For IACUC Use Only

**TEXAS A&M UNIVERSITY - COMMERCE**

Approval - DVM

IACUC Chair hair:

File Number:

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

**ANIMAL CARE AND USE APPLICATION – Research**

## Principal Investigator

## Name Department

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**Campus Address**

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**Campus Phone Number Email**

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Project Title**:**

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Project Status: [ ]  New [ ]  Renewal

## Course Number and Title:

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Term of Project:

Start **End**

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Maximum protocol duration is 3 years from approval date. Completion and signing of this form are the responsibility of the principal investigator or faculty member in charge. Completion of the approval process will fulfill the Public Health Service and USDA Animal Welfare Act requirements, and will serve to remind users and the public of Texas A&M University, Commerce’s commitment to humane care and use of animals.

ASSURANCES: The law specifically requires several written assurances from the Principal Investigator. Please read and sign the assurances as indicated:

As the Principal Investigator on this protocol, I acknowledge my responsibilities and provide assurances for the following:

 A. Animal Use: The animals authorized for use in this protocol will be used only in the activities and in the manner described herein, unless a modification is specifically approved by the IACUC prior to its implementation.

 B. Duplication of Effort: I have made every effort to ensure that this protocol is not an unnecessary duplication of previous experiments.

 C. Statistical Assurance: I assure that I have consulted with a qualified individual who evaluated the experimental design with respect to the statistical analysis (if necessary), and that the minimum number of animals needed for scientific validity will be used.

 D. Biohazard/Safety: I have taken into consideration and made the proper arrangements regarding all applicable rules and regulations concerning radiation protection, biosafety, recombinant issues, and so forth, in the preparation of this protocol.

 E. Training: I verify that the personnel performing the animal procedures/manipulations observations described in this protocol are technically competent and have been properly trained to ensure that no unnecessary pain or distress will be caused to the animals as a result of the procedures/manipulations.

 F. Responsibility: I acknowledge the inherent moral, ethical and administrative obligations associated with the performance of this animal use protocol, and I assure that all individuals associated with this project will demonstrate a concern for the health, comfort, welfare, and well-being of the research animals. I agree to comply with the Letter of Assurance, all institutional Guidelines, rules and policies, and all applicable state and federal laws governing animal use in research, testing and teaching*.*

 G. Licenses and Permits: I assure that licenses and permits for a) any controlled substances required, and b) collecting wild animals (if appropriate) have been obtained and are attached to this document. I agree to comply with all regulations for their use.

 H. Veterinary Consultation: I have consulted with the Attending Veterinarian or his/her designee in the preparation of this Animal Care and Use Protocol.

 I. Painful Procedures: (A signature for this assurance is required by the Principal Investigator if the research being conducted has the potential to cause more than momentary or slight pain or distress even if an anesthetic or analgesic is used to relieve the pain and/or distress.)

I am conducting biomedical experiments, which may potentially cause more than momentary or slight pain or distress to animals. I assure that discomfort and injury to animals will be limited to that which is unavoidable in the conduct of valid scientific research or teaching.This potential pain and/or distress [ ]  **WILL** or [ ]  **WILL NOT** (**please check 1 box**, if applicable) be relieved with the use of anesthetics, analgesics, and/or tranquilizers. I have considered alternatives to such procedures; however, I have determined that alternative procedures are not available to accomplish the objectives of this proposed experiment.

## Principal Investigator Date:

\*\*This application must be submitted on a new complete form every **three** years, more often if changes are made to the protocols. **Annual reports are also required**.

I was consulted in the preparation and planning of this Animal Care and Use Protocol and the associated experimental plans. (The Animal Welfare Act Regulations require that an attending veterinarian must be consulted in the planning of procedures/manipulations that may cause more than slight or momentary pain or distress, even if relieved by anesthetics or analgesics.)

Attending Veterinarian:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This Animal Use Protocol was approved by a duly constituted quorum of the Texas A&M Commerce Animal Care and Use Committee:

## IACUC Approval Date:

TAMUC IACUC Chair:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Source (or prospective source) of funding for this AUP and Associated Project(s):

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## Was a Scientific Peer Review performed for the Grant or Research Plans associated with this project?

 [ ] Yes [ ] No

If a peer review was performed, please provide name of agency / study group and date of last peer review:

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General Purpose of Project (check all that apply) Basic Procedure(s) (check all that apply)

[ ]  Research Project [ ]  Behavioral

[ ]  Pilot Project [ ]  Blood/Tissue collection

[ ]  Student Special Project [ ]  Surgical Lesion

 [ ]  Pharmacological

## ANIMAL NUMBERS AND PAIN AND DISTRESS CATEGORY ASSIGNMENTS:

## Number of Animals Required (By Species):

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## Statistical Justification for Animal Numbers:

Please provide statistical justification for the number of animals requested on this AUP. If you do not have statistical measures for prediction of the number of animals required, please provide a detailed list of how you have arrived at the number of animals requested. For example, you may list animals by statistical group (i.e. Group A of 6 mice, Group B of 6 mice and control Group C of 6 mice, equals 18 mice, etc.). In most cases, the IACUC will need detail to the level of the individual animal or smallest group size. You may need to insert a flowchart to help delineate your group’s sizes and animal numbers.

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Please address how you have considered replacement, reduction and refinement for your project

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## USDA Pain Category Determinations and Animal Numbers Assigned:

## Species 1:

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| --- | --- | --- | --- | --- | --- |
| Year | Category B | Category C | Category D | Category E | Totals |
|  |  |  |  |  |  |
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| 3 yr. Totals |  |  |  |  |  |

## Species 2:

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| --- | --- | --- | --- | --- | --- |
| Year | Category B | Category C | Category D | Category E | Totals |
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| 3 yr. Totals |  |  |  |  |  |

## QUALIFICATIONS/TRAINING/EXPERIENCE DOCUMENTATION:

Provide the names of all associated co-investigators, students and technicians who will have direct animal contact, Specify those persons performing anesthesia and surgery. For each person, briefly state their experience/qualifications to perform the procedures described within this application, or how training will be obtained if needed.

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| Name | School and Degree / Status | Years’ Experience with Species | IACUC Training Date | Training Date for Procedures Listed |
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## PURPOSE OF PROPOSED RESEARCH: Please provide a brief lay-oriented statement outlining the purpose and scientific merit of the research project. This explanation should include your project’s relevance to human or animal health and/or the advancement of knowledge. Include the rationale for the choice of species and number of animals used. Your response must fit into the text box provided below. Please do not append an attachment in response to this question.

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RATIONALE AND BACKGROUND:Describe the goal of the project, the hypothesis to be tested and a brief summary of the experimental methods. An attachment may be appended if your response does not fit into the text box below. Please do not append text from your grant application. Experimental plans should include detail to the level of experimental group such that the IACUC can determine the exact use of each individual subset / group of animals and associate use plans with the animal numbers provided elsewhere in this application.

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ASSURANCE THAT PROPOSED WORK DOES NOT UNNECESSARILY DUPLICATE PREVIOUS RESEARCH: The Animal Welfare Act requires that the principal investigator has provided assurance that the research activities do not unnecessarily duplicate previous experiments. Provide a description of the methods and sources used to determine that the proposed research does not unnecessarily duplicate previous experiment.

Has a thorough literature search for alternatives to pain or distress inducing procedures been performed? [ ] Yes [ ] No

Date of Literature Search within the last 12 months:

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Provide two sources consulted (e.g. Science Direct, Medline etc.):

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Has a thorough literature search been performed to ensure lack of unnecessary duplication of experimentation with animals? [ ] Yes [ ] No

Date of Literature Search within the last 12 months:

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Provide two sources consulted (e.g. Science Direct, Medline etc.):

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## ANIMAL HUSBANDRY AND JUSTIFICATION OF USE:

If wild animals are used, describe how they will be trapped and types of traps used.

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Describe the characteristics of the animals that satisfy their use in this study and how the number of animals needed was determined.

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## Are all husbandry and handling practices standard (routinely performed in this facility)?

 [ ]  Yes [ ]  No

If no, describe all deviations from standard procedures and practices. You must provide scientific justification for any non-standard husbandry plans, i.e. please explain why these non-standard husbandry methods are required to meet the scientific objectives of this study, and why standard methods are unacceptable from a scientifically argued standpoint, e.g. prolonged restraint is not considered a standard practice and must be justified.

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## Where will animals be housed?

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**Will animals be kept longer than 12 hours, or overnight, in any area other than the IACUC approved housing facility?**

 [ ]  Yes [ ]  No [ ]  N/A

If yes, indicate the location (building and room #), number of animals and explain why the animals must be kept outside the main facility.

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## Disposition of Animals:

 [ ]  Euthanasia [ ]  Return to Colony [ ]  Return to Wild S Sold

Transfer to different project entitled:

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Other (explain):

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Return to colony/ return to wild: How will emergency euthanasia be performed?

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## Check the method that will be used for euthanasia.

Note that euthanized animals may not be made available for human consumption.

 [ ]  A. Inhalant agents (please provide specific agent and route of administration)

 [ ]  B. Injectable agents (please provide specific drug, dosage and route of administration)

 [ ]  C. Physical Methods

 [ ]  Cervical dislocation (Animals < 200 grams)

 [ ]  Decapitation with guillotine

Will animals be sedated/anesthetized during physical methods? [ ]  Yes [ ]  No

If no, provide scientific justification for performing this procedure without sedation/anesthesia.

 [ ]  D. Exsanguination (method to be used ONLY in anesthetized animals)

 [ ]  E. Other Method (describe)

## List specific safety precautions and procedures for handling animals:

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## Has the necessary approval been obtained from:

Radiation Safety Officer [ ]  Yes [ ]  No [ ]  N/A [ ]  Submitted

Institutional Biosafety Committee [ ]  Yes [ ]  No [ ]  N/A [ ]  Submitted

## Experimental Manipulations:

‘Yes’ answers to the following questions require additional sections to be completed.

 **Yes** **No** **Situation** [ ]  [ ]  Will surgery be performed? If yes, complete Section A.

 [ ]  [ ]  Will anesthetics be administered? If yes, complete Section B.

 [ ]  [ ]  Will animals have a serious or experimentally-induced disease, perceive pain

 and discomfort, or be subjected to prolonged restraint or aversive stimuli? If

 yes, complete Section C.

[ ]  [ ]  Does this project require the use of radioactive materials, or bio hazardous?

 agents in surviving, live animals? If yes to either, complete Section

## SECTION A: SURGERY

Surgery is defined as a major operative procedure that exposes a body cavity or produces a substantial impairment of physical or physiologic function. Multiple survival surgeries on a single animal are discouraged unless they can be scientifically justified.All survival surgery must be performed using aseptic procedures, including surgical gloves, masks, sterile instruments and aseptic techniques. Non-rodent mammalian survival surgery must be performed in an operating room used only for surgery.

## Type of surgery will be:

[ ]  Survival

[ ]  Non survival

## Location where surgery will be performed:

## Describe the surgical procedures:

Include aseptic preparation of the operative site, location and size of incisions, size and placement of catheters or devices that will be implanted, suture types used, and estimated time to complete the procedure. For acute procedures, include operative site preparation, description of procedures to be performed and estimated duration of the experiment.

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| Will multiple survival surgeries be performed on any one animal?  | [ ]  Yes | [ ]  No |
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If yes, provide scientific justification for performing these procedures.

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Describe postoperative care including how often animals will be observed and all drugs to be administered.

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## SECTION B: ANESTHESIA

Preoperative regimen:Include length of withholding of food and/or water and drugs administered.

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Anesthetic regimen:List all pre-anesthetic, induction, maintenance and muscle relaxant drugs that will be used. Include dosages and routes of administration.

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Analgesic drugs:Provide drug names, dosages, route and frequency. If analgesic drugs cannot be administered, provide scientific justification for withholding them.

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Describe the procedures and methods that will be used to indicate that adequate depth of anesthesia is being maintained.

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## SECTION C: Animals will have a serious natural or experimentally induced condition, will perceive discomfort or distress, or be subjected to periods of restraint or aversive stimuli.

Procedures that would be expected to cause pain or distress in a human should also be considered painful for animals. Prolonged restraint means the animal is kept confined or immobilized for time periods in excess of those required for administration of treatments or routine handling procedures.

## Consideration of alternatives: What consideration have you given to refining procedures to be less painful; to using other non-vertebrate species; to using fewer numbers of animals; or to non-animal alternatives?

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## Will the animal’s death be used as an experimental endpoint?

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| [ ]  Yes | [ ]  No |
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If not, list the specific criteria for euthanasia of sick animals.

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If the animal cannot be euthanized, please provide a scientific justification.

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If the animal will have a serious natural or experimentally induced condition, answer the following:

What condition(s) will the animals have?

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How will progression of the condition be monitored?

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What measure(s) will be taken to alleviate or minimize pain or distress?

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**Check appropriate space(s) below and provide specific scientific justification details under comments. A special appendix may be attached for scientific justification under this heading.**

[ ]  Injection of hazardous/toxic substance into a living animal

[ ]  Immunization protocol

[ ]  Prolonged restraint

[ ]  Food/water deprivation

[ ]  Abnormal environment (temperature, humidity, light/dark)

[ ]  Hybridoma protocols

[ ]  Aversive stimuli

Comments:

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**SECTION D: Hazardous substances that will be injected into living animals add n/a boxes**

Check all that apply:

[ ]  Infectious agent

[ ]  Toxic chemical

[ ]  Radioisotope

[ ]  Carcinogen

[ ]  Recombinant DNA

[ ]  Transplantable cell line

[ ]  Other (list)

Describe agent, amount, and route of administration:

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## Appendix:

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| **Category B**  | **Category C**  | **Category D**  | **Category E**  |
| Animals being bred, acclimatized, or held for use in teaching, testing, experiments, research, or surgery **but not yet used** for such purposes. Non‐invasive observation only of animals in the wild.  | Animals that are subject to procedures that cause no pain or distress, or only momentary or slight pain or distress and do not require the use of pain‐relieving drugs.  | Animals subjected to potentially painful or stressful procedures for which they receive appropriate anesthetics, analgesics and/or tranquilizer drugs.  | Animals subjected to potentially painful or stressful procedures that are **not** relieved with anesthetics, analgesics and/or tranquilizer drugs. Withholding anesthesia/analgesia must be scientifically justified in writing and approved by the IACUC.  |
| **Example**  | **Examples**  | **Examples**  | **Examples**  |
| Animals being bred or housed, without any research manipulation, prior to euthanasia or transfer to another protocol Observation of animal behavior in the wild without manipulating the animal or it’s environment  | Holding or weighing animals in teaching, outreach or research activitiesObservation of animal behavior in the labEar punching of rodentsTail snips in mice ≤ 21 days oldPeripheral Injections, blood collection or catheter implantationFeed studies, which do not result in clinical health problemsRoutine agricultural husbandry procedures approved by the IACUC in a protocol or SOPLive trappingPositive reward training or research | Survival surgery Non‐survival surgical procedures Laparoscopy or needle biopsies Retro‐orbital blood collection Exposure of blood vessels for catheter implantation Induced infections or antibody production Tattooing Exposure of skin to UV light to induce sunburn Tail snips in mice > 21 days old Research procedures that could potentially increase pain or distress (ex: anesthesia/analgesia studies) on client owned  | Toxicological or microbiological testing, cancer research or infectious disease research that requires continuation after clinical symptoms are evident without medical relief or require death as an endpoint Ocular or skin irritancy testing Food or water deprivation beyond that necessary for ordinary pre‐surgical preparation Application of noxious stimuli such as electrical shock that the animal cannot avoid/escape Any procedures for which needed analgesics, tranquilizers, sedatives, or anesthetics must be withheld for justifiable study purposes  |