

**BATES COLLEGE ANIMAL CARE AND USE PROPOSAL (ACUP) FORM**

For the Use of Vertebrates in Research, Teaching, or Demonstration

Bates College Institutional Animal Care and Use Committee, Bates College, Lewiston, Maine 04240

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**I. BACKGROUND INFORMATION**

Use of vertebrate animals in teaching and research is regulated by two federal agencies. The United States Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS) monitors compliance with the Animal Welfare Act by conducting unannounced inspections of facilities and by reviewing annual reports, the program of veterinary care, and other records related to animal care and use, including research and teaching protocols. The Bates College Animal Care Facility is registered with the USDA. The Department of Health and Human Services, Public Health Service, Office of Laboratory Animal Welfare (OLAW; formally the Office for Protection of Research Risks, OPRR) monitors compliance with standards in the PHS policy on the Humane Care and Use of Laboratory Animals. Bates College has an approved Animal Welfare Assurance # A3320-01 on file with OLAW and files annual reports.

The Institutional Animal Care and Use Committee (IACUC) at Bates College is federally mandated and is composed of scientists, a nonscientist, a veterinarian, and a member from the local community. Prior to using live or dead\* vertebrate animals in teaching or in research, principal investigators and instructors must submit an Animal Protocol Review Form for review and approval by the IACUC. An approved Animal Care and Use Proposal (ACUP) is valid for three years from the date of approval, but must be reviewed annually to remain in compliance with federal law and college policy.

\* {If the animal is euthanized specifically for us or by a Bates principal investigator }

**II. THE REVIEW PROCESS**

The attending veterinarian initially reviews each ACUP and may request clarifications or additional information. Revisions are then distributed to the full IACUC for review.

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**INSTRUCTIONS**

Please follow these instructions when completing and submitting the Animal Care and Use Proposal Form:

1. Only Bates faculty or staff may serve as Principal Investigators; students may serve only as co-investigators.
2. Clearly define all terms and abbreviations and write in a manner understandable to those outside your discipline.
3. Include sufficient information to allow reviewers to assess whether the proposed teaching exercises or research project merits the use of animals and whether the animals will be treated humanely.

- Principal investigators and instructors should initially submit a draft copy of the ACUP to the attending veterinarian for preliminary review. This can be done electronically by sending the form as an email attachment to the Animal Care Coordinator - mhughes@bates.edu. Following preliminary review and revision, the final form will be distributed to the IACUC for review.

**INSTRUCTIONS FOR USE OF THIS FORM:** This Animal Care and Use Proposal form was created using Microsoft Word. To use, save this form to your hard-drive as a word document (\*.doc). Fill in the required areas, if using surgical procedures also give information in part V. Fonts and formatting will be partially controlled by the template (this original document). Most text boxes will expand as needed to accommodate your information. Place an X under the appropriate answer. Save the completed form on your hard-drive. E-mail the proposal in an attachment to [mhughes@bates.edu](mailto:mhughes@bates.edu), Animal Care Coordinator, the Animal Care Coordinator forward the proposal through the review process. When the protocol is approved, a signature will be collected. The signed hard copy will be filed in the Animal Care Coordinator's office in 410 Carnegie Science Building.

**IACUC USE ONLY**

NEW PROPOSAL _____	PROPOSAL NUMBER _____
PROPOSAL RENEWEL _____	DATE RECEIVED _____
AMENDMENT OF PREVIOUSLY FILED PROPOSAL _____	ORIGINAL PROPOSAL NUMBER _____
USDA CATEGORY: _____	YES NO EXEMPTION FROM STANDARDS
SPECIES _____	NUMBERS _____

**For Amended or Renewed ACUP**

Provide information for amended or renewed ACUP in bold or red letters. Hard copies will be highlighted in yellow.

**Date approved:** \_\_\_\_\_

**IACUC CHAIR SIGNATURE** \_\_\_\_\_

**Bates College-Institutional Animal Care and Use Committee**  
**Animal Use/Pain Classifications**

**Classification B:** Animals being bred, conditioned, or held for the use in teaching, testing, experiments, research, or surgery, but not yet used for such purposes. Examples:

- Breeding colonies or any animal species that are held in legal sized caging and handled in accordance with the Guide and other applicable regulations. Breeding colony includes parents and offspring.
- Newly acquired animals that are held in proper caging and handled in accordance with applicable regulations.
- Animals held under proper captive conditions or wild animals that are being observed.

**Classification C:** Animals upon which teaching, research, experiments, or tests will be conducted involving no pain, distress, or use of pain-relieving drugs. Examples:

- Procedures performed correctly by trained personnel such as the administration of electrolytes/fluids, administration or oral medication, blood collection from a common peripheral vein per standard veterinary practice (dog cephalic, cat jugular, rodent saphenous vein) or catheterization of same, standard of radiography, perenteral injections of non-irritating substances.
- Euthanasia performed in accordance with the recommendations of the most recent AVMA Panel on Euthanasia, utilizing procedures that produce rapid unconsciousness and subsequent humane death.
- Manual restraining that is no longer than would be required for a simple exam; short period of physical restraint for an adapted animal.

**Classification D:** Animals upon which experiments, teaching research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs will be used. Examples:

- Surgical procedures conducted by trained personnel in accordance with standard veterinary practice such as biopsies, gonadectomy, exposure of blood vessels, chronic catheter implantation, laparotomy or laparoscopy.
- Blood collection by more invasive routes such as intracardiac pro periorbital collection from species without a true orbital sinus such as rats and guinea pigs.
- Administration of drugs, chemicals, toxins, or organisms that would be expected to produce pain or distress but will be alleviated with analgesics.

**Classification E:** Animals upon which teaching, experiments, research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which to the use of appropriate anesthetic, analgesic, or tranquilizing drugs will adversely affect the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. Examples:

- A) Procedures producing pain or distress unrelieved by analgesics such as toxicity studies, microbial virulence testing, radiation sickness, and research on stress, shock or pain.
- B) Surgical and post surgical sequella from invasion of body cavities, orthopedic procedures, dentistry or other hard or soft tissue damage that produces unrelieved pain or distress. Negative conditioning via electric shocks that would cause pain in humans.

**NOTE REGARDING CLASSIFICATION E:** An explanation to the procedures producing pain or distress in these animals and the scientific justification for not using anesthetic, analgesic, or tranquilizing drugs **must be included on your Animal Proposal Review Form.** This information is required to be reported to the USDA and will be available from USDA under the Freedom of Information Act.

**BATES COLLEGE ANIMAL CARE AND USE PROPOSAL (ACUP)**

Name of Principal Investigator/Responsible Faculty Advisor:	Department	Phone #	Email
Co-Investigator/Student	Department	Phone #	Email
Title (s) of Proposal			
Name(s) of Funding Source(s)	ASAF#	Approval Date(s)	

**I. JUSTIFICATION FOR THE USE OF ANIMALS:**

Please answer ALL questions in Part A in NON-SCIENTIFIC TERMS in the box below the question:

1. **How would you explain to a non-scientist, the specific objectives (s) of your project/class?**  
 In what ways might this project benefit the advancement of knowledge, the good of society, or human/animal health?

2. **Rationale for the Use of Animals:**  
 Why must animals be used? Explain why this work cannot be carried out using invertebrate or prokaryotic organism or alternatives such as cell and tissue culture, computer simulations or audiovisual presentations.

3. **Appropriateness of Species to be Used:**  
 Describe the biological characteristics of the animal species that justifies its use in the proposed study/class. Cost should not be used as a justification, except as a means to choose among species that are equally well-suited for the proposed project. For transgenic rodents, include any special attributes, immune system abnormalities, or congenital defects.

- 4a) **Description of Project and Number of Animals to be Used:**  
 Describe in detail the use of animal(s) including the number of animals to be used for the project. How did you determine the number of animals required? When possible, include a statistical power justification of the group size(s) or a yield of tissue needed per animal. For complicated research plans, attaching a table or flow chart showing group size, time frame, etc. is often helpful in understanding how the total number of animals was determined.

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4b) **Animal Procurement, Classification & Numbers:**

List All Species and Strains of Animal(s)	Source(s) of Animals*	Type/class (B,C,D,E**)	Number of Animals Used Per Year		
			Year 1	Year 2	Year 3

\*If animals are acquired from another research/teaching project, list previous ASAF# and investigator

\*\* For type Classification, see enclosed instruction sheet. TYPE E projects REQUIRE written justification statement for review.

<sup>1</sup> If breeding animals, estimate the animal numbers based on average litter size. If subsets are used in the research, clarify how many that you estimate will be used.

**A. Alternatives To Procedures**

The Animal Welfare Act and the Public Health Service **REQUIRE** that the principal investigator consider alternatives to procedures that may cause more than momentary or slight pain or distress to the animals. If you have listed animals under **TYPE D or E** in the chart above, you must provide a written narrative description. This narrative description must provide details on the methods you used and sources consulted to determine that alternative procedures, i.e., less painful and/or distressful, are not available or acceptable. Examples of sources might include a literature search, review of scientific journals, discussions with colleagues, etc. **However, as a minimum, the database(s) used to search the literature for alternatives, the keywords used, the date the search was conducted, and the years included in the search MUST be listed and results noted.**

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Please place an X in the appropriate box. If yes explain in the box below the question.

**B. Study Areas**

<b>Yes</b>	<b>No</b>	<b>1) Will the animals be taken to a laboratory/study area outside the animal housing facility?</b> If yes, list room number _____ What procedure will be performed in this area ? _____
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<b>Yes</b>	<b>No</b>	<b>2) Will animals be taken to this area and maintained for longer than 12 hours?</b> If yes, what is the total length of time animals are maintained in this area? Why must animals be maintained in this area rather than in the animal facility? _____ _____
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### C. Blood Sampling

Yes	No	If yes, describe techniques, sites of collection, volumes per sample, frequency of sampling(s), total samples per animal, length of time animal maintained for sampling, indicate the % blood loss per week based on animal's body weight and if applicable, describe how animal(s) will be monitored for anemia}

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### D. Urine/Feces Sampling

Yes	No	Indicate method, e.g. metabolism cage (describe dimensions of cage and time animal is housed in cage; catheterization (describe frequency of sampling(s), length of time animal maintained for sampling), cystocentesis (describe technique, frequency of sampling(s), length of time animal maintained for sampling); manual expression (describe technique, frequency of sampling(s), length of time animal maintained for sampling)

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### E. Other Bodily Fluid and Tissue Sampling

Yes	No	Indicate type of substance, method of collection, site of collection, volumes per sample, frequency of sampling(s), length of time animal maintained for sampling, total samples per animal

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### F. Collection of Tissue Post Euthanasia

Yes	No	In addition to your required tissue samples, would you be willing to allow other investigators to harvest tissues?

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### G. Antibody Production

Yes	No	Indicate type, e.g., monoclonal, polyclonal, ascites production; method used-e.g. conventional, waffle ball, adjuvant used for each injection, e.g. Complete vs. incomplete <i>Freund's consideration of alternatives to Freund's adjuvant</i> (e.g. <i>Ribi Adjuvant, Hunter's Titer</i> used-e.g. conventional, waffle ball, adjuvant used for each injection, e.g. Complete vs. incomplete <i>Freund's consideration of alternatives to Freund's adjuvant</i> (e.g. <i>Ribi Adjuvant, Hunter's Titer Max</i> ); dilution/diluents, if injectable agent(s) are not commercially prepared and sterility guaranteed-describe method used to assure the agent's sterility when injected, injection sites, volume injected per site, frequency of administration; harvesting protocol, site of collection, volume per collection, frequency of sampling (s), length of time animal maintained for sampling, total samplings per animal

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### H. Administration of Paralytic Agents

Yes	No	Describe agent, dose [i.e. mg/kg]. route of administration, frequency of administration, duration of paralysis; If used in conjunction with procedure(s) involving potential pain, how will the presence of pain, depth of anesthesia, degree analgesia be assessed?

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**I. Administration of Anesthetics**

Yes	No	
		Describe agent, duration of anesthesia, method of monitoring depth of anesthesia; maintenance/monitoring procedures to ensure normal body temperature is maintained in the animal, procedures employed in case of an anesthetic emergency/over-dose, monitoring protocol to insure animal's complete recovery from anesthesia; if by inhalation-describe equipment used and state method of scavenging waste anesthetic gases/fumes; <i>If injectable agent(s) are not commercially prepared and sterility guaranteed- describe method use to assure the agent's sterility when injected</i>

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**J. Administration of Analgesics**

Yes	No	
		Describe agent, dose [i.e. mg/kg], route of administration, frequency, duration of use

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**K. Administration of Drugs/Reagents/Cells/Etc. (cite your dose)**

Yes	No	
		<b>Other than anesthetics, paralytic agents, analgesics</b> , describe agent, dose {i.e. mg/kg}, volume, diluent, route of administration, list equipment used for administration- e.g. gavage needle, stomach tube, etc., frequency of administration, length of time animal maintained, anticipated deficit/adverse effects, monitoring protocol/schedule for effects... if no adverse effects are anticipated, so state; describe monitoring procedures to ensure cell lines have been screened for rodent pathogens }

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**L. Administration of Infectious Organisms (cite your dose)**

Yes	No	
		Describe organism, dose, (i.e. mg/kg), volume and route of administration, frequency of administration, anticipated deficit/adverse effects, protocol for monitoring animals for effects, criteria for moribund sacrifice; if no adverse effects are anticipated, so state

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**M. Administration of Radiation Treatment**

Yes	No	
		Describe treatment, duration of treatment(s), dose of radiation, frequency of treatment(s), total number of treatment(s), anticipated deficit/adverse effect, monitoring protocol/schedule for effects; If treatment(s) are applied to an immature egg/embryo, will it then be allowed to grow into the mature animal state? If YES, describe any anticipated effects to the mature animal

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**N. Controlled Substances, Including Anesthetics (cite dose)**

Yes	No	
		(e.g. pentobarbital), Describe arrangements for use, ordering, record keeping, storage, and precautions taken to avoid unauthorized access/use }

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**O. Special Diets**

<b>Yes</b>	<b>No</b>	Will food items other than standard commercial chows, feed plant formulations, supplements, etc. be used? If YES, describe diet, duration of use, anticipated nutritional deficit or adverse effect, weight monitoring of animal(s), amount of weight loss that will be allowed, monitoring protocol/schedule for effects
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**P... Food and/or Water Deprivation**

<b>Yes</b>	<b>No</b>	Describe duration of deprivation, frequency of deprivation, reason(s) for deprivation, monitoring protocol of animal(s), weight monitoring of animal(s), protocol/schedule of effects
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**Q. Indwelling Catheters Or Implants**

<b>Yes</b>	<b>No</b>	Describe type, size, duration of use, maintenance and monitoring protocol/schedule
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**R. Restraint**

<b>Yes</b>	<b>No</b>	Describe method, duration, equipment used, dimensions of equipment if applicable, observation schedule during confinement.; Will non-domestic animals be trapped? If YES, describe type of equipment used, duration of trapping/restraint, monitoring protocol/schedule for traps, potential for trapping non-target animals, disposition of trapped animals, etc
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**S. Transportation**

<b>Yes</b>	<b>No</b>	If animals are <b>NOT</b> procured/transported by animal facility personnel OR if animals are WILD (non-domesticated), describe how the animals are procured and transported or been obtained; if animals are transported outside the animal colony describe method used and how public exposure to allergens will be minimized }
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**T. Non Standard Husbandry Techniques**

<b>Yes</b>	<b>No</b>	Describe any non-standard husbandry techniques or exceptions to the Guide for the Care and Use of Laboratory Animals and a justification for their use }
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**U. Maintenance of a Breeding Colony**

<b>Yes</b>	<b>No</b>	If any animals listed on this protocol will be maintained as breeding animals, please list the individual responsible for colony maintenance e.g., weaning, pairing, record keeping, etc. }
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**V1). Behavioral Testing (with significant restraint or noxious stimuli)**

Yes	No	Describe restraint procedure, equipment, duration, frequency, type of noxious stimuli, methods used to monitor animals and minimize discomfort and distress; PROVIDE SCIENTIFIC JUSTIFICATION for degree of restraint and/or noxious stimuli
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**V2). Behavioral Testing (without significant restraint or noxious stimuli)**

Yes	No	Describe Procedure
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**W. Tumor or Tumor Cell Transplantation**

Yes	No	Describe agent, transplantation procedure, length of time animal maintained, anticipated deficit/adverse effect to the animal, monitoring protocol/schedule for effects, endpoint if no adverse effects are anticipated, so state; describe monitoring procedures to ensure tumor lines have been screened for rodent pathogens
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**X. Survival Surgery**

Yes	No	Death is not an endpoint{ If YES, complete Animal SurgeryForm }
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**Y. MULTIPLE Major Survival Surgeries Involving an Individual Animal**

Yes	No	Major survival surgery is any surgical intervention that penetrates and exposes a body cavity OR which produces permanent impairment of physical or physiological functions. If YES, complete Animal Survey Information Form
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**Z. Death as an Endpoint**

Yes	No	Does the project involve observing or studying the animal w/o euthanasia until death occurs? If YES, PROVIDE SCIENTIFIC JUSTIFICATION as to why an earlier endpoint is not acceptable
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**Place an X in the appropriate box**

Yes	No	Is confidential information contained in this project? If yes, please note by highlighting item.
Yes	No	Is this a renewal/reapplication of a previously approved project? If yes, please list ACUP # _____
Yes	No	Will any aspect of the animal use be conducted at another institution? If yes, where? _____

**III. Method of Euthanasia**

*Specify method, agent; if by chemical means, specify dose [i.e. mg/kg] and route of administration; must be consistent with the AVMA Panel on Euthanasia Journal of Veterinary Medical Association [www.avma.org/resources/euthanasia.pdf](http://www.avma.org/resources/euthanasia.pdf) OR justification for deviation should be indicated. AVMA Panel On Euthanasia Report recommends Physical methods (decapitation, cervical dislocation) be used **only** after other methods have been excluded and **when scientifically justified**. If a physical method is selected, a scientific justification for the use of the technique must be provided (i.e. Why*

are non-physical methods such as pentobarbital overdose/CO<sub>2</sub> unacceptable?) Describe method used to ensure animal will not revive (e.g, removal of heart, induction of bilateral pneumothorax, observation of rigor mortis, etc). Even if you do not intend to euthanize animals at the completion of your project, a method of euthanasia should be listed in cases of emergency or you are unable to sell/transfer these animals. Who will euthanize the animals?

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**a) If animals are not Euthanized, Indicate their Disposition** { e.g. transferred to another protocol/class, (indicate new project ASAF # and investigator) OTHER...please describe}


**IV. Personnel Qualifications:**

List personnel actively involved with animal components of the project and their qualifications. Describe an individual’s experience/training in all relevant animal related procedures. Indicate date these individuals attended and Animal Care Module and the date they were cleared for animal work through the Occupational Health Program (OHP).

<u>Individual</u>	<u>Role(s) on Project</u>	<u>Qualifications</u>	<u>Experience</u>	<u>Date of ACM</u>	<u>Date of Clearance-OHP</u>

<u>Individual</u>	<u>Role(s) on Project</u>	<u>Qualifications</u>	<u>Experience</u>	<u>Date of ACM</u>	<u>Date of Clearance-OHP</u>

**X. SAFETY. IF YES TO ANY QUESTIONS YOU MUST CONTACT THE SAFETY COORDINATOR FOR SAFETY TRAINING**

**1. Hazardous Materials:**

Yes	No	N/A	Will you house animals in the animal colony after they have been EXPOSED TO agents (infectious, carcinogenic, toxic chemical, radiological) that may be hazardous to humans or other animals?

Yes	No	N/A	Will you be working with one of the following hazardous categories 1)Flammable 2) Corrosive 3) Reactive 4) Toxic (heavy metals)

**PRINCIPAL INVESTIGATOR ASSURANCE**

The information contained on this form provides an accurate description of my animal care and use proposal. All people using animal under my direction have been trained to use appropriate methods and have read and agree to comply with this proposal. I agree to abide by governmental regulations and college policies concerning the use of animal. Discomfort of animals will be limited to that which is unavoidable. Analgesic, anesthetic and tranquilizing drugs will be used where indicated and appropriate to minimize pain and discomfort. I will allow veterinary care to be provided to animal showing evidence of pain and illness.

If the information provided for this project concerning animal use should be revised, or procedure changed, I will notify the Institutional Animal Care and Use Committee via amendment submission prior to making these changes. I understand that failure to report such changes may place the College and myself in violation of federal regulations.

*As required by federal regulations, I assure you the activities described do not unnecessarily duplicate previous /projects.*

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Signature of Principal Investigator/Responsible Faculty Advisor

Date

**PART V ANIMAL SURGERY FORM**

Species Used	Number Used	S=Survival N= Non survival*	Building & Room Where Surgery Is Performed

\*Non survival surgery animals are not allowed to awaken, once euthanized

1)	Yes	No	<b>Multiple Major Surgeries:</b> Will animals be subjected to more than one major survival surgery?
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**If YES, PROVIDE SCIENTIFIC JUSTIFICATION** and explain how surgeries are related.

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2)	<b>Contacts:</b> Please provide name and phone number or individual(s) performing surgery:
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Please provide name and phone numbers of individual(s) responsible for post-operative care:

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3)	<b>Preoperative Procedures/Care: Provide a brief description of all pre-operative procedures and care.</b> {Include with-holding of food & water, pre-operative antibiotic/therapeutic drug/fluid administration (describe agent, dose (i.e. mg/kg), route of administration frequency, duration or treatment), preparation of surgical site (e.g., clipping, use of antiseptic scrub/solution, etc.)}
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4)	<b>Anesthetic Procedures: Provide a brief description of anesthetic procedures.</b> { include drug(s), dose(s) (i.e.mg/kg), routes of administration, expected duration of anesthesia, monitoring procedures to assess the depth of anesthesia, maintenance/monitoring procedures to ensure normal body temperature is maintained in the animal, procedures employed in case of an anesthetic emergency/over-dose, monitoring protocol to insure animal's complete recovery from anesthesia; if by inhalation-describe equipment used and state method of scavenging waste anesthetic gases/fumes; if injectable agents(s) are not commercially prepared and sterility guaranteed-describe method use to assure the agent's sterility when injected}
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5)	<b>Surgical Procedures: Provide a brief description of all surgical procedures to be performed.</b> {including where appropriate site of incision, procedures performed, anticipated duration of procedure, method wound closure, etc...}
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5a)	<b>Describe procedures employed to ensure aseptic technique is maintained throughout surgical procedure.</b> {describe sterilization method used for instruments/equipment/supplies, indicate the use of sterile gloves/gowns/drapes, mask, sterile implants, sterile suture/closure material. If the same surgical instruments are used for multiple animals (i.e. rodents), describe how the instruments are managed to assure continued sterility}
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6a)	<b>Post-Operative Care: Provide a brief description of all post-operative procedures and care.</b> {including criteria to assess animal pain and the need for analgesics, type of post-operative analgesics (describe agent, dose [i.e. mg/kg], route of administration, frequency, duration of treatment); techniques used to ensure maintenance of normal body temperature in the animal; incision care, monitoring and time of suture removal; catheter or long term care of any chronically instrumented/implanted animals, monitoring and time of removal; bandage/dressing monitoring and changing schedule}
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<b>6b)</b> If post-operative analgesics will not be used, <b>PROVIDE SCIENTIFIC JUSTIFICATION.</b>

<b>6c)</b> Describe arrangements for post operative monitoring of animals, individual(s) responsible for performance of monitoring, including after-hour weekend and holiday care.

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<b>6d)</b> Describe the use of any antibiotics or other therapeutic drugs. {describe agent, dose (i.e. mg/kg), route of administration, frequency, duration of treatment}

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<b>6e)</b> If this surgical procedure induces a disease or other functional alteration, describe any anticipated adverse effects and deficiencies, monitoring protocol/schedule for animals, animals' degree of tolerance to disease/functional deficit.

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