



**Information and Guidelines for Completion of the
Application for Review of Vertebrate Animal Use in Instruction***

Prior to acquisition and use of live vertebrate animals for research, teaching, or other activities, UNH faculty, staff, and students must receive approval from the University's Institutional Animal Care and Use Committee (IACUC). Members of the IACUC include faculty and staff from a variety of disciplines, and non-University representatives. The IACUC is responsible for assuring appropriate use, care, and treatment of all vertebrate animals used for University activities, and has the authority to approve or withhold approval of protocols for all such activities involving animals. This authority is in accordance with the Public Health Service Policy on the Humane Care and Use of Laboratory Animals, regulations of the Animal Welfare Act (Public Law 99-158), and University policy.

*Use this form ONLY to apply for IACUC approval of vertebrate animal use in instructional activities. IACUC approval is NOT required for activities using only preserved specimens. IACUC approval IS required for field studies, trapping, or other course activities that may involve vertebrate animals, either as target species or as incidental captures.

To ensure review of applications in advance of the start of classes each semester, please submit applications in accordance with the following dates:

April 1 for summer session courses
July 1 for fall semester courses
November 1 for spring semester courses

ADHERENCE TO SUBMISSION DATES IS ESSENTIAL. Instructors who submit protocols by the dates listed above will be notified of the IACUC decision prior to the beginning of classes. The IACUC cannot guarantee review of late protocols (submitted after the posted dates) in advance of the planned procedures in that course. Such delay will put instructors at risk of noncompliance.

Instructions for completing and submitting applications:

- No handwritten applications will be accepted.
- Complete all items of the application or mark as being "not applicable" (N/A).
- On narrative sections (**except Section III**), when necessary, enlarge boxes to display text by placing the mouse on a lower corner, clicking and dragging the box to the required size.
- Use the arrow keys to move through tables; use of the tab key will create additional lines.
- Only UNH faculty (including emeriti) and staff members with appropriate authority and access to facilities and resources may accept responsibility for a course and serve as a principal instructor. (Graduate students [TAs] cannot serve as principal instructors.)
- The IACUC recognizes the following as authorized individuals who may sign application forms in a Department Chair's absence: Acting Department Chair or IACUC member in the principal instructor's department.
- Include sufficient information in the application to allow reviewers to judge whether the course objectives require the use of animals and whether animals will be treated humanely.
- Clearly define all abbreviations and terms for reviewers unfamiliar with your discipline.
- Attach to the application the appropriate sections of course outlines; do not, however, answer application questions by referring reviewers to the attached sections. All essential information must be included on the form.
- Submit the original of the complete application and supporting materials to the Office of Sponsored Research, Room 107, Service Building.

SPECIAL NOTE ON ALTERNATIVES TO DISTRESSFUL PROCEDURES:

Federal animal welfare policy has been amended so that principal investigators must provide a written narrative of the sources consulted to determine whether or not alternatives exist to procedures which may cause pain or distress for ALL COVERED SPECIES as defined in PHS/USDA/AWA policy. The policy requires:

“Consideration of alternatives to each procedure which may cause pain or distress must state sources consulted, such as Biological Abstracts, Index Medicus, Medline, the Current Research Information Service (CRIS), and the Animal Welfare Information Center (AWIC).”

Accordingly, be sure to complete all the relevant information in Section V of the application form.

Application review process:

- * Under normal circumstances application review takes approximately 4 weeks.
- * The IACUC Veterinarian, and, where necessary, appropriate consultants, will review the completed application initially.
- * Following favorable initial review, the application will be reviewed at a convened IACUC meeting. Principal instructors have the option to present their applications in-person at the meeting.
- * The protocol may be approved, disapproved, or returned for revision.
- * Approval is effective for three years subject to a mandatory annual continuation review. (The IACUC sends appropriate continuation forms annually.)

Questions concerning the application process may be directed to the following:

Richard French, D.V.M., Ph.D., Director, Animal Resources Office, 862-2726

Dean Elder, D.V.M., Associate Director, Animal Resources Office, 862-4629

Julie Simpson, Ph.D., Manager, Research Integrity Services, 862-2003



INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Application for Review of Vertebrate Animal Use in Instruction

Principal Instructor
Academic Department & Course (include course number) in which protocol will be used

Proposed Start Date Anticipated Completion Date

SECTION I: INSTRUCTOR ASSURANCE FOR HUMANE CARE AND USE OF ANIMALS IN INSTRUCTION

I, the Principal Instructor named above, certify that:

- The information included in this application is accurate to the best of my knowledge.
All personnel listed recognize and agree to accept their responsibility in complying with the PHS Policy for the Humane Care and Use of Laboratory Animals, USDA rules and University of New Hampshire policies governing the care and use of animals in research or instruction.
All personnel listed will comply with DEA, Occupational Health and Safety, and Biohazard regulations.
All procedures involving live animals will be performed under my supervision or that of another qualified scientist identified in this application (e.g. properly trained teaching assistant [TA]).
Procedures in animal handling, administration of anesthetics, analgesics, and euthanasia to be used in this course will be carried out by properly trained and qualified personnel.
Prior to implementing any revisions or variations from the approved animal care and use protocol, I will submit proposed changes, in writing, to the IACUC for review and approval.
Where applicable, I conducted the literature search (in Section V) and found no alternatives to the potentially painful/distressful procedure(s) outlined in this protocol and that the keywords used were directed at finding alternatives to the potentially painful/ distressful procedure(s).

Principal Instructor Signature Date

Department Chairperson or Authorized Individual Signature Date

Name (Typed or Printed)

Name (Typed or Printed)

FOR IACUC USE ONLY

IACUC#

Approval Date

VETERINARIAN'S REVIEW:

Signature Date

Application: Original Modified

a. Pre-Review Completed

b. Return for Revision

Name (Typed or Printed)

COMMENTS:

SECTION II: BASIC APPLICATION INFORMATION

A. PRINCIPAL INSTRUCTOR (must be UNH faculty [including emeriti] or staff members)

Applicant Name _____	Position _____
Department _____	Campus Phone _____
Campus Address _____	Fax _____
Email Address _____	Home/Emergency Phone _____

CO-INSTRUCTOR (if any)

Name _____	Position _____
Department _____	Campus Phone _____
Campus Address _____	Fax _____
Email Address _____	Home/Emergency Phone _____

B. PERSONNEL INFORMATION and OCCUPATIONAL HEALTH PROGRAM INFORMATION

Who will have direct contact with animals? (Training and medical form required for all personnel other than students enrolled in the course.)

<input type="checkbox"/> Principal instructor (PI)	<input type="checkbox"/> Lab Staff
<input type="checkbox"/> Teaching assistants	<input type="checkbox"/> Students

Provide information for all personnel (including Principal Instructor but not students receiving classroom or laboratory instruction) who will handle animals for this project. Include all teaching assistants and lab preparators who will handle animals. Each person working with animals in this protocol must participate in the UNH Occupational Health Program for Animal Care Personnel. This involves completing the Medical Questionnaire form and attending scheduled trainings. For more information or to request forms, please contact Environmental Health & Safety at 862-4041. **If new TAs are assigned to the course in subsequent years**, their names must be added to the course approval (through the annual continuing review process), and they must complete the medical questionnaire and attend annual Animal Resources Office (ARO) training sessions if they have not already done so (to check, contact Research Conduct & Compliance Services at 862-3536 or 862-2003).

Name	Role in Course	Yrs Experience w/Animal Model	Campus Phone #	Completed Medical Questionnaire (Yes/No)	If no, Date to be Completed
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

C. TRAINING

The IACUC requires that all project-affiliated personnel possess knowledge appropriate for the animal model and procedures used in the project. For personnel (such as TAs) who will need additional training, please provide the following information (NOTE: all personnel listed above with "0" years experience must be listed here):

Person Being Trained	Type of training	Trainer
_____	_____	_____
_____	_____	_____
_____	_____	_____

D. BIOHAZARDS

The IACUC is required to assure safety of personnel and animals. If you are using any of the following in this course, indicate approval from the Office of Environmental Health and Safety (862-4041) or the appropriate committee, and give approval date:

<input type="checkbox"/> Infectious Agents	Date _____	<input type="checkbox"/> Carcinogens	Date _____
<input type="checkbox"/> Radioisotopes	Date _____	<input type="checkbox"/> Recombinant DNA	Date _____
<input type="checkbox"/> Other (List – include approval date) _____			

E. CONTROLLED SUBSTANCES. List all scheduled drugs (Drug Enforcement Agency (DEA) controlled substances) to be used:

Who will obtain controlled substances? _____

F. ATTRIBUTES: (Indicate all that apply)

<input type="checkbox"/> Behavioral activities	<input type="checkbox"/> Prolonged restraint (specify – e.g. how long in a trap?)
<input type="checkbox"/> Blood collection	<input type="checkbox"/> Tissue collection (post mortem)
<input type="checkbox"/> Euthanasia (e.g. after class ends)	<input type="checkbox"/> Use of farm animals in instruction
<input type="checkbox"/> Field activities	<input type="checkbox"/> Use of potentially hazardous material
<input type="checkbox"/> Nutritional studies/projects	<input type="checkbox"/> Other

SECTION III: SUMMARY OF PROPOSED ANIMAL USE

A. In language understandable to the general public, describe the educational importance and role of animal use in this course. Please use a 10 point or greater font and DO NOT expand the text box. Click [here](#) for examples of summaries). This information may be released in the event that the University is contacted by someone seeking information about this activity.

B. Indicate why alternatives to animal use are not available or feasible. This information may be released in the event that the University is contacted by someone seeking information about this activity.

a. Students need to learn/be exposed to techniques for studying live animals.

b. The complexity of the processes being studied cannot be duplicated or modeled in simpler systems.

c. Other (Explain): _____

SECTION IV: INSTRUCTIONAL DESIGN AND METHODS, AND SPECIES JUSTIFICATION

A. INSTRUCTIONAL DESIGN. Outline only those portions of your course, teaching lab, or field study that use animals. Please be brief (no more than one page); do not just attach the syllabus or lab manual. (Expand text box as necessary.)

B. SPECIES JUSTIFICATION. Please provide justification for the species selected.

- a. Standard model for studying phenomenon of interest
- b. Robust and tractable for student work
- c. Clearly demonstrates principles being taught
- d. Ecological or field study
- e. Other (Explain):

SECTION V: PAIN AND DISTRESS CLASSIFICATION AND ASSESSMENT

Description of Pain and Distress Level Categories

(Please Note: There is NO Category A; Choose the highest category if using procedures from more than one category.)

Category B	Category C	Category D	Category E
<p>Animal use activities that involve normal maintenance, or breeding, conditioning, or holding (with IACUC approval) for future use in teaching, testing, experiments, research or surgery.</p>	<p>Animal use activities that involve either no pain or potentially involve momentary, slight pain, discomfort or stress not requiring the use of pain relieving drugs or methods.</p>	<p>Animal use activities that involve accompanying pain or distress to the animals for which appropriate anesthetic, analgesic, tranquilizing drugs or other methods for relieving pain or distress are used.</p>	<p>Animal use activities that involve accompanying pain or distress to the animals for which appropriate anesthetic, analgesic, tranquilizing drugs or other methods for relieving pain or distress are not used. (Reasons why drugs or other methods to alleviate pain or distress will not be used must be clearly stated.)</p>
Examples	Examples	Examples	Examples
<ol style="list-style-type: none"> 1. Standard agricultural & aquaria husbandry procedures not for research, teaching or testing. 2. Standard animal health programs, e.g., routine physical examinations & vaccinations, performed by experienced professionals. 3. Normal maintenance of non-wild sourced fish. 	<ol style="list-style-type: none"> 1. Normal maintenance, breeding, conditioning, or holding of animals for use in teaching or research, or use of animals in teaching where no category D or E procedures are involved (e.g., therapeutic riding, pet grooming). 2. Teaching routine physical examinations/performance, or routine physical examinations by students. 3. Manual restraint of awake animals to perform routine examinations, or the time necessary to complete any category C procedure. 4. Holding or weighing animals. 5. Injections, blood collection, or catheter implantation, via superficial vessels. 6. Behavioral testing without stress. 7. Feeding or oral/gastric gavaging studies. 8. Collection of tissues preceded by standard euthanasia. 9. Chemical immobilization/restraint for ≤ 60 minutes (e.g., use of MS-222, clove oil or medetomidine in fish or amphibians). 10. Tagging fish without surgical procedures. 11. Ear punching, tail clipping, or toe clipping of laboratory or captive animals. (Note: If animals must be captured/trapped first, the animal use should be categorized as D.) 	<ol style="list-style-type: none"> 1. Induction of behavioral stress. 2. Non-survival surgical procedures. 3. Cannulation. 4. Survival surgery with anesthesia and without significant post-operative pain management (e.g., biopsy). 5. Implantation of minor chronic catheters (e.g., femoral arterial and venous catheters). 6. Short-term food or water deprivation (≤ 24 hours). 7. Capturing/trapping of live animals (e.g., collecting fish using commercial fishing practices, or trapping wild birds, rodents, or amphibians). 8. Tagging studies involving surgical procedures. 9. Perfusion under anesthesia. 10. Use of chemical or immunological adjuvants (e.g., ascites production, Freund's adjuvant). 11. Physical restraint of awake animals (> 15 minutes). 12. Inducement of a functional deficit. 13. Chronic maintenance of animals with a disease/functional deficit. 	<ol style="list-style-type: none"> 1. Research or procedures that require continuation until death occurs (e.g., fisheries mortality studies). 2. Application of noxious chemicals or stimuli if animals cannot avoid/escape the stimuli and/or it is severe enough to cause pain or distress. 3. Continuous withholding of food or water (> 24 hours) from birds or mammals.

In Table 1 below:

- **List all live vertebrate animals directly involved in the course.**
- **Indicate the category of anticipated animal pain, discomfort, or distress level from the list above.**
- Please note that procedures such as trapping/capturing or procedures requiring the use of anesthetics (including terminal surgeries) have been defined as having the potential for greater than momentary pain or discomfort, and must therefore be listed in Category D or above.

Table 1

Species (common name)	USDA Pain & Distress Classification B, C, D, or E	3 year total number of animals directly involved in the course

In Table 2 below (if applicable):

- **List all anticipated/estimated live vertebrate non-target species/by-catch that may inadvertently be involved in the course.**
- **Indicate the category of anticipated animal pain, discomfort, or distress level from the list above.**
- Please note that procedures such as trapping/capturing or procedures requiring the use of anesthetics (including terminal surgeries) have been defined as having the potential for greater than momentary pain or discomfort, and must therefore be listed in Category D or above.

Table 2

Species (common name)	USDA Pain & Distress Classification B, C, D, or E	3 year total number of anticipated non-target species/by-catch

****PLEASE READ THE INTRODUCTORY PARAGRAPH AND INSTRUCTIONS FOR THIS NEXT QUESTION CAREFULLY****

A. REDUCTION, REPLACEMENT, AND REFINEMENT – Categories D and E only. Federal policies require documentation that reduction, replacement, and refinement (the three R's) have been addressed. For all activities in which animals may experience more than momentary pain or discomfort (i.e., greater than that associated with a needle stick), a literature search (or other documentation) is required.

[Resources: <http://www.altwebsearch.com/> <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>
<http://toxnet.nlm.nih.gov/altbib.html> <http://www.nal.usda.gov/awic/alternatives/alternat.htm> <http://www.iacuc.org>]

The literature search should demonstrate that less painful/distressful alternatives to your proposed animal use/procedures are not available, the study does not unnecessarily duplicate previous studies, and alternatives to animal use were considered.

Databases/Sources	Date of Search	Years Searched	Key Words or Strategy (include procedures used and alternatives to animal use)

B. PAIN OR DISTRESS MINIMIZATION METHODS – Categories D and E only. If pain or distress is specifically anticipated in your instructional design, list below what drugs will be used to minimize or relieve conditions, or explain other method(s) of pain or distress assessment:

Species	Drug	Dose (Mg/Kg Body Weight)	Route	Frequency
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Explain _____

C. EVALUATION OF OUTCOMES. In ALL activities, animals must be evaluated for these outcomes. What criteria will be used to assess pain or distress (discomfort)? (Check all that apply.)

- | | |
|--|--|
| <input type="checkbox"/> Loss of appetite | <input type="checkbox"/> Loss of weight |
| <input type="checkbox"/> Loss of mobility | <input type="checkbox"/> Guarding (protecting the painful area) |
| <input type="checkbox"/> Vocalizing | <input type="checkbox"/> Licking, biting, scratching or shaking a particular area |
| <input type="checkbox"/> Failure to show normal patterns of activity | <input type="checkbox"/> Abnormal resting postures in which the animal appears to be sleeping or is hunched up |
| <input type="checkbox"/> Failure to groom | |
| <input type="checkbox"/> Other (Explain) | |
- _____
- _____

SECTION VI: NUMBERS AND HOUSING OF ANIMALS

A. METHOD TO DETERMINE ANIMAL NUMBERS. Describe in detail the method used to determine the number of animals. (Expand text box as necessary.) The description should include information such as: the anticipated number of students in the course; whether individual animals will be used in multiple lab sections in a given day/week; and how many times individual animals will be subjected to specific procedures.

B. HOUSING AND USE LOCATIONS. Complete the relevant table(s) for animal housing and use location(s).

i Field studies: Check all that apply.

- Animals observed/handled only at field site Animals returned to, and released at, field site
 Animals released on-site Other
 Animals transported from field site to campus
 (complete Section B ii)

ii. On-campus courses:			
Species	Long-term Housing (\geq 12 hours, e.g., between semesters)*	Short-term housing (up to 12 hours)	Instructional location (teaching lab or other)

* Animals may only be housed for 12 hours or longer in a facility that has been previously approved by the IACUC. Contact the ARO for more information about getting a new facility approved by the IACUC.

C. Will animal care schedule follow facility standard operating procedure (SOP)?** Yes No

If "No," please explain _____

** Facility SOPs must include formal contingency plans (e.g., in case of weather emergencies, power outages).

D. Indicate the planned number of animals for the entire course (ONLY COMPLETE RELEVANT TABLES). Please make sure the information provided in this section correlates with the information provided in Section V, Table 1 and Table 2 (if applicable).

i. New: Animals to be ordered/purchased for the planned activity (pet stores are not an acceptable source of animals):					
Species/Strains	Source	Sex	Ages	Size/Weight	Number

ii. Breeding: Anticipated number of animals to be produced by breeding for the planned activity:		
Species/ Strains	Source	Number

iii. Transfers: Animals to be acquired from another approved protocol for the planned activity:						
Protocol #	Species/ Strains	Source	Sex	Ages	Size/Weight	Number

iv. Capture: Anticipated number of animals to be captured for the planned study:				
Species	Source	Ages	Size/Weight	Number

v. Existing Stock: Animals currently in-house, to be continued on this activity (includes use of animals from herds or colonies maintained at UNH):					
Species/ Strains	Source	Sex	Ages	Size/Weight	Number

vi. Borrowed/loaned: Animals not belonging to UNH that are borrowed from/loaned by specified individuals for the course (e.g., instructor's/clients' dogs):					
Species/ Strains	Source	Sex	Ages	Size/Weight	Number

vii. Disposition of animals at the end of the study:				
Species	Returned to Source	Saved for Future Use	Euthanized (complete table vii)	Other (specify)

viii. Euthanasia: Techniques for euthanasia must follow the current [AMVA Guidelines on Euthanasia](#). Alternatives must be specifically reviewed and approved by the IACUC.

Species	Drug	Dose (Mg/Kg Body Weight)	Route	Other (specify)

SECTION VII: ANIMAL PROCEDURES

A. ROUTINE PROCEDURES. Mark either “Yes” or “No” for EACH procedure in Section A (procedures 1-8). If a procedure is marked “Yes”, answer each part indicated. Make additional space as needed or attach additional sheets. If a specific part of a procedure is not applicable to your activity, type “N/A.” If you are unable to locate a category for a procedure, please check #22, *Other Procedures Not Listed Elsewhere* in Section C and attach an explanation. Note: You must provide specific timelines for all procedures, including the endpoint of the study for each animal.

Yes No

1. **Capture/Trapping (Note: Obtaining required permits is the responsibility of the PI and is required prior to start of project.)**
 - a. Protocol:
 - b. Duration animals will be in traps or restrained:
 - c. Indicate non-target species that may be inadvertently captured:
 - d. Disposition of animals (e.g. euthanized, released):

2. **Special diet (e.g. nutritional studies)**
 - a. Composition of diet:
 - b. Amount:
 - c. Duration:
 - d. Anticipated side effects (e.g. anticipated % weight loss or gain, dehydration):

3. **Blood Sampling (answer for each animal species)**
 - a. Species:
 - b. Method:
 - c. Site:
 - d. Volume (describe monitoring/replacement therapy if greater than 10ml/kg in a 2-week period):
 - e. Frequency:

4. **Administration of drugs/reagents/cells/etc. (Answer all parts for each agent and animal species. For antibody or ascites production, answer under # 16 and/or #17 in Section B.)**
 - a. If administration is exclusively for surgical purposes, please provide information as applicable on the Surgical Procedures form.
 - b. Agent:
 - c. Dose/amount:
 - d. Route of administration and needle size:
 - e. Frequency of administration:
 - f. Anticipated side effects:
 - g. Monitoring protocol:

5. **Collection of tissues (including post mortem)**
 - a. Time point for collection:
 - b. Tissue(s) to be collected:

Yes No

6. **Behavioral testing**

- a. Describe testing procedures (including stimuli and restraint):
- b. Scientific justification for use of noxious stimuli:

7. **Food/Water restriction (in behavioral testing)**

- a. Indicate what is restricted and duration:
- b. Anticipated side effects (e.g. anticipated % weight loss or gain, dehydration):
- c. What parameters will be monitored, and how often will animals be monitored for health and well-being:
- d. Scientific justification for restriction:
- e. Scientific justification for weight losses greater than 20% of baseline (or controls):

8. **Use of restraint (not applicable for brief restraint, i.e., < 2 minutes, such as holding for blood sampling)**

- a. Species:
- b. Method:
- c. Frequency:
- d. Duration of restraint:
- e. Scientific justification for prolonged or painful restraint:

B. SPECIALIZED PROCEDURES.

Yes	No

- If none of the procedures in Section B (procedures 9 - 21) is applicable to this project, respond "No" here and proceed to Section C.
- If one or more of the procedures in Section B is/are applicable to this project, indicate "Yes" here and then either "Yes" or "No" for EACH procedure in Section B.
- If a procedure is marked "Yes", answer each part indicated. Make additional space as needed or attach additional sheets. If a specific part of a procedure is not applicable to your study, type "N/A." If you are unable to locate a category for a procedure, please check #22, *Other Procedures Not Listed Elsewhere* in Section C and attach an explanation. Note: You must provide specific timelines for all procedures, including the endpoint of the study for each animal.

9. **Implanted catheters, prostheses, etc. (describe applicable surgery under # 11)**

- a. Type:
- b. Site:
- c. Monitoring protocol for animal health:
- d. Maintenance and care of chronic implants:

10. **Terminal surgery (i.e. no recovery from surgery)**

- a. Describe surgical procedure:
- b. Duration of procedure:

11. **Survival surgery – complete Surgical Procedures form (available at http://www.unh.edu/osr/compliance/support/iacuc_surgical_procedures.doc)**

Yes No

12. **Anesthesia (include pre-anesthetic and anesthetic agents)**

- a. If anesthesia is exclusively for surgical purposes, please provide information as applicable on the Surgical Procedures form.
- b. Provide the information requested in the table below:
- c. For gas anesthesia, what is the method of scavenging of waste gases (e.g. FAIR canister, fume hood)?
- d. What parameters will be monitored to ensure adequate anesthesia (e.g. corneal reflex, heart rate, respiration)?

Animal Species	Anesthetic Agent	Dose	Route	Procedure (e.g. surgery, blood draw)

13. **Imaging procedures (radiographs, ultrasounds, MRI, etc.)**

- a. Type of procedure:
- b. Frequency:
- c. Purpose (e.g. imaging only, tumor treatment):
- d. Effects on animals:

14. **Breeding colony that will supply other protocols or research projects**

- a. Breeding method (e.g. pair, harem):
- b. Protocol (e.g. randomizing procedures, breeder culling criteria):
- c. For inbred, specify # of generations from source:
- d. For outbred stocks, specify method to ensure lack of inbreeding:
- e. Any other quality control procedures:
- f. For inbred strains, provide a description of record systems and documentation of animal pedigrees, production, and disposition:

15. **Transgenic or knockout animal use or production**

- a. Method of production (e.g. embryo transfer, superovulation procedures, breeding):
- b. Method/protocol for genetic verification (e.g. age, amount of tissue, use of anesthetics):
- c. Anticipated effects of genetic manipulation (e.g. spontaneous death, tumors):
- d. Method and frequency of monitoring health and well-being:
- e. Disposition of non-transgenics (e.g. use as controls, euthanasia):

16. **Antibody production (for ascites production, go to #17)**

- a. If antibody production service will be provided by the Animal Resources Office, indicate that and specify the immunizing agent. If all procedures will be conducted by your own research staff, provide all of the information requested in the table below:

	Immunizing Agent (antigen)	Adjuvant	Number & Site(s) (IP, IM, SQ, etc.) of inoculation	Volume per inoculation site
Primary Immunization				
Booster Immunization				

Yes No

17. **Ascites production**
a. Species (e.g. mice):
b. Priming agent (e.g. Pristane):
c. Injection volume (for mice, not to exceed 0.2 ml for Pristane):
d. Route of administration:
e. Hybridoma cell injection protocol (e.g. does, # of days after priming):
f. Monitoring protocol (minimum required following initial inoculation: 3 times/week the first week, daily thereafter):
g. Ascites collection protocol including number of taps, needle size, etc. (Note: euthanasia required after 2nd tap unless scientifically justified):
h. Recent federal policies require that investigators planning production of monoclonal antibodies by the mouse ascites method specifically address the reasons why in vitro methods cannot be used:
18. **Tumor transplantation/induction of spontaneous growth**
a. Type:
b. Site:
c. Functional deficits expected:
d. Monitoring protocol (at least 3 times per week required):
e. Provide assurance that animals will be euthanized before tumors exceed 10% of normal body weight or provide scientific justification for larger tumors:
f. Endpoint: Euthanasia Spontaneous Death Other (explain)
19. **Paralytic agents (anesthesia required)**
a. Agent:
b. Dose:
c. Route of administration:
d. Monitoring protocol to ensure adequate anesthesia:
20. **Toxicity testing**
a. Protocol:
b. Side effects expected:
c. Monitoring protocol:
d. Endpoint: Euthanasia Spontaneous Death Other (explain)
21. **Spontaneous death of an animal instead of euthanasia (e.g. toxicity studies, LD50 studies)**
a. Scientific justification (required), including the reason(s) euthanasia is not possible:
b. Monitoring protocol:
- C. **MISCELLANEOUS.** If you are unable to locate a category for a procedure in either Section A or Section B, please check #22, *Other Procedures Not Listed Elsewhere* and attach an explanation.
22. **Other procedures not listed elsewhere (attach description)**
23. **Are there any medications or procedures that should not be administered by veterinary personnel because they would render the results of the activity invalid? Please list.**
-