

1. How will animals be acquired? Include specific vendor, where applicable. If animals are being drawn from a currently approved NMU animal colony, please indicate this here and include the IACUC colony approval number.

1. **Housing conditions.** Describe (briefly using nontechnical language) the care and conditions that will be provided for the animals if they are to be held prior to or following the experimental procedure. Include proposed recordkeeping protocols and duration of the non-experimental housing period.

Click here to enter text.

**C.** Will the animals undergo multiple survival surgical procedures (counting surgical procedures from previous protocols)?
 [ ] Yes [ ] No

**D.** If yes, please provide justification.

**E.** Will any animals from this protocol be used in other projects at a later date?
 [ ] Yes [ ] No

If yes, please be aware that IACUC approval is required prior to transfer of the animal

**F.** Will this project use dogs, cats, nonhuman primates or farm animals?
 [ ] Yes [ ] No

If yes, describe the quarantine and conditioning procedures to be performed prior to the start of the project. Include selection criteria that will be used in including or excluding an animal from this project.

**G.** Location of animal housing:
Building

 Room Number(s)

 Off Campus Site(s)

**H.** Location of animal surgical facility (if applicable)

 Building Room Number(s)

 Off Campus Site(s)

**I.** Location of laboratory in which the experimental procedures described in **VI. A** will occur (if applicable). For off-campus work including field work, include the locality of the work.

 Building

 Room Number(s)

 Off Campus Site(s)

**VII. EXPERIMENTAL PROTOCOL**

For each species, describe the procedures to be employed (e.g., surgery, behavioral training, administration of substances for testing, etc.). Be certain to include information under the following headings:

**A. Procedure.** Details of the procedure to be performed on each animal including the time frames and intervals in the order in which each procedure will be performed. Indicate if the procedures are to be performed on the animals or tissues.
Click here to enter text.

**B. Pharmacological Agents.** Describe the use of test substance(s), or agent(s). Include a description of the dose(s) and route(s) of administration (if applicable).

Describe the use of anesthetic, analgesic, and tranquilizer agent(s). Include a description of the dose(s) and route(s) of administration. Indicate how the animals will be monitored during anesthesia and during post-anesthesia recovery (if applicable)

1. **Euthanasia** Describe the methods of euthanasia that will be employed if necessary, including how you will ensure that the animal is deceased.

Click here to enter text.

**D. Adverse Effects** Describe (using nontechnical language) any anticipated adverse effects on the animals well-being.

**E**. **State and Federal Assurances for Field Studies (if applicable):** If the proposed studies will be conducted in the field, then describe any state and federal assurances (e.g., a permit) that you have obtained or will obtain before conducting these studies.

**F. Provide additional comments as necessary.**

**VIII. PERSONNEL INVOLVED IN PROJECT**

1. List dates and types of animal-related training completed by personnel involved in the project and check off activities that will be performed by personnel. Please refer to current training requirements as listed on the IACUC web page. Should personnel change during the project, please inform the IACUC prior to personnel undertaking any project-related activity via written memorandum. In this memo, supply similar information about their training for their project-related activities. If you have further questions, please contact the chair of the IACUC or the Institutional Officer.

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| --- | --- | --- | --- | --- | --- | --- |
| **Personnel Name** | **No. years experience with specified animals** | **Will provide animal husbandry** | **Will conduct non-surgical experimental procedures** | **Will conduct surgery or anesthesia (specify)** | **Will/may perform euthanasia** | **CITI Training Completed (See C.)** |
|       |       |[ ] [ ] [ ] [ ] [ ]
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(Add or delete rows as needed)

1. Describe any experience with the proposed animal model and methods

1. List CITI Program courses required for this project in addition to the Basic Course (Working with the IACUC, etc.) that is always required.

1. If some personnel have no training, indicate how they will be trained, especially if any involved do not require CITI training

**IX. OCCUPATIONAL SAFETY AND HAZARDOUS MATERIALS**

1. Describe any relevant animal hazards (bites, diseases, etc.) and explain what will be done to minimize risks.

1. Does the research, testing, or instruction require the use of hazardous agents (i.e., infectious agents, carcinogens, toxic chemicals, radioisotopes)?
 [ ] Yes [ ] No
2. If yes, specify the hazardous agents to be used and describe their hazards. **For those agents classified as NEPA hazards greater than Level 1 or that are unclassified electronically attach the appropriate MSDS with this application when you submit it by email.**
3. Is the hazardous agent a biohazard?

[ ] Yes [ ] No

1. If yes, specify Biohazard Safety Level

1. Describe the containment protocol to be followed in protecting other animals and personnel from hazardous agents, and if applicable, isotope or controlled substance license/permit. If the containment protocol used is one recommended by a governing body, i.e. Nuclear Regulatory Commission, in addition to describing the protocol you will use for containment, provide a copy of the organization's guidelines with relevant sections highlighted or tabbed. Do not merely state "hazard will be contained based on protocol suggested by U.S. Centers for Disease Control."

**SIGNATURE PAGE**

**IACUC #:**       **PROPOSAL TITLE (From cover page):** Click here to enter text.

**X. ACKNOWLEDGEMENT BY PRINCIPAL INVESTIGATOR**

I acknowledge responsibility for this project. I have read the Northern Michigan University Principles for the Care and Use of Laboratory Animals and certify that this project will be conducted in compliance with those principles. I assure that I will obtain Institutional Animal Care and Use Committee approval prior to significant changes in the protocol. I assure that this project does not unnecessarily duplicate previous research or instructional projects. I assure that students, staff and faculty on the project are qualified or will be trained to conduct the project in a humane, safe, and scientific manner.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Principal Investigator** Date

**XI. APPROVAL OF SCIENTIFIC MERIT (to be completed by the Department Head)**

Before the project is initiated, it must be reviewed and approved on the basis of its scientific merit.

[ ] Review conducted by external agency.

[ ] Governmental Agency: Please specify the reviewing agency or board Federal agency (e.g., NIH, NSF, USDA, etc.) and evidence of approval

[ ] Nongovernmental agency (e.g., University review, specify if other):

[ ] Departmental Review: I assure that this project has been reviewed and approved for scientific or instructional merit by:

 [ ] Expert reviewer (Name)

 [ ] Departmental Committee Review (Committee Name and Chairperson):

 [ ] Other (Describe):

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Department Head/Other Authorized Departmental Designee** Date

**XII. REVIEWED AND APPROVED BY THE IACUC**

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Institutional Animal Care and Use Committee Chair Date

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Institutional Animal Care and Use Officer Date
Following action on this application, copies of approval or denial letters will be sent to the applicant, Department Head, and appropriate College Dean.