UNIVERSITY OF RICHMOND INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
ANIMAL CARE AND USE FORM

Animal welfare regulations require that the Institutional Animal Care and Use Committee (IACUC) review and approve all research or teaching activities involving vertebrate animals prior to the start of any project. This Animal Care and Use Form (ACUF) is an application for a 3 year protocol which will be reviewed at least annually during the 3 years.

The information requested in this ACUF is required in order for the UR IACUC to ensure compliance with expectations of oversight and evaluation of vertebrate animal care and use at the University of Richmond as described in the "Guide for the Care and Use of Laboratory Animals" (National Research Council, 2011). Please refer questions to The UR IACUC Chair.

I. Proposal Information

Project Title:

Protocol Number:

Protocol Type: ☐ Research ☐ Teaching ☐ Breeding

Type of Submission: ☐ New ☐ Modification ☐ Renewal

Sources of Funding: ☐ NIH ☐ NSF ☐ A&S ☐ Departmental ☐ Other:

II. Personnel and Training

A. Personnel

Principal Investigator: Email:

Department: Office Phone: Cell/Home Phone:

Other Investigators:

Students:

B. Training

Please provide personnel qualifications for each individual, including the PI, who will come into contact with the animals in this project. (*Please do not include each individual student in a laboratory course – one line for a whole class will do)

Name	Experience	Hands on Training	CITI Training	Lab Safety 101
e.g. Dr. Ima IACUC	15 years of laboratory experience	Survival surgery, anesthesia and euthanasia techniques	Completed 5/2012. Modules: UR Faculty and Staff Researchers	Completed 5/2012

III. Project Description

A. Animals to be used

Genus and Species	Strain/Breed	Common name	Age	Sex	Weight	Number

Please complete the chart for all species to be used

B. Location

Please indicate the location(s) where the animal research activities will take place. (check all that apply)

☐ Research Lab:

☐ Teaching Lab:

☐ Field Location:

C. Project Summary and Justification

1. Please provide a summary or abstract of the project that is accessible to a **non-scientist** in the space provided below. Define any terms or abbreviations and focus your summary on the events or procedures that happen specifically to the animals. In this section, limit background and rational to only what is needed to explain to the committee what will happen to the animals during each portion of the proposed project.

2. Please provide a summary analysis of harm to animals versus benefit to society. This response should be a clear and straightforward explanation of how the proposed research will advance scientific understanding and/or improve human or animal health and wellbeing. This summary should also be understandable by a non-scientist.

D. Source

How will the animals be obtained?

E. Rationale

1. Why is it necessary to use animals in this project?

2. Why is this species used?

3. Why must this number of animals be used? Where possible, please provide statistical justification to explain how you arrived at your numbers.

4. Does this study duplicate previous experiments? If so, why is duplication necessary?

5. Additionally, please complete a literature search to verify that the proposed research activities do not unnecessarily duplicate previous experiments. When possible, please consult at least 3 sources.

☐ Literature search was conducted
Name of database searched:
Date of search (must be within 90 days of the ACUF submittal):
Years covered by search:
Keywords or search strategies used:
Comments/Findings:

☐ Literature search was not conducted
Reason:

F. Description of Experimental Design and Animal Procedures

Briefly explain the experiment and describe all animal procedures. Make sure to include all procedures involved in the study. The description provided here should allow the IACUC to understand each animal's involvement in the study from the beginning to the endpoint of the study. A flowchart may be effective, where applicable.

Include details about the following specific information, when possible: Animal identification methods, methods of restraints, experimental injections or inoculations, blood withdrawals, radiation, food or fluid restriction, pharmaceutical and non-pharmaceutical grade compounds, resultant effects, potential stressors, endpoint criteria, veterinary care, and surgical procedures and other procedures.

G. Experimental Procedures

1. Will restraint of the animal be necessary? ☐ No

☐ Yes: Indicate restraint device and/or drug and dose and maximum time an animal would be restrained over a 24-hour period. Justify prolonged restraint

2. Will muscle relaxants or paralytic drugs be used? ☐ No

☐ Yes: Explain why they are necessary; indicate drug, dose, route, and frequency of administration. Describe how the level of anesthesia will be monitored while the drugs are in use.

3. Will anesthesia be used in this project? (check appropriate categories)

☐ This project will not involve pain, discomfort, or suffering to animals, and therefore no anesthetic, analgesic, or tranquilizer will be necessary.

☐ This project will not involve painful procedures. However, anesthesia will be used as an aid for restraining the animals.

☐ The procedures used in this study could cause pain, discomfort, or suffering to animals. However, anesthetic, analgesic, tranquilizing drugs, or euthanasia will be used to prevent unnecessary pain, discomfort, or suffering.

☐ The procedures in this study will cause pain, discomfort, or suffering to animals, but anesthetic, analgesic, or tranquilizing drugs cannot be used. Explain the reason why it is inappropriate to administer such drugs to subject animals.

List the name of drug(s), dosage, route, frequency or administration, and indication (e.g. blood collection, surgical procedure, analgesia, etc.) for all anesthetics, analgesics, and tranquilizers to be used in this project.

Drug	Dose	Route	Frequency	Indication

a. How will anesthetic depth be monitored, and how often?

b. Who will supervise the administration of anesthesia?

c. What other techniques will be used to minimize experimental pain, discomfort, or suffering (e.g. euthanasia of animals with complication)?

4. Surgery

a. Will there be any surgical manipulation of these animals? ☐ No

☐ Yes.

Provide a brief description for each experimental group

b. Will the surgical manipulation result in animal survival? ☐ Survival ☐ Non-survival

c. Will there be multiple survival surgeries performed on any one animal? ☐ No ☐ Yes

Explanation:

d. Will you be extracting any fluids from the animals (e.g. blood, urine, bile, cerebrospinal fluid)? ☐ No ☐ Yes

e. If yes to 4d., please indicate whether the extraction will occur before or after euthanasia. If before, please describe how the extraction will be collected.

f. Please describe how surgical instruments will be sterilized between surgeries.

g. Will post-operative analgesics be administered? (list drug, dose, and route) ☐ No ☐ Yes

5. Euthanasia

a. Will it be necessary to euthanize all or some of the animals? ☐ No

☐ Yes

How many and why?

b. Indicate the method to be used on these animals.

☐ Cervical dislocation

☐ Decapitation with anesthesia (list anesthesia, dose, and route)

☐ Administration of CO_2

☐ Exsanguination with anesthesia (list anesthesia, dose, and route)

☐ Other. Please Describe.

c. If other method cited is not listed as approved in the AVMA Guidelines on Anesthesia, indicate scientific justification (with references, if possible).

d. How will euthanized animals be disposed?

e. What will happen to animals not euthanized?

6. Hazardous agents

a. Will any hazardous agents be used in this project?

☐ No

☐ Radioactive Agents (list):

Signature, UR Radiation Safety Officer

☐ Biohazardous Agents (list):

Signature, UR Biosafety Officer

☐ Hazardous Chemicals or Drugs (list):

Signature, UR Environmental Health and Safety Office

☐ Other (list):

7. Controlled substances

a. Are any of the drugs to be used in this study classified as controlled substances? ☐ No ☐ Yes

b. If yes, please list the drugs and describe how and where they will be stored. Will they be stored in a double-locked cabinet accessible only by authorized personnel?

H. Field Studies

Does this experiment involve wild animals? ☐ No (move on to section I) ☐ Yes (complete section H)

1. Are permits required for this type of work? Please check all that apply.

☐ Federal Date of permit acquisition:

☐ State Date of permit acquisition:

☐ Local Date of permit acquisition:

2. Please list or describe the planned interactions with wild animals. How will they be observed? How will they be disturbed or affected? Are any special procedures involved?

I. Investigator's Assurance Statement

I accept and will conform to all federal and state laws and guidelines and all institutional policies and procedures concerning the care and use of animals in research, teaching, or testing. I have made every effort in designing this project to 1. Minimize the pain and distress to animals, 2. Review procedures other than using animals to explore these scientific questions, and 3. Review the literature to ensure this study does not duplicate work already done. I understand that I have a responsibility to notify in writing the Institutional Animal Care and Use Committee of any

substantive changes in the proposed project or personnel relative to this application prior to proceeding with any animal use and will provide an annual project status report.

Principal Investigator Date

I have reviewed this request for animal care and use and have found the proposed project to be scientifically meritorious.

Department Chair Date

If student:

Supervising Faculty Member Date

Please forward the completed ACUF to:
Robert Plymale
rplymale@richmond.edu
Grants & Research Specialist
Arts &Sciences Dean's Office

Are there attachments for this ACUF? ☐ Yes ☐ No

If yes, name them here :