All necessary documents must be submitted to [iacuc@georgiaaquarium.org](mailto:iacuc@georgiaaquarium.org) as Word documents once completed. Hard copies, scanned hard copies, and faxed copies of applications will not be accepted. Section G needs to be completed by the Primary Investigator and each person working on the project that will engage in the capture, restraint, or handling or animals and/or handling of samples, unless they have a qualified exemption.

**SECTION A. ADMINISTRATIVE**

**A1. PERSONNEL INFORMATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Protocol Title: |  | | | | | | | | | |  | | | | | | | | | | | Principal Investigator: | | |  | Institution/Department: | | | |  | | |  | | | | | | | | | | | Office Phone: |  | | | | Cell Phone: |  | | | | |  | | | | | | | | | | | E-mail Address: | |  | | | | | Funding Source: | | Choose an item. | |  | | | | | | | | | | |

**A2. EMERGENCY CONTACTS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | a. In case the animal(s) is/are observed in distress, the following person(s) should be contacted: | | | | | | | | | | |  | | | | | | | | | | | Primary Contact: | | |  | | | | | | | |  |  | | | |  |  | | | | | Office Phone: |  | | | | Cell Phone: |  | | | | |  | | | | | | | | | | | Alternative Contact: | | |  | | | | | | | |  |  | | | |  | |  | | | | Office Phone: |  | | | | Cell Phone: | |  | | | |  | |  | |  | | | |  | | b. Do you have any special instructions concerning animal care practices or prohibitions in emergency situations involving animals under this protocol?  No. Veterinarians should use professional judgement.  Yes. As described in Section L Special Instructions for Emergency Animal Care. | | | | | | | | | | |

**A3. STUDY TYPE**

|  |
| --- |
| This is an observation study. No animal holding, management, or control will occur under this   protocol.  This is a study involving animals for the purpose of scientific investigation or medical/veterinary research. |

**A4. RENEWAL PROTOCOLS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | a. Does this application renew an existing protocol? No Yes | | Protocol ID: |  | |  | | | | | | |  | If yes, briefly summarize findings: | | | | | | |  |  | | | |  |  | | | | |  | Specify numbers of animals that were used: | | | | |  |  | | | |  |  | | | | |  | Describe any adverse events: | | | | |  |  | | | |  |  | | | | |

**A5. ROLE DELINEATION**

A Personnel Qualification Form (**Section G**) must also be completed for every member of the research group listed on this protocol who will be handling animals, except for GAI personnel when participation does not exceed routine animal handling, training, or treatment. The form should illustrate skills or training necessary, or the roles specified below (e.g., surgeon, anesthetist, phlebotomist, breeder, provides husbandry, observer, etc.). A **Liability Waiver** must be completed for all other personnel listed on this protocol who do not complete a Section G.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Title or Affiliation | Animal Handling? | Role in Project |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |

### Expand this section to add another Section A4. Role Delineation table.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Title or Affiliation | Animal Handling? | Role in Project |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |
|  |  | Yes No |  |

### 

## A6. COLLABORATING (INCLUDES SUB-CONTRACTING) INSTITUTIONS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a. Will any facilities other than Georgia Aquarium or its Animal Care Facility be used for animal use activities (e.g., housing, experimentation, observation, or procedures)?   |  |  |  |  | | --- | --- | --- | --- | | This is entirely a field-based operation (field study)\*. | | | | |  | | | | | No. All work will be performed at GAI's facilities. | | | | |  | |  | | | Yes. Work will be performed at another facility (domestic and/or international). | | | | |  |  | | | | | Please specify: |  | | |  |  | | | \*Georgia Aquarium defines a “field study” as any study conducted on free-living wild animals in their natural habitat, which does not involve invasive procedure, and which does not harm or materially alter behavior of the animals under study. “Natural habitat” does not include a zoo/aquarium, petting zoo, fish hatchery/farm, or other animal exhibit or man-made housing, regardless of how similar to the animals’ natural environment. | | | |

**A7. SUPPLEMENTAL SECTIONS INCLUDED IN THIS APPLICATION**

(Sections you check off have corresponding sections that need to be expanded and completed at the end of this form)

[Section H: Hazardous Agent Use](#H)

[Section I: Survival Surgical Procedures](#I)

[Section J: Non-Surgical Procedures](#J)

[Section K: Field Research/Field Capture/ Field Studies](#K)

[Section L: Special Instructions for Emergency Animal Care](#L)

[Section M: Specimen or Data Request](#M)

[Section N: Animal Welfare Regulations Exemption](#N)

[Section O: Aquatics, Amphibians, & Reptiles](#O)

**SECTION B: ANIMAL USE JUSTIFICATION**

**B1. PURPOSE & SCIENTIFIC BENEFIT**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | a. Briefly describe, in less than 250 words and in lay terms, the purpose of this animal study and the potential scientific benefit of the proposed study with respect to human or animal health, the advancement of knowledge, or the good of society. Please spell out acronyms at first use. | | |  |  | |  | | | b. Summarize the primary objective(s) of this study in bullet-point form. | | |  |  | |  | | | c. Briefly describe, in less than 250 words, the methods, testing, and experimental design that will be used to conduct this study. | | |  |  | |  | | |

**B2. LITERATURE SEARCH FOR ALTERNATIVES TO PAINFUL PROCEDURES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | a. Does this study include activities, procedures, or states of welfare that have the potential for producing pain   (Examples: procedures, spontaneous disease, genotype induced disease, tumor development)? | | | | | | | | No. There is no potential for pain. ([Skip to B3](#B3)) | | | | Yes. There is potential for pain. | | | |  | | | |  | | | | If yes, what are the potentially painful conditions in this proposal? (Examples: surgery, toxins, ionizing radiation, implants, tumor development, adjuvants, sepsis, infectious challenge) | | | | | | |  | | |  | | | |  | | | |  | | | | b. A literature search for alternatives to the potentially painful conditions (listed above) is required. Please provide the following details: | | | | | | |  | Date (day, month, year) literature search was performed: | | | |  | |  | Years Covered By The Search (From - To): | | | |  | |  | Search Strategy / Keywords used in the search: | | | |  | |  | | | |  | | | | c. Databases Searched (Minimum of **2** databases required. Check all databases searched): | | | | | | | | AGRICOLA Data Base  AltBib  PubMed/MEDLINE (is considered one database)  Web of Science  Animal Welfare Information Center (AWIC)  Altweb | | | | SCOPUS  ToxNet  Biosis  Zoological Record  Other(s): | | | |  | | | |  | | | | d. Did the literature search reveal less painful alternatives to the potentially painful conditions that are proposed? | | | | | | | | No alternatives were found. | | | | | | | | Yes, but they are not suitable alternatives for the following reason(s): | | | | | | | |  | | Potentially painful conditions in this proposal (match to keywords used) | | | | |  | |  | | | | |  | | | |  | | | |  | | Write a BRIEF explanation why the alternatives found to these potentially painful conditions were not acceptable alternatives. | | | | |  | |  | | | | |  | | | |  | | | |

**B3. LOCATION OF ANIMAL HEALTH/WELL-BEING RECORDS (surgical, diet, dietary restrictions)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | a. Records documenting observation of animal health and well-being:  Will be kept with the animals (next to or near the housing location). | | | | Will be kept at the following location: |  | |  |  | | | | Will not be kept by the research staff. State reasons: |  |   b. The justification for using live vertebrate animals rather than alternative means of achieving the research goal is: (check all that apply)  There is not enough information known about the processes being studied to design nonliving models.  The complexity of the processes being studied cannot be duplicated or modeled in simpler systems. |

**B4. SPECIES JUSTIFICATION** (address each species individually)

|  |  |
| --- | --- |
| Species | This species was selected for the study because of the following attributes (select all that apply): |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |

### Expand this section to add an additional B4. Species Justification table

|  |  |
| --- | --- |
| Species | This species was selected for the study because of the following attributes (select all that apply): |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |

### Expand this section to add an additional B4. Species Justification table

|  |  |
| --- | --- |
| Species | This species was selected for the study because of the following attributes (select all that apply): |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |
|  | A large database exists allowing comparisons with previous data.  The anatomy or physiology is uniquely suited to the study proposed.  This is the lowest species on the phylogenetic scale that is suitable for the proposed study.  Other: |

## B5. ANIMAL NUMBERS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| List the number of animals required for over the life of this 3-year protocol and the pain category for each species. Note: If this is a renewal protocol and there are animals remaining on the expiring protocol, the number of animals remaining on the expiring protocol (and transferring to the new protocol) must be included in the number of animals requested under the new protocol. Animals on the expiring protocol will be transferred to the new protocol upon activation of the new protocol.  Please use [this guide](https://www.esf.edu/animalcare/documents/USDApainLevels.pdf) to help understand USDA's pain level categories associated with research on animals.   |  |  |  |  | | --- | --- | --- | --- | | Species | Age/Weight Range | Number of Animals for 3 Year Protocol | USDA Pain Category | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  | Choose an item. | |  |  |  |  | |

### Expand this section to add an additional B5. Animal Numbers table.

|  |  |  |  |
| --- | --- | --- | --- |
| Species | Age/Weight Range | Number of Animals for 3 Year Protocol | USDA Pain Category |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
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|  |  |  | Choose an item. |
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|  |  |  | Choose an item. |
|  |  |  | Choose an item. |
|  |  |  | Choose an item. |

## B6. OVERVIEW OF EXPERIMENTAL DESIGN AND ANIMAL USE TIMELINES

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| |  |  |  | | --- | --- | --- | | a. Provide summary of the scientific overview including the goals/rationale. If this is a 3-year renewal, give a brief synopsis of study progress to date (research aims completed, numbers of animals used) before you discuss your current proposed work. | | | |  |  | |  |  | | b. Provide a summary of the overall experimental design. The description should define animal groups, group sizes, anticipated or established mortality for these procedures, and how each group will be tested or used. This section should *not* include a detailed review of surgery or other activities but should include the use of any unique drugs or practices. | | |  |  | |  |  | | c. Describe the anticipated sequence of experimental events (timeline) such as breeding, preparation of animals, surgery, testing procedures, collection of tissues, euthanasia, etc. | | |  |  | |  |  | |

**B7. NUMBER JUSTIFICATION** (address each species individually)

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| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | |

### Expand this section to add an additional B7. Number Justification table

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### Expand this section to add an additional B7. Number Justification table

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### Expand this section to add an additional B7. Number Justification table

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### Expand this section to add an additional B7. Number Justification table

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| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | | Species: |  | | | | | | | | | | | | | | | The number of animals requested for this protocol is based on the following (select all that apply):  The estimated minimum number necessary to achieve the goals of the study in the absence of a statistical estimate.  The number necessary to obtain sufficient tissue or other material for testing or analysis.  The number required to provide sufficient technical training or practice for the number of trainees expected.  The expected or established mortality associated with this procedure. | | | | | | | | | | | | | | | | Other. Please explain: | | |  | | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | A statistical estimate of the number required to achieve statistical significance **(Power Analysis Required)**. | | | | | | | | | | | | | | | |  | | | |  | | |  | | | |  | | | | | Description of Statistical Analysis: | |  | | | Power Level: |  | | Tests Used: | |  | | Probability Level: |  | |  | | | |  | | |  | | | |  | | | | |

## B8. ANIMAL IDENTIFICATION (applies to all animals)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Animal identification is not necessary for this protocol: | | | | |  | Please explain why animal identification is not necessary: | | | |  |  | | | |  | | |  | | Animal identification is necessary for this protocol.  Specify identification method(s) to be employed. Check all that apply: | | | | | Ear tagging with a unique numbered tag  Tattoo  Temporary dye or Ink marking  Ear punch or notch | | |  |  | | --- | --- | | Microchip  PIT tags  Acoustic transmitters | | | Other. Please identify: |  | | | |

**B9. USE OF ANIMALS FOR PERSONNEL TRAINING**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Is personnel training or teaching the primary purpose of this protocol?  No, this is not a training or teaching protocol.  No, this is not a training or teaching protocol. However, I may use small numbers of the approved   experimental animals to train my research staff the procedures approved on this protocol.  Yes, this is a training or teaching protocol. Animals will be used for personnel training or teaching (students   or others): | | | |  | | | |  | Describe how the use of animals enhances the didactic components of the training or teaching exercise: | | |  |  | |  |  | |

**B10. TEST SUBSTANCES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a. Name all test substance(s), including the vehicle/control, which will be administered to animals:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Substance | Class | List All Species Administered To | Dose/ Volume/ Route  (e.g., ug/gm bwt) | Interval  (e.g., 1x,EOD,ev 3rd day) | Duration  (e.g., 5 weeks) | |  | Choose an item. |  |  |  |  | |  | Choose an item. |  |  |  |  | |  | Choose an item. |  |  |  |  | |  | Choose an item. |  |  |  |  | |  | Choose an item. |  |  |  |  | |  | Choose an item. |  |  |  |  |   **Class:** (A) infectious agent, (B) primary human explant, uncharacterized human blood, lymph or specimen, (C) recombinant DNA, (D) radioisotope, (E) carcinogen, (F) hazardous or toxic chemical, (G) biological toxin, (H) cell line, (I) Adjuvant, (J) Antigenic Substance, (K) Pharmacologic Agent, or (L) Other  Please add any additional test substances (a) and purpose explanations (b) in the body of the e-mail during your application submission to the IACUC.  b. In the same order in which substances to be administered are listed above, very briefly indicate below the purpose of the substance administration in the relation to the hypothesis, and the expected effect to the animal(s).  None   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **Purpose and Expected Effect of Substance Administration to the Animal** | | | | | 1 |  | | | | | 2 |  | | | | | 3 |  | | | | | 4 |  | | | | | 5 |  | | | | | 6 |  | | | | | c. Is there a possibility that any of the test substances(s) could cause more than momentary or slight pain,   discomfort, or distress to the animals, either immediately following substance administration, or as a   consequence long after administering the test substance(s)? No Yes: | | | | | | **List those substances in the space below.**  For each substance describe the consequences of administration that have a potential to cause animal discomfort, pain, or distress, and how discomfort, pain or distress will be anticipated, minimized or alleviated . If discomfort, pain, or distress will not be alleviated, then justify how treatments interfere with the procedures or the interpretation of results.  (Note: Log entries describing health concerns or complications that develop as a consequence of substance administration to nonrodent mammals, and their treatment and resolution, or when animals are euthanized must be kept by the PI in the animal facility on forms. | | | |  | | | | | | |  | | | | |

**B11. GRADES OF CHEMICALS OR SUBSTANCES ADMINISTERED TO ANIMALS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | a. Will this protocol include the use of non-pharmaceutical grade substances, medications, test compounds, vehicles, diluents?  No. No chemicals or substances will be administered to the animals.  No. All chemicals and substances used in animals will be pharmaceutical grade.  Yes. Some or all chemicals and substances used in animals will be non-pharmaceutical grade. Complete the table below:   |  |  | | --- | --- | | Non-pharmaceutical chemical or substance | Scientifically justify why each non-pharmaceutical grade chemical  or substance is necessary. | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |   Please add any additional non-pharmaceutical chemical or substances and scientific justifications in the body of the e-mail during your application submission to the IACUC.  Describe the source, purity, formulation, storage, and method of sterilization prior to administering to animals. Supporting documents (e.g., data sheet) should be included. | | |  |  | |  | |   **Note 1:** USDA requires the use of pharmaceutical-grade substances (medications, diluents, and extenders) whenever they are available, even in acute procedures.  **Note 2:** Non-pharmaceutical grade chemical compounds may be used in animals only after specific review and approval by the IACUC for reasons such as scientific necessity or non-availability of an acceptable veterinary or human pharmaceutical-grade product. Cost savings are not a justification for using nonpharmaceutical-grade compounds (exceptions for extraordinary costs of substances may be considered).  **Note 3:** The PI should submit additional information of the grade, purity, sterility, pH, pyrogenicity, osmolality, stability, site and route of administration, formulation, compatibility, and pharmacokinetics of the chemical or substance to be administered, as well as animal welfare and scientific issues relating to its use when determining whether to approve the use of non-pharmaceutical grade products. The inclusion of this information will assist the Committee's review of your request for the use of non-pharmaceutical grade material in animals. The IACUC will consider this request as part of the protocol review. |

**B12. PHOTOGRAPHY/VIDEOS OF ANIMALS OR TISSUES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | a. Will images/video be taken of live animals for scientific purposes/publication? No Yes | | | | | | | | | |  | | |  | | | | | | |  | Are animals (tissues) GAI-owned or free-ranging? Free ranging GAI-owned.   Please complete the following ↓ | | | | | | |  | | | | |  | | | | |  | | Provide the name(s) of the photographer(s) and description of how images/videos will be secured/protected from unauthorized use: | | | | |  | |  | | | | | | |  | |  | | | | |  | | Provide a description and purpose of the photographs/videos, including species (if not all listed in the protocol), and whether the photos are whole body, histologic/fresh/fixed tissues, or radiologic (e.g., CT, PET, MRI): | | | | |  | |  | | | | | | |  | | | |  | | | | |

**SECTION C: HOUSING & PROCEDURE ARRANGEMENTS**

**C1. GAI-MANAGED, OR INVESTIGATOR-MANAGED HOUSING**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | No animal housing will occur at GAI.  GAI collection animals will be used for this study: | | | |  | Please specify the housing location to be used at GAI: | |  |  | |  |  | |

**C2. SPECIAL HUSBANDRY REQUIREMENTS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | a. Is approval requested for any special husbandry needs? Note: that special husbandry needs that are approved must be implemented through direct arrangements with GAI Zoo Ops Management.  No. There are no special husbandry requirements.  Yes. Please provide a description of the special husbandry needs below ↓ | | | | |  | Food restriction (other than for routine presurgical preparation): | | | |  | |  | |  |  | | | |  | Water restriction: | | | |  | |  | |  |  | | | |  | Special caging: | | | |  | |  | |  |  | | | |  | Special environment: | | | |  | |  | |  |  | | | |  | Other restrictions or special needs: | | | |  | |  | |  |  | | | |

**SECTION D: SPECIAL CONCERNS FOR ANIMAL USE**

**D1. EXEMPTION FROM ANIMAL WELFARE STANDARDS**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | a. Are there experimental or scientific reasons why any animal or research process on this protocol should be   exempted from animal welfare regulations (AWRs)? No Yes. Explain below ↓ | | | |  | Explain (include the specific code numbers for each AWRs that needs to be deviated from): | |  |  | |  |  | |

**D2. CONTROLLED SUBSTANCE USE**

|  |
| --- |
| a. Will controlled substances be used for anesthesia, restraint, animal management, agent testing, or euthanasia?  No. Controlled substances will not be used.  Yes. Controlled substances will be used. I DO have the registrations at present.  Yes. Controlled substances will be used, but I will not obtain a controlled substance registration. GAI will   provide necessary controlled substances for sedation, anesthesia, analgesia, and euthanasia, and   provision of controlled substances will continue for the duration of this protocol.  Yes. Controlled substances will be used. I DO NOT have the registrations at present, but I am/will apply for   controlled substance registration. |

**D3. PHYSICAL RESTRAINT**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | a. Will the proposed research require the use of physical restraint (other than short-term hand-held) of awake animals? | | | No. Physical restraint will not be used. ([Skip to D4](#D4))  Yes, but physical restraint of awake animals will not exceed short-term hand restraint. ([Skip to D4](#D4))  Yes. Physical restraint must be used. | | |  | **If physical restraint will be used, I agree with the following:**  Restraint devices shall not be considered a normal method of housing.  Restraint devices shall not be used as convenience in handling or managing animals.  Alternatives to physical restraint have been considered and cannot meet the requirements of my study.  The restraint period shall be the minimum required to accomplish my research objectives.  Animals shall be acclimated to the devices and personnel prior to actual research use.  Animals that fail to adapt shall be removed from the study.  Animals in restraint shall be observed at appropriate intervals, as described below.  Veterinary care shall be provided if lesions or illnesses associated with restraint are observed.  A clear explanation of the purpose of the restraint and its duration shall be provided to the personnel involved. | |  | D3a.1. Briefly describe or identify the restraint device: | |  |  | | |  | | | |  | D3a.2. Briefly describe the procedure for restraining the animal: | | |  |  | | |  | | | |  | D3a.3. State the duration of the restraint period: | | |  |  | | |  | | | |  | D3a.4. Describe the plan for observation of the animal during the period of restraint: | | |  |  | | |  | | | |  | D3a.5. Describe the plan for animal care and support during the period of restraint to ensure comfort and well-being: | | |  |  | | |  | | | |  | D3a.6. Describe the procedure for conditioning the animal to the restraint device and procedure so as to minimize potential animal distress during restraint: | | |  |  | | |  | | | |

**D4. WITHHOLDING OF ANESTHETICS OR ANALGESICS**

|  |
| --- |
| a. Does this protocol involve procedures that are expected to cause pain, but for which pain-relieving anesthetics and/or analgesics will be provided?  No. There are no painful procedures (i.e., no greater pain than from simple injections).  No. Anesthetics and/or analgesics will be provided for pain relief.  Yes. This protocol includes painful procedures for which anesthetics and/or analgesics will be withheld. |

**D5. ANIMAL WELL-BEING, HUMANE AND DEATH AS ENDPOINT FOR EXPERIMENTAL ENDPOINTS**

Researchers should consider the impact of their procedures upon the animals' well-being. Do you anticipate any animal health complications (e.g., local or systemic infection, physical or physiological impairment, heavy tumor burden, tumor necrosis, malnutrition, dehydration, etc.) arising from the experimental procedures or animal manipulations that are proposed in this protocol?

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | No. Animal health complications/adverse events are not expected. *Answer only D5d.* | | | | | | Yes. Animal health complications/adverse events may occur. *Answer D5a through D5e.* | | | | | |  | | | | | |  | D5a. Describe the health complications that are anticipated: | | | | | |  |  | | | | | |  | | | | | | |  | D5b. Describe the plan for detecting the development of complications and their routine management: | | | | | |  |  | | | | | |  | | | | | | |  | D5c. If animals experience complications that are not resolved by the above management plan, specify the action(s) that will be taken (select all that apply):  Euthanize the animal  Seek veterinary care from the Attending Veterinarian  Withdraw the animal from the study for treatment and recovery according to the following plan   (describe): | | | | | |  | |  | | | | |  | | | | | | |  | D5d. The Principal Investigator, with precise knowledge of both the objectives of the study and the proposed model, should identify, explain and include in the protocol a study endpoint that is both humane and scientifically sound. The experimental endpoint of a study occurs when the scientific aims and objectives have been reached. The humane endpoint is the point at which pain or distress is prevented, terminated or relieved in an experimental animal. The use of humane endpoints contributes to refinement by providing an alternative to experimental endpoints that result in more severe animal pain and distress, including death. Please select the appropriate response.  I anticipate that the experimental endpoints will be reached prior to the humane endpoints.  I anticipate that humane endpoints will be reached prior to the experimental endpoints.  This is necessary because: | | | | | |  | | | |  | | |  | | | | | | |  | D5e. Will death be the endpoint for any animal(s) in this protocol? (i.e., The animal's death is a required experimental data point). For example, heart failure is induced in a rabbit, and it is allowed to survive until it dies of congestive heart failure without being euthanized.  No  Yes ↓ | | | | | |  | | | | | | |  | | | Will euthanasia ever be considered or is there any other measurable endpoint at which euthanasia will be performed? If YES, this may not be death as an endpoint. If yes, please explain. | | | |  | | |  | | | |  | | | | | | |  | | | If euthanasia will never be considered, please justify why death is the end point rather than euthanasia. | | | |  | | |  | | | |  | | | | | | |  | | | What signs are the animals expected to exhibit as they go through the terminal stages? | | | |  | | |  | | | |  | | | What measures can be taken to alleviate pain (e.g., analgesics)? (If NONE, please justify) | | | |  | | |  | | | |  | | | | | | |  | | | Who will observe the animal during the terminal stages? | | | |  | | |  | | | |  | | | | | | |

**SECTION E: EUTHANASIA & DISPOSITION**

**E1. EUTHANASIA**

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Please indicate the role of euthanasia in the proposed activity:  Euthanasia is not planned, but *if* necessary will be performed to prevent animal distress using one of these   options:1) The Attending Veterinarian will perform or asked performed an AVMA-approved method of   euthanasia or 2) For situations (e.g., field studies) where no veterinarian is available, the method selected   below will be used.  Euthanasia will not be performed. Federal, international, or local permits governing this work do not allow   euthanasia.  Animals will be euthanized as part of the experimental protocol:  Specify experimental protocol here: | | | | | | | | |  | | |  | | | | |  | | | | | | | | **Generally Acceptable Methods Of Euthanasia**  Please specify the method(s) of euthanasia below. If applicable, provide a justification for methods that are acceptable with conditions. If using a different method with the same animal, indicate such in the Other/Additional column.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Species Group | | Species | Method | Other / Additional | |  | Mammal |  | Choose an item. |  | |  | | | | | |  | Marine Mammal |  | Choose an item. |  | |  | | | | | |  | Bird |  | Choose an item. |  | |  | | | | | |  | Fish |  | Choose an item. |  | |  | | | | | |  | Reptile |  | Choose an item. |  | |  | | | | | |  | Amphibian |  | Choose an item. |  | |  | | | | | |  | AQ Invertebrate |  | Choose an item. |  | |  |  |  |  |  | |  | TR Invertebrate |  | Choose an item. |  | |  |  |  |  |  | | | | | | | | | Unacceptable methods might be appropriate under certain circumstances (e.g., under field conditions) and can be approved by the IACUC if a strong justification is provided: | | | | | | | | Thoracic compression. Please justify: | | | | | | | |  | | | | | | | |  | |  | | | | | |  | | | | | | | | Blunt force trauma to the head. Please justify: | | | | | | | |  | | | | | | | |  | |  | | | | | |  | | | | | | | | Death must be assured by a second physical form of euthanasia in mammals, amphibians, and reptiles unless otherwise approved by the IACUC. In all other species, at a minimum respiratory and cardiac arrest must be assured by a trained technician. | | | | | | | |  | | | | |  | | | Bilateral thoracotomy  Decapitation  Tissue/organ collection. Please specify ↓ | | | | | Cervical dislocation  Pithing  Other. Please specify ↓ | | |  |  | | |  | |  | |  |  | | |  | |  |   Other Methods of Euthanasia ([AVMA Guide on Euthanasia](https://www.avma.org/sites/default/files/2020-01/2020-Euthanasia-Final-1-17-20.pdf)) |

**E2. FINAL DISPOSITION OF ANIMALS**

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| |  |  |  | | --- | --- | --- | | Live animals will remain part of Georgia Aquarium’s collection and may be transferred to other approved GAI IACUC protocols to facilitate collaborative interactions and reduce overall animal usage and undue waste.  Animals will be euthanized by methods specified in section E1 above (Euthanasia).  Disposition to another partner facility. | | | | Other: |  | |  | | | |

**E3. SHARING OF TISSUES, FLUIDS, OR CARCASSES**

NOTE: This section ONLY APPLIES to animals which are dead prior to collecting the tissues, fluid, or carcasses. Any collection of tissues or fluids from animals which are alive REQUIRES specific protocol approval for the collection of tissues or fluids.

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| --- |
| Indicate below if you anticipate sharing tissues, fluids, or carcasses post-euthanasia (intentional or not) from this protocol:  I may share tissues, fluids, or carcasses from my euthanized animals with GAI researchers.  I may share tissues, fluids, or carcasses from my euthanized animals with non-GAI researchers. |

**SECTION F: APPLICATION ADMINISTRATION**

**F1. PRINCIPAL INVESTIGATOR AGREEMENT**

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| --- |
| I have reviewed and will abide by the IACUC’s Research Approval Standard Conditions and Research Policy and understand that any work performed without IACUC approval may result in federally required reporting of non-compliance.  I have determined that the research proposed is not unnecessarily duplicative.  I confirm that all individuals working on this protocol have been assessed for health risks and are participating in an appropriate Occupational Health & Safety Program.  I authorize individuals listed on this application to conduct procedures involving animals and I accept responsibility for their oversight in the conduct of this proposal.  I confirm that all individuals listed on this protocol as working with animals have completed the required training (or equivalent training) or will be required to do so before being permitted to begin work with animals. Further, I certify that those individuals are properly trained, or will receive such training prior to working with animals, in all areas relevant to their assigned work with animals.  For animals under this proposal, I understand that in cases of necessary medical treatment, GAI's Attending Veterinarian is authorized to provide any treatment required to sustain life, or if necessary, provide humane euthanasia to prevent unapproved distress and/or pain. The GAI veterinary staff will contact me as soon as possible using the emergency contact information that I provide in this application, but I understand that such contact may not always be possible prior to providing treatment/euthanasia.  For all USDA Category D (anesthesia / analgesia provided to relieve potential pain) and USDA Category E (pain not relieved by anesthesia / analgesia) animal use procedures, I certify that I have reviewed the pertinent scientific literature and the sources/databases noted in this application and found no scientifically acceptable alternative to any of those procedures that would result in less pain or distress. This includes all animals, regardless of the location of the research. I also certify that the Attending Veterinarian of Record was consulted during the development of this protocol request for such categorized procedures.  I will make myself available during the scheduled IACUC review meeting in case the IACUC needs to ask additional questions. If I am not available, I understand that the review of my project may be delayed pending the return of requested information and/or materials to the IACUC. |

**F2. INTERNSHIP PROJECTS**

All internship projects must be submitted with the appropriate advance notice to ensure requests can be processed within the IACUC’s deadlines and timelines, while allowing for enough time to complete the project. Participating in an internship at Georgia Aquarium does not guarantee that an internship project will be approved by the IACUC.

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | This project is part of an internship program at Georgia Aquarium | | | | | | | |  | | | | |  | | |  | Dates of Internship: |  | to |  | | |  | | | | | | | | This project is not for an internship. | | | | | | | |  | | | | |  | | |

**F3. INFORMATION RELEASE**

Georgia Aquarium’s IACUC has a legal responsibility to protect all information related to trade secrets and proprietary information and to not release such information unless it has met the criteria outlined in the IACUC’s policies. In working with Georgia Aquarium, all information related to research may be openly shared with internal personnel, the scientific community, and/or the public at any time. Projects that do not allow information sharing will not be approved by the IACUC.

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| I understand, and agree, that Georgia Aquarium may share information about this research project. |

**F4. SUPPLEMENTAL APPROVALS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | All principal investigators must collaborate with Georgia Aquarium’s animal departments prior to submitting a request to the IACUC. This collaboration can be established by e-mailing the Research and Conservation Department at ([gairesearch@georgiaaquarium.org](mailto:gairesearch@georgiaaquarium.org)). **If your request includes the use of Georgia Aquarium’s animals, you must receive approval from all three animal departments. Applications that do not have the appropriate code(s) will be immediately sent back to the submitter:** | | | | | | | | |  | | | | | | | | | 1. Research & Conservation Director: | |  | | | | |  | |  | | | | | 1. Zoological Operations Director: | |  | | | | |  | |  | | | | | 1. Animal Health Veterinarian: | |  | | | | |  | |  | | | | | All principal investigators that are employees of Georgia Aquarium must also have their supervisor’s approval to conduct research at Georgia Aquarium, at partner facilities, or in the field. By providing the information of your supervisor below, you are certifying that you have obtained such approval to submit this research request: | | | | | | | | | Name: |  | | Title: | |  | | |  | | | |  | | | | | I am not an employee of Georgia Aquarium. | | | | | | | | |  | | | |  | | | | |

**F5. FINAL SIGNATURE**

**I have obtained all the required approvals and have carefully reviewed, understand, and agree to all the above agreement clauses (required for a submission) for:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Project Title: |  | | | | |  | | | |  | | Ideal Project Start Date (Not Guaranteed): | | |  | | |  | | | |  | | Principal Investigator Signature:  To insert your signature, hover over and click on the photo icon to the right and select a saved photo of your signature. | |  | | | |  | | | |  | |

*Click on the arrow to expand the additional sections that are needed for this application and please leave all non-applicable sections closed.*

# SECTION G. PERSONNEL QUALIFICATIONS

**G1. PERSONNEL INFORMATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | During the review of this protocol, the IACUC will determine what trainings are required for participation under this protocol, based on your previous experience. Please check the trainings that you have already been completed: | | |  |  | | [Research Basics (GAI Staff Only)](https://georgiaaquariumacademy.com/#/login)  [CITI Working with the IACUC](https://about.citiprogram.org/course/working-with-the-iacuc/)  [CITI Wildlife Research](https://about.citiprogram.org/course/wildlife-research/)  [CITI Working with Amphibians in Research Settings](https://about.citiprogram.org/course/working-with-amphibians-in-research/) | [CITI Working with Fish in Research Settings](https://about.citiprogram.org/course/working-with-fish-in-research-settings/)  [CITI Working with Reptiles in Research Settings](https://about.citiprogram.org/course/working-with-reptiles-in-research-settings/)   |  |  |  | | --- | --- | --- | | International Colleague – No IACUC Training Required | | | | Other, please describe: |  | | |

**G3. PERSONNEL AGREEMENT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| Please complete the researcher techniques checklist below. All applicable techniques that will be used in this protocol should be completed with appropriate skills, experience, and training information. **Blank checklists will not be accepted.** | |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

### Expand this section to add 5 more Section G.

**G1. PERSONNEL INFORMATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

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**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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**G3. PERSONNEL AGREEMENT**

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**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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### Expand this section to add 5 more Section G.

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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**G3. PERSONNEL AGREEMENT**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
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**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

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**G4. SKILLS AND EXPERIENCE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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**G3. PERSONNEL AGREEMENT**

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**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| Please complete the researcher techniques checklist below. All applicable techniques that will be used in this protocol should be completed with appropriate skills, experience, and training information. **Blank checklists will not be accepted.** | |
|  |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | During the review of this protocol, the IACUC will determine what trainings are required for participation under this protocol, based on your previous experience. Please check the trainings that you have already been completed: | | |  |  | | [Research Basics (GAI Staff Only)](https://georgiaaquariumacademy.com/#/login)  [CITI Working with the IACUC](https://about.citiprogram.org/course/working-with-the-iacuc/)  [CITI Wildlife Research](https://about.citiprogram.org/course/wildlife-research/)  [CITI Working with Amphibians in Research Settings](https://about.citiprogram.org/course/working-with-amphibians-in-research/) | [CITI Working with Fish in Research Settings](https://about.citiprogram.org/course/working-with-fish-in-research-settings/)  [CITI Working with Reptiles in Research Settings](https://about.citiprogram.org/course/working-with-reptiles-in-research-settings/)   |  |  |  | | --- | --- | --- | | International Colleague – No IACUC Training Required | | | | Other, please describe: |  | | |

**G3. PERSONNEL AGREEMENT**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| Please complete the researcher techniques checklist below. All applicable techniques that will be used in this protocol should be completed with appropriate skills, experience, and training information. **Blank checklists will not be accepted.** | |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

**G1. PERSONNEL INFORMATION**

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| |  |  |  |  | | --- | --- | --- | --- | | Name: |  | Institution/Department: |  | |  |  |  |  | | Day Phone: |  | E-mail address: |  | |  |  |  |  | | GAI Relationship: | Staff Intern Volunteer Not Affiliated | | | |  | | | | |

**G2. ANIMAL USE, ETHICS, AND WELFARE TRAINING**

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| |  |  | | --- | --- | | During the review of this protocol, the IACUC will determine what trainings are required for participation under this protocol, based on your previous experience. Please check the trainings that you have already been completed: | | |  |  | | [Research Basics (GAI Staff Only)](https://georgiaaquariumacademy.com/#/login)  [CITI Working with the IACUC](https://about.citiprogram.org/course/working-with-the-iacuc/)  [CITI Wildlife Research](https://about.citiprogram.org/course/wildlife-research/)  [CITI Working with Amphibians in Research Settings](https://about.citiprogram.org/course/working-with-amphibians-in-research/) | [CITI Working with Fish in Research Settings](https://about.citiprogram.org/course/working-with-fish-in-research-settings/)  [CITI Working with Reptiles in Research Settings](https://about.citiprogram.org/course/working-with-reptiles-in-research-settings/)   |  |  |  | | --- | --- | --- | | International Colleague – No IACUC Training Required | | | | Other, please describe: |  | | |

**G3. PERSONNEL AGREEMENT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | I have reviewed and will abide by the IACUC’s **Research Approval Standard Conditions** and will promptly   notify the Principal Investigator of any situations that arise which fall under these standard conditions. | |  | | I have reviewed, or will review, the protocol section under which I will be performing work. I accept   responsibility for conducting my work in accord with the approved protocol. | |  | | I understand that work performed without IACUC approval may result in federally required reporting of non-  compliance. | |  | | I certify that I have reviewed the humane endpoints in this proposal and are competent to assess the animal's   well-being. | |  | |

**G4. SKILLS AND EXPERIENCE**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | With respect to **THIS PROTOCOL ONLY**, please indicate the species with which you will be working and indicate which skills are needed to perform the study in which you are ALREADY PROFICIENT. | | | | | | | If any of the procedures in the protocol will be requested to be performed by GAI personnel, please describe those here: | | | | | | |  | | |  | | | |  |  | | | | |  | | |  | | | | Please describe any formal training that you have received related to the use of animals. Include the institution, approximate dates, and a brief description of the training content: | | | | | | |  | | |  | | | |  |  | | | | |  | |  | | | | | What experience do you have that prepares you to perform the procedures and use the techniques required of you in this protocol? (Please be specific.) | | | | | | |  | |  | | | | |  |  | | | | |  | |  | | | | | If training in specific skills is needed (as checked above) or if you will be engaged in procedures for which you are not presently proficient, indicate who will provide the necessary training and who will provide oversight until you have achieved proficiency: | | | | | | |  | |  | | | | |  |  | | | |  | | | | | | |

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| Please complete the researcher techniques checklist below. All applicable techniques that will be used in this protocol should be completed with appropriate skills, experience, and training information. **Blank checklists will not be accepted.** | |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Techniques | Current Skills | List length of experience | Training Needed | Species Applicable To (list all) | | Direct Handling |  |  |  |  | | Passive Handling (Training; Stimulus Control) |  |  |  |  | | Restraint |  |  |  |  | | Oral Gavage |  |  |  |  | | Other: |  | | | | | **Injections** | | | | | | Intramuscular |  |  |  |  | | Subcutaneous |  |  |  |  | | Intraperitoneal |  |  |  |  | | Intracardiac |  |  |  |  | | Other: |  | | | | | **Blood Collection** | | | | | | Tail vein |  |  |  |  | | Facial (maxillary) vein |  |  |  |  | | Saphenous vein |  |  |  |  | | Orbital sinus/plexus |  |  |  |  | | Cardiac puncture |  |  |  |  | | Other: |  | | | | | **Identification** | | | | | | Ear tagging |  |  |  |  | | Ear notch |  |  |  |  | | Microchip |  |  |  |  | | Dart/roto tag |  |  |  |  | | Other: |  | | | | | **Anesthesia** | | | | | | Injectable |  |  |  |  | | Volatile |  |  |  |  | | Aseptic technique |  |  |  |  | | Post-surgical care |  |  |  |  | | Other: |  | | | | | **Euthanasia** | | | | | | CO2 |  |  |  |  | | Decapitation |  |  |  |  | | Cervical dislocation |  |  |  |  | | Transcardial perforation |  |  |  |  | | Other: |  | | | | |  | | | | | | |

# SECTION H. HAZARD USE

**Complete only if applicable to your project**. This portion of the protocol is for applications using hazardous agents *in vivo* such as radioisotopes, infectious agents, carcinogens or toxic chemicals. Because many of the questions are "agent-specific", unless toxicity/treatment/etc. are the same, please complete additional, separate Section H forms for each agent.

**H1. THIS STUDY INVOLVES (check all the apply):**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | Radioactive materials or radiation | | Infectious agents (pathogenic to humans or animals) | |  | |  | | Acute toxins | | Known or suspected chemical carcinogens or mutagens | |  | |  | | Other, explain ↓ | | Recombinant or non-recombinant DNA or RNA | |  | |  | |  |  | | |  | |  | |

**H2. IDENTIFY AGENT**

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | a. Agent/chemical/isotope: |  | | b. Species: |  | | | |  |  | |  |  | | | | c. Dose (Max volume): |  | | d. Route: |  | | | |  |  | |  |  | | | | e. Needle size: |  | | f. Frequency: |  | | | |  |  |  | | |  | |

**H3. RISKS TO HUMANS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  | | --- | --- | --- | --- | | Are there risks to humans? | | No Yes | | |  | | |  | | |  | If yes, describe the method of exposure. How could humans be exposed (e.g., excreted in animal's feces or urine, airborne, only on direct contact with contaminated animal, etc.)? | | | | |  | | |  | | |  |  | | | | |  | | |  | | |  | Describe signs/symptoms: | | | | | |  |  | | | | | |  |  | | | | | |  |  | | | | | |  | Describe treatment: | | | | | |  |  | | | | | |  |  | | | | | |  |  | | | | | |  | Describe protection (Personal Protective Devices): | | | | | |  |  | | | | | |  |  | | | | | |

**H4. RISKS TO OTHER ANIMALS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Are there risks to other animals in the room or animal facility? Can other animals in the same room or in the facility become exposed (infected, contaminated, affected, etc.)? | | | No Yes | | | |  | |  | | |  | If yes, describe the method of exposure. How could humans be exposed (e.g., excreted in animal's feces or urine, airborne, only on direct contact with contaminated animal, etc.)? | | | |  | |  | | |  |  | | | |  | |  | | |  | Describe signs/symptoms: | | | | |  |  | | | | |  |  | | | | |  |  | | | | |  | Describe treatment: | | | | |  |  | | | | |  |  | | | | |  |  | | | | |  | Describe protection (Personal Protective Devices): | | | | |  |  | | | | |  |  | | | | |

**H5. HAZARDOUS AGENTS**

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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Describe experimental procedures involving hazardous agents: | | | | | | | | | | | | |  |  | | | | | | | | | | | |  | | | | | |  | | | | | | | Is the duration of hazardous agents use the same as the total project duration?  If different, state approximate time period. | | | | | | | | No Yes | | | |  | |  | | | | | | | | | | |  | | If yes, Start Date: |  | | Stop Date: | |  | | |  | | | | | |  | | | | | | | Is there special animal care required relating to the use of hazardous materials? | | | | | | | | No Yes | | |  | | | | | | | |  | | |  | | If yes, please explain: | |  | | | | | | |  | | | | | | | |  | | |

**H7. WASTE AND ANIMAL DISPOSAL**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Are there special waste and animal disposal requirements? | | | No Yes | | |  | | | |  | | |  | If yes, please explain: |  | | | | |  | | | |  | | |

E-mail the IACUC if you need to add more agents to your Section H.

# SECTION I. SURVIVAL SURGERY

Note: If surgical procedures are the same for all species, you can list them on a single form. If they differ, please submit additional, separate Section I forms for each species.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Species (list all): |  | | |  | | | | This is the only species in this study and therefore the only Section I Form. Multiple species are in this study with different surgical procedures, and each have a Section I Form. Multiple species are in this study with the same surgical procedures. | | | |  | |  | |

**I1. MULTIPLE SURVIVAL SURGERY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | Will any of the animals have undergone survival surgery prior to being entered into this study (e.g., by the vendor or under a different protocol)? | | | |  | |  | | No, animals will not have had prior survival surgery. | | | |  | |  | | Yes, animals will have had prior survival surgery: | | | |  | | | |  | Provide prior surgeries and include dates of the procedures: | | |  |  | | |  |  | | |  | | | | Will any of the animals experience more than one survival surgery, including surgery prior to entering the study? | | | |  | | | | No. Animals will have only one survival surgery procedure. | | | |  | | | | Yes. Animals will have more than one survival surgery procedure: | | | |  | | | |  | Describe how the multiple survival surgeries, including any experienced prior to entering this study, are interrelated components of this protocol and why the multiple surgeries are necessary to achieve the scientific objective). | | |  |  | | |  |  | | |  |  | | |

**I2. NARRATIVE OF SURVIVAL SURGERY PROCEDURES UNDER THIS PROTOCOL**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Description of survival surgery procedures: | |  | |  | |  | |  |  | | |  | |  | | Specify the method of wound closure: | |  | |  | |  | |  |  | | |  | |  | | Will all sutures and/or wound clips be allowed to remain in place beyond the 14th post-operative day? | | | |  | |  | | No, all sutures and/or wound clips will be removed on or before the 14th day after surgery.  Yes, sutures and/or wound clips will remain in place for more than 14 days. | | | |  | |  | |

**I3. PRE-OPERATIVE ANIMAL SUPPORT (NOT ANESTHESIA)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Specify pre-operative actions that will be taken to prepare the animals for survival surgery (select all that apply): | | | | | | |  | |  | | | | | Physical exam/evaluation of overall appearance  Iodine (or Chlorhexidine) + alcohol skin scrub, 3 alternating cycles  CBC/Chemistry profile (define blood sampling method): | | | | Overnight food withdrawal  Ophthalmic ointment to eyes  Clipping of fur | |  | | | |  | |  |  | |   For ALL drugs that fall under this category (Pre-Op, non-anesthesia), please identify the drug and specify the dose, route and frequency of administration, and duration of treatment below:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Drug | Dose | Route of Administration | Frequency of Administration | Duration of Treatment | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

**I4. PRE-OPERATIVE ANESTHESIA, SEDATION, TRANQUILIZATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Will pre-operative anesthesia, sedation or tranquilization be provided to the animals? | | | | |  |  | | | | No. Drugs will not be administered to the animals prior to surgical anesthesia.  Yes. Pre-operative drugs will be used to calm the animals. | | | | | |  | |  |   For ALL drugs that fall under this category (Pre-Op, non-anesthesia), please identify the drug and specify the dose, route and frequency of administration, and duration of treatment below:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Drug | Dose | Route of Administration | Frequency of Administration | Duration of Treatment | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

**I5. INTRA-OPERATIVE ANIMAL SUPPORT (NOT ANESTHESIA)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Specify intra-operative care that will be provided to animals during survival surgery (select all that apply): | | | | | | |  | |  | | | | | Mechanical ventilation  Intravenous fluids  None, explain: | | | | Ophthalmic ointment to eyes  Heat to prevent hypothermia  Cooling to prevent hyperthermia | |  | | | |  | |  |  | | | | |  |  | | | Other, please detail: | | | |  |  | | | | |  |  | | | | |

**I6. INTRA-OPERATIVE ANESTHESIA**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Please list all agents and dosing regimens to be used for intra-operative anesthesia.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Anesthetic Agent | Dose | Route of Administration | Frequency of Administration | Duration of Treatment | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

**I7. NEUROMUSCULAR BLOCKING AGENTS (PARALYTICS)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Will neuromuscular blocking agents (paralytics) be used at any time during the procedure? | | | | |  | | |  | | No. Neuromuscular blocking agents will not be used for the procedure.  Yes. Neuromuscular blocking agents will be used: | | | | |  | | |  | |  | Provide details on neuromuscular blocking agents: | | | | |  |  | | | | |  | |  | | | |  |  | | | | |

**I8. MONITORING DURING ANESTHESIA**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Indicate below the indices that will be used for intra-operative monitoring of animal condition and depth of anesthesia. | | | | | | | |  | | | |  | | | | Respiratory rate / effort  Body temperature  Heart rate  Capillary refill time  Reflex, detail: | | | | Mucous membrane color  Oxygen saturation  Blood pressure  EKG  Other, explain: | | | |  | |  | |  | |  | |  |  | |  | |  | | |  | | | |  | | | | Specify the frequency at which the above indices will be recorded: | | | | | | | |  | | | |  | | | |  |  | | | | | | |  | | | |  | | | |

**I9. POST-OPERATIVE ANIMAL SUPPORT DURING RECOVERY FROM ANESTHESIA**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Indicate care that will be provided to animals during post-operative recovery from anesthesia (i.e., until sternal recumbency is regained and maintained. Select all that apply: | | | | | | | |  | | | |  | | | | Heat to prevent hypothermia  Cooling to prevent hyperthermia  Intravenous fluids (IV, IP, SC Fluids), please detail: | | | | Ophthalmic ointment to eyes  Oxygen saturation | | | |  |  | | | | | | |  | | | |  | | | | None, explain: | | | | Other, explain: | | | |  | |  | |  | |  | |  |  | |  | |  | | |  | | | |  | | | |

**I10. MONITORING DURING RECOVERY FROM ANESTHESIA**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Indicate below the indices that will be used for post-operative monitoring of animal condition during recovery from anesthesia. **Note**: Animals will be continuously monitored until fully recovered, as indicated by regaining righting reflex and purposeful movement. | | | | | | | |  | | | |  | | | | Respiratory rate / effort  Body temperature  Heart rate  Capillary refill time  Reflex, detail: | | | | Mucous membrane color  Oxygen saturation  Blood pressure  EKG  Other, explain: | | | |  | |  | |  | |  | |  |  | |  | |  | | |  | | | |  | | | | Specify the frequency at which the above indices will be recorded: | | | | | | | |  | | | |  | | | |  |  | | | | | | |  | | | |  | | | |

**I11. PAIN MANAGEMENT**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Will analgesia be provided to the animal for relief of post-operative pain? | | | | |  | | |  | | No. Post-operative analgesia will not be provided. | | | | |  | | |  | |  | Please explain why analgesia will be withheld: | | | |  | |  | | |  | |  | | |  | | |  | | Yes. Analgesia will be provided. | | | | |  | | | | |  | Please list analgesics, time of administration, and dosing regimens: | | | |  | | |  | |  | |  | | |  | | |  | |

**I12. POST-OPERATIVE ANTIBIOTIC OR DRUG THERAPY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Will antibiotics or drugs other than experimental agents be provided to animals during the  post-operative period? (7 days) | | | | |  | | |  | | No. Such treatment is not planned and will be provided only if medically advised. | | | | |  | | |  | |  | | |  | | Yes. Antibiotics and/or drugs will be administered: | | | | |  | | | | |  | Specify details: | | | |  | | |  | |  | |  | | |  | | |  | |

**I13. SINGLE HOUSING DURING POST-OPERATIVE RECOVERY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | Animals are required to be socially housed (if appropriate) unless otherwise requested and justified. This provision exists from the point of anesthesia recovery up to seven days post recovery. Please select the appropriate response which applies to this protocol. If more than one is applicable, then select multiple responses: | | | | |  | | |  | | Single housing post anesthesia is not required for this study. | | | | |  | | |  | |  | | |  | | Animals may be singly housed post anesthesia for up to 7 days. Animals in this condition will be provided with environmental enrichment: | | | | |  | | | | |  | Which animals in your study will require single housing? | | | |  | | |  | |  | |  | | |  | | |  | |

**I14. SPECIMEN COLLECTION FROM LIVE ANIMALS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Will specimens be collected from living animals during or after the survival surgery? | | | | | | | | | | | | |  | | | | | | | |  | | | | | No. Specimens will not be collected from living animals.  Yes. Specimens will be collected from living animals: | | | | | | | | | | | | |  | | | | | | | |  | | | | |  | Define specimen type and collection details below: | | | | | | | | | | | |  | |  |  |  | |  |  | | | | | |  | | Fluids (e.g., blood, lymph, ascites, CSF,   GI fluids, etc.) | | | | | | |  | Solid Tissues | | |  | |  | | |  | | | |  |  |  | |  | | Fluid type (specify): | | |  | | | |  | Tissue type (specify): |  | |  | |  | | |  | | | |  |  |  | |  | | Volume (mls) per collections: | | |  | | | |  | Volume (mm3) per collections: |  | |  | |  | | |  | | | |  |  |  | |  | | Collection method (specify): | | |  | | | |  | Collection method (specify): |  | |  | |  | | |  | | | |  |  |  | |  | | Frequency of collection: | | |  | | | |  | Frequency of collection: |  | |  | |  | | |  | | | |  |  |  | |

**I15. HUMANE ENDPOINTS WHICH WILL BE MONITORED AND WILL PROMPT INTERVENTION TO PREVENT CONTINUED PAIN OR DISTRESS**

Information that is critical to the IACUC's assessment of appropriate endpoint consideration within a protocol includes precisely defining the humane endpoint (including assessment criteria); the frequency of animal observation; training of personnel responsible for assessment and recognition of the humane endpoint; and the response required upon reaching the humane endpoint. The IACUC has determined that the list below defines the commonly accepted clinical milestones which should be regarded as humane endpoints for most animal studies. Choose all of those which are appropriate for the species being used. For each milestone, indicate the action that will be taken. Add other milestones (in the row marked 'other') if applicable for defining the humane endpoints for the proposed study.

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| |  | | --- | | No, humane endpoints are not related to this protocol.  Yes, humane endpoints are applicable to this protocol. Please complete the table below: |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **HUMANE ENDPOINTS THAT WILL PROMPT INTERVENTION TO PREVENT CONTINUED PAIN OR DISTRESS** | | | | | | | Clinical Observation/ Milestone | Applicable to my proposal? | Frequency of observation | Protocol personnel will perform each of these observations | Response required upon reaching the humane endpoint | Provide duration (days, weeks, etc.) of monitoring or a scientific justification for not using the milestones listed | | Infection unrelated to the protocol | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Not eating or drinking (will require individual housing to effectively assess) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Decreased fecal and urine output (will require individual housing to effectively assess) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Delayed wound healing (requires checking at least daily until suture removal) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Sudden behavioral change (Ex. aggression, guarding, hiding) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Licking, biting, scratching of the operative / injection site (requires checking at least daily until suture removal | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Poor posture or ambulating difficulty (Ex: tense, tucked-up, stiff gait) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Lost hair coat condition (Ex: ruffled fur, lack of grooming, piloerection) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Sudden activity level change (Ex: restlessness, pacing, reluctance to move) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Unexpected sweating or salivation (Ex: stressed rodents salivate excessively when stressed) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Painful' facial expression (Ex: grimace, eyes dull, pupils dilated, pinning of ears) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Oculonasal discharge (Ex: rats shed porphyrin pigment when stressed) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Teeth grinding (Ex: More common sign in rabbits, livestock) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Signs of moderate to severe pain or distress that was not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Body weight loss exceeding 15% of free feeding bodyweight relative to an age matched reference (Ex: Requires regular weighing) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Self-mutilation (requires checking at least daily until suture removal) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Neurological disorders (e.g., seizures, blindness, ataxia) that were not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Cardiopulmonary disorders (e.g., sudden weakness, vascular collapse, coma) that were not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Abnormal feeding or defecation for 48 hours (e.g., decreased feed or water intake and/or decreased fecal production that is unrelated to the study plan) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Non-weight bearing for 72 hours (e.g., difficulty walking, inability to maintain upright posture) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | **Other humane endpoints which will be employed in this project:** |  | | | | | |  |  |  |  |  |  | |

E-mail the IACUC if you need to add more surgical procedures to your Section I.

# SECTION J. NON-SURGICAL

Note: If non-surgical procedures are the same for all species, you can list them on a single form. If they differ, please submit additional, separate Section J forms for each species.

**J1. SPECIES AND DESCRIPTION OF NON-SURGICAL PROCEDURES (BLOOD SAMPLING, BIOPSY, TAGGING, etc.)**

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| |  |  |  |  | | --- | --- | --- | --- | | Species (list all): | |  | | |  | | | | | Please provide a chronological description of non-surgical procedures: | | | | |  |  | | | |  |  | | | |  | | | |

**J2. PRE-PROCEDURE ANIMAL SUPPORT (NOT ANESTHESIA)**

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Will special pre-procedural care be provided? | | | | | | | |  | |  | | | | | | No, the procedures do not require any special pre-procedural care.  Yes, pre-procedural actions that will be taken to prepare animals for the procedure(s): | | | | | | | |  | |  | | | | | |  | |  | | | | | | Physical exam/evaluation of overall appearance  Iodine (or Chlorhexidine) + alcohol skin scrub, 3 alternating cycles  CBC/Chemistry profile (define blood sampling method): | | | | | Overnight food withdrawal  Ophthalmic ointment to eyes  Clipping of fur | |  | | | |  | | |  |  | |   For ALL drugs that fall under this category (Pre-Op, non-anesthesia), please identify the drug and specify the dose, route and frequency of administration, and duration of treatment below:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Agent | Dose | Route of Administration | Frequency of Administration | Duration of Treatment | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

**J3. INTRA-PROCEDURE ANIMAL SUPPORT (NOT ANESTHESIA)**

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Will special intra-procedure care be provided? | | | | | | | | |  | | |  | | | | | | No. The procedures do not require special intra-procedural care.  Yes. Specify intra-procedure care that will be provided to animals during the procedure(s): | | | | | | | | |  | | | | |  | | | | | Ophthalmic ointment to eyes  Cooling to prevent hyperthermia  Intravenous fluids (IV, IP or SC Fluids), describe: | | | | | Heat to prevent hypothermia  \  Other, describe: | | | | |  | |  |  | | | |  | |  |  | | |  | |  | | |  | | |  | | | | | |  | | |  | | | | | |

**J4. INTRA-PROCEDURE ANESTHESIA OR CHEMICAL RESTRAINT**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Will intra-procedure anesthesia or chemical restraint be provided? | | | | | | |  | | |  | | | | No, the procedures do not require intra-procedural anesthesia or chemical restraint.  Yes, the procedure requires anesthesia as described below: | | | | | | |  | | |  | | | |  | | |  | | | | Anesthetic Agent | Dose | Route of Administration | | Frequency of Administration | Duration of Treatment | |  |  |  | |  |  | |  |  |  | |  |  | |  |  |  | |  |  | |  |  |  | |  |  | |  |  |  | |  |  | |  |  |  | |  |  | |

**J5. MONITORING DEPTH OF ANESTHESIA DURING PROCEDURES**

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Indicate below the indices that will be used for monitoring animal condition and depth of anesthesia. | | | | | | | |  | | | |  | | | | Respiratory rate / effort  Body temperature  Heart rate  Capillary refill time  Reflex, detail: | | | | Mucous membrane color  Oxygen saturation  Blood pressure  EKG  Other, explain: | | | |  | |  | |  | |  | |  |  | |  | |  | | |  | | | |  | | | | Specify the frequency at which the above indices will be recorded: | | | | | | | |  | | | |  | | | |  |  | | | | | | |  | | | |  | | | |

**J6. POST-PROCEDURE ANIMAL SUPPORT**

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Will special post-procedure care be provided? | | | | | | | | |  | | |  | | | | | | No. The procedures do not require special post-procedural care.  Yes. Specify post-procedure care that will be provided to animals during the procedure(s): | | | | | | | | |  | | | | |  | | | | | Ophthalmic ointment to eyes  Cooling to prevent hyperthermia  Intravenous fluids (IV, IP or SC Fluids), describe: | | | | | Heat to prevent hypothermia  \  Other, describe: | | | | |  | |  |  | | | |  | |  |  | | |  | |  | | |  | | |  | | | | | |  | | |  | | | | | |

**J7. MONITORING DURING RECOVERY FROM ANESTHESIA (if used)**

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| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Animals will be continuously monitored until fully recovered, as indicated by regaining righting reflex and purposeful movement.  No. Please explain:  Yes. Indicate below the indices that will be used for post-procedure monitoring of animal condition during recovery from anesthesia (i.e., until sternal recumbency is regained and maintained): | | | | | | | | | |  | | | | |  | | | | | Respiratory rate / effort  Body temperature  Heart rate  Capillary refill time  Reflex, detail: | | | | | Mucous membrane color  Oxygen saturation  Blood pressure  EKG  Other, explain: | | | | |  | | |  | |  | |  | | |  | |  | |  | |  | | |  | | | | |  | | | | | Explain above choices if necessary, including the frequency at which the above indices will be recorded: | | | | | | | | | |  | | | | |  | | | | |  |  | | | | | | | | |  | | | | |  | | | | |

**J8. PAIN MANAGEMENT INTRA- OR POST-PROCEDURE**

Note: The GAI IACUC encourages the use of preemptive analgesia for pain management. Analgesia should be provided as early as possible in the procedure if it is expected to be painful or result in residual pain, ideally before the procedure begins.

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| |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 1. Is the procedure expected to cause pain or result in residual pain? | | | | | | | | | | | | | |  | | | | | | |  | | | | | | | No. The procedure is not expected to cause pain.  Yes. Pain during and/or after the procedure is likely.  b. If pain is expected, will analgesia be provided for pain relief?   |  |  |  |  | | --- | --- | --- | --- | | No, analgesia will not be provided. | | | | |  | | |  | |  | If pain is expected and analgesia will not be provided, please explain why pain relief will be withheld: | | | |  | | |  | |  | |  | | |  | | |  |   Yes, analgesia will be provided. Please list analgesics and dosing regimens below: | | | | | | | | | | | | | |  | | | | | | |  | | | | | | |  | | | | | | |  | | | | | | | Anesthetic Agent | Timing of Administration | | Dose | | | Route of Administration | | | Frequency of Administration | | Duration of Treatment | | | |  | Choose an item. | | |  | |  | | |  | |  | | | |  | Choose an item. | | |  | |  | | |  | |  | | | |  | Choose an item. | | |  | |  | | |  | |  | | | |  | Choose an item. | | |  | |  | | |  | |  | | | |  | Choose an item. | | |  | |  | | |  | |  | | | |  | |  | | |  | | |  | |  | | |

**J9. SPECIMEN COLLECTION FROM LIVE ANIMALS**

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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Will specimens be collected from living animals during or after the procedure(s)? | | | | | | | | | | | | |  | | | | | | | |  | | | | | No. Specimens will not be collected from living animals.  Yes. Specimens will be collected from living animals: | | | | | | | | | | | | |  | | | | | | | |  | | | | |  | Define specimen type and collection details below: | | | | | | | | | | | |  | |  |  |  | |  |  | | | | | |  | | Fluids (e.g., blood, lymph, ascites, CSF,   GI fluids, etc.) | | | | | | |  | Solid Tissues | | |  | |  | | |  | | | |  |  |  | |  | | Fluid type (specify): | | |  | | | |  | Tissue type (specify): |  | |  | |  | | |  | | | |  |  |  | |  | | Volume (mls) per collections: | | |  | | | |  | Volume (mm3) per collections: |  | |  | |  | | |  | | | |  |  |  | |  | | Collection method (specify): | | |  | | | |  | Collection method (specify): |  | |  | |  | | |  | | | |  |  |  | |  | | Frequency of collection: | | |  | | | |  | Frequency of collection: |  | |  | |  | | |  | | | |  |  |  | |

**J10. INDWELLING CATHETERS OR IMPLANTS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Not applicable to this protocol.  Indwelling catheters or implants will be used:   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Size: | | |  | | Type: |  | |  | | |  | |  |  | | Is maintenance necessary? | | | | No Yes | | | |  |  | | | | | | |  | Describe: | | | | | | |  |  | | | | | | |  | |  | | | | | |  | | | | | | | |

**J11. HUMANE ENDPOINTS THAT WILL PROMPT INTERVENTION TO PREVENT CONTINUED PAIN OR DISTRESS**

Information that is critical to the IACUC's assessment of appropriate endpoint consideration within a protocol includes precisely defining the humane endpoint (including assessment criteria); the frequency of animal observation; training of personnel responsible for assessment and recognition of the humane endpoint; and the response required upon reaching the humane endpoint. The IACUC has determined that the list below defines the commonly accepted clinical milestones which should be regarded as humane endpoints for most animal studies. Choose all of those which are appropriate for the species being used. For each milestone, indicate the action that will be taken. Add other milestones (in the row marked 'other') if applicable for defining the humane endpoints for the proposed study.

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| |  | | --- | | No, humane endpoints are not related to this protocol.  Yes, humane endpoints are applicable to this protocol. Please complete the table below: |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **HUMANE ENDPOINTS THAT WILL PROMPT INTERVENTION TO PREVENT CONTINUED PAIN OR DISTRESS** | | | | | | | Clinical Observation/ Milestone | Applicable to my proposal? | Frequency of observation | Protocol personnel will perform each of these observations | Response required upon reaching the humane endpoint | Provide duration (days, weeks, etc.) of monitoring or a scientific justification for not using the milestones listed | | Infection unrelated to the protocol | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Not eating or drinking (will require individual housing to effectively assess) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Decreased fecal and urine output (will require individual housing to effectively assess) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Delayed wound healing (requires checking at least daily until suture removal) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Sudden behavioral change (Ex. aggression, guarding, hiding) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Licking, biting, scratching of the operative / injection site (requires checking at least daily until suture removal | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Poor posture or ambulating difficulty (Ex: tense, tucked-up, stiff gait) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Lost hair coat condition (Ex: ruffled fur, lack of grooming, piloerection) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Sudden activity level change (Ex: restlessness, pacing, reluctance to move) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Unexpected sweating or salivation (Ex: stressed rodents salivate excessively when stressed) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Painful' facial expression (Ex: grimace, eyes dull, pupils dilated, pinning of ears) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Oculonasal discharge (Ex: rats shed porphyrin pigment when stressed) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Teeth grinding (Ex: More common sign in rabbits, livestock) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Signs of moderate to severe pain or distress that was not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Body weight loss exceeding 15% of free feeding bodyweight relative to an age matched reference (Ex: Requires regular weighing) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Self-mutilation (requires checking at least daily until suture removal) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Neurological disorders (e.g., seizures, blindness, ataxia) that were not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Cardiopulmonary disorders (e.g., sudden weakness, vascular collapse, coma) that were not anticipated by the study plan | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Abnormal feeding or defecation for 48 hours (e.g., decreased feed or water intake and/or decreased fecal production that is unrelated to the study plan) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | Non-weight bearing for 72 hours (e.g., difficulty walking, inability to maintain upright posture) | Choose an item. | Choose an item. | Choose an item. | Choose an item. |  | | **Other humane endpoints which will be employed in this project:** |  | | | | | |  |  |  |  |  |  | |

E-mail the IACUC if you need to add more non-surgical procedures to your Section J.

# SECTION K. FIELD STUDY

Georgia Aquarium defines a “field study” as any study conducted on free-living wild animals in their natural habitat, which does not involve invasive procedure, and which does not harm or materially alter behavior of the animals under study. “Natural habitat” does not include a zoo/aquarium, petting zoo, fish hatchery/farm, or other animal exhibit or man-made housing, regardless of how similar to the animals’ natural environment.

**K1. SPECIES & LOCATION**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Species (list all): | | | |  | | |  | | | | | | | Specify the location(s) where the study will take place: | | | | | | |  |  | | | | | |  |  | | | | | |  |  | | | | | | Are there other vertebrate species that could be adversely affected or become involved due to proximity? | | | | | | |  | NoYes ↓ | | | | | |  | | | | | | |  | | Please identify species at risk and how risk will be mitigated or reduced: | | | | |  |  | | | | | |  | | |  | | | |  |  | | | | | |  | | | | | |

**K2. FIELD CAPTURE**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Will any animals be captured in the field for observation, marking, measurements, testing, euthanasia, or other data collection activities? | | |  |  | | No, animals will not be captured for any purpose. This is a behavioral study.  Yes, animals will be captured for this study. | | |  |  | |

**K3. FIELD OBSERVATIONS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Will any animals be observed in the field or natural environment without capture or handling? | | |  |  | | No, animals will be observed in the field with capture or handling.  Yes, the study includes observation of animals in the field without capture or handling. | | |  |  | |

**K4. LIVE CAPTURE AND RELEASE**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Describe, in chronological order, how animals will be captured, handled, and released. Describe methods of capture to be used, including devices to be used, frequency with which these devices will be checked and estimated maximum time animals will be restrained before release. | | | |  |  | | |  |  | | |  | | |

**K5. PERMITS AND AUTHORIZATIONS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  | | --- | --- | | Are local, regional, or national permits or other authorizations required for the observation, capture, transportation, data collection or other proposed activity using these animals? | | |  |  | | No, permits or other authorizations are not required.  Yes, permits or other authorizations are required for the proposed activities: | | | Please provide the following information for each required permit or authorization. If agency approval has not yet been obtained, indicate "pending" for date of approval and submit the required information when obtained. Note that certification of IACUC approval will not be provided until all required information has been received. Please provide copies of applicable permits.   |  |  |  |  | | --- | --- | --- | --- | |  | Permit 1 | Permit 2 | Permit 3 | | Agency |  |  |  | | Agency contact person |  |  |  | | Agency email |  |  |  | | Agency phone number |  |  |  | | Permit/authorization number |  |  |  | | Date of approval |  |  |  | | Duration of approval |  |  |  | |  | | | | | | |

**K5. ANIMAL TRANSPORTATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  | | --- | --- | | Will animals be transported from one field location to another (e.g., from the capture site to a research facility)? | | |  |  | | No, animals will not be transported.  Yes, animals will be transported from one field location to another: | | | |  |  |  | | --- | --- | --- | | Please provide details on point of origin, the final destination, and the reason animal transportation is necessary: | | | |  | |  | |  |  | | |  | |  | | Person responsible for animals during transport: | | | |  | |  | |  |  | | |  | |  | | Describe method of animal transport (e.g., commercial carrier, agency vehicle, private vehicle, etc.). Describe the vehicle and how it is equipped to ensure the welfare of animals during transport (e.g., heated, air conditioned, tie-down straps for caging, etc.): | | | |  | |  | |  |  | | |  | |  | | Describe procedures to be used to protect the animals during transport (e.g., caging, food, water, frequent observation, etc.): | | | |  | |  | |  |  | | |  | |  | | | |

**K6. IMPORTATION OF ANIMALS INTO GAI ANIMAL CARE AND USE FACILITIES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Will any animals be brought into GAI animal housing or use areas? | | |  |  | | No, animals will not be brought into any of GAI's housing or use areas at any time.  Yes, animals will be brought into GAI's housing or use areas. | | | |  |  |  | | --- | --- | --- | | GAI Zoological Operations teams must be consulted regarding the importation of animals into GAI vivarium or other GAI-owned facilities. Please describe the importation plan that has been developed in consultation with GAI Zoological Operations staff: | | | |  | |  | |  |  | | |  | |  | | | |

**K7. FINAL DISPOSITION OF THE ANIMAL**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  | | | | | | | Adopt-out  Transfer to another protocol  Other, explain: | | | | Euthanasia  Release  Accession into GAI collection | | |  | | | | |  | | |  |  | | |  |  | | |

# SECTION L. EMERGENCY CARE INSTRUCTIONS

Use separate forms for care that differ by treatment group, species, or housing location.

**L1. ADMINISTRATIVE INFORMATION**

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | All species under protocol are covered.  These instructions only apply to specific species. List below ↓ | | | | | |  | | | |  | |  | |  | | | |  | | | |  | | Housing location(s): | | |  | | |  | | | |  | | Indicate procedures performed on these animals (e.g., surgery, tumor implant, catheter placement, etc.): | | | | | |  | | | |  | |  |  | | | | |  | | | |  | |

**L2. CONTACT INFORMATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Specify circumstances under which contact is requested: | | | | | | | | | | | |  | | | |  | | | |  | | | |  |  | | | | | | | | | | |  | | | |  | | | |  | | | | Primary Contact in Case of Emergency: | | | |  | | | | | Same as Section A2 | | |  | | | | | | | | | | | | Work Phone: | |  | | | Cell Phone: | |  | | | | |  | | | | | | | | | | | | Alternate Contact in Case of Emergency: | | | |  | | | | | Same as Section A2 | | |  | | | | | | | | | | | | Work Phone: | |  | | | Cell Phone: | |  | | | | |  | | |  | | |  | | | |  | | |

**L3. COMPLICATIONS AND TREATMENTS**

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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Describe potential or expected complications: | | | | | | |  | | | |  | | |  |  | | | | | |  | | | |  | | | Indicate preferred option when treatment is necessary:  Treatment as determined by veterinarian.  Veterinary treatment with conditions: | | | | | | |  | | | |  | | | Notify contact person before initiating treatment. \*See note at the end of this form\*  Observe the treatment guidelines described below when possible.  Observe the treatment restrictions described below when possible.  Avoid contraindicated drugs, specified below ↓ | | | | | | |  | | Description of treatment guidelines, restrictions, and/or contraindicated drugs: | | | | |  | |  | | | | |  | |  | | | | |  | | | |  | | | Indicate preferred option when euthanasia decisions are necessary:  Veterinary discretion based on animal condition.  Euthanasia under certain conditions (check all that apply):  Notify contact person before performing euthanasia. \*See note at the end of this form\*  Euthanasia method, agent and route of administration should follow protocol specifications.  Should be performed when the following specific criteria are met: | | | | | | |  | | Explain euthanasia criteria in more detail: | | | | |  | |  | | | | |  | |  | | | | |  | | | |  | | | Indicate the actions that are requested when euthanasia is administered, or animals are found dead: | | | | | | |  | | | |  | | | Notify contact person. | | | Refrigerate carcass. | | Dispose of carcass. | |  | | | |  | | | Additional requests or instructions: | | | | | | |  | | | |  | | |  |  | | | | | |  | | | |  | | |

**NOTE: VETERINARIANS WILL TAKE ACTION BASED ON PROFESSIONAL JUDGEMENT IF PROMPT CONTACT IS NOT POSSIBLE**

E-mail the IACUC if you need to add more care instructions to your Section L.

# SECTION M. SPECIMEN OR DATA REQUEST

I understand that this is a request for data (e.g., animal records, photos, videos), water samples, environmental samples, non-living diet or prey items, and/or archived or banked tissue samples. All other requests involving live animal research are required to complete a full IACUC proposal.

**M1. PERSONNEL INFORMATION (SEE SECTION A1)**

**M2. SPECIMEN REQUESTED**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Water sample | | | Animal records (specify): | | | |  | | |  | |  | | Diet/prey sample | | | morphometrics | | medical | |  | | |  | |  | | Photo/Video (archived) | | | feeding | | behavioral | |  | | |  | |  | | Other - Not Listed, explain: | | | water chemistry / environmental / LSS | | other, explain: | |  | |  |  | |  | | |  | |  | |  | | Archived tissue (specify): | | | |  | |  | | plasma | | necropsy | |  | |  | | serum | | muscle | |  | |  | | other, explain: | | | |  | | | | | | |  | | | |  | | |  | | | |  | | | Describe the sample request in detail, including target species, sample volumes, preservation methods, storage and shipping requirements: | | | | | | |  | | | |  | | |  |  | | | | | |  | | | |  | | |

**M3. SCIENTIFIC OBJECTIVES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Please briefly describe the project scope and main objectives and how this request will achieve these objectives: | | | |  | |  | |  |  | | |  | |  | |

**M4. TIMEFRAME AND DURATION OF PROJECT**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Please specify the time frame (dates), frequency, and duration of your request: | | | |  | |  | |  |  | | |  | |  | |

**M5. PROCEDURE/SPECIMEN NEEDS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Are there any specialized instructions or sampling equipment required to meet this request?  No  Yes, please explain: | | | |  | |  | |  |  | | |  | |  | |

**M6. SHIPPING AND PERMITS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | If samples are to be shipped, please provide shipping details, preferred carrier, and account numbers.  Shipping is not required.  Yes, shipping is required: | | | | | | | | | | |  | | | | |  | | | | | |  | Shipping details (name of recipient, address, email, phone number): | | | | | | | | |  |  | | | | | | | | |  | | | Carrier: |  | | Account #: |  | |  | | | | |  | | | | Do the requested samples require a permit for transfer:  No.  Yes, please explain and provide copies of applicable permits or authorizations (e.g., NMFS, USFWS, CITES): | | | | | | | | |  | | | | | | | | |  | |  | | | | | | |  | | | | |  | | | |

**M7. DATA END USE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Will this data be used for scientific publication, conference presentation, or other publishing?  No  Yes, please explain: | | | |  | |  | |  |  | | |  | |  | | How will Georgia Aquarium be represented: | | | | Acknowledgement  Co-authorship | | Both  Neither | |  | |  | |

**M8. TERMS AND CONDITIONS**

|  |
| --- |
| Georgia Aquarium Inc. hereby releases, acquits and forever discharges [**RECIPIENT**], its parent company, and the parent, related, affiliated and subsidiary companies of each, and the directors, officers, employees, agents and assigns of each (collectively, “Releasees”) of and from any and all rights, claims, demands, liabilities, judgments, suits, expenses, actions, causes of action, damages, costs, losses, compensation, contracts, agreements and debts (including, without limitation, attorneys’ and consultants’ fees and costs) (collectively, “Claims”), which Georgia Aquarium Inc. may now have or may hereafter have against the Releasees arising out of or related to the Materials.  [**RECIPIENT**] hereby releases, acquits and forever discharges Georgia Aquarium Inc., its parent company, and the parent, related, affiliated and subsidiary companies of each, and the directors, officers, employees, agents and assigns of each (collectively, “GAI Releasees”) of and from any and all rights, claims, demands, liabilities, judgments, suits, expenses, actions, causes of action, damages, costs, losses, compensation, contracts, agreements and debts (including, without limitation, attorneys’ and consultants’ fees and costs) (collectively, “Claims”), which [**RECIPIENT**] may now have or may hereafter have against GAI Releasees arising out of or related to the use of the Materials by [**RECIPIENT**]. |

**M9. INTERNAL APPROVAL (SEE SECTION F4)**

**M10. SPONSOR**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | This section is required if the applicant is not a university faculty member, research scientist or health professional. | | | | | | | |  | |  | | | | | | Name: |  | | Date: |  | | | |  | | | | | | Title: |  | | Sponsor Signature:  To insert your signature, hover over and click on the photo icon below and select a saved photo of your signature. | | | |  | | | | | | | | Affiliation: |  | |  | | | | |  |  | | |  | | | | | | | |

**M11. INFORMATION RELEASE (SEE SECTION F3)**

**M12. AGREEMENT TO TERMS AND CONDITIONS (SEE SECTION F5)**

# SECTION N. ANIMAL WELFARE REGULATIONS EXEMPTION

This section should be used to request exemptions from the Animal Welfare Act and/or Animal Welfare Standards for scientific reasons. Specify the exemption(s) that are requested and complete the related item(s) as indicated.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Standard Housing Density [[Complete N1](#_N1._EXEMPTION_FROM)]  Cage Change Frequency [[Complete N2](#_N2._CAGE_CHANGE)]  Allow Radios / Sound / Noise in Animal Radios [[Complete N3](#_N3._ALLOW_RADIOS/SOUND/NOISE)]  Standard Environmental Conditions (temperature, humidity, light level) [[Complete N4](#_N4._STANDARD_ENVIRONMENTAL)]  Environmental Enrichment (bedding, toys, treats, activities) [[Complete N5](#_N5._ENVIRONMENTAL_ENRICHMENT)]  Social Housing (pair or group housing) [[Complete N6](#_N6._SOCIAL_HOUSING)]  Free Choice Feed or Water [[Complete N7](#_N7._FREE_CHOICE)]  Other, please explain: [[Complete N8](#_N8._OTHER_EXEMPTIONS)] | | | |  | |  | |  |  | | |  | |  | | **Check the appropriate box:**  *I will notify Zoological Operations Staff PRIOR TO initiating restriction*  *I will notify Animal Health Staff PRIOR TO removing restriction* | | | |  | |  | |

## N1. EXEMPTION FROM STANDARD HOUSING DENSITY

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Specify the maximum housing density for animals in this study and describe the management plan that will be used to avoid exceeding that maximum. Include any plan to return animals to standard housing density when specified conditions are met: | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | | Justification for housing these animals at a density that exceeds established guidelines: | | | |  | |  | |  |  | | |  | |  | |

## N2. CAGE CHANGE FREQUENCY

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Describe the cage change frequency that is necessary for this protocol: | | | |  | |  | |  |  | | |  | |  | |

## N3. ALLOW RADIOS/SOUND/NOISE IN ANIMAL AREAS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Specify the type of sound to which animals will be exposed (e.g., radio, controlled sounds, random noise, etc.) and describe its nature (e.g., soft music, bell, buzzer, etc.). Indicate the volume or decibel setting, the duration of each exposure, and the frequency of animal exposure. | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | | Justification for exposing animals to radio or other generated sound or noise. If the sound is a component of the experimental design or the plan for environmental enrichment, please describe its purpose. | | | |  | |  | |  |  | | |  | |  | |

## N4. STANDARD ENVIRONMENTAL CONDITIONS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Describe the environmental condition(s) for which you request an exemption. Be specific. | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | |

## N5. ENVIRONMENTAL ENRICHMENT (OTHER THAN SOCIAL HOUSING)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Specify the specific environmental enrichment(s) for which you request an exemption: | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | | Indicate the duration of the exemption that is required for each animal and/or study group and explain the reason that particular time period is necessary. | | | |  | |  | |  |  | | |  |  | | | Please describe the experimental or other scientific reasons why animals on this protocol should be exempted from standard species-specific environmental enrichment: | | | |  |  | | |  |  | | |  | |  | |

## N6. SOCIAL HOUSING

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Specify the specific housing arrangement that is requested under this exemption (e.g., single housing; restrictive housing, isolated housing, etc.) Be specific. | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | | Please describe the experimental or other scientific reasons why animals on this protocol should be exempted from standard species-specific social housing and specify the length of time that the exemption must apply. | | | |  | |  | |  |  | | |  |  | | | Will single housing (if single housing is being used) be for the shortest period possible? No Yes | | | |  |  | | | Please indicate the anticipated maximum period for single housing, and the animals or study group to which single housing applies. | | | |  |  | | |  |  | | |  | |  | |

## N7. FREE CHOICE FEED OR WATER

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Check the specific exemption(s) identified below. Restrictions as a management or clinical activity (e.g., NPO prior to surgery; treatment of disease) do not constitute an exemption to free choice feed or water and do not require approval of the IACUC. | | | |  | |  | | Restricted feed intake | Restricted water intake | | |  | |  | |

## N8. OTHER EXEMPTIONS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Please describe the experimental or other scientific reasons why animals on this protocol should have this exemption: | | | |  | |  | |  |  | | |  | |  | | For each animal or study group requiring this exemption, identify the specific group and indicate the number of animals involved: | | | |  | |  | |  |  | | |  | |  | | For the style of exemption noted above, describe the minimum quantity of feed or water which will be provided and the frequency or schedule of provision. EXAMPLE: Water: 'x' mls/kg/day/ animal. Feed: maintain animals at 'x' % of the free feed body weight. NOTE: Provide a copy of the 'water log' or 'weight/feed log' which will be used as an email attachment to [iacuc@georgiaaquarium.org](mailto:iacuc@georgiaaquarium.org). | | | |  | |  | |  |  | | |  |  | | | For the style of the exemption noted above, describe the impact of the proposed procedures upon the animals' well-being. | | | |  |  | | |  |  | | |  |  | | | For the style of the exemption noted above, provide a clear scientific justification as it relates to the desired research outcomes. | | | |  |  | | |  |  | | |  |  | | | For the style of the exemption noted above, provide a monitoring plan for physiologic or behavioral parameters (while animals are in a reduced intake status). EXAMPLE: weight, measures of hydration status or behavior, etc. | | | |  |  | | |  |  | | |  |  | | | For the style of the exemption noted above, describe which specific criteria will be used to determine when to remove an animal from study (humane endpoints) and criteria which will result in a veterinary consult. EXAMPLE: level of weight loss, hydration state, urine specific gravity, hematocrit, behavior change, etc. | | | |  |  | | |  |  | | |  |  | | | **FOR DEPRIVATION STUDIES ONLY:** Describe the 'post-deprivation recovery plan' which will be used to return the animal to a state of normal hydration, body condition, etc. Include quantities, frequency, measures to assess progress, and veterinary involvement. | | | |  |  | | |  |  | | |  | |  | |

# SECTION O. AQUATICS, AMPHIBIANS, AND REPTILES

Aquatic animals have special needs. This Section is designed to provide the IACUC specific details regarding care provisions of aquatic animals.

**O1. AQUARIA LOCATION AND SPECIES SUMMARY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Please summarize water management and monitoring information programs for each animal facility, including all satellite facilities/rooms/enclosures. | | | |  | |  | |  |  | | |  | |  | | List location of aquaria, including outdoor enclosures (ponds or outdoor tanks). If indoors, list building and room number. | | | |  | |  | |  |  | | |  | |  | | Indicate if embryonic (E), larval (L), juvenile (J) or Adult (A): | | | |  | |  | |  |  | | | **NOTE:** All species housed at the same location and maintained via the same design and monitoring may be listed in the same row. Group tanks (ponds, outdoor tanks, multiple aquaria) have shared water supply (using arrays for distribution collection); Individual aquaria have exclusive water handling systems. | | | |

**O2. SYSTEM DESIGN**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  | | --- | --- | --- | | Please summarize water management and monitoring information programs for each animal facility, including all satellite facilities/rooms/enclosures. | | | |  | |  | |  |  | | |  | |  | | Indicate water type, e.g., fresh, brackish, or marine: | | | |  | |  | |  |  | | |  | |  | | Indicate water circulation, e.g., static, re-circulated, constant flow, or some combination of these. If applicable, indicate water exchange frequency and amount (percentage). | | | |  | |  | |  |  | | |  |  | | | Provide a key word for filtration employed, e.g., biological, chemical, mechanical, etc. and type (e.g., mechanical-bead filter). A diagram may be provided showing the flow of water, filtration, source of “make-up” water and amount replaced daily. | | | |  |  | | |  |  | | |  |  | | | Identify means of water disinfection (e.g., UV, ozone, etc.) | | | |  |  | | |  |  | | | **NOTE**: Records of equipment maintenance (filter changes, UV bulb changes, probe changes, calibrations, etc.) should be available for review. Pre-treatment means any action toward the incoming water not described above (e.g., carbon filtered, conditioned with sea salt, toning to remove chloramine). | | | |

**O3. SYSTEM MONITORING**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Monitoring - (In these columns, please indicate monitoring frequency, e.g., daily, weekly, monthly or other point sampling frequency; continuous/real time, or none, if applicable. | | | | | | | | | |  | | | |  |  | | |  | | Location: | |  | | | | | | | |  | | | |  |  | | |  | | Temperature: | | |  | | Salinity: | |  | | |  | | | |  |  | | |  | | pH: |  | | | | NH4: |  | | | | |  |  | | | |  |  | | | | | NO2: |  | | | | NO3: |  | | | | |  |  | | | |  |  | | | | |

**O4. SYSTEM MONITORING – GASES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Monitoring - (In these columns, please indicate monitoring frequency, e.g., daily, weekly, monthly or other point sampling frequency; continuous/real time, or none, if applicable. | | | | | | | | | | | | |  | | | | |  | |  | | |  | | | Location: | |  | | | | | | | | | | |  | | | | |  | |  | | |  | | | | Dissolved O2: | | |  | | | Total Dissolved Gases: | |  | | | | |  | | | | |  | |  | | |  | | | | Other, Please List: | | | |  | | | | | | | |  |  | | | | | |  | |  | | | | | |

**O5. SPECIAL HUSBANDRY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | UV Light with specific wavelengths  Describe: | | | | | |  | | |  | | |  | |  | | |  | | |  | | | Basking area  Describe: | | | | | |  | | |  | | |  | |  | | |  | | |  | | | Other  Describe: | | | | | |  | | |  | | |  |  | | | | |  |  | | | | |