**BATES COLLEGE ANIMAL CARE AND USE PROPOSAL INSTRUCTIONS**

For the use of vertebrates in research, teaching, or demonstration

Bates College Institutional Animal Care and Use Committee, Bates College, Lewiston, Maine 04204

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**BACKROUND 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 for USDA covered species. The Bates College Animal Care Facility is registered with the USDA. The Department of Health and Human Services (DHHS), Public Health Service (PHS), Office of Laboratory Welfare (OLAW) monitors compliance with standards the PHS policy on Humane Care and Use of Laboratory Animals and has an approved Animal Welfare Assurance 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, nonscientists, a veterinarian, member from the local community. Prior to using live of dead\* vertebrate animals in teaching or in research, principal investigators must submit an Animal Care and Use Protocol (ACUP) for review and approval by the IACUC. The approved ACUP is valid for three years from the date of approval and is reviewed annually.

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

**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. ACUPs must be submitted to the attending veterinarian at least 1 week prior to the IACUC review.

**INSTRUCTIONS**

1. Only Bates College faculty or staff may serve as the Principal Investigator.
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 research project or teaching exercise merits the use of animals and whether the animals will be treated humanely.
4. Send your completed ACUP to the Animal Care Coordinator-mhughes@bates.edu. Please do NOT send your ACUP to the veterinarian. All ACUPs need to be numbered for referencing.

**IACUC USE ONLY**

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| **BATES COLLEGE****INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE****ANIMAL CARE AND USE PROPOSAL (ACUP)****Revised 8/2012** |

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| **Date Received** | **ACUP #** |
| **Date Approved** | **Expiration Date:** |

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| Amendment #: | Amendment Date Received: |
| **USDA Covered Species****□ yes □ No** | **Amendment Approval Date:** |
| **NIH or NSF Funded?** | **If yes, Grant Number?** |

**Explanation of Humane Use Categories:**

**Category B**: Animals that will be bred or purchased for breeding, but not used for experiments. This includes breeders, offspring that cannot be used because of improper genotype of gender and any other animals that will not participate in the research studies.

**Category C**: Animals used in research experiments, or tests which involve no pain or distress or only momentary or slight pain or distress that WOULD NOT REQUIRE anesthetic, analgesic, or tranquilizing agents (ex. s.c., i.m., i.p., or percutaneous i.v., ,injection, a brief period of restraint, tissue harvesting after euthanasia had been performed).

**Category D:** Animals used in research, experiments, or tests where appropriate anesthetic, analgesic, or tranquilizing agents are used to avoid pain or distress (ex. Major and minor surgery, tissue or organ collection prior to euthanasia, retro-orbital blood collection, prolonged restraint accompanied by tranquilizers or sedatives). Animals used in research experiments, or tests which, if they experience pain or distress cannot be treated with an anesthetic, analgesic or tranquilizer, but the agent or procedure producing the pain/distress is immediately discontinued or the animal is euthanized to prevent pain and/or suffering

**Category E**: Animals used in research, experiments, or tests involving pain or distress in which the use of appropriate anesthetic, analgesic or tranquilizing agents would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (Ex. Studies which allow endpoints that are painful or stressful, drug withdrawal without treatment, pain research, noxious stimulation). **IF YOU LIST ANIMALS IN THIS CATEGORY YOU MUST PROVIDE A DETAILED JUSTIFICATION.** 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 in your ACUP.** This information is required to be reported to the USDA (USDA covered species) and will be available from the USDA under the Freedom of Information Act.

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|  **IMPORTANT—PLEASE ALLOW 1-2 WEEKS FOR APPOVAL** **THE IACUC WILL TRY ITS BEST TO REVIEW YOUR ACUP AS SOON AS POSSIBLE.**  **PLEASE SUBMIT ACUP TO : MHUGHES @BATES.EDU** |

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

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| **Name of P.I./Faculty Advisor** | **Department** | **Phone #** | **Email:** |
| **Co-Investigator/Student** | **Department** | **Phone #** | **Email:** |

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| **PROJECT/COURSE TITLE AND FUNDING AGENCY****(If you have more than one project to put on this form, please copy and paste this page as many times as needed)** |
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| ACUP #(amendments only): |

Title of ACUP or Course Title (If externally funded, this must match the grant title):Is this project federally funded? If so, by which agency? |

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| ***CLASSIFICATION OF RESEARCH PROJECT (place X in appropriate box)*** |
|  | *Biomedical* |  | *Agriculture* |  | *Teaching/Instruction* |  | *Wildlife/Field* |
|  | *Testing* |  | *Clinical Trial* |  | *Other:* |  |  |

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| **List the animals requested for use, including the Humane Use Category for each, and the number that will be used of the three year period in the columns corresponding to the source of animals.** **WHEN FILING AN AMENDMENT TO ADD ADDITIONAL ANIMALS, PLEASE DO NOT ADD TO THE EXISTING NUMBER- HIGHLIGHT IN YELLOW YOUR ADDITIONAL NUMBERS.** |

\*If animals are acquired from another research/teaching project, list previous ACUP # and P.I.

\*\* For Category E, projects **REQUIRE** written justification statement for review

**Note: For protocols involving generation of offspring, list the number of breeders required and the expected offspring from all breeding. All animals bred in-house must be included in this table, including any excess or unsuitable animals that may not be used**

**for experiments.**

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| **List all species and strains** | **Source \*** | **Category\*\*(B,C,D,E)** | **Number produced in-house** | **Year 1** | **Year 2** | **Year 3** |
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1. **JUSTIFICATION FOR THE USE OF ANIMALS:**

 **1.**

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| **Project Description**Using terminology that a non-scientist could understand, explain what you are going to do and how these procedures involving animals should be designed and performed with due consideration of their relevance to human or animal health, the advancement of knowledge, or the good of society. The IACUC is looking for a few well-written sentences showing a clear and concise description that is easily understood by all members of the committee, including the non-scientific members. Abbreviations and acronyms should be spelled out and explained the first time they are used. **Place your answers in the boxes below the questions.** |

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**2**

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

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|  **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 specialattributes, immune system abnormalities, or congenital defects. |

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|  **4.** | **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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1. **Alternatives To Procedures**

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|  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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1. **Details of animal use**. Please place an X in the appropriate box. If yes explain in the box below the question.
2. **Study Areas**

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| **Yes** | **No** |  **1)**Will the animals be taken to a laboratory/study area outside the animal housing facility? If yes, list room number What procedure will be performed in this area ?  |

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| **Yes**  | **No**  | **2)** Will animals be taken to this area and maintained for **longer than 12 hours?** 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?  |

1. **Blood Sampling**

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| **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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1. **Urine/Feces Sampling**

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| **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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1. **Other Bodily Fluid and Tissue Sampling**

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| **Yes** | **No** | **Ot** 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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1. **Collection of Tissue Post Euthanasia**

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| **Yes** | **No** | Do you plan to harvest tissues post-euthanasia as part of this study? If yes, please list those tissues below.In addition to your required tissue samples, would you be willing to allow other investigators to harvest tissues?  |

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1. **Antibody Production**

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| **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 *Freund’s consideration of alternatives to Freund’s adjuvant (e.g. Ribi Adjuvant, Hunter’s Titer*  used-e.g. conventional, waffle ball, adjuvant used for each injection, e.g Complete vs. incomplete *Freund’s consideration of alternatives to Freund’s adjuvant (e.g. Ribi Adjuvant, Hunter’s Titer* Max); 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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1. **Administration of Paralytic Agents**

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| **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? |

1. **Administration of Anesthetics**

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| **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; *If injectable agent(s) are not commercially prepared and sterility guaranteed- describe method used to assure the agent’s sterility when injected.*  |

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1. **Administration of Analgesics**

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

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1. **Administration of Drugs/Reagents/Cells/Etc.**

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| **Yes** | **No** | **Other than anesthetics, paralytic agents, analgesics ,** 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} Provide a citation for the dosage or describe how the dosage is derived.  |

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1. **Administration of Infectious Organisms**

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| **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. Provide a citation for the dosage or describe how the dosage was derived.. |

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1. **Administration of Radiation Treatment**

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| **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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1. **Controlled Substances**

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| **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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1. **Special Diets**

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| **Yes** | **No** | 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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1. **Food and/or Water Deprivation**

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| **Yes** |  | 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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1. **Indwelling Catheters Or Implants**

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| **Yes**  | **No** | Describe type, size, duration of use, maintenance and monitoring protocol/schedule |

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1. **Restraint**

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| **Yes** | **No** | Describe method, duration, equipment used, dimensions of equipment if applicable, observation schedule during confinement; Will wild 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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1. **Transportation**

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| **Yes** | **No** | If animals are **NOT** procured/transported by animal facility personnel OR if animals are WILD (non-domesticated), describe how the animals are procured and transported or have 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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1. **Non Standard Husbandry Techniques/Enrichment**

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| **Yes** | **No** | desc 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}. Explain what enrichment you are providing. |

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1. **Maintenance of a Breeding Colony**

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| **Yes** | **No** | 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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1. **Behavioral Testing**
	1. **Withsignificant restraint or noxious stimuli**

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| **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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* 1. ***Without* significant restraint or noxious stimuli**

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| **Yes** | **No** | Describe procedure |

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1. **Tumor or Tumor Cell Transplantation**

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| **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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1. **Survival Surgery**
	1. **Minor survival surgery**

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| **Yes** | **No** | **Non** Minor survival surgery is any surgical intervention that does not penetrate or expose a body cavity OR which produces permanent impairment of physical or psychological functions. If YES, complete the Animal Surgery Form. |

* 1. **Major Survival Surgery**

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| **Yes** | **No** | Major survival surgery is any surgical intervention that penetrates or exposes a body cavity OR which produces permanent impairment of physical or physiological functions. If YES, complete the Animal Surgery Form |

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* 1. **MULTIPLE Major Survival Surgeries Involving an Individual Animal**

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| **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 Surgery Form |

1. **Death as an Endpoint**

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| 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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1. **Place an X in the appropriate box**

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| Yes  | No | Is confidential information contained in this project?If yes, please note by highlighting item in red. |
| Yes | No | Will any aspect of the animal use be conducted at another institution?If yes, where?  |

1. **Method of Euthanasia**

Specify method; specify dose [i.e. mg/kg] and route of administration. Method must be consistent with the AVMA Panel on Euthanasia Journal of Veterinary Medical Association (**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/CO2 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 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 ACUP # and investigator)}

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**V. 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).

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| Individual | Role(s) on Project | Qualifications | Experience | Date of ACM | Date of Clearance-OHP |

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| Individual | Role(s) on Project | Qualifications | Experience | Date of ACM | Date of Clearance-OHP |

1. **SAFETY**

 **If yes to the following questions, the Safety Coordinator will be contacting you and all involved**

 **in your research for safety training.**

1. **Hazardous Materials:**

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| **Yes** | **No** | **n/a** | Will you house animals in the animal colony after they have been exposed to agents (infectious, carcinogenic, toxic chemical, radiological, flammable) that may be hazardous to humans or other animals?  |

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| **List chemical or agents that will be used:** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
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1. **Occupational Health Form ( All P.I.s and student researchers listed on ACUP are required to complete the OHF). Classroom studies are exempt.**

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| **Yes** | **No** | **Exempt**  | Have you completed and submitted your Occupational Health Form to the Occupational Health Nurse? ( Note: All Occ. Health Forms must be completed and researchers must be cleared prior to using animals. Please contact the Animal Care Coordinator at ext. 6942 if you have any questions).  |

1. **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 tranquillizing 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

1. **ANIMAL SURGERY FORM**

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| **1)** | **Yes** | **No** | **Multiple Major Surgeries:** Will animals be subjected to more than one major survival surgery? |

 **If YES, PROVIDE SCIENTIFIC JUSTIFICATION** and explain how surgeries are related.

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| **2)** | **Contacts**: 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)** | **Preoperative Procedures/Care:** **Provide a brief description of all pre-operative procedures and care**.{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)** | **Anesthetic Procedures: Provide a brief description of anesthetic procedures. {** 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)** | **Surgical Procedures: Provide a brief description of all surgical procedures to be performed**. {including where appropriate site of incision, procedures performed, anticipated duration of procedure, method wound closure, etc…} |

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| **5a)** | **Describe procedures employed to ensure aseptic technique is maintained throughout surgical procedure**. {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) | **Post-Operative Care**: Provide a brief description of all post-operative procedures and care. {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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| **6b)** If post-operative analgesics will not be used, **PROVIDE SCIENTIFIC JUSTIFICATION**. |

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| **6c)** | 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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| **6d)** | 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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| **6e)** | 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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