***Lake Superior State University***

*IACUC Use Only*

Received Date: Click or tap to enter a date.

Decision:  Approve

Approve with modification

Deny

Start date: Click or tap to enter a date.

Expiration date: Click or tap to enter a date.

Approval Number: Click or tap here to enter text.

***Institutional Animal Care and Use Committee***

**Animal Use Proposal (AUP)**

**for Laboratory Animal Research**

**Section I (parts 1-13)**

Submit completed form to: [iacuc@lssu.edu](mailto:iacuc@lssu.edu)

1. **Administrative Information (SINGLE CLICK ON FILLABLE FIELDS TO TYPE)**

|  |
| --- |
| **Project Title**:Click or tap here to enter text. |
| **Type of Project**: Research  Teaching |
| **If this application is a continuation of a currently or previously approved AUP, what is the old AUP number?**  Click or tap here to enter text. |
| **AUP approval period**: Start date:Click or tap to enter a date.End date:Click or tap to enter a date.  **(cannot exceed 3 years)** |

|  |  |
| --- | --- |
| **Principal Investigator**: Click or tap here to enter text. | **Work phone**: Click or tap here to enter text. |
| **Department**:Click or tap here to enter text. | **Home or cell phone**:Click or tap here to enter text. |
| **Email**:Click or tap here to enter text. | **Office location**:Click or tap here to enter text. |
| **Roles and responsibilities in this study**:Click or tap here to enter text. | |
| **CITI training complete and on file with IACUC**:Click or tap here to enter text. | |
| **Additional training/experience related to this study**:Click or tap here to enter text. | |

|  |  |
| --- | --- |
| **Co-Investigator/Student CI**: Click or tap here to enter text. | **Work phone**: Click or tap here to enter text. |
| **Department**:Click or tap here to enter text. | **Home or cell phone**:Click or tap here to enter text. |
| **Email**:Click or tap here to enter text. |  |
| **Roles and responsibilities in this study**:Click or tap here to enter text. | |
| **CITI training complete and on file with IACUC**:Click or tap here to enter text. | |
| **Additional training/experience related to this study**:Click or tap here to enter text. | |

1. **Project Funding**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Not Applicable** | | | | | |
|  | **University Funding** | | **Type:** Click or tap here to enter text. | | | |
|  | **External Funding** *(provide info below)* | | | | | |
|  |  | **Agency** | **Grant No.** | **Start Date** | **End Date** | **PI** |
|  |  | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap here to enter text. |
|  |  | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap here to enter text. |

1. **Project Summary for Lay Person:**
   1. In **lay language for a non-scientist**, summarize the overall intent/objectives of the study and why the study is important to human or animal health, the advancement of knowledge, or the good of society (keep it very simple and do not exceed 500 words).

Click or tap here to enter text.

* 1. **Harm/Benefit Analysis**: In 2-3 sentences and using **lay language for a non-scientist**, compare the potential harm to participating animals with the potential benefits of the research for humans, animals and/or the advancement of science.

**Harm:** Click or tap here to enter text.

**Benefit:** Click or tap here to enter text.

1. **Study Objectives**
   1. **In scientific language**, provide a description of your proposed research project. If this is a triennial resubmission, include summaries of findings during the previous 3 years of research and how this research will be expanded upon in the next 3 years.

Click or tap here to enter text.

* 1. List the specific aims or objectives for the project:

Click or tap here to enter text.

* 1. Detail all experimental procedures that will involve vertebrate animals:

Click or tap here to enter text.

* 1. Provide an experimental timeline:

Click or tap here to enter text.

* 1. Provide a list of relevant citations for the project:

Click or tap here to enter text.

1. **Description of the Use of Animals**
   1. Where applicable to your study, provide the information requested. Otherwise, type NA.
2. **Pilot Study**

If this is a pilot study, a report of the findings must be submitted to the IACUC and approved prior to commencing full scale experimental protocols.

Click or tap here to enter text.

1. **Breeding**

Describe in detail the need for breeding and the methodology to be used.

Click or tap here to enter text.

1. **Animal identification methods**

Describe in detail ear tagging, tattoos, collars, etc.

Click or tap here to enter text.

1. **Transgenic animals**

Describe in detail the phenotype and genotype of each transgenic strain and cross to be used and why each strain is useful for this study.

Click or tap here to enter text.

1. **Anesthesia**

Briefly describe here and provide complete details in Part 6 of form.

Click or tap here to enter text.

1. **Blood collection**

Describe in detail volume, frequency, collection site, needle size, methodology, etc.

Click or tap here to enter text.

1. **Non-pharmaceutical grade compounds**

List any non-pharmaceutical grade drugs, biologics, or reagents that will be administered to animals and provide a scientific justification for their use and describe in detail methods that will be used to ensure appropriate preparation and administration (*e.g. Avertin*).

Click or tap here to enter text.

1. **Injections (excluding immunizations)**

Describe in detail injection material, injection site, volume, frequency, needle size, etc.

Click or tap here to enter text.

1. **Oral gavage, instillations**

Describe in detail material to be used including volume, frequency, methodology, diluent, etc.

Click or tap here to enter text.

1. **Other routes of drug/compound delivery**

Describe in detail any other routes of drug/compound delivery to animals (e.g. diluted in water bottle).

Click or tap here to enter text.

1. **Devices for prolonged animal restraint**

Describe in detail and provide justification for prolonged animal restraint.

Click or tap here to enter text.

1. **Behavior testing**

Describe in detail any behavior testing that will be conducted on the animals.

Click or tap here to enter text.

1. **Animals singly – housed**

Describe in detail the justification for singly-housing animals for this study.

Click or tap here to enter text.

1. **Animal pain or distress (also see Part 10 of form)**

Describe in detail any anticipated adverse effects on animals.

Click or tap here to enter text.

1. **Detecting pain, distress or failing health**

Describe in detail the physical parameters used to determine pain, distress or failing health (*e.g. ruffled coat, weight loss)* and how animals will be monitored and how often*.*

Click or tap here to enter text.

1. **Non-survival surgery**

Describe in detail non-survival surgery procedures.

Click or tap here to enter text.

1. **Tissues collected after euthanasia**

List tissues to be harvested following euthanasia.

Click or tap here to enter text.

1. **Survival surgery**

Describe briefly and attach **Supplemental Section II** as an e-mail attachment.

Click or tap here to enter text.

1. **Illness, experimental endpoint, induced disease, or pathological condition**

Describe briefly and attach **Supplemental Section III** as an e-mail attachment

Click or tap here to enter text.

1. **Special diets and/or food or water restriction**

Describe briefly and attach **Supplemental Section IV** as an e-mail attachment.

Click or tap here to enter text.

1. **Immunizations**

Describe briefly and attach **Supplemental Section** **V** as an e-mail attachment.

Click or tap here to enter text.

1. **Hazardous Materials (exogenous tumors, cells lines, hybridomas, biohazards, isotopes, chemicals, etc.)**

Describe briefly and attach **Supplemental Section VI** as an e-mail attachment

Click or tap here to enter text.

1. **Animal work conducted at another institution**

Describe in detail how the work at the other institution fits into the project. Include the Animal Welfare Assurance Number for the other institution. Attach as an e-mail attachment the completed proposal form and IACUC approval number from the other institution.

Click or tap here to enter text.

1. **Other procedures or relevant information**

Describe in detail any other procedures or information relevant to this AUP

Click or tap here to enter text.

1. **Euthanasia**

Describe in detail the methods of euthanasia to be used. Explain how animals will be monitored and the signs and symptoms used to determine if an experimental animal should be euthanized before the experimental endpoint.

Click or tap here to enter text.

* 1. Provide an accounting of the experimental course for all animals from their entry into an experiment to the endpoint of the study.

Click or tap here to enter text.

1. **Anesthetics, Medical Treatments and Euthanasia Agents**
2. Specify in the table below any drug you may use to anesthetize, provide medical treatment (analgesics, antibiotics, NSAIDs, etc.) and/or euthanize research animals. Where anesthetic combinations are called for, list each drug separately.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Reason for Use** | **Drug** | **Dose** | **Route** | **Expected Duration**  **of Agent** |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
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*Note: Expired drugs are not approved for use in survival procedures performed on live vertebrate animals. Only medical grade drugs should be used unless they are unavailable, or scientific justification is provided for use of non-medical grade drugs*.

1. Volatile (gas) anesthetic agents.
   * 1. Are you using a volatile anesthetic (e.g. isoflurane)? **Yes**  **No**
     2. How will this be vented (e.g., fume hood) or scavenged (e.g. charcoal canister)? Click or tap here to enter text.
     3. List the location of the venting or scavenging equipment. Click or tap here to enter text.
2. List who will administer the anesthesia or euthanasia agents and the qualifications of each person listed. Anesthesia and post-op recovery forms should be maintained in the surgery room and available to the Attending Veterinarian for review until the experimental protocol is completed.

Click or tap here to enter text.

1. **Animals**

Complete a separate column for each species or rodent strain to be used. If more than 6 species or strains (columns A – F) are to be used, copy this table and insert appropriately. Please include all information that applies to the animals you propose to use in this proposal.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| 1. Species (common name) | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Strain | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Sex | M  Both  F | M  Both  F | M  Both  F |
| 1. Age range | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Number of animals/year | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Animal facility where housed | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Building and room number where experiment will be performed | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **D** | **E** | **F** |
| 1. Species (common name) | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Strain | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Sex | M  Both  F | M  Both  F | M  Both  F |
| 1. Age range | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Number of animals/year | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Animal facility where housed | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Building and room number where experiment will be performed | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

1. **Justification for Animal Use**
2. Describe the number of animals to be used for each experiment in the table below or provide your own table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Experiment or  Procedure** | **Animals/ Group** | **Groups/ Experiment** | **Experiments/ Year** | **Animals/ Year** |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

1. The number of animals used in each project should be the minimum necessary to obtain valid and meaningful results. In the box below:
2. Explain how you arrived at these animal sample sizes.

Click or tap here to enter text.

1. Provide the statistical method used to determine the animal numbers requested (e.g. power analysis).

Click or tap here to enter text.

1. Briefly describe the type of analysis used, input parameters and output.

Click or tap here to enter text.

1. If this is a pilot study, exploratory project, or teaching protocol then provide a brief narrative of how you determined sample size.

Click or tap here to enter text.

1. Search for **alternatives to the use of live animals**.

A literature search for alternatives to the use of live animals must be conducted and you will be requested to provide detailed results.

* + 1. List a minimum of 2 databases consulted (e.g., PubMed, Agricola, Toxline, Biological Abstracts, ALTBIB, University of California Center for Animal Alternatives, Altweb, Animal Welfare Information Center (AWIC), Institute for In Vitro Sciences, European Centre for Validation of Alternative Methods).

i.Click or tap here to enter text.

ii.Click or tap here to enter text.

Additional databases: Click or tap here to enter text.

* + 1. Date of search: Click or tap to enter a date.
    2. Years covered by search:Click or tap here to enter text.
    3. Key words or search strategies used (e.g., animal models, in vitro, pilot, tissues, etc.):

Click or tap here to enter text.

* + 1. Provide a brief summary of your search results:

Click or tap here to enter text.

1. **Experimental Stress and Pain**

Indicate the appropriate pain and distress category(ies) and the number of animals in each. Sums should equal the total animals indicated in Parts 8 and 9 above.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Pain and Distress Category   (based on USDA categories)** | |  | | --- | | **Number of animals per year:**  Year 1 Year 2 Year 3 **TOTALS** | | | | |
| Pain and distress **category** **B** – holding or breeding | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Pain and distress **category** **C** – minimal, transient, or no pain or distress | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Pain and distress **category** **D1**– pain or distress relieved by appropriate measures | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| Pain and distress **category** **E1, 2** - unrelieved pain or  distress | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

***1, 2****For* ***category D or E animals****, the results of a* ***targeted literature*** *search* ***for alternatives to painful and distressful procedures*** *must be provided below and you will be requested to provide detailed search results.*

* + 1. List a minimum of 2 data bases consulted (e.g., PubMed, Agricola, Toxline, Biological Abstracts, etc.).

i. Click or tap here to enter text.

ii. Click or tap here to enter text.

Additional databases:Click or tap here to enter text.

* + 1. Date of search:Click or tap here to enter text.
    2. Years covered by search:Click or tap here to enter text.
    3. Key words or search strategies used (e.g., analgesics, reduce pain, non-invasive, training):

Click or tap here to enter text.

* + 1. Provide a brief summary of your search results:

Click or tap here to enter text.

***2****For* ***category E*** *animals, a scientific justification is required to explain why the use of anesthetics, analgesics, sedatives or tranquilizers during and/or following painful or distressful procedures is contraindicated.*

Click or tap here to enter text.

1. **Euthanasia and Final Disposition of Animals**
2. If animals **will not** be euthanized, check (**XX**) disposition:

Return to colony, flock, or herd

Adoption

Experimental animals may be transferred to another AUP for non-survival procedures. Breeders and  
non-experimental animals may be transferred to another AUP.

Other: Click or tap here to enter text.

1. If animals **will be** euthanized, check (**XX**) method(s) of euthanasia:

Carbon dioxide (CO2)-induced hypoxia followed by a secondary mechanical means of euthanasia

Exsanguination under anesthesia. Specify anesthesia in Part 6, Anesthesia Table.

Perfusion under anesthesia. Specify anesthesia in Part 6, Anesthesia Table.

Injectable agent overdose. Specify anesthesia in Part 6, Anesthesia Table.

Decapitation (if used without prior anesthesia, you must provide scientific justification below\*)

Cervical dislocation (if used without prior anesthesia, you must provide scientific justification below\*)

Other method of euthanasia. Please specify: Click or tap here to enter text.

\*Provide **scientific justification** for decapitation or cervical dislocation without anesthesia here:

Click or tap here to enter text.

1. Who will be responsible for carrying out the final disposition of the animals?

Click or tap here to enter text.

1. Where will the final disposition take place? Click or tap here to enter text.
2. **Unexpected illness or death of experimental animals must be reported to the Attending Veterinarian.**
3. **Use of Drug Enforcement Agency (DEA) Controlled Substances**
4. Will this project involve any DEA controlled substances? **Yes**  **No**
5. If you answered **YES** :
6. The PI or Co-PI will have a valid DEA registration BEFORE use of controlled substances under this AUP (<https://www.deadiversion.usdoj.gov/webforms/>).
7. Provide name on DEA controlled substance registration and registration number.

Click or tap here to enter text.

1. Are all controlled substances to be used listed in Part 6 of this AUP? **Yes**   **No**
2. **Principal Investigator’s Statement**

check [**XX**] EACH box.

**I agree:**

The statements made in this AUP are accurate and complete.

Animal usage in this AUP does not unnecessarily duplicate previous experiments.

To inform the IACUC in writing of any emergent problems. I further agree not to proceed with the project until the problems have been resolved.

Not to make changes to procedures involving animals without submitting a written amendment to the IACUC and will not undertake such changes until the IACUC has reviewed and approved them.

Not to take visitors, including the media, into the animal facility without prior approval by the IACUC.

All photographs and videotapes of research animals and/or personnel will be for documentation of my research and for scientific purposes.

It is my responsibility to ensure that every person assigned to this AUP is appropriately trained.

It is my responsibility to ensure that every person assigned to this AUP has read and understands the AUP and their role in the project.

Work on the procedures described in this AUP will not commence until I receive notice of approval from the IACUC.

To keep a copy of this AUP and all subsequent correspondence.

**Name of Principal Investigator (Faculty Mentor)**: Click or tap here to enter text. **Date**:Click or tap to enter a date.

**Note**: I AM AWARE THAT ELECTRONIC SUBMISSION OF THIS FORM FROM MY COMPUTER CONSTITUTES MY SIGNATURE.