**McPherson College**

**Institutional Review Board Application**

**Animal Research**

**For All Animal Studies:**

Name of Primary Investigator (PI):

PI Status (check one):

McPherson College Faculty/Staff \_\_\_\_\_\_

McPherson College Student \_\_\_\_\_\_\_

Other \_\_\_\_\_

If Other, please explain your affiliation:

Name of Faculty Project Sponsor (if PI is student):

Signature of Faculty Sponsor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Note to faculty sponsors: By providing your signature above, you confirm that you have worked with this student to ensure the ethical conduct of the proposed research, assisted them in preparing the application for IRB approval, and will take an active role in ensuring that the project is conducted in accordance with IRB requirements.*

Title of Project/Proposal:

Is this research being conducted as part of a senior thesis/project requirement? Yes \_\_\_\_ No \_\_\_\_\_

Is this research being conducted for a class (other than senior thesis)? Yes \_\_\_ No \_\_\_\_

If yes, please list course number and title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Funding Agency

*Have you received any financial support for this research? If so, from whom?*

Partner Institutions

*Does this research involve collaboration with researchers (professors, students, etc.) at other colleges or universities? If so, please list. (If this project has gone/is going through the IRB process at another institution, please include that documentation with this application)*

Purpose of Study

*Briefly state the aims and/or research questions that guide your study.*

Animals

*For all animals to be used or observed, complete a separate column in the table below:*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Name** |  |  |  |  |  |  |  |
| **Genus/Species** |  |  |  |  |  |  |  |
| **Strain** |  |  |  |  |  |  |  |
| **Concerned/****Threatened/****Endangered?** |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| **Age Range** |  |  |  |  |  |  |  |
| **Number Required** |  |  |  |  |  |  |  |
| **Where are they being housed?** |  |  |  |  |  |  |  |
| **Location of experimentation** |  |  |  |  |  |  |  |

Justification for Animal Use

*Describe the number of animals to be used for each experiment/procedure in the table below, or provide your own:*

|  |  |
| --- | --- |
| **Procedure** | **Animals/Year** |
|  |  |
|  |  |
|  |  |
|  |  |

*State your rationale for the animal numbers to be used for each procedure. If you used statistics to justify the number of animals to be used, describe the statistical method, input parameters, and output.*

Data Collection Procedures

*Briefly explain the type of data collection procedure(s) you plan to conduct. (For example, biospecimen collection, behavioral experiment, etc.)*

Research Location

*List all sites where data collection will take place.*

*If data will be collected outside of McPherson College, have you obtained permission from those institutions or sites? (If so, please include that documentation with this application)*

Will hazardous substances or materials be used in this study?

*If yes, explain – including the use of any personal protective equipment required by the material SDS.*

Data Storage

*Please detail the format in which your data will be stored, and the process for storage (biospecimens kept in labeled containers in a secure location; research notebook kept in a locked drawer; password protection for online data; etc.) Who, besides the PI, will have access to the data?*

Expected Project Completion

*When do you expect to finished collecting data? To be finished analyzing data? (Note: IRB approval is granted for a 12 month period. If data is still being collected one year after approval, the PI should submit an application for Continuing Review)*

Long-Term Data Storage

*What will happen to the data after the project is complete? Who will have access?*

Potential Benefits of Research

*Please describe the potential benefits of your research, including benefits to society.*

Qualifications to Conduct Research

*Please describe the qualifications of the PI and/or other research team members to conduct this research. (For example, methods training)*

Conflicts of Interest

*Are there any possible perceived conflicts of interest in this research project?*

**For Care or Use of Invertebrate Species Only:**

*Check all that apply:*

[ ]  Holding of cephalopods for greater than 12 hours

[ ]  Species are listed as endangered, threatened, or of special concern at the Federal or local levels

[ ]  Species are considered poisonous, venomous, or a threat to human or public health

[ ]  Non-native species that requires permission from the State or local authority to possess or handle

**For Use of Vertebrate Eggs Only:**

*What term in gestation will embryos be acquired and terminated?*

**For Any Other Use of Vertebrate Animals:**

*Where applicable to your study, provide the information requested. Otherwise, enter N/A.*

1. Breeding

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

1. Animal capture and restraint

*Describe all capture and restraint methods, including trapping methods, frequency of checking traps, length of time animals will be held in traps, and if food/water/provisions for inclement weather are provided. Describe potential non-target species that may be trapped.*

1. Animal immobilization agents

*Describe immobilization agents used and describe precautions taken to protect both the animal and the investigator.*

1. Animal identification method

*Ear tagging, tattoos, collars, etc.*

1. Transgenic animals

*Describe the phenotype/genotype of any necessary transgenic strains or crosses to be used, and why each strain is necessary.*

1. Non-invasive manipulations

*Describe manipulations such as weighing/measuring and the type and duration of any necessary restraints.*

1. Anesthesia

*Briefly describe here and provide complete details in the Anesthesia/Medical Treatments/Euthanasia table.*

1. Blood/tissue collection

*Describe volume, frequency, collection site, needle size, protective equipment, methodology, etc.*

1. Non-pharmaceutical grade compounds

*List any non-pharmaceutical grade drugs, biologics, or reagents that will be administered and provide a justification for their use. Describe in detail methods that will be used to ensure appropriate preparation and administration.*

1. Injections

*Describe injection material, method, site, volume, frequency, needle size, etc.*

1. Oral gavage, instillations

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

1. Other routes of drug/compound delivery

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

1. Behavioral testing

*Describe any behavioral testing that will be conducted on animals.*

1. Animal pain or distress

*Describe any anticipated adverse effects on animals and also complete the Animal Pain or Distress Table*

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). How and how often will animals be monitored during capture, handling, containment, and post-release (if applicable)?*

1. Non-survival surgery

*Describe in detail any non-survival surgery procedures to be performed on animals.*

1. Survival surgery

*Describe briefly here and also complete the Survival Surgery portion of the form.*

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

*Describe briefly and also complete the Disease or Pathological Condition portion of the form.*

1. Special diets and/or food/water restriction

*Describe briefly and also complete the Dietary Manipulation portion of the form.*

1. Tissues collected after euthanasia

*List tissues to be harvested following euthanasia.*

1. Euthanasia

*Describe in detail methods of euthanasia to be used, as well as complete the Anesthesia/Medical Treatments/Euthanasia portion of the form. Explain how animals will be monitored and the signs and symptoms to be used to determine if an experimental animal should be euthanized for any reason.*

Anesthetics, Medical Treatments, and Euthanasia Agents

*Specify in the table 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** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

*List who will administer the anesthesia/euthanasia agents and the qualifications of each person listed.*

Animal Pain or Distress

*Indicate the appropriate pain and distress category/categories and the number of animals in each.*

|  |  |
| --- | --- |
| **Pain and Distress Category** | **# of animals** |
| Pain and distress **category B** – holding or breeding |  |
| Pain and distress **category C** – minimal, transient, or no pain/distress |  |
| Pain and distress **category D –** pain or distress relieved by appropriate measures |  |
| Pain and distress **category E** – unrelieved pain or distress |  |

*For category D or E animals, you must provide evidence of a targeted literature search for alternatives to painful and distressful procedures. Provide a brief summary of your search parameters and results below:*

*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.*

Euthanasia and Final Disposition of Animals

*If animals will not be euthanized, check the form(s) of final disposition to be used:*

[ ]  Return to wild, colony, flock, or herd

[ ]  Adoption

[ ]  Other (please explain):

*If animals will be euthanized, check the method(s) of euthanasia to be used:*

[ ]  Carbon dioxide-induced hypoxia followed by a secondary mechanical means of euthanasia

[ ]  Exsanguination under anesthesia (Specify in the Anesthesia/Medical Treatments/Euthanasia table)

[ ]  Perfusion under anesthesia (Specify in the Anesthesia/Medical Treatments/Euthanasia table)

[ ]  Injectable agent overdose (Specify in the Anesthesia/Medical Treatments/Euthanasia table)

[ ]  Decapitation\*

[ ]  Cervical dislocation\*

[ ]  Other method, please specify:

*\*If decapitation or cervical dislocation are to be performed without prior anesthesia, a scientific justification is required:*

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

Survival Surgery

*Describe the survival surgery in detail:*

*Will you be performing surgery on animals that have undergone previous surgery, either here or elsewhere, or will they undergo multiple surgeries as a part of this protocol? If so, provide scientific justification for major surgeries on a given animal.*

*Describe the post-operative care plan for animals that will undergo survival surgery. Include the criteria that will be used to determine if the animal is experiencing pain, distress, or discomfort, as well as any signs or status that will result in euthanasia.*

*Where will the surgical procedures take place? Who will perform them?*

*Ensure that any analgesics and/or antibiotics to be used during or after the surgery are listed in the Anesthetics/Medical Treatments/Euthanasia table.*

Disease or Pathological Condition

*Describe in detail the disease or condition that currently exists or will be induced in the animal. If the disease or condition will cause pain or distress, ensure that these animals are listed in the Animal Pain or Distress table under the appropriate category, and that any methods to minimize or eliminate pain/distress are listed in the Anesthetics/Medical Treatments/Euthanasia table. If pain or distress will not be relieved (category E), provide scientific justification in the space provided under the table.*

*If you propose that animals reach a moribund state or death from the disease and/or pathological condition (“death as an endpoint”), you must provide scientific justification as to why it is not possible to euthanize the animal at an earlier point in the study.*

Dietary Manipulation

*If dietary alteration is to take place, specify what the alteration will be and what effect, if any, it will have on animal health and well-being.*

*If food/water is to be restricted, please answer the following questions:*

1. What is the scientific rationale or necessity for the food/water restriction?
2. If the restriction is being used to motivate animals in behavioral studies, explain why preferred foods/liquids could not be used as positive reinforcement instead of restriction.
3. What is the food/water restriction protocol? Describe the method and time course.
4. How will food/water-deprived animals be monitored?
5. Under what circumstances will an animal be removed from the food/water restriction protocol?

When you submit this application, please also provide the IRB Committee with the following documents:

* Research Proposal
* Copy of experiment protocol(s)
* Letter of support from outside agency (if applicable)
* IRB status from partner institutions (if applicable)
* External permits for possession of restricted species (if applicable)