

**Animal Use Protocol  
University of Arkansas at Monticello  
Coversheet**

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IACUC use only:

Protocol number:  
Date Received:  
Approval Date:  
Start Date:  
End Date:

Category(s) of animal use:  
 Biomedical  
 Agricultural  
 Field

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Project Title:

Project length (3 years maximum):

Start date: \_\_\_\_\_

End date: \_\_\_\_\_

Principal Investigator

Name:  
Department/Division:  
Campus Mail Address:

Telephone:  
Fax:  
E-mail:

Individual(s) responsible for animal care

Name:  
Office address:  
Home address:  
Home phone:

Individual(s) responsible for euthanasia

Name:  
Office address:  
Office phone:  
Home address:  
Home phone:

Animals used

Species:  
Common name:  
Approximate number to be used (by species; not a combined number):  
Supplier (all purchases must be from a licensed supplier)  
Name:  
Address:

Locations (building and room)

Animal housing:  
Surgical facility:  
Data collection:

**Animal Use Protocol  
University of Arkansas at Monticello  
Checklist**

Title of Project: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

Type of Project:

1.  Teaching  Research
2.  New
3. Category of research and teaching for which this protocol was written:  
 Biomedical  Agricultural  Field

Funding Source (check all that apply):

- NIH  NSF  USDA  private industry  U of A  
 State of Arkansas  other (identify): \_\_\_\_\_

Level of pain or stress (see attachment at end of this form):

- Level 1  Level 2  Level 3  Level 4

Surgical Procedures:

- none  
 non-survival surgery (euthanasia will be administered before recovery from anesthesia)  
 survival surgery (animal will be allowed to recover from anesthesia)  
 multiple survival surgeries (requires explicit justification in Narrative)

Non-Surgical Procedures:

If any of the methods/techniques listed below will be used, check the appropriate space and provide the requested details in Section 2C of the Narrative (Non-Surgical Procedures):

- Non-surgical invasive procedures (blood collection, catheterization, intubation, etc.). Provide appropriate details (volume, site, frequency, etc.)
- Exposure of a living animal to a hazardous, toxic, and/or radioactive substance. Provide substance name, route of administration, dose, volume, frequency.
- Exposure of a living animal to an infectious agent. Provide name of agent, means of exposure, and amount and frequency of exposure. Specify in Section 2E of the Narrative the criterion you will use to determine if euthanasia is necessary to relieve suffering.

Non-Surgical Procedures (continued):

- Immunization protocol. Provide name of adjuvant(s) used; injection site; volume per site; frequency of injection; method, frequency, and volume of blood withdrawn (including anesthetic, if used). **Note: this does NOT apply to standard prophylactic vaccinations.**
- Prolonged restraint. Provide method, duration, frequency, procedure by which animal is adapted to restraint device.
- Food/water deprivation. Provide duration, frequency, extent (total/partial), methods used to assess and monitor distress. **Note: removal of food and/or water for 24 hours in preparation for surgery or some other procedure is NOT considered to be "Food/water deprivation".**
- Abnormal environment. Provide information on departure from normal conditions (temperature, humidity, light, duration, etc.).
- Aversive stimuli. Provide type and intensity of stimulus, duration, justification for use.
- Hybridoma protocol. Provide priming agent, cells injected, schedule for collection of ascites, number of abdominal taps, size of needle used. **Important: Provide justification for use of the *in vivo* mouse ascites method versus the various *in vitro* methods currently available , providing adequate documentation.**
- Use of neuromuscular blocking agents (muscle paralytics) during surgery. Provide a rationale for their use and explain how you will determine that adequate anesthesia is maintained.
- Use of death (without euthanasia) as an endpoint of the study. Provide justification why an earlier endpoint is not acceptable.

Method of Euthanasia (must comply with the most recent report of the AVMA panel on euthanasia; provide details in Section 2E of Narrative):

- none needed
- overdose of anesthetic
- inhalation of carbon dioxide
- physical means under general anesthesia
- physical means without anesthesia (USDA procedures permit use of captive bolt pistol on large farm animals; otherwise this method can be used only when scientifically justified and requires specific written justification)
- other (identify here and describe in Narrative):

Disposal of remains:

- Incineration at University Farm
- Other (describe in Narrative)

**Animal Use Protocol**  
**University of Arkansas at Monticello**  
**Narrative**

(Note: only items in **boldface** need be reproduced on your protocol; the remaining text is provided to help you prepare your answers)

**1. ABSTRACT** (approximately 100-300 words)

Please provide, in lay language, a concise but specific statement of the scientific objective for the proposed research, the rationale behind this objective, the species of animal to be used, and an overview of the procedures to be followed. This statement should stand alone and be comprehensible to a non-scientist.

**2. METHODS**

Using the headings listed below, describe the methods to be used in your project. The level of detail for procedures involving animals should be comparable to that in the Methods section of a journal article (i.e., sufficient to enable another researcher competent in your field to replicate your study).

**A. Housing**

Describe how the animals will be housed, including cage size and number per cage where applicable.

**B. Experimental design**

Provide an overview of the experimental design, including a schedule or timetable of the treatments animals will be exposed to and their duration.

**C. Non-surgical procedures involving animals**

Be particularly detailed regarding any procedures that are invasive, involve stress, or cause tissue damage.

**D. Surgical procedures**

(Note: Written records of surgery and anesthesia must be kept for each animal.

Animals must be observed daily following surgery and observations must be recorded from the time surgery is completed until incisions are healed).

**1. Surgeon(s)** (list qualifications for the procedures to be carried out)

**2. Procedure** (must use aseptic techniques)

**3. Medication**

For all medications, specify the agent, the route of administration (e.g., i.m.), the dose (mg/kg), and, when appropriate, the frequency of administration.

**A. Pre-operative medication and preparation**

**B. Anesthesia and other medication during surgery**

**C. Post-operative medication and observation**

**E. Euthanasia**

Identify the method of euthanasia to be used. If your protocol may cause animals to become seriously ill, specify the criterion you will use to determine if and when euthanasia will be used to relieve suffering. If euthanasia will not be used, indicate what will happen to the animals at the end of the study.

**3. QUALIFICATIONS OF INDIVIDUALS PERFORMING WORK WITH ANIMALS**

Please list all individuals who will be carrying out procedures involving animals during this project. Please indicate who will be performing each procedure and their qualifications for that procedure. If individuals are to be trained in a procedure during this project, please indicate who will provide the training and supervision and their qualifications.

- A. Principal Investigator** (a current vita should be on file with the IACUC)
- B. Students** (attach resume or provide a brief description of qualifications)
- C. Lab Technicians** (attach resume or provide a brief description of qualifications)
- D. Individuals Providing Training or Supervision** (attach resume or provide a brief description of qualifications)

**4. STATEMENT OF COMPLIANCE:**

**As the individual responsible for this research or teaching project,**

**I confirm that the information contained herein is accurate and, to the best of my knowledge, conforms with all applicable University, PHS, and USDA policies on the use of animals in research and teaching.**

**I confirm that all individuals who will be involved with the animals used in this project have been instructed in the humane care, handling, and use of animals, and that I have reviewed their qualifications.**

**I agree not to proceed with any portion of this project or purchase animals until I receive written approval from the University of Arkansas - Monticello Institutional Animal Care and Use Committee (IACUC).**

**I agree that no substantive change will be made in the procedures contained in this proposal without prior written notification to and approval by the IACUC.**

**I agree to allow inspection of my research facilities by members of the IACUC and the Animal Welfare Veterinarian and to comply promptly if informed of any violations of the University of Arkansas - Monticello's Policy on Animal Care and Use.**

**I understand that failure to comply with the University of Arkansas at Monticello's Policy on Animal Care and Use will jeopardize the University's Animal Welfare Assurance on file with the PHS (and with it all federal funding for the University), and may ultimately lead to revocation of my privileges to conduct animal research at the University of Arkansas at Monticello.**

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Signature of Principal Investigator

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Date

**Animal Use Protocol**  
**University of Arkansas at Monticello**  
**Assurance Statements for Biomedical Research and Teaching**

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**DO NOT COMPLETE THIS SECTION IF PROTOCOL IS SPECIFIED AS  
AGRICULTURAL or FIELD RESEARCH**

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(Note: only items in **boldface** need be reproduced on your protocol; the remaining text is provided to identify the source of the requirements)

**The regulations for the Animal Welfare Act, the United States Department of Agriculture, and the Public Health Service require that in protocols for biomedical research and teaching involving animals the following concerns be specifically addressed in writing by the Principal Investigator.** Items in brackets [] identify the source of the requirement (AWA = Animal Welfare Act regulations; NIH = NIH Guide for Care and Use of Laboratory Animals, 1996 edition).

- A. Animals should not be used if other methods exist that would provide substantially the same information. Indicate why the use of live animals is required in this research.** [AWA 2.31 (e) (2); NIH p. 8]
- B. Justify your choice of species by listing some of the important characteristics of the species that make it suitable for use in the proposed research. Cost alone is not sufficient rationale.** [AWA 2.31 (e) (2); NIH p. 8]
- C. The number of animals used should be the minimum number that can be expected to provide valid results. Describe how the number of animals to be used was determined.** [AWA 2.31 (e) (2); NIH p. 8]
- D. The principal investigator should not unnecessarily duplicate previous experiments, and must consider less invasive alternatives to procedures that may cause more than momentary or slight pain or distress to animals (i.e., Level 3 or higher). Provide a statement that a literature review has been carried out demonstrating that this research does not unnecessarily duplicate previous experiments, and that appropriate alternative research methods are not available for any proposed procedures that are Level 3 or higher. The database used must be identified (check below).** [AWA 2.31 (d) (1) (I, ii, and iii); NIH p. 8]

**Database:**

- Medline**    **Agricola**    **Index Medicus**    **Biol. Abstracts**
- Animal Welfare Information Center (National Agricultural Library)**
- Other (please specify):**

**Signature:**

\_\_\_\_\_  
**Principal Investigator**

\_\_\_\_\_  
**Date**

## Grading of Pain and Stress in Research Using Animals

<u>Level</u>	<u>Examples and Comments</u>
<u>Level 1</u> Experiments on vertebrate animals that are expected to produce little or no discomfort.	Simple procedures such as injections and blood sampling; observational field behavior; physical examinations; experiments on anesthetized animals that do not regain consciousness; food/water deprivation for short periods and methods of euthanasia that induce rapid unconsciousness.
<u>Level 2</u> Experiments that involve some minor stress or short-duration pain to vertebrate animals.	With anesthesia, "cut downs" or implantation of catheters; behavioral experiments on conscious animals that involve restraint; immunization employing Freund's adjuvant; noxious stimuli from which escape is possible; surgical procedures under anesthesia that may result in postsurgical discomfort.
<u>Level 3</u> Experiments that involve significant unavoidable stress or pain to vertebrate animals.	Deliberate induction of behavioral stress; major surgical procedures under anesthesia that result in significant postoperative discomfort or an anatomic or physiologic deficit that will result in pain or distress; noxious stimuli from which escape is impossible; prolonged periods of physical restraint; procedures that produce pain in which anesthetics are not used (toxicity testing, radiation sickness, certain injections, and stress and shock research, experimental infection producing systemic disease or death). Level 3 mandates responsibility on the part of the investigator to explore alternative designs.
<u>Level 4</u> Procedures that involve inflicting severe pain on unanesthetized, conscious animals.	Use of muscle relaxants or paralytic drugs without the use of anesthetics; surgery, severe burn or trauma infliction on unanesthetized animals; attempts to induce psychotic-like behavior or severe stress or terminal stress. Many of these procedures are specifically prohibited and therefore may result in withdrawal of federal funds and/or institutional USDA registration.

Note: The preceding levels correspond to the following animal use categories on the APHIS annual report form: Level 1 = Category C or D; Level 2 = Category D; Levels 3 and 4 = Category E.