**Institutional Animal Care and Use Protocol**

Federal animal welfare regulations require that the Institutional Animal Care and Use Committee (IACUC) must review and approve all activities involving the use of vertebrate animals prior to initiation of such use. Once approved by the IACUC, any change(s) to the following protocol must be submitted in a written amendment for review and approval of the IACUC prior to implementation of the change(s).

**Protocol #** Click or tap here to enter text.

1. **Title of Project:** Click or tap here to enter text.
2. **Principal Investigator:**

Name: Click or tap here to enter text. Title: Click or tap here to enter text.

Program: Click or tap here to enter text.

Phone: Click or tap here to enter text. Emergency Phone: Click or tap here to enter text.

Email: Click or tap here to enter text. Campus Mail: Click or tap here to enter text.

**Secondary Contact Person Involved in Study:**

Name: Click or tap here to enter text. Email: Click or tap here to enter text.

Phone: Click or tap here to enter text. Emergency Phone: Click or tap here to enter text.

1. **Project Type:**

[ ] New Protocol[ ] Addendum (Previous Protocol #:Click or tap here to enter text.)

[ ] Annual Continuing Review[ ] *de novo* Review (3 year) **Use Appendix F**

**If addendum:** [ ] Personnel Change[ ] Minor Revision[ ] Major Revision **Use Appendix F**

1. **Project Length:**

Number of years project is expected to continue: [ ] 1 year [ ] 2 years [ ] 3 years

1. **Purpose:**

This protocol is for: [ ] Instruction [ ] Research [ ] Other

***If instruction*:**

Course name and number: Click or tap here to enter text.

Frequency course is offered: Click or tap here to enter text.

***If research*:**

How will this project be funded? Click or tap here to enter text.

If grant, this project is: [ ] Pending[ ] Funded – Federal[ ] Funded – Other

Grant title and/or contract number (if available): Click or tap here to enter text.

1. **Scientific Peer Review:**

Has this project already received an independent scientific peer-review? [ ] Yes [ ] No

If yes, by whom? Click or tap here to enter text.

1. **Animal Location:**

Where will animals be housed? [ ] UHCL Animal Research Facility [ ] Field Study[ ] Other[[1]](#footnote-1): Click or tap here to enter text.

Where will animal use take place? Click or tap here to enter text.

Will animals be kept over 12 hours outside of housing area? [ ] Yes [ ] No

If yes, give location and reason: Click or tap here to enter text.

1. **Lay Summary:**

Describe the goals­ and intended benefits of the project in terms that can be understood by a ***non-scientist***. Include the species and the number of animals to be used. This description should be no more than 350 words. Avoid the use of technical jargon and abbreviations. Click or tap here to enter text.

1. **Animal Use:**

Provide the specifications for all of the animals requested for use in this protocol. List each strain separately.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species (Common Name)** | **Breed/Strain** | **Sex** | **Vendor/Source** | **Number Requested** |
|  |  |  |  | **Year 1** | **Year 2** | **Year 3** | **Total** |
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**Field Studies:**

[ ] Not applicable (this is a population field study and species studied is unknown)

If a population field study, check all vertebrate animals that are planned to be studied:

[ ] Fish [ ] Amphibians [ ] Reptiles[ ]  Birds[ ] Mammals [ ] Cetaceans

1. **Personnel:**

List all personnel, including student research assistants, having contact with animals, the species proposed and the years of experience the individual has with the species. List the specific roles the individual will have in the project and the date of last training received.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name, Title** | **Species and Years of Experience** | **Specific Role in Project[[2]](#footnote-2)** | **CITI Training Date** | **Occupational Health Training Date** |
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[ ] Student visitors[[3]](#footnote-3) will/may participate in the protocol and will be supervised by**:** Click or tap here to enter text.

1. **Literature Search:**

Using at least two different databases, perform literature searches to determine alternatives to procedures that may cause more than a momentary or slight pain or distress to the animals, and unnecessary duplication of research.

|  |  |  |  |
| --- | --- | --- | --- |
| **Search Database (e.g., Agricola)** | **Date of Search (mm/dd/yyyy)** | **Years Covered (e.g., 1980 – 2013)** | **Keywords or Search Strategy Used in Search** |
|  |  |  |  |
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1. **Rationale and Purpose of Animal Use** *(state the overall rationale, purpose and significance of this project):* Click or tap here to enter text.
2. **Justification for Animal Use** *(explain why non-animal models, such as isolated organ preparation, cell or tissue culture or computer simulation cannot be used):* Click or tap here to enter text.

**14. Justification for Using this Particular Species** *(explain why the species and/or strain(s) requested is/are the most appropriate for this research. Statements that the planned species is/are traditionally used for the proposed research are not sufficient)***:**  Click or tap here to enter text.

1. **Alternatives to Potentially Distressful Procedures:**

Describe considerations of alternatives to procedures that may cause more than a momentary or slight pain or distress to the animal, and determination that alternatives were not available.

[ ] Not Applicable (animals listed are only in USDA Category B or C)

1. **Assurance of Non-Duplication:**

[ ] This experiment does not duplicate previous experiments unnecessarily. Otherwise, provide justification of the necessity of experiments proposed.Click or tap here to enter text.

1. **Justification of Animal Numbers:**

Provide a detailed justification for the numbers of animals requested. Include number of animals per group and total number of animals. If power analysis was utilized, give appropriate details. If the determination was based on prior experience, please cite reference. If a population study in the field, give justification of sampling method. Click or tap here to enter text.

1. **Pain, Discomfort and Distress:**

USDA Pain/Distress Classification *(check the category that indicates the highest level of pain/distress the animals will experience during the course of these studies. Refer to the Instructions, Section 10 for help.)*

[ ] Category B [ ] Category C[ ] Category D [ ] Category E

1. If Category E is selected, provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. Click or tap here to enter text.
2. **What will happen with the animals at the end of their roles in the project?**
3. Check all that apply and provide explanation, if necessary.

[ ]  Transferred to another protocol (if possible)

[ ] Placed for adoption

[ ] Released into wild (field study)

[ ] Euthanasia: Click or tap here to enter text.

**Rodents:**

[ ] CO2 followed by secondary method (e.g., bilateral thoracotomy, cervical dislocation)

State secondary method: Click or tap here to enter text.

[ ] Injectable agent *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ]  Inhalant agent *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ]  Cervical Dislocation (rodents <200 gm) with anesthesia *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ] Decapitation/Guillotine with anesthesia *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ]  Exsanguination with anesthesia *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ]  Anesthetic + Perfusion *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

 Type of perfusion: Click or tap here to enter text.

**Amphibians, Fish, Reptiles:**

[ ] CO2

[ ]  Injectable agent *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ] External or topical agent *(Specify Agent, Route, Dose)*: Click or tap here to enter text.

[ ]  Inhalant agent: Click or tap here to enter text.

[ ] Decapitation and pithing

[ ]  Stunning and decapitation/pithing

[ ] Other: Click or tap here to enter text.

1. Explanation/Justification: Click or tap here to enter text.
2. **Additional Forms Attached:**

Check all that apply and attach appropriate forms. If a form is not needed, delete the page from the protocol.

[ ] Appendix A: Laboratory Research or Classroom

[ ] Appendix B: Surgical Procedures

[ ]  Appendix C: Wild Animal and/or Field Research

[ ]  Appendix D: Non-Pharmaceutical Grade Drugs

[ ]  Appendix E: Safety

[ ]  Appendix F: Renewal/Addendum

[ ]  Appendix G: Additional Information/Standard Operating Procedures

1. **Check the following, indicating your acknowledgement of the statements:**

[ ]  I certify that the use of all animals involved in this project will be carried out within the provisions of the Animal Welfare Act, the Guide for Care and Use of Laboratory Animals, the PHS Policy on Humane Care and Use of Animals, the University of Houston Policy on Care and Use of Animals and related animal welfare rules and regulations as issued by state and/or federal agencies.

[ ]  I am aware that the Institutional Animal Care and Use Committee (IACUC) may make periodic inspections of all labs in which animals are used. I will permit unannounced inspections and observations of my animals and surgical techniques by a UH veterinarian or other representative of IACUC.

[ ]  I am aware that the IACUC is empowered to stop any objectionable procedure or project. Where procedures have caused severe distress to an animal that cannot be alleviated, UH staff veterinarians are authorized to humanely euthanize the animal. I understand that every attempt will be made to contact me before any action is taken.

[ ]  I understand that I cannot start this project until I have received approval from the IACUC.

[ ]  I understand that I will make written notification to the IACUC of any proposed changes to the project. I understand that I will not be able to implement such changes until approval is received from the IACUC.

[ ]  I certify that the above statements are true and that I will make written notifications to the IACUC of any changes in the proposed project prior to proceeding with any animal experiment.

**Signature of Principal Investigator or Instructor Date**

[ ]  Submitted Electronically: Instead of signature, protocol is emailed from the PI’s UHCL email address

**Appendix A: Laboratory Research or Classroom**

***Delete page if not needed.***

1. **Special Husbandry Requirements:**
2. Will any of the following exceptions to routine animal care be required? Selections must be justified.

[ ]  Wire bottom cages [ ]  Individual housing [ ]  Special diet

[ ]  Special bedding [ ]  Special water [ ]  Food/water restriction

[ ]  Other (explain): Click or tap here to enter text.

1. Justification: Click or tap here to enter text.
2. **Description of Experimental Design and Animal Procedures:**

Provide a clear and concise sequential description of the proposed use of animals. This description should allow the IACUC to understand the course of an animal from its arrival through the experiment to the endpoint of the study, and final disposition. A flowchart or timeline of experimental activity is encouraged. Refer to the Instructions, Section A2 for information that should be included. Details of surgical procedures must be provided in Appendix B. Click or tap here to enter text.

**3. Animal Well-Being and Minimizing Pain and Distress**

**a.** What is the impact of the proposed experiments on the animals’ well-being? Describe the procedures designed to assure that discomfort and pain to animals will be limited to that which is unavoidable for the conduct of this project.

[ ]  Not Applicable (animals listed are only in USDA Category B or C)

1. The following list gives standard criteria for indications of pain or stress in animals. If study requires a change to these criteria, please provide a justification below:

*Non-specific signs of illness to monitor for (more than one or two criteria could require experimental termination after consult with a veterinarian):*

**Mammals**

|  |  |  |
| --- | --- | --- |
| Weight loss (10%) | Lethargy | Kyphosis (hunched posture) |
| Unkempt appearance | Isolation from cage mates | Slow/lame/limping |
| Dermatitis  | Uterine or rectal prolapsed |  |

**Aquatic**

|  |  |  |
| --- | --- | --- |
| Decreased/abnormal activity  | Change in ventilation rate |  |

*Serious conditions requiring more immediate experimental termination*

**Mammals**

|  |  |  |
| --- | --- | --- |
| Dyspnea (difficulty breathing) | Non-responsiveness  | Severe fight wounds |
| Weight loss (>15%) | Dehydration | Infection |
| Ataxia/inability to access food/water | Ulcerated tumors | Tumors >1.5 cm (mouse) or 2.5 cm (rat) |
| Dermatitis >10% body area | Abdominal distention |  |

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

**Appendix B: Surgical Procedures**

***Delete page if not needed.***

**Description of Surgical Procedures.** (To be completed only if surgery is involved.)

For each of the following, refer to Instructions, Appendix B for information that should be included in each section.

1. Please check one of the following that describes this surgery:

[ ]  Non-survival [ ]  Minor Survival Surgery [ ]  Major Survival Surgery

1. Describe location where surgery will be performed and methods used to minimize contamination of the animal. Click or tap here to enter text.

**3.** Use the following table to list the method of sedation or anesthesia to be used for surgery.

|  |  |  |  |
| --- | --- | --- | --- |
| **Agent** | **Route** | **Dose** | **Frequency** |
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1. Describe methods used to determine the animal’s level of anesthesia. Click or tap here to enter text.
2. Describe preoperative preparation and surgical procedure(s) in detail. Click or tap here to enter text.
3. Are multiple survival surgeries required? [ ]  Yes [ ]  No

If so, provide the timeframe between surgeries, describe any differences in surgical procedures, and provide a scientific justification for conducting multiple survival surgeries. Click or tap here to enter text.

1. Describe post-operative care of animals. Include the use of pain-relieving drugs (agent(s), dosages, route(s) of administration, frequency), monitoring of animal’s normal recovery from anesthesia and wound healing, and provision of supportive care. How long will animals be expected to survive post-surgery? Click or tap here to enter text.

[ ]  Not applicable (this is a non-survival surgery)

**Appendix C: Wild Animal and/or Field Research**

***Delete page if not needed.***

1. How will the animals be captured? Click or tap here to enter text.
2. Will any procedures be conducted with the animals while captured (e.g., tagging, marking, banding, weighing, blood drawn, etc.)? Are these procedures expected to cause any stress or discomfort to animals and, if so, how will this be minimized? (Make sure to include needle sizes, delivery techniques, collections sites, methodology and protective equipment.) Click or tap here to enter text.
3. Will animals be maintained for any length of time, where will they be maintained (field and/or animal facility) and for how long? Click or tap here to enter text.
4. Will animals be transported, and if so, how will stress be minimized? Click or tap here to enter text.
5. How will the housing and nutritional needs of animals that are captured and detained for a research project be met? Click or tap here to enter text.
6. What criteria will be used in determining whether the animals can be released after they have been captured (even if the animals are part of a capture and release project, and they will not be maintained for any length of time)? If the animal will not be released, give the plan for disposition/disposal of animals. Click or tap here to enter text.
7. How will pain and/or distress be monitored and treated in these animals? Based on prior experience, how many animals are expected to be injured during capture and handling? Click or tap here to enter text.
8. What permits are required to conduct this project and have they been obtained? Click or tap here to enter text.

**Appendix D: Non-Pharmaceutical Grade Drugs**

***Delete page if not needed.***

This page is not needed if drugs listed in the protocol are available pre-made as a pharmaceutical grade from a reputable supplier.

1. If applicable, I will use IACUC approved formulations of

[ ]  Sodium Pentobarbital [ ]  Inactin (Thiopental) [ ]  MS-222 [ ]  Urethane

For formulations not listed above, please answer the following:

1. Why can a pharmaceutical grade compound not be used in this protocol? Cost savings or lack of DEA license are not appropriate justifications. Click or tap here to enter text.
2. For each non-pharmaceutical grade compound used in the protocol, please describe how the following will be addressed: 1) what injection route and volume will be used; 2) what diluents or vehicles will be used; 3) how will the drug be filtered; 4) how will it be stored and in what quantity; 5) how will sterility of drug be maintained; and 6) how will pH be measured and justify use if pH is outside 4.5 and 8.0? Click or tap here to enter text.

**Appendix E: Safety**

***Delete page if not needed.***

**Hazardous Working Environment**

1. Will this project have the potential to create an unsafe workplace for personnel (beyond common risks associated with working in a laboratory environment)? [ ]  Yes [ ]  No
2. Will personnel be exposed to any possible zoonosis from wild or captive animals? [ ]  Yes [ ]  No
3. If yes to either, how will these personnel safety concerns be addressed? Click or tap here to enter text.

**Use of Hazardous Agents or Biological Materials**

1. Will the animals be exposed to any of the following agents? Check all that apply.

[ ]  Chemical hazards [ ]  Biohazards [ ]  Recombinant DNA

[ ]  Biological materials [ ]  Radioisotopes or Radiation Generating Machine

[ ]  Other (explain): Click or tap here to enter text.

1. For the items checked, list the materials and related information, below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name, Type or Description** | **Frequency** | **Dose** | **Total Amount Given or Exposed to** | **Exposure Route** | **Side Effects to Animal** |
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1. Provide additional information or justification, if needed. Click or tap here to enter text.

**Appendix F: Renewal/Addendum**

***Delete page if not needed.***

1. **Please check all that apply:** [ ]  Annual Renewal [ ]  Addendum [ ]  de novo Review (3 year)

[ ]  No Changes in Protocol [ ]  Personnel Change [ ]  Minor Revision [ ]  Major Revision

1. **Current Status:** [ ]  Active [ ]  Temporarily Inactive [ ]  Never Started

If the study is temporarily inactive, or has never started, please explain why: Click or tap here to enter text.

1. **Personnel Change**

Please list personnel added or removed from the protocol. Additionally, the personnel list along with experience, role and training should be updated on the original protocol to reflect current project personnel.

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| --- | --- |
| **Add** | **Remove** |
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1. **Methodological Changes**

Has there been, or do you anticipate in the next 12 months, any change in your protocol? [ ]  Yes [ ]  No

This includes change of species, change in numbers of animals used, change of techniques, change of anesthesia or analgesia, change in drugs or test chemicals being used, changes in euthanasia methods, etc. **Briefly** summarize changes below. In addition, edit the original protocol submission and indicate any changes by underlining new text. Click or tap here to enter text.

1. **Problems**

Did any of the animals used have an unanticipated adverse reaction(s)? [ ]  Yes [ ]  No

If yes, please describe: Click or tap here to enter text.

1. **Progress**

Describe the progress and/or any significant findings relative to this project. Projects that have not realized any progress should provide an explanation. Please include citations of abstracts, publications, etc. (full text is not needed). Click or tap here to enter text.

**Appendix G: Additional Information/Standard Operating Procedures**

***Delete page if not needed.***

**Use this page to add any additional information the committee may need for evaluation of this protocol. This can include standard operating procedures (SOPs) utilized.** Click or tap here to enter text.

1. A standard operating procedure (SOP) to ensure proper welfare and housing of animals must be attached to this protocol in Appendix G. This does not apply to animals housed at other AALAC accredited animal facilities (e.g., UH or NASA). [↑](#footnote-ref-1)
2. Examples include supervision, care/handling, anesthesia, surgery, monitoring, post-procedural care, euthanasia in the stated species. [↑](#footnote-ref-2)
3. Student visitors are defined as students working with animals no more than one semester and are not allowed to handle or experiment with animals without direct supervision. [↑](#footnote-ref-3)