***INSTRUCTIONS FOR SUBMITTING THE HENDRIX COLLEGE***

***“ANIMAL USE PROTOCOL”***

Revised August 8, 2018

All protocols must be typed and submitted as a Word document on the **current** protocol.

At the time of submission please make sure to:

* **Sign the Assurance Page (IACUC Protocol item VII)**
* **Attach a copy of the grant/proposal (if applicable)**
* **Attach copies of training certifications for all personnel**

**Protocol Submission Deadline:**

**The IACUC will only review proposals and amendments with major procedural revisions turned in during Weeks 1-13 of each semester**.  So, if you intend to do research over a winter or summer break, be proactive about submitting research proposals early. Protocols must be submitted to the IACUC Chair no less than 2 weeks (10 business days) prior to the start date.

**It typically takes 5-10 business days for an initial review to be conducted,** at which point changes or additional information may be requested and a re-review may need to be conducted. It is therefore imperative that you request review in plenty of time to go through this process before the start date of your research.

However, we ***strongly encourage*** new submissions, particularly those that involve pain and distress or surgical procedures much sooner than that to allow sufficient time for veterinary review and revisions.

**Training:**

Proper training is required of ALL protocol participants. Training requirements can be found at the IACUC webpage and in ***PERSONNEL*** section of this protocol form. The IACUC will verify training as part of the protocol review process. For questions on training, contact the IACUC chair.

|  |  |
| --- | --- |
| IACUC Use Only | **IACUC Protocol #:** |
| Date Received: | Date Approved: |

**ANIMAL USE PROTOCOL**

**HENDRIX COLLEGE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

**(revised August 2018)**

**Upon approval, this protocol will become a public record so please follow instructions carefully.**

**PROJECT/PROGRAM TITLE**:

**SPECIES REQUESTED**:

**I.** **PERSONNEL INFORMATION**

A. A single member of the college faculty and/or Principal Investigator (PI) is considered the responsible individual.

|  |  |  |  |
| --- | --- | --- | --- |
| NAME: |  | TITLE: |  |
| Department: |  | Office location: |  |
| Phone #: |  | E-Mail: |  |

B. Additional contact, if any, for IACUC business

|  |  |  |  |
| --- | --- | --- | --- |
| NAME: |  | TITLE: |  |
| Department: |  | Office location: |  |
| Phone #: |  | E-Mail: |  |

C. Protocol Type

Non-funded research

Teaching

Course Number and Title:

**For non-funded and teaching proposals, please indicate the sources of funding that will be used to provide food and bedding for the animals in your care. Then have your department chair sign off on this to confirm.**

Source(s) of funding:

Department Chair Please Print Date

Department Chair Signature

Grant / Contract (Also submit grant proposal with this protocol)

|  |  |  |  |
| --- | --- | --- | --- |
| Granting Agency: |  | Deadline: |  |
| Proposal Title: |  | | |
| Co-Investigator(s): |  | | |

1. Protocol Status:

New

Continuation—Previous Protocol #:

**For Continuation projects, does your planned animal use follow the original proposal's plans for:**

Number of animals

No**.**

Yes.

Species used

No**.**

Yes.

Procedures

No**.**

Yes.

If you answered **yes to any of these questions**, you must complete this form in its entirety, with modifications highlighted.

If you answered **no to all questions**, you must submit:

* updated assurance and personnel pages
* a copy of your previously approved protocol, amendments or other supporting documents
* a statement about why your protocol needs to be extended

**II. Project Description and Program Requirements**

The Institutional Animal Care and Use Committee (IACUC) is composed of both active animal users and lay persons. Regardless of background, each member has a vote, so it is particularly important that the language of the application be understood by all. This applies to all sections of the application, but it is especially important that the goals and justifications of the proposed research be spelled out in the clearest possible terms. NOTE: Upon approval, this protocol will become a public record, so please do not disclose proprietary information.

1. Please provide a brief (300 words or less) synopsis in **LAYMEN TERMS** of proposed research.

B. PLANNED USE OF ANIMALS. Begin with a clear **statement of purpose** and briefly provide **background** information with **in-text citations** referring to previous work (especially if this is a renewal protocol). Include a clear description of the **experimental design** for all animal experiments planned and explain **why** the experiments must be performed. It is critical that for each procedure you provide a detailed sequence of events that effectively describes what happens to the animals from acquisition to euthanasia (if applicable). Flow charts, diagrams or tables are strongly recommended for complicated experimental designs. Please state how the research is expected to benefit the human community, the animal community, and/or society as a whole. Include a **references list** at the end. **Details regarding surgical procedures, drug treatments, and field techniques are not necessary, as they will be addressed later in the form.**

1. RATIONALE FOR INVOLVING ANIMALS AND THE APPROPRIATENESS OF THE **SPECIES AND NUMBER** USED. Keeping in mind the principles of the “3 R’s” (Refinement, Reduction, and Replacement), answer the following:
   1. Why must live vertebrates be used in this study?
   2. Why are you using the requested species rather than other species?
   3. What is the rationale supporting the numbers of animals proposed? Typically, a power analysis should be performed to support the proposed sample sizes. If power analyses are not appropriate (i.e., you won’t need to conduct inferential statistical analyses), then provide references that set a precedent for the number of animals requested.
   4. What refinements, if any, have been made to reduce the number of animals used and the potential detrimental effects on the study animals?
2. **EMERGENCY CONTACT**
3. Who should be contacted in case of an animal emergency? **Note: This information will be redacted if this protocol is requested as a public document.**

Name:

Office Phone #:

Home Phone #:

Cell Phone #:

**V. DUPLICATION AND ALTERNATIVES**

The Animal Welfare Act requires that you document your justifications with data from **two** or more sources. **One source must be a set of searches of a relevant database: name the database searched, the keyword and keyword combinations searched, the date the search was performed and the date range searched. The second source can be a set of searches of a second relevant database, or consultation with a laboratory animal science veterinarian, or courses/meetings/consultations with qualified personnel.** Sufficient documentation, such as the consultant's name and qualifications and the date and content of the consult, should be provided to the IACUC to demonstrate the expert's knowledge of the availability of alternatives in the specific field of study. Examples of appropriate databases to search include PUBMED and Web of Science. [Note:USDA Animal Welfare Information Center provides an in depth listing of database resources on their website at <http://awic.nal.usda.gov/literature-searching-and-databases>]

1. Provide the following details for the most recent literature search used to explore for **duplicative research**. (The literature search documents that the research will not unnecessarily duplicate previous research). **Teaching protocols do not need to conduct this search.**

Date that search was conducted (Must be within 60 days of the IACUC review date):

Database(s) used:

Publication years covered by the search:

Keywords and keyword combinations used:

1. Provide the following details for the most recent literature search used to explore for **alternatives to animal use** and **alternatives to painful procedures.**  Alternatives should be considered for any aspect of the protocol that may cause more than momentary or slight pain or distress to the animal. Alternatives to be considered include those that would: 1) refine the procedure to minimize discomfort that the animal(s) may experience; 2) reduce the number of animals used overall; or 3) replace animals with non-animal alternatives (e.g., computer models or tissue culture). **All protocols (research and teaching) MUST conduct this search.**

Date that search was conducted (Must be within 60 days of the IACUC review date):

Database(s) used:

Publication years covered by the search:

Keywords and key word combinations used:

1. Results of search for alternatives: Please comment on the application(s) of any identified alternatives, including how these alternatives may be or may not be incorporated to modify a procedure to either lessen or eliminate potential pain and distress. You must include sufficient information for the IACUC to determine that a reasonable, good faith effort was made to determine the availability of alternatives. If the search identified any alternative methods (ones that could be used to accomplish the goals of the animal use proposal), you must clearly explain and justify why this alternative cannot be used.
2. Describe any other procedures (e.g., participation in meetings, review of journals) that are used to explore and evaluate alternatives:
3. Does this research replicate previous work?

No. Proceed to section **VI.**

Yes. Explain why the replication is necessary:

Not applicable. This is a teaching protocol.

**VI**. **CATEGORY OF PAIN OR DISTRESS**

The USDA Regulations define a “painful or distressful procedure” as “any procedure that would reasonably be expected to cause more than slight or momentary pain or distress in a human being to which that procedure was applied; that is, pain in excess of that caused by injections or other minor procedures.” Using the table below, list all species of live vertebrate animals to be used in the proposed study and indicate the number of animals to be used under the appropriate USDA category. For an animal undergoing multiple procedures, list the animal under the highest level of pain expected for that animal.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Number per USDA Category\* | | | | Total number of animals requested |
| B | C | D | E |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Name the veterinarian consulted in planning projects that cause more than momentary, minor pain.

\*USDA PAIN CATEGORIES:

Classification B: Includes animals that are used solely for breeding (e.g., to produce experimental animals or to maintain experimental lines).

Classification C: Includes the use of animals in procedures involving no, momentary, or slight pain or distress (e.g., non-invasive parenteral drug delivery, peripheral blood collection, euthanasia, short-term manual or chemical restraint, toe clipping).

Classification D: Includes the use of animals used in procedures that could cause pain or distress but appropriate anesthetics, analgesics, and/or tranquilizing drugs or other methods for relieving pain or distress are used (e.g., surgery, perfusion, administration of irritating chemicals, humane endpoint euthanasia).

Classification E: Includes the use of animals in procedures that have the potential to involve pain or distress that will **not** be relieved with anesthetics, analgesics, tranquilizer drugs, or other method for relieving pain or distress (e.g., negative conditioning, unrelieved post-surgical pain, death without euthanasia).

**VII. ASSURANCE**:

The information contained herein is accurate to the best of my knowledge. I have carefully compared the proposed work with the current state of knowledge in this field by reviewing the literature and it is my professional opinion that the proposed work meets high standards of scientific merit. If the study involves pain and distress to the animal, whether or not it is relieved by anesthetics or analgesics, I have (1) reviewed the literature related to this work and have found no significant studies which could make this protocol unnecessarily duplicative, and (2) considered alternatives to animal use and found none available, as described above. The use of alternatives to animal models has been considered and found to be unacceptable at this time. Procedures involving animals will be carried out humanely and all procedures will be performed by or under the direction of trained or experienced persons. Any revisions to animal care and use in this project will be promptly forwarded to the Institutional Animal Care and Use Committee for review. Revised protocols will not be used until Committee clearance is received.

The principal investigator, by signing below, and the IACUC recognize that other medications may be given to the animals for veterinary care purposes. This includes the humane euthanasia of animals in uncontrollable pain or distress as determined by the Attending Veterinarian. However, the veterinarians will make all efforts to contact and discuss the case with the Principal Investigator or designee prior to making a unilateral decision.

Principal Investigator – Please Print Date

Principal Investigator Signature

NOTE: Principal investigators must submit a current curriculum vitae or biosketch that reflects their most recent pertinent experience**.**

**PERSONNEL**

Hendrix College requires that all personnel engaged in animal research or teaching be qualified through training and experience in order to conduct the work humanely.

* The IACUC requires the [NIH training course: Guidelines for ANIMAL USERS](https://oacutraining.od.nih.gov/public_menu.aspx). This training must be completed every 3 years for all active animal users.
* The IACUC also requires completion of the **Hendrix Health Questionnaire and Release forms** and the **Occupational Health and Safety Info** documents from the [IACUC website](https://www.hendrix.edu/academicaffairs/default.aspx?id=86652).
* For instructions on how to complete the training, please see the IACUC Animal Users Training guide, also available on the [IACUC website](https://www.hendrix.edu/academicaffairs/default.aspx?id=86652).

**Personnel**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Title | ID | Role in Protocol (What procedures will each person be doing on live animals?) | Species with which individual will have direct contact (e.g., “none”, “all”, or list species) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |

**Documentation of NIH Training and other documents for all personnel.**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | NIH Training Completion (mm/yy) | IACUC  USE ONLY Tetanus/  (mm/yy) | IACUC  USE ONLY Campus Health Approval/  (mm/yy) |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |

For each individual, including the PI, describe the individual’s years of experience with all listed species and procedures they will be conducting under this protocol. For procedures for which they are not yet trained, but will likely be trained to do during the activity period of this protocol, provide a description of who will provide such training:

**DETAILED USE OF ANIMALS**

## **This section must be completed for each species used.**

**Common Name:**

**Scientific Name:**

1. **ANIMAL INFORMATION**
2. Is this a threatened or endangered species?

No. Proceed to section I. B.

Yes. Describe why this work must be done on this species and why the project will not have a significant negative impact on the species:

B. Maximum # of animals to be used over the 3-year life of the protocol:

|  |
| --- |
|  |

C. Sex: Male and Female Age or Weight Range:

1. Source (e.g., commercial, in-house breeding, captured from wild):
2. Please LIST housing rooms **and** all labs or other rooms where youintend to keep or use live animals in connection with the animal use covered under this protocol.  This list is for IACUC information to assure each location is inspected semi-annually.  **Listing rooms here does not assure approval of this space for use**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Building | Room # | Max Length of Stay | Method of Transport | Purpose |
|  |  |  |  |  |

1. Describe, in detail, how the animals in your research or teaching will be cared for. Where and how will they be housed? How often will their room conditions and food and water be monitored? How frequently will their cages be cleaned?
2. If this protocol will use DEA-controlled substances, please list their locations (building and room number). The IACUC is required to inspect these semi-annually.

**II.** **MAJOR CATEGORIES OF USE**

1. Will animals be immunized for antibody production?

No. Proceed to section II. B.

Yes. Complete the following table.

Injection:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Volume of injectate | Adjuvant | Route | Min. Frequency | Max. # of injections |
|  |  |  |  |  |

Collection: If terminal, check here  Otherwise complete the following.

|  |  |  |  |
| --- | --- | --- | --- |
| Route | Max. Volume | Min. Frequency | Max. # of collections |
|  |  |  |  |

1. Will tissues, blood, or other body fluids be harvested (other than for antibody production)?

No. Proceed to section II. C.

Yes. Will tissues, blood, or other body fluids be collected post-mortem only?

Yes. Proceed to section II.C.

No. **Complete Appendix 1: Antemortem Specimen Collection**.

1. Will animals be food restricted (calorically or specific constituents)?

No. Proceed to section II. D.

Yes. [note: restriction paradigms exceeding a single 24-hr period must be approved by the Attending Veterinarian in advance.]

1. What are the restriction parameters? Provide scientific justification

2. How will you monitor for negative effects of food restriction (include information on how you will account for animal growth)?

1. Will animals be water restricted?

No. Proceed to section II. E.

Yes. [note: restriction paradigms exceeding a single 24-hr period must be approved by the Attending Veterinarian in advance.]

1. What are the restriction parameters? Provide scientific justification

2. How will you monitor for negative effects of water restriction (include information on how you will account for animal growth)?

1. Will animals be exposed to trauma, injury, burning, freezing, electric shock, UV radiation, magnetic fields, lasers, loud noise, or other physical agents that might cause distress?

No. Proceed to section II. F.

Yes. List and justify each exposure.

Provide scientific justification:

1. Will animals be exposed to environmental stress (e.g., non-natural temperature exposure, prolonged physical restraint, forced exercise)?

No. Proceed to section II. G.

Yes. List and scientifically justify each exposure.

G. Will animals undergo surgery?

No. Proceed to section II. H.

Yes. **Complete Appendix 2: Surgical Procedures.**

H. Will any animals have a device (e.g., thermocouple, cannula, electrode) that extends chronically through the skin?

No. Proceed to section II. I.

Yes. Describe wound management measures to minimize chances of infection around the device where it penetrates the skin:

1. Will animals need any special husbandry considerations, including but not limited to single housing individuals of social species (e.g., rodents) or altering standard cage type, cage change frequencies, or housing temperature?

No. Proceed to section II. J.

Yes. Describe special procedures and provide scientific justification:

1. Will any animals need to be individually identified?

No. Proceed to section II.K.

Yes. Describe the marking technique to be used, why that technique was chosen, how it will be performed, and on what age range of animals?

1. Will any work be conducted in the field (this includes field experiments or the capture of animals to be used in laboratory experiments)?

No. Proceed to section III.

Yes. **Complete Appendix 3: Field Research**.

**III. CHEMICALS AND OTHER POTENTIAL HAZARDS**

*(If you answer yes to any of the following questions, this information may be forwarded to another oversight unit to aid you in assuring safe practices. Approval by these units may be required prior to using any of these materials)*

1. Will drugs or chemicals be used in animals?

No. Proceed to section III. B.

Yes. For each drug or chemical, list the agent, dose, route, purpose, and grade in the table below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Agent** | **Dose** | **Route** | **Purpose** | **Pharmaceutical grade (Y/N)?** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

1. For each drug or chemical that is not pharmaceutical grade, indicate whether no pharmaceutical grade equivalent exists or provide scientific justification for using the non-pharmaceutical grade product.

1. Does this project involve transgenic animals?

No. Proceed to section III. C.

Yes. List the strains, any special care needs, and any expected clinical signs that are associated with the strain

There are 3 transgenic strains used in this protocol: Ngn1, Dlk1, and Tattler-4. All of these lines are maintained as heterozygotes and there are no expected clinical signs associated with the heterozygous genotype.

1. Does this project involve the use of biohazardous agents in animals (microorganisms, microbial toxins, recombinant DNA)?

No. Proceed to section III. D.

Yes. List the agent, as well as concentration, dose, and route if applicable.

|  |  |  |  |
| --- | --- | --- | --- |
| **Agent** | **Concentration** | **Dose** | **Route** |
|
|  |  |  |  |
|  |  |  |  |

### Describe and provide documentation of appropriate training and safety practices for all personnel involved.

1. Describe any additional hazardous equipment or materials as well as any non-routine means (e.g., vaccinations, PPE, training, SOPs) used to assure human and animal safety from hazards.

**IV. DETRIMENTAL SEQUELAE**

1. Will animals possibly experience clinical signs (e.g., inducement of disease state or malnutrition) intentionally or as a possible side effect of the study?

No. Proceed to section V.

Yes. Complete the following.

|  |  |  |
| --- | --- | --- |
| Possible Clinical Effect | Probability of Occurrence | Treatment |
|  |  |  |

**V. END POINT CRITERIA**

1. What clinical signs will be used as a basis for removal of an animal from the study?

**VI**. **EUTHANASIA**

Will animals be euthanized as part of your experimental design?

No. Complete the following, only to be used in the event of extreme illness or injury, and it is determined that it would be more humane for an animal to be euthanized.

Yes. Complete the following.

A. Chemical/Gas Methods used as the primary means of euthanasia, if any:

|  |  |  |  |
| --- | --- | --- | --- |
| **Agent** | **Dose** | **Route** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |

Describe other procedural details here:

If using a chemical method for euthanasia, what secondary physical means (e.g., thoracotomy, decapitation, cervical dislocation) will be used to ensure euthanasia? ***The IACUC now requires a secondary method to be used.***

B. Physical Methods used as the primary means of euthanasia, if any:

Cervical dislocation (mice, immature rats)\*

Decapitation\*

Exsanguination under anesthesia

For methods that are marked with an \*, provide a scientific justification if the method is being conducted on an awake animal (provide references if possible):

**APPENDIX 1: ANTEMORTEM SPECIMEN COLLECTION**

**Will antemortem blood, tissue or bodily fluid be collected?**

No. Proceed to Appendix 2.

Yes. Complete the following.

1. **BLOOD COLLECTION**
2. Will blood be collected?

No. Proceed to section II.

Yes. Complete the following.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Site | Volume (ml) | % BW | Max. # of collections | Min. Interval |
|  |  |  |  |  |

B. Will anesthetics, sedatives, or other drugs be used during blood collection?

No. Proceed to section I. C.

Yes. Complete the following.

|  |  |  |  |
| --- | --- | --- | --- |
| Drug | Dose | Route | Purpose |
|  |  |  |  |

C. Describe the methods used to draw the blood including physical restraint, if any.

D. Provide scientific justification for blood collection and justification for the frequency of it.

1. **OTHER TISSUE/BODY FLUID COLLECTION**
2. Will other tissues or body fluids be collected prior to death?

No. Appendix 1 is completed.

Yes. Complete the following. Surgical procedures should be described more fully in Appendix 2.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tissue/Fluid | Site and Method | Amt | # of collections | Min Interval |
|  |  |  |  |  |

B. Will anesthetics, sedatives, or other drugs be used during tissue/body fluid collection?

No. Proceed to section II. C.

Yes. Complete the following.

|  |  |  |  |
| --- | --- | --- | --- |
| Drug | Dose | Route | Purpose |
|  |  |  |  |

C. Describe the methods used to collect the samples, including physical restraint, if any.

D. Provide scientific justification for the sample collection(s) and justification for the frequency of it

**APPENDIX 2: SURGICAL PROCEDURES**

**Will surgical procedures be performed?**

No. Proceed to Appendix 3.

Yes. Complete the following.

1. **GENERAL INFORMATION**
2. Species

1. Surgical Procedure(s)

1. Room/location of surgery

1. **SURGICAL PROCEDURE**:

Survival  Non-survival

1. Describe each surgical procedure (e.g., approach, tissue manipulation, closure):

1. Will pre-anesthetic drugs be used?

No. Proceed to section II. C.

Yes. Complete the following.

|  |  |  |  |
| --- | --- | --- | --- |
| **Drug & concentration (e.g., mg/ml)** | **Dose (e.g., mg/kg) & maximum volume to be given** | **Route** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |

C. Anesthetic regimen:

|  |  |  |  |
| --- | --- | --- | --- |
| **Drug & concentration (e.g., mg/ml)** | **Dose (e.g., mg/kg) & maximum volume to be given** | **Route** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |

1. Describe measures used to indicate surgical plane of anesthesia to keep animals from getting both too light and/or too deep:

1. Additional pharmacological agents used during surgery (include analgesics, supportive medications, and research drugs):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Drug and concentration** | **Dose & max volume** | **Route** | **Frequency** | **Purpose** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

1. Describe the steps taken to maintain an aseptic surgery:

1. What is the maximum duration of each surgery?

1. Will any animals recover from surgery?

No. This involves terminal, or non-survival, procedures; Appendix 2 is complete.

Yes. Complete Section III.

**III.**  **POST-SURGICAL CARE**

1. Is there a potential for post-operative pain or distress?

No. Proceed to section C.

Yes.

1. Will analgesics be used?

(For analgesic options, consult the Attending Veterinarian)

No. Provide a scientific justification:

Yes. Complete the following.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Drug & concentration** | **Dose & max. volume** | **Route** | **Frequency** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |  |

Who will administer these drugs?

C. Post-operative routine care:

i. What drugs will be administered, if any (e.g., antibiotics, fluids)?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Drug & concentration** | **Dose & max. volume** | **Route** | **Frequency** | **Purpose** | **Is this a DEA controlled substance (Y/N)?** |
|  |  |  |  |  |  |

ii. What other post-operative support and monitoring will be provided, how often, for how long, and by whom?

D. Is post-operative intensive care required?

No. Proceed to section E.

Yes.

What special care is required?

Who will provide special care and what are their qualifications?

For how long will special care be needed?

E. Will animals undergo multiple survival surgical procedures?

No. Appendix 2 is complete.

Yes. Describe which surgeries, the sequence (timeline), and frequency. Provide scientific justification:

**APPENDIX 3: FIELD RESEARCH**

**Will field research be conducted?**

No. This application is complete.

Yes. Complete the following. PI’s are encouraged to consult *The Guide,* in addition to other relevant guidelines, including the American Society of Mammalogists’ [*Guidelines of the American Society of Mammalogists for the use of wild mammals in research*](http://www.mammalsociety.org/uploads/Sikes%20et%20al%202011.pdf)*,* The Ornithological Council’s [*Guidelines to the Use of Wild Birds in Research*](https://www.aaalac.org/accreditation/RefResources/SS_WildBirds.pdf)*,* the American Fisheries Society’s [*Guidelines for the Use of Fishes*](https://fisheries.org/docs/wp/Guidelines-for-Use-of-Fishes.pdf), and the American Society of Ichthyologists and Herpetologists’ [*Guidelines for Use of Live Amphibians and Reptiles in Field and Laboratory Research*](https://www.norecopa.no/3r-guide/guidelines-for-use-of-live-amphibians-and-reptiles-in-field-and-laboratory-research)

**I. General Information**

1. Species
2. Common name(s):
3. Scientific name(s):
4. Where will the field work be conducted?

1. If the work will be conducted on private land, has permission been obtained from property owners?
2. If the work will be conducted on public land, identify the government agency that owns/manages the land. Indicate whether or not a permit or authorization is required. If a permit or authorization is required, describe below.

*[NOTE: it is the responsibility of the PI to (1) identify all permits and licenses that are required to conduct the proposed work, (2) have those documents issued prior to beginning the work, (3) abide by all limitations and restrictions outlined in those documents, and (4) renew the documents as needed throughout the course of the work]*

|  |  |  |
| --- | --- | --- |
| Permit Type or other Form or Written Authorization | Permit Number, if any | Expiration Date (if application or renewal application pending, date submitted) |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**II. Capture**

1. Describe capture methods. Identify equipment to be used, planned duration of trapping/restraint, monitoring protocol/schedule for traps, expected disposition of trapped animals, and any precautions taken to ensure the welfare of animals while they are in the trap.

1. What is the maximum duration that an animal will be in a trap?

1. Is there a chance of incidental capture of non-target individuals (same or different species)?

No. Proceed to item II.D.

Yes. Complete the following

1. List the most likely animals to be incidentally captured and estimate their numbers.

1. What is done to minimize incidental capture?

1. What will be done with incidentally captured individuals?

1. How will you monitor pain/distress of captured animals, and how will signs of pain or distress be dealt with?

1. What is the expected mortality rate for both target and incidental captures?

1. Will physical restraint be use when capturing animals?

No. Proceed to item III.

Yes. Complete the following.

Describe the method(s) to be used, the planned duration of restraint, equipment to be used, including dimensions of equipment if applicable, and observation schedule during confinement. Provide detailed justification and protocol if animals are to be physically restrained for longer than 1 hour at a time.

1. **Holding**
2. Will animals be held in captivity beyond processing at the site of capture?

No. Proceed to item IV.

Yes. Complete the following.

* 1. Will the animals be held overnight?

No.

Yes.

* 1. What is the maximum duration of housing?

1. Where will the animals be housed?

A location/site that has already been approved by the IACUC.

Give protocol title and approval number.   
     

A location/site that has not yet been approved by the IACUC.

Describe the housing (e.g., the holding facilities you intend to use [specifying cage size/type], where the housing will be located, the equipment that you intend to use, feeding and watering strategies, plans for maintaining suitable environmental conditions [including appropriate temperatures], enclosure cleaning, and animal release procedures). A photograph, drawing, or illustration of the holding facility may help to clarify your description.

1. Describe observations planned for monitoring the health of captured animals.

1. Will food items or quantities other than the animal’s natural diets be used?

No. Proceed to item III E.

Yes. Complete the following

Describe the food items and quantities, purpose for dietary change, planned duration, anticipated nutritional deficit/adverse effect, weight monitoring of animal(s), amount of weight gain or loss that will be allowed, and monitoring protocol/schedule for effects. If planned diet for animal’s whose natural diet is live prey. For these cases. How will the adequacy of diets other than live prey be assessed?

1. **Transport**
2. Will animals be transported away from the field site where collected?

No. Proceed to item V.

Yes. Complete the following.

1. To where will the animals be transported, and what is the maximum duration of transport?

1. Describe the transportation (e.g., vehicle, confinement, constraint, environmental control).

1. **Research Protocol**
2. Describe the observation/research procedure, including frequency and duration of each observational session, number of observers, distance between observer and animals, the degree to which human-animal contact will occur, and type of equipment to be used.
3. Will your work involve the use of significant physical restraint or noxious stimuli?

No. Proceed to item VI.

Yes. Complete the following.

Describe the use of physical restraint and noxious stimuli, including the duration of exposure. Provide a scientific justification for the use of restraint or noxious stimuli.

1. **Animal Disposition**
2. Will animals be released back into nature?

No. Proceed to item VI.B.

Yes.  *[NOTE: release must be at the site of capture unless experimentally justified here]*

What criteria are used to determine whether animals will be released?

B. How will any carcasses in the field (as a result of intended euthanasia or unexpected mortality) be disposed of?

1. **Safety**
2. Describe the training to inform field workers of risks (e.g., zoonotic, environmental, physical).

1. Describe any safety precautions (e.g., vaccinations, protective equipment) used during the field work.