UNION COLLEGE
IACUC Laboratory Animal Protocol

1. Name of Principal Investigator: ________________________________
   Title: ______________________________________________________
   Dept./Phone: ______________________________________________

1a. Name of Co-Investigator(s): _________________________________
   Title: ______________________________________________________
   Dept./Phone: ______________________________________________

If the individual conducting the activity is a student, please note that the Faculty Supervisor is the Principal Investigator. The student is listed under Co-investigator.

2. Application is for:
   a. _____ Initial approval to use live vertebrate animals. Please complete the attached form including a detailed description of the study.
   b. _____ Amendment, revision, or renewal of an approved protocol:
      Number of protocol being revised or renewed: __________. Please provide a complete description of the changes, if any.
   c. Application is for external funding support:
      Submission deadline __________. Please complete the attached pages and provide a abstract of your research proposal.

3. Type of Project:

   □ Research
   □ Class (name/number): _________________________________
   □ Other _________________________________

4. Project Title: ____________________________________________

   ____________________________________________
   ____________________________________________
   ____________________________________________
5. Period Covered by this Proposal:
Starting date: ____________________________

Completion date: ____________________________

6. Species and Total of animals for project:
   Species
   1. ____________________________ # ____________________________
   2. ____________________________ # ____________________________
   3. ____________________________ # ____________________________
   4. ____________________________ # ____________________________

7. Check the appropriate items. Please include explanation for all checked items in narrative under Section 12.
   ☐ Field Study
   ☐ Captive Observations
   ☐ Behavioral conditioning is required
   ☐ Animals collected from the wild
   ☐ Tissue biopsy (including blood)
   ☐ Drug administration
   ☐ Antibody production (or other immunological technique) is required (fill out section B)
   ☐ Biological or radiological hazardous agents are required (fill out Section B)
   ☐ Tumor production required
   ☐ Long-term restraint is required
   ☐ Survival surgery is required (fill out section B)
   ☐ Laboratory exercise/class projects

8. This project will involve experiments on animals that fall under Category ________. See Attachment 1 for a description of the categories A-E.

Discomfort to animals must be limited to what is unavoidable in scientifically valuable studies. Appropriate drugs in proper doses must be used where indicated to minimize discomfort and pain. Drug doses (anesthetics, analgesics, tranquilizers, etc.) and route of administration must be described under Section 12.
9. Where will the animals be obtained?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

10. Will the animals be housed? ☐ No ☐ Yes Where?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. Disposition of animals upon completion of project:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

12. Please attach a narrative description of the proposed study (you may attach lab handout/protocol), including but not limited to the following information (see Attachment 2 for Federal Criteria for Granting IACUC Approval):

   a. Briefly explain the scientific merit of the proposal to justify the use of animals to any reasonable and well-informed lay person. Include the rationale for species choice, gender (if appropriate) and number of individuals. Investigators must provide assurance that the minimal number of animals required will be used.

   b. Please describe, all procedures and manipulations to be used in your project that involve animals. All items checked in section 7 of the protocol must be included.

   c. Method of euthanasia must be described (when and by what agent/method).

   d. Describe the qualifications of the investigator(s) and/or technician(s) to perform animal manipulations. Include any animal care and training program you have completed.
13. Principal Investigator Assurance:

a. The experiments described in this protocol do not necessarily duplicate previous experiments.

b. Personnel conducting animal procedures will be appropriately qualified and trained in these procedures.

c. All alternative methods for performing these procedures have been thoroughly reviewed.

d. If the procedures, etc., here in require revision (change in procedure, species, numbers, etc.), I will submit a protocol revision to the chair of the IACUC. It is the responsibility of the investigator to submit a protocol revision each year to indicate if the project will be done that year and to indicate any changes.

e. I hereby assure that I shall conform to all information contained in this proposal and follow the regulations set forth by the USDA under the provisions of the Animal Welfare Act and the policy on Humane Care and Use of Laboratory Animals as established by the public Health Service and that the information provided above is accurate to the best of my knowledge.

Principal Investigator date Co-Investigator date

IACUC Chair date
Section B

A. SURGICAL PROCEDURES: The technique for survival rodent surgery requires the use of sterile instruments, sterile gloves and the appropriate preparation of the surgical field. Full sterile technique is required for all other warm blooded mammals. Justification is required if the animal is required to undergo more than one survival surgery.

1. Indicate where surgery will be performed, the person(s) performing the surgery and the qualifications and experience of that individual to perform the techniques involved (aseptic techniques must be used during surgery).

2. Describe the surgery procedure including all support care and monitoring during the procedure.

3. Anesthesia

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<tr>
<th>Species</th>
<th>Anesthetic</th>
<th>Dose</th>
<th>Route</th>
<th>Duration</th>
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4. Please describe method of measuring/monitoring depth of anesthesia.


5. Describe any pre-operative procedures, including fasting (food, water) and pre-anesthetics.


6. If survival surgery, describe postoperative survival time, care (and who will give it), including:

Recovery: 

Supportive care: 

Postoperative monitoring: 

Analgesia: 

Antibiotics: 

B. IMMUNIZATION/ANTIBODY PRODUCTION:

<table>
<thead>
<tr>
<th>Species</th>
<th>Agent</th>
<th>Route</th>
<th>Site</th>
<th>Volume</th>
<th># of doses</th>
<th>Interval</th>
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C. HAZARDOUS AGENTS

Agent(s): ____________________________

Biosafety, Radiation Safety & controlled substance Approval (John Sowa x6340)
- [ ] Yes
- [ ] No
- [ ] Pending

Describe the method, route, place of administration, personnel involved, precautions to protect people and animals, and carcass disposal.
Attachment 1

Categories of Biomedical Experiments Based on Increasing Ethical Concerns for Non-human Species
(Laboratory Animal Science. Special Issue: 11-13, 1987)

Category A
Experiments involving either no living materials or use of plants, bacteria, protozoa, or invertebrate animal species.
Biochemical, botanical, bacteriological, microbiological, or invertebrate animal studies, tissue cultures, studies on tissues obtained from autopsy or from slaughterhouse, studies on embryonated eggs. Invertebrate animals have nervous systems and respond to noxious stimuli, and therefore must also be treated humanely.

Category B
Experiments on vertebrate animal species that are expected to produce little or no discomfort.
Mere holding of animals captive for experimental purposes; simple procedures such as injections of relatively harmless substances and blood sampling; physical examinations; experiments on completely anesthetized animals which do not regain consciousness; food/water deprivation for short periods (a few hours); standard methods of euthanasia that induce rapid unconsciousness, such as anesthetic overdose or decapitation preceded by sedation or light anesthesia.

Category C
Experiments that involve some minor stress or pain (short-duration pain) to vertebrate animal species.
Exposure of blood vessels or implantation of chronic catheters with anesthesia; behavioral experiments on awake animals that involve short-term stressful restraint; immunization employing Freund's adjuvant; noxious stimuli from which escape is possible; surgical procedures under anesthesia that may result in some minor post-surgical discomfort. Category C procedures incur additional concern in proportion to the degree and duration of unavoidable stress or discomfort.

Category D
Experiments that involve significant but unavoidable stress or pain to vertebrate animal species.
Deliberate induction of behavioral stress in order to test its effect; major surgical procedures under anesthesia that result in significant post-operative discomfort; induction of an anatomical or physiological deficit that will result in pain or distress; application of noxious stimuli from which escape is impossible; prolonged periods (up to several hours or more) of physical restraint; maternal deprivation with substitution of punitive surrogates; induction of aggressive behavior leading to self-mutilation or intra-species aggression; procedures that produce pain in which anesthetics are not used, such as toxicity testing with death as an end point; production of radiation sickness, certain injections, and stress and shock research that would result in pain approaching the pain tolerance threshold, i.e. the point at which intense emotional reactions occur. Category D experiments present an explicit responsibility on the investigator to explore alternative designs to ensure that animal distress is minimized or eliminated.

Category E
Procedures that involve inflicting severe pain near, at, or above the pain tolerance threshold of unanesthetized, conscious animals.
Use of muscle relaxants or paralytic drugs such as succinyl choline or other curariform drugs used alone for surgical restraint without the use of anesthetics; severe burn or trauma infliction on unanesthetized animals; attempts to induce psychotic-like behavior; killing by use of microwave ovens designed for domestic kitchens or by strychnine; inescapably severe stress or terminal stress. Category E experiments are considered highly questionable or unacceptable irrespective of the significance of anticipated results. Many of these procedures are specifically prohibited in national policies and therefore may result in withdrawal of federal funds and/or institutional USDA registration.
Federal Criteria for Granting IACUC Approval  
(From the ARENA/NIH IACUC Guidebook)

Activities  
Must be in accord with USDA Regulations/PHS Policy.

Pain/Distress  
Must avoid/minimize discomfort, distress, and/or pain. If pain/distress is caused, appropriate sedation, analgesia or anesthesia will be used. Attending veterinarian must be involved in planning. Use of paralytics without anesthesia is prohibited. Animals with chronic/severe unrelievable pain will be painlessly killed.

Surgery  
Must meet requirements for sterile surgery and pre/postoperative care. Cannot use one animal for several major operative procedures from which it will recover, without meeting specified conditions.

Euthanasia  
Euthanasia method must be consistent with USDA Regulations/AVMA recommendations.

Housing/Health  
Animal living conditions must be consistent with standards of housing, feeding and care directed by veterinarian or scientist with appropriate expertise.

Alternatives  
There must be considered alternatives to painful procedures; also must document consideration of alternatives if animals experience pain or suffering.

Rationale and Methods  
Must provide written narrative of methods/sources.

Duplication  
Must provide assurance that activities do not unnecessarily duplicate previous efforts.

Qualifications  
Personnel must be appropriately qualified.

Deviations from Requirements  
Must be justified for scientific reasons, in writing.