**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

*Ryan Bavis, PHD, IACUC Chair, Department of Biology, 207-786-8269*

*Mary Hughes, Animal Care Coordinator, Department of Biology, 207-753-6942*

**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](mailto: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 8/2014** |

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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)** |
| |  | | --- | | ACUP #: |   Title of ACUP or Course Title (If externally funded, this must match the grant title):   |  |  |  | | --- | --- | --- | | Yes | No | Is this project federally funded? If so by what agency? | | Yes | No | Is this a renewal or resubmission of a previously approved protocol?  If YES, please list protocol number and complete question 1.B. below. | | 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? | |

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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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1. **Animal Use**

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| **List the animals requested for use, including the Humane Use Category for each, and the number that will be used for 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.

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

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

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| 1A. 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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| 1B. If this is a renewal of a previously approved protocol, please summarize progress during the past year  toward achieving the objectives of the study. This summary should define the current status of the project in a way that  reveals the benefits or understanding gained from the use of animals and the reasons continued animal use is necessary to  achieve the scientific or educational objective. **Note: Protocols expire every three years, requiring renewal or**  **resubmission.** |

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| **1C. Rationale for the Use of Animals:**  Why must animals be used? Why can’t this work be carried out using invertebrate or prokaryotic organisms or alternatives such as cell and tissue culture, computer simulations or audiovisual presentations. What is the reason that live vertebrate animals are necessary for this project? |

Check all that apply:

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|  | The complexity of the processes being studied cannot be replicated, duplicated, or modeled in simpler living systems, such as in plants, insects, or other invertebrates. |
|  | There is not enough information about the process being studied to design in-vitro or non-living models |
|  | Existing in-vitro or non-living processes cannot produce the required results (IE, cell culture for monoclonal antibody production, computer modeling of protein synthesis, etc) |
|  | Preclinical studies in living vertebrate animals are necessary prior to human testing |
|  | This is a behavioral, learning, or development study: a whole living system is required |
|  | This is an ecological or field study specifically designed to study the biology of this species or species group |
|  | The animals will be used for teaching/ demonstration purposes |
|  | Other- please describe: |

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| **1D. Appropriateness Of Species To Be Used:**  In the table below, please include the characteristics of the animal species selected 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. |

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| **Enter species name across top, than check all rationale that apply for that species** | **Species/ strain 1: *Rattus norvegicus*/ Fischer 344** | **Species/ strain 2:** | **Species/ strain 3:** | **Species/ strain 4:** |
| This is a new model with untested properties |  |  |  |  |
| A large database exists for this species/ strain which will allow comparisons to previous data |  |  |  |  |
| The anatomy, genetics, physiology, phenotype, or behavior of the species is particularly well suited to the proposed study |  |  |  |  |
| This is the phylogenically least complex model that will provide adequate tissue, size, or anatomy for the proposed study |  |  |  |  |
| The results will be directly applicable to the health or care of this species |  |  |  |  |
| This is an ecological or field study |  |  |  |  |
| Other: please describe additional rationale used to select the species and strain requested  **The National Institute of Aging maintains aged populations of this strain of rat.** |  |  |  |  |

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| **.** | **2. 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. **ALTERNATIVE SEARCH**

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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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**IV. DETAILS OF ANIMAL USE**

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

1. **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. **Use of Non-Pharmaceutical Grade Compounds**

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| **Yes** | **No** | The 2011 Guide (pg. 31) states “[Pharmaceutical grade chemical compounds] should be used, when available, for all animal related procedures”. OLAW defines pharmaceutical grade compounds as a drug, biologic, or reagent that is approved by the Food and Drug Administration (FDA) or for which a chemical purity standard has been established by the [United States Pharmacopeia-National Formulary](http://www.uspnf.com/uspnf/login) ([USP-NF](http://www.uspnf.com/uspnf/login)) , or [British Pharmacopeia](http://www.pharmacopoeia.co.uk/) ([BP](http://www.pharmacopoeia.co.uk/)) If Non-Pharmaceutical grade chemicals or substances will be used, please complete the next section. |

**a). (Check all that apply)**

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|  | Pharmaceutical grade compound is not available from a veterinary or medical supplier |
|  | Pharmaceutical grad compound is not available from a veterinary or medical supplier in the needed concentration or formulation |
|  | The compound is required in order to produce data that is comparable to previous year’s data |
|  | Reagent grade compound is more pure than the pharmaceutical grade compound |
|  | Non-Pharmaceutical grade compounds are necessary to meet the scientific goals of the study. Briefly explain: |

b). Please provide a written SOP (attach as an appendix) describing how the compound is prepared and stored. Be sure

to include the following in your description.

* Chemical Compound concentration (units or %)
* Vehicle used
* How sterility is achieved (e.g. filtered, autoclaved)
* How labeled to include: Date compounded, by whom, shelf life and expiration date
* Assessment of pH (pH test paper is appropriate)

1. **Administration of Infection Organisms**

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| 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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**M. 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; Please include why restraint is necessary and how the specific duration was chosen. Describe adaptation training and if training is not included, discuss why adaptation training cannot be used. |

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1. **Use of Atypical or Wild Animals/Capture**

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| **Yes** | **No** | If wild, venomous, and/or “exotic” animals are to be used, state their source. Do any of these species carry zoonotic diseases? If so, list the precautions taken to protect personnel. If Federal/State permits are required, please provide a copy with your ACUP. Will animals be captured? If YES, describe type of equipment used, duration of restraint in the equipment used for capture, schedule for checking the equipment, potential for trapping non-target animals, disposition of captured animals, etc. Are any species involved in this study endangered or protected? If yes, explain why these species must be used. |

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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}.Standard husbandry includes group housing for social species, daily animal checks including weekends and holidays, provision for ad-libitum feed and water, a stabilization period of at least 48 hours, cages changed every 7 days at a minimum, and at least one form of environmental enrichment. |

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1. **Animal Identification**

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| **Yes** | **No** | Will you be identifying your animals with any method other than cage cards? If so, please describe the procedure. |

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**W. 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.} **Do any of the animals have a phenotype that may cause a known painful or distressful physical, behavioral, or physiological condition (e.g. susceptibility to a particular illness, weakened immune system, delayed growth rate, etc.)** |

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**X.** **Behavioral Testing**

* 1. **Withoutsignificant restraint or noxious stimuli**

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

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* 1. **Withsignificant restraint or noxious stimuli**

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| **Yes** | **No** | Describe procedure, equipment , duration, frequency, type of noxious stimuli, methods used to monitor animals and minimize discomfort and distress; PROVIDE SCIENTIFIC JUSTIFICATION for use of this model. |

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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. **METHOD OF EUTHANASIA**

*Specify method; specify dose [i.e. mg/kg] and route of administration. Method must be consistent with the AVMA Guidelines for the Euthanasia of Animals*) *OR justification for deviation should be indicated. AVMA Guidelines for the Euthanasia of Animals 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), release in the case of wild caught.

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**VI. 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 Training 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 Training | Date of Clearance-OHP |

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

**VII. SAFETY**

**If you or any researchers involved with your study will come in contact with any hazardous material, please contact the safety coordinator at ext. 6942 or** [**mhughes@bates.edu**](mailto:mhughes@bates.edu) **to schedule a safety training prior to your attended research begins.**

**A) Will you house animals in the animal housing facility after they have been given agents (infectious, carcinogenic, toxic chemical, radiological) that may be hazardous to humans or other animals?**Yes □ No □

**If YES, Please answer 8(B) and 8(C)**

**B) Describe agent, type of hazard, amount and route of administration, frequency of administration and dose, route of excretion, anticipated deficit/adverse effects on treated animals, monitoring protocol/schedule for affected animals.**

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| Chemical or Hazard | Route of Administration | Frequency of Administration | Route of Excretion | Adverse effects | Monitoring Protocol |
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**C)Describe precautions that will be followed to protect all personnel (including animal care staff) with animal contact. Will special training of personnel be necessary and provided? (If YES, describe training) Describe any special animal care procedures required relating to the use of the hazard? (E.g. mask gloves, lab coat, respirator, autoclaving items, special/isolated animal housing, etc.) If none required, so state*.***

**List PPE’s worn during administration or handling this hazard.**

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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

**Student Assurance**

We the undersigned have read this protocol in its entirety and agree to abide by it. Principal Investigator, please have students added to this protocol sign and date below.

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1. **ANIMAL SURGERY FORM**

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| **Species Used** | **N=Non Survival** | **Major Survival** | **Minor Survival** | **Building & Room Where Surgery is Performed** |
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**\*non-survival surgery animals are not allowed to awaken, once anesthetized**

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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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