ACRI ANIMAL USE PROTOCOL

IACUC Office Use Only

File # _____ Category _____ Approval Date _____

This Animal Use Protocol (AUP) must be reviewed and approved by the Institutional Animal Care and Use Committee (IACUC) prior to initiation of the study. Please submit the completed AUP *and the Animal Methods section from the grant proposal (if applicable)* by e-mail to Kerrey Roberto, IACUC Administrator robertokerreya@uams.edu . **The application must include the PI's signature. A scanned hand-signed page or digitized/electronic signature is acceptable.** Full approval will not be given without the PI's signature. Due date for receipt of new AUPs is on or before the first Friday of each month. If you have questions please email the address above or call the IACUC office at 686-8542.

I. PROJECT IDENTIFICATION

A. Principal Investigator: Email:

Dept.: Slot # : Work Phone : Home Phone: Cert. #:

B. Coinvestigator(s)/Cert #:

C. Responsible Technician / Cert#: Slot #: Work Phone: Home Phone:

D. Other Technician(s) or Students/Cert#:

E. Title of Project:

F. Funding Agency: Duration of Project: From: To:

G. Type of Protocol New ☐ Renewal ☐ Previous File No. Date of Last Review:

I am aware that the IACUC makes periodic inspections of all areas in which animals are used. I will permit unannounced inspections and observations of my animals and surgical techniques by ACRI veterinarians or IACUC Site Visit Teams.

I am aware that the IACUC is empowered to suspend any activity involving animals if that activity violates the guidelines described in the ACRI Policy on Humane Utilization and Care of Laboratory Animals.

I agree that if an animal covered under this protocol becomes ill, is in pain or distress, and if the co-investigators or I cannot be reached, the attending veterinarian or designee may treat this animal including euthanasia for humane purposes.

I certify that all of the information provided in this application is true and that I will notify the IACUC and ACRI Office of Animal Research in writing of any changes in the proposed project (species, procedures, anesthesia, post-op care, biohazards, location, personnel, etc.) prior to proceeding with any animal experiment.

Signature of Principal Investigator/Project Director

Date (mm/dd/yyyy)

II. LAY EXPLANATION OF THE PROJECT

(limit to one page)

This should include brief descriptions of: 1) the relevance of the proposed study to human and/or animal health, the advancement of knowledge, and/or benefit of society; 2) the overall goals of the proposed study; 3) the specific aims or objectives of the study; and 4) the general experimental approach and how the animal species chosen will be used, including final disposition and euthanasia. This section must be understandable to the general public. Therefore it is essential to use simple, non-technical, common language at a high-school level.

Title: ►

P.I.: ►

►

(Note: Failure to make this section understandable to non-scientists will delay approval. Do not use technical terms or specialized lingo. Do not use undefined acronyms. Do mention briefly all procedures that will be performed on animals including their final disposition. Delete this note and replace with your text.)

1) Relevance

2) Overall Goals

3) Specific Aims

4) Experimental Approach

III. ANIMAL METHODS

If **no** procedures will be performed on **any** animal in this protocol other than euthanasia followed by collection of tissues, check here. Tissue Harvest Only: ☐

A. Briefly describe **all** procedures other than surgery to be performed on the animals. Include method and length of restraint; names, dosages, routes, volumes, frequencies of all administered drugs; methods, frequency, and volumes of bleedings or other sample collections; length of experiment; any abnormal environmental conditions, etc. Indicate whether any morbidity or mortality is expected from any procedure. If it is possible that the animals may suffer pain or distress at any time during the experiment, describe how you will monitor the animals, the criteria and process for intervention, removal of animals from the study, or euthanasia if required.
[IACUC policies on some specific procedures are available at: http://intranet.uams.edu/dlam/dlam_and_iacuc_policies.htm] ►

B. Euthanasia method (Indicate physical method or drug/chemical used with dosages and routes of administration.) [Whatever method is used, it is important to verify that the animal is dead before being discarded. In particular, when using an injectable or inhaled drug, death must be confirmed by physical examination or ensured by adjunctive physical method such as induction of bilateral thoracotomy, exsanguination, cervical dislocation, etc. List one of those secondary methods here if appropriate.]
[IACUC policy available at http://intranet.uams.edu/dlam/dlam_and_iacuc_policies.htm .] ►

C. List all room numbers where animal procedures will occur. (Don't include the animal holding room unless procedures are performed there.) ►

IV. Surgical Procedure:

No Surgery: ☐:	Survival:☐	Non-survival:☐	Room # for Surgery:	

* The ACRI animal surgical facilities (Rms 1219, 1220, or 1108) must be used for survival surgical procedures on all animals except rodents.

A. Describe all surgical procedures to be done.

[The IACUC policy on Aseptic Surgery in Rodents is available at: http://intranet.uams.edu/dlam/dlam_and_iacuc_policies.htm]

►

B. List the names, dosages, routes, and frequencies of administration of any of the following:

1. Preoperative and Preanesthetic drugs: ►*If analgesics will be required after a procedure, consider the potential benefit of giving the first dose preoperatively.*

►

2a. Anesthetic drugs:

►

2b. Describe how the adequacy of anesthesia will be monitored.

►

2c. If neuromuscular blocking agents are to be administered, justify their use here.

►

3. Postoperative analgesics:

►

4. Antibiotics:

►

5. Other drugs:

►

C. What is the anticipated postoperative survival time?

►

D. Describe the postoperative care. Include a brief description of potential complications and the level of pain, distress, and functional deficiencies that may result postoperatively. If painful or distressful outcomes are possible, indicate the criteria and process for intervention, termination of the study, or euthanasia of the animal as necessary. Indicate who will be responsible for postoperative care and the recovery location.

►

E. For non-survival surgeries, indicate the method of euthanasia (with dose and route for chemical agents):

►

V. JUSTIFICATION FOR ANIMAL NUMBER

Provide a table showing the proposed sequence of experiments. Specify the number of experiments, number of treatment groups within each experiment, and the number of animals in each group. The total number of animals here must be consistent with that indicated in section VI. The numbers of animals used must be the minimum number that can be expected to provide valid results. **Indicate the specific statistical procedure or a clear rationale used to determine the numbers indicated.** All animals must be accounted for. This includes animals used for breeding and all offspring generated.

If this is a Renewal of an existing AUP, you must include the number of animals currently housed under the expiring protocol that you intend to transfer to this renewal AUP. Once the new AUP is approved you must notify DLAM in writing to request transfer of those animals and to obtain cage cards with the New AUP number.

Several documents to assist in determining animal number are available at http://iacuc.ad.uams.edu/. ►

VI. ANIMAL REQUIREMENTS AND MAINTENANCE

A. Animal Species		Number "ordered" [1]:	+	Number bred [2]:	=	Number used[3]		Max. # housed at one time
Select	Mouse		+		=			
Select	NA		+		=			
Select	NA		+		=			
Additional Species:			+		=			

List all the specific strains of rats or mice used here:

[1]. This is the total number of animals that will be obtained from commercial vendors, transferred from other institutions, or transferred from other approved ACRI protocols (including separate breeding protocols and expiring protocols) over the duration of the protocol.
[2]. This is the total number of offspring that will be born in-house over the duration of the protocol. If this protocol does not involve pregnant animals or breeding colonies, this number will be zero. If you are ordering pregnant animals and intend for them to deliver, count the offspring here. If you will euthanize the mother and harvest the feti, do not count those here. If this protocol involves a rodent breeding colony and you do not have a separate breeding colony protocol, this number should be a reasonable estimate of the total number of offspring to be generated including not only the animals used in experiments but also animals that cannot be used in experiments because they are the wrong genotype or sex and animals that are used as replacement breeders.
[3]. Add columns 1 and 2.

B. What is the maximum length of time the animals will be housed in DAR?

C. Are there any special requirements for these animals (housing, diet, environmental conditions, health monitoring, technical assistance from DAR staff, etc.)?

D. Sick animal disposition — Notify investigator ☐ Treat ☐ Euthanize ☐
Dead animal disposition — Notify investigator ☐ Hold in cold box (24 hrs) ☐ Discard ☐

VII. HAZARDOUS & CONTROLLED SUBSTANCES

A. List any agents in the following classes to which animals will be exposed. ***The administration of some of these agents requires review and approval by either the ACRI Radiation Safety Committee (for radio-isotopes) or the ACH Biohazards Committee for other hazards. Attach documentation of approval.***

Type of Agent	Check if Yes?	Name or Description of Agent	Safety Approval Date
Radioactive compounds	No		
Recombinant, plasmid, or "naked DNA", non-replicating viral vectors	No		
Viral, bacterial, or parasitic pathogens	No		
Hazardous Chemicals and Toxins	No		
Human tissues or cell lines	No		
Animal tissues or cell lines	No		Not Required

The names, doses, routes, number and duration of exposures must be described in the Methods or Surgery section as appropriate.

B. Will controlled substances be used? No
(Note: Buprenorphine is a Schedule III Controlled Substance)

If yes, under whose DEA License?

VIII. ASSURANCE STATEMENTS

A. A fundamental goal of the Animal Welfare Act is the minimization of animal pain and distress via the consideration of alternatives to animal use (**REPLACEMENT** with computer modeling, tissue culture, etc.) or, where animals are required; alternatives to methods that are potentially painful or distressful (**REFINEMENT)**; or **REDUCTION** of the number of animals used. *(By USDA definition, a painful procedure is one that would reasonably be expected to cause more than slight or momentary pain and/or distress in a human being to which that procedure is applied. Note that this definition applies even if analgesics or anesthetics are used. For example any surgical procedure is defined as "painful" even though the animal is anesthetized.)* To ensure that alternatives have been considered, the following concerns must be addressed by the PI.

1. USDA policy states their belief that the most efficient method of demonstrating compliance with the requirement to consider alternatives is a database search. Searches must include a minimum of 2 databases (one of which must cover, at a minimum, the last 10 years) and use a minimum of 5 animal-alternative terms. (For a list of databases or suggested search terms, contact Susan Steelman at 686-6737 or steelmansusanc@uams.edu.)

Database Name	Years of Coverage	# of Results	Date of Search
a. PubMed (includes MEDLINE & InProcess Records)	1945-Present		
b.			

c. Provide your search strategies for each database showing all combinations with Boolean operators. Do not include the citations or abstracts from the search here.

i. **PubMed Strategy**: ►

ii. **Second Database Strategy: ►**

d. Provide a short statement of review describing animal alternatives as they pertain to your research. ►

► **I have reviewed the results of my search and was unable to find any animal alternative methods of reduction, replacement, or refinement that could be used in this protocol.**

2. Animals should not be used when there is a non-animal system available which will generate substantially the same information. When animals are required, the species chosen must be appropriate for the intended use but also should be the lowest on the phylogenetic scale expected to provide valid results. Briefly explain why an animal model is required for these studies and describe the rationale for your choice of species.
►

3. Procedures that may cause more than momentary or slight pain or distress to the animals must be performed with appropriate pain relieving drugs. If this protocol involves such procedures, and pain-relieving drugs cannot be given, provide an explanation here. **** Note that the information that you provide here will be placed in the USDA Annual Report which is available to the public under the FOI Act.***

►

4. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved must be painlessly euthanized at the end of the procedure or during the procedure if appropriate. Procedures that violate this principle, including the use of death as an end point, must be specifically justified.
►

5. Experiments should not unnecessarily duplicate previous experiments. Provide a statement that the protocol is not duplicative or if it is duplicative, provide a rationale for its necessity. . If this is a renewal of an existing AUP, include a brief statement of progress, what specific aims/experiments were performed on the previous AUP and what is different for the renewal.

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6. No animal may be used in more than one major operative procedure without specific scientific justification. If this protocol involves multiple surgical procedures on a single animal, explain here why it is required.
►

7. The period of restraint of any animal should be the minimum required to accomplish the research objectives. Provide justification here for any period of restraint greater than four hours.
►

8. PHS and USDA regulations require that compounds administered to animals must be pharmaceutical-grade when available. If you will be administering non-pharmaceutical grade substances when there are pharmaceutical grade options available, list them and provide a justification here.
►

B. All personnel handling animals and/or performing any procedure on animals, including surgery, must be appropriately qualified and trained to perform **those specific procedures on that specific species**. Identify which personnel will perform which procedures, and indicate **qualifications** and **relevant animal experience** specific to those procedures. If an individual is listed in this protocol but will not be involved in animal work, state this as well. (Personnel training in animal handling and technical procedures is available through the Division of Animal Research (320-2700)).
►

C. Will whole animal images or movies be presented in a forum outside the PIs laboratory? **No.**

This includes scientific meetings, poster presentations, and seminar presentations. Presentation of any image or movie of an animal to a non-scientific group is not considered necessary and thus **not** allowed. An exception for presentation to a non-scientific group can be considered via request (Addendum) to the IACUC.

If **Yes**, briefly explain what you anticipate presenting and how or why this form of presentation is important for your work.
►