

**IACUC PROTOCOL
FOR USE OF LIVE VERTEBRATES FOR RESEARCH, TEACHING OR DEMONSTRATION
UNIVERSITY OF MEMPHIS**

Date submitted to Attending Veterinarian for pre-review: _____

IACUC Protocol # _____ Date Submitted to IACUC _____

Dates Protocol will be in effect: _____ from _____ to _____
(not to exceed three years including two yearly renewals)

Is this protocol related to an external grant or contract application? Yes No

If yes, complete the following:

Agency: _____ Date Submitted _____

Grant # _____

University account for Animal Care Facility per diem charge: _____

If the protocol is not related to an external grant or contract application, complete the following:

University account for Animal Care Facility per diem charge: _____

Project Title: (If project relates to a grant or contract application, give that title; if multiple protocols relate to one grant, give unique titles for each protocol; if the project is related to a class, give the course name and number):

I. Personnel

Investigator/Instructor: _____

Department: _____

Academic Rank: _____

Campus phone: _____ Emergency phone: _____

Attending Veterinarian: _____

Phone: _____ Emergency phone: _____

List all individuals that will handle animals using this protocol, their affiliation, and their level of expertise (e.g. relevant qualifications). If the protocol applies to a class then so specify.

If additional personnel become involved in handling animals used in this protocol, it is the responsibility of the principal investigator to notify the Animal Care Facility in writing before they start.

Has the investigator/instructor and all personnel listed above received the appropriate vaccinations (tetanus, rabies)? Yes No Not Applicable

Is it necessary for personnel listed on this protocol to be tested for TB? Yes No

If you have questions about the kind of vaccination or about TB, call the Animal Care Facility at 678 2359.

All U of M personnel involved in this protocol must complete the animal care and use training program before animals can be procured or before experiments/teaching or demonstration. In submitting this protocol, I, as Principal Investigator/Instructor accept the responsibility for compliance with this requirement.

In addition, the Principal Investigator/Instructor must be willing to provide appropriate supervision for all persons working on this protocol. In the case of a class, the Instructor must be responsible for training any students in classes involved prior to using animals.

II. Project Description

A. Summary (Enter a brief description below of your project, using lay terminology):

B. Describe IN DETAIL the procedures you will follow. Include accompanying documentation and reference to previously published work in the box below. Provide a complete bibliographic citation and describe any variations from the published technique. The bibliography may be included in the box below or appended to this protocol.

C. Rationale for Involving Animals and the Appropriateness of Species and Number Used.

Indicate (**here**) briefly the short and/or long-term benefits (to humans and/or other animals) of this use of animals for research, teaching or demonstration. Provide rationale for and the number of animals to be used. In addition, state briefly why living animals are required for this study, rather than some alternative model.

D. Do the procedures described in B above, have the potential to inflict more than momentary pain or distress (this does not include pain caused by injections or other minor procedures)? Yes No

I have considered alternatives to procedures that might cause more than momentary or slight pain/distress, and I have not found such alternatives. As such, I have used one or more of the following methods and sources to search for such alternatives: (**check below each method used**)

- Agricola Data Base Medline Data Base CAB Abstracts
- TOXLINE BIOSIS Lab. Animal Sci. Journal
- Lab. Animals Journal Lab Animal Animal Welfare Info Center
- ATLA (Alternatives to Laboratory Animal Journal) Quick Biblio. Series
- Lab Animal Welfare Bibliography (QL55L27311988) "Benchmarks"
- "Alternatives to Animal Use in Research, Testing and Education"
- Current Contents
- CARL
- Direct contact with colleagues (**if selected, you MUST document this below**)

List search words for the literature search:

What is the length of time that the literature search covers?

III. Animal Use

A. List all animal species to be used (example below).

Species	Number ¹	Age ²	Sex ²	Weight ²	Where Housed (Bldg./Rm#)
e.g. Hooded Wistar rats	45	2 months	male	250-350 gm	Psychology Bld./422I

¹Individuals using ectotherms need to only approximate numbers.

²Individuals using fish or other ectotherms need not answer this question.

Is any species threatened or endangered? Yes No

B. Source of animals

Commercial vendor (Source _____)

Bred at The University of Memphis

Captured from wild. Identify method of capture: _____

Transferred from another study (IACUC Protocol Number _____)

Donated (Source _____)

Tennessee Wildlife Resources Agency

Is the supplier a USDA approved source? Yes No

If not, explain why:

Animals are already in residence at U of M

C. Will surgery be conducted on animals? Yes No

If yes, complete this section:

Non Recovery Surgery Recovery Surgery

Multiple Survival Surgery (if the latter is checked, complete section F)

Surgeon(s) (Name/Job/Title/Academic Rank)

Location of Surgery (Bldg. & Room #)

--

D. Will Anesthetic(s), Analgesic(s), or Tranquilizing agents be administered? Yes No

If yes, complete this section (example below).

Species & Sex	Agent	Dose	Route	Performed by (Name/Title/Academic Rank)
e.g. male Hooded Wistar rats	sodium pentobarbitol	50 mg/kg	i.p.	Mr. Smith/Research Technician/B.S.

E. Will euthanasia be carried out? Yes No

If yes, complete this section (example below).

Species & Sex	Agent	Dose	Route	Performed by (Name/Title/Academic Rank)
e.g. male Hooded Wistar rats	sodium pentobarbitol	150 mg/kg	i.p.	Mr. Smith/Research Technician/B.S.

If no, describe disposition of animal(s) at conclusion of this study in box below.

F. Will special housing, conditioning, diets or other conditions be required? Yes No

If yes, please explain in box below.

G. Will animals be removed from the U of M campus at any time? Yes No

If yes, please indicate to where and for how long in box below.

H. If they are to be housed for more than 24 hours outside approved facilities at U of M, provide a scientific justification in box below.

IV. Toxic and Hazardous Substances

A. Check off any of the following below that will be used in these experiments?

- Infectious agents (Fill out a, b)
- Radioisotopes (Fill out a, b, e)
- Toxic chemicals or carcinogens (Fill out a, b)
- Recombinant DNA (Fill out a)
- Experimental drugs (Fill out a)
- Malignant cells or hybridomas (Fill out a, c)
- Adjuvants (Fill out a)
- Controlled substances (Fill out a, d, e)

For each checked off category, answer the questions indicated below:

a. Identify the substance(s) and completely describe their use, including how will be injected or given to the animal(s):

b. Describe all procedures necessary for personnel and animal safety including biohazardous waste, carcass disposal and cage decontamination:

c. If transplantable tumors or hybridoma cells are to be injected into the animals, have the tissues/cells been tested for inadvertent contamination by viruses or mycoplasma? Yes No

If yes, what was the result (indicate in box below).

- d. In the box below, provide a complete list of these substances, and if their use is not explicitly explained in the materials already provided, explain their use and role in the research.

--

Provide DEA license # covering the use of these substances: _____

To whom (or what entity) is the license issued? _____

e. Provide Radioisotope License Number: _____

To whom is the license issued? _____

**V. Categories of Animal Experimentation Based Upon Level of Manipulation and Pain:
(check off each category that is applicable to this application)**

- A. Animals will be involved in teaching, research, experiments or tests involving no pain, distress, or use of pain-relieving drugs.
- B. Animals will be subject to mild stress only (e.g., food or water deprivation of less than 24 hours for use in behavioral studies such as operant conditioning; physical restraint for less than 30 minutes), and will not be subject to surgery, painful stimuli, or any of the other conditions described below. Procedures described in this protocol have the potential to inflict no more than momentary or slight pain or distress on the animal(s)---that is, no pain in excess of that caused by injections or other minor procedures such as blood sampling.
- C. Animals will have minor procedures performed, blood sampling, etc. while anesthetized.
- D. Live animals will be humanely killed without any treatments, manipulations, etc. but will be used to obtain tissue, cells, sera, etc.
- E. Live animals will have significant manipulations, surgery, etc. performed while anesthetized. The animals will be humanely killed at experiment termination without regaining consciousness.
- F. Live animals will receive a painful stimulus of short duration without anesthesia (behavior experiments with flight or avoidance reactions--e.g., shock/reward) resulting in a short-term traumatic response. Other examples in this category are, blood sampling, injections of adjuvants, or drugs, etc.

- G. Live animals will have significant manipulations performed, such as surgery, while anesthetized and allowed to recover. Such procedures cause post-anesthetic pain/discomfort resulting from the experiment protocol (e.g., chronic catheters, surgical wounds, implants) which cause a minimum of pain and/or distress. Also included are mild toxic drugs or chemicals, tumor implants (including hybridomas), tethered animals, short-termed physically restrained animals (up to 1 hour), mother/infant separations.

- H. Live animals will have significant manipulations or severe discomfort, etc. without benefit of anesthesia, analgesics or tranquilizers. Examples to be included in this category are: toxicity testing, radiation sickness, irritants, burns, trauma, biologic toxins, virulence challenge, prolonged: restrictions of food or water intake, cold exposure, physical restraint or drug addiction. All use of paralytic agents (curare-like drugs) must be included in this category. Describe any abnormal environmental conditions that may be imposed. Describe and justify the use of any physical restraint devices employed longer than 1 hour.

VI. Justifications for Category G Studies and Deviations from Standard Techniques

Describe in the box below any steps to be taken to monitor potential or overt pain and/or distress during the course of this study and how such pain or distress will be alleviated. Be as detailed as necessary to justify your procedure.

VII. Certifications

(By submitting this protocol, I am acknowledging that I comply with the certifications included in Section VII.) *(check one)*

- Animal Use for Research. I certify that the above statements are true and the protocol stands as the original or is essentially the same as found in the grant application or program/project. The IACUC will be notified of any changes in the proposed project, or personnel, relative to this application, prior to proceeding with any animal experimentation. I will not purchase animals nor proceed with animal experimentation until approval by the IACUC is granted.

- Animal Use for Teaching/Demonstration. I certify that the information in this application is essentially the same as contained in the course outline and a copy of the laboratory exercises using animals is on file in the IACUC office. The IACUC will be notified of any changes in the proposed project, or personnel, relative to this application, prior to proceeding with any animal experimentation. I will not proceed with animal experimentation until approval by the IACUC is granted.

Estimate the cost of maintaining animals used in this protocol based on current per diem charge at University of Memphis.

Please specify cost per unit of time: \$ _____

Specify anticipated total costs for project duration: \$ _____

As supervisor of this project it is required that you inform your department chair concerning any animal per diem costs related to this project that are to be paid by the department.

By submitting this protocol, the Principal Investigator/Course Director indicates that the following have been considered:

1. Alternatives to use of animals.
2. Reduction of pain and stress in animals to the lowest level possible.
3. The proper needs of the animals with respect to housing and care.
4. The lowest number of animals used that will give the appropriate experimental results.
5. Use of the most primitive species that will give the appropriate experimental results.
6. Proper training of all personnel in the care and handling of the species used and in the procedures called for in this protocol before beginning the experiment/teaching or demonstration.
7. That this protocol is not an unnecessary repeat of results already in the literature or in the case of teaching/demonstrations, results that can be demonstrated using models or video material.

Principal Investigator/Course Director (Type Name) _____

e-mail address _____

Date _____

Federal Law requires that members of the IACUC be given adequate time to read and review protocols including any changes or revisions in them.

Pre-review of protocols by the Attending Veterinarian is required before submission to the IACUC. New protocols or modifications or renewals to protocols must be submitted to the IACUC Chair by the 1st business day of the month to be considered for review during that month. Incomplete protocols will be returned to the principal investigator.

E-mail the completed protocol to the IACUC Chair, Dr. Amy de Jongh Curry,
adejongh@memphis.edu

February, 2015