**Old Dominion University**

**IACUC FIELD PROTOCOL APPLICATION**

Submission instructions: Please e-mail this form and any applicable attachments, permits, supporting audio-visual materials, etc. to the Office of Research (kwheeler@odu.edu) with PI’s CV or Biosketch by the submission dates listed at <http://www.odu.edu/ao/research/compliance/animals.shtml> Electronic signatures are acceptable.

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| **FOR IACUC USE ONLY** |
| IACUC Number: | Submission Date: |
| Notes: | Veterinarian Review Date: |
| Statistician Review Date: |
| Committee Review Date: |
| Final Approval Date: |

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| A. ADMINISTRATIVE DATA |
| **Is this application funded or pending funding by outside source?** | **Yes, funded ☐ Yes, pending ☐ No ☐** |
| **If yes, which source?**  |
| **ODURF Project #:** |
| If Yes, please submit the Specific Aims and Vertebrate Animals sections from your grant application. |
| **Project Title (If a grant supports the project, the titles must be identical):** |
| **Principal Investigator:** |
| Position: |  |
| Department: |  |
| Address 1: |  |
| Address 2: |  |
| Email Address: |  |
| Phone: |  | Emergency Phone: |  |
| Other Responsible Personnel (co-investigators, students, postdoctoral fellows, technologists, etc.): Documentation of training must be submitted or on file for all personnel listed below |
| Name, degree, and position | Role in this protocol | Email Address |
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| [ ]  Check this box if additional students or other personnel will be assisting in the field without handling animals |
| **Proposed Starting Date:** | **Proposed Ending Date (3 years max):** |
| **Reviews by other regulatory committees.** If the answer to any of the questions is “yes” please provide the date of approval of responsible committee or office. Please attach the approval along with the procedures for safe handling and disposal of animals and materials. |
| **Reviews by other regulatory committees.** | Yes | No | Date |
| 1. Use of radioisotopes *in vivo*? Radiation Safety Committee |  |  |  |
| 2. Use of known chemical hazards, mutagens, teratogens? Environmental Health & Safety |  |  |  |
| 3. Use of recombinant DNA? –Institutional Biosafety Committee |  |  |  |
| 4. Use of biohazards? Institutional Biosafety Committee |  |  |  |
| 5. Study conducted at Biosafety Level 2? Institutional Biosafety Committee |  |  |  |
| 6. Study conducted at Biosafety Level 3 or 4? (Cannot be conducted at ODU.) |  |  |  |
| 7. Use of non-pharmaceutical grade drugs?If yes, provide name of drug and % purity\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |

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| B. ANIMAL REQUIREMENTS |
| Target animal species & common names (if applicable):\* NOTE: species lists might include general descriptors such as “all native mammals” rather than an extensive list of individual species. |
| Non-Target Animals:Include any non-study animals directly or indirectly affected by the research. Examples include the potential to live-capture or kill non-target individuals (e.g., loss of offspring due to taking of one or both parents) or disturb/harass other species during the research activity.\* NOTE: species lists might include general descriptors such as “all native mammals” rather than an extensive list of individual species. |
| Field Location(s):  |
| Please provide photocopies of all current permits that authorize the proposed field activity. If current permits are not available, previously issued permits or a copy of the application for the current permit may be submitted temporarily in order to demonstrate concept. Up to date permits must be filed with IACUC upon receipt in order to be compliant with regulations on animal use numbers. ☐ I have attached complete/full copies of all current permits☐ I have attached previously issued permits or a copy of the application for a current permit and will file up to date permits with the IACUC when received☐ Permits do not apply: * If permits do not apply to your project, please explain/describe:

 * If permits are not required, if possible, please provide documentation to that effect such as a copy of the regulatory statute or a letter from the appropriate law enforcement agency.

***Please note, additional information may be required for studies that do not require permits*.** |
| If animals will be housed at ODU, where will they be held?What is the maximum number to be housed at ODU at any one time? | Approximate number of target animals to be sampled for this protocol over 3 years: |

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| C. STUDY OBJECTIVES |
| Describe briefly the objective(s) of this study at the level of a high school senior (limit 250 words): |
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| Technical Abstract (limit 400 words): |
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| **Explain how the study will benefit wildlife, humans, or society. Benefits can include basic scientific knowledge; conservation and/or management applications for wildlife; wildlife habitat; wildlife or human health.** |
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| D. RATIONALE FOR ANIMAL USE |
| **1. Describe the biological characteristics of the animal species that make them suitable for this particular study. Cost should not be used as a justification, except as a means to choose among species that are equally suitable.** |
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| **2. The Animal Welfare Act regulates animal care and treatment. This act requires Principal Investigators to consider alternatives to procedures that may cause more than momentary or slight pain or distress to animals and to consider the “Three R’s”:****Refinement** is defined as an alternative to earlier examples of animal use by better use and/or modification of existing procedures so that animals are less subject to pain or distress. **Reduction** is defined as a lesser number of animals used to obtain information of a certain amount and precision through sharing of animals, better experimental design, or changed practices. **Replacement** is defined as an alternative to animal use, replacing animal use with some method that does not require whole animals, e.g., the substitution of insentient materials for animals, substitution of a lower species less sensitive to pain and distress, etc.  |
| **3a. Database searches for alternatives such as refinement, reduction, and replacement as described above**. To satisfy the alternatives requirement, a literature search is required. The Animal Welfare Act regulations suggest the use of the USDA National Agricultural Library’s Animal Welfare Information Center, which has a compilation of databases [<http://awic.nal.usda.gov/literature-searching-and-databases/databases>]. However, these dozens of databases include many that are not useful for searching for alternatives and most are useful only for biomedical research. Do not feel constrained to use this particular resource; any relevant source is acceptable. The taxon-specific guidelines, for instance, include hundreds of species-specific references. * [American Society of Mammalogists Animal Care and Use Guidelines](http://www.mammalogy.org/articles/guidelines-american-society-mammalogists-use-wild-mammals-research-0)
* [Ornithological Council Guidelines to the Use of Wild Birds in Research](http://www.nmnh.si.edu/BIRDNET/guide/index.html)
* [American Fisheries Society, American Institute of Fishery Research Biologists, and American Society of Ichthyologists and Herpetologists Guidelines to the Use of Fishes in Research](http://fisheries.org/docs/policy_useoffishes.pdf)
* [American Society of Ichthyologists and Herpetologists Guidelines to the Use of Amphibians and Reptiles in Research](http://www.asih.org/sites/default/files/documents/Resources/guidelinesherpsresearch2004.pdf)
 |
| **Database** | **Search Date** | **Keywords** | **Time period covered by search** |
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| **Please describe your findings below.** Include the number of citations found and a brief narrative description summarizing your findings, including citations of pertinent references found.  |
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| 3b. Describe any provisions specific to this protocol that refine, reduce or replace the use of animals, including computer and animal modeling*, in vitro* cell, tissue, or organ culture. Address each of the 3R’s (refinement, reduction, and replacement).Refinement:Reduction:Replacement: |
| **3c. Consultation with other experts in area of investigation (if any).** Please list names, qualifications, and a brief narrative of the discussion. |

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| E. DESCRIPTION OF EXPERIMENTAL DESIGN AND ANIMAL PROCEDURES |
| Briefly explain the general experimental design. This description should be written so as to enable the IACUC to understand the experimental course of the animal from its entry to its endpoint in the study. A clear description of the species, number of animals, and their distribution into experimental groups including tables, flow charts, diagrams, etc. will expedite the review process. Specify the normal experimental endpoint. (More detailed information regarding husbandry, anesthetics/analgesics, surgical procedures, etc should be provided in the appropriate attachments) |
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| **Collection Methods:****Which of the following activities will occur to live animals in the field. If checked, answer follow-up questions.**☐ Capture, other than via trap (Nets, trawling, by hand, etc)☐ Trapping☐ Tagging or marking ☐ Collection via noxious event (includes, gunshot, poison, snap trap, etc)☐ Euthanasia, other than via lethal event☐Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Please describe capture methods. (i.e., hand-held, noose, net, tongs)** **What is the maximum time an animal will remain captured? Please explain/justify**.**What will be the fate of any animals wounded when being captured?**  |
| **Non-lethal Trapping**:**Please indicate the type of trap.** ☐ Sticky boards☐ Sherman ☐ Havahart ☐ Mist net☐ Other, Please describe **What is the maximum time an animal could spend in a trap before discovery? Please explain/justify**.**How will trapping non-target species be avoided?** **Indicate the fate of any trapped non-target species**. **What will be the fate of any animals wounded in the traps?**  |
| **Collection via lethal event (includes, gunshot, rotenone, snap trap, etc)****Please describe the lethal event in detail and provide indications of relevant permits and safety precautions.**  **Describe how killing non-target species will be avoided.****Describe what will happen to any animals wounded, but not killed**.*\*\*Please be reminded that many drugs, controlled substances, and some other products are highly regulated materials, and may require permits or special licenses for lawful transportation across state lines or into other countries. Investigators are responsible for ensuring the lawful transport of all of their research materials to avoid legal action up to and including capital punishment.\*\** |
| **Blood Sampling:** (Describe: needle gauge and length; collection site preparation; location of collection sites; sample volume; frequency of sampling(s); total samples per animal; how long an animal is retained for sampling; and indicate the percent blood loss per sample based on the animal’s body mass, how fluid volume will be restored, and describe how animal(s) will be monitored for anemia. |
| **Other Hazards:****How will you protect your safety during animal collection? Describe all PPE that will be used by personnel including, gloves, respirators, goggles or face shields, etc. If no PPE is planned, explain the likelihood of exposure to potential hazards (pathogens – including mode of transmission; bites, scratches, and stings), the potential consequences, and any other methods you intend to use to avoid the hazards or the consequences, such as physical means, prophylactic medicines, post-exposure treatment.****Detail the decontamination procedures for equipment that will be used to capture, transport, contain, etc. animals; and the frequency of decontamination.****Will your work involve other hazardous materials, objects, equipment or activities? If so, please list.****If an animal (live or dead) is to be transported from the field, describe measures to be taken to avoid potential disease transmission to researchers and other animals.** |
| **Animal identification method****Please indicate the type of tag including the make and model as well as manufacturer (including coded wire tags, bands, ear tags, pit tags, Fly fish tags, sterile beads.)** **If non-tag marking is used, please describe the method.** ☐ Fin clip☐ Toe clip☐ Belly scale clip☐ Tattoo☐ Stains/dyes,☐ Shell etching☐ Other, Please describe: **If marking involves cutting or piercing skin, please describe any antiseptic precautions to be taken and/or pain management**. |
| **Statistical Justification.** Provide justification that the number(s) given in this protocol is the minimum necessary to obtain *statistically meaningful* results. A reference to an appropriate statistical methodology and to a sample size determination formula or the recommendations of a qualified statistician may be used. If the services of a statistician were used, provide a brief (2 page) CV or biosketch of the qualifications of the statistician. |
| Procedure | Yes | No | If yes, include: |
| Any other than standard or routine husbandry and handling practices required (e.g. special housing, animal care requirements or safety requirements such as water or feed or waste disposal) |  |  | Attachment A |
| Injection, inoculation, or delivery of substances other than anesthetics or analgesics (e.g. antibiotics, drugs, reagents, radiation, biohazards, chemical agents, infectious agents, recombinant DNA, tumor cells, etc.) |  |  | Attachment B |
| Ante-mortem specimen collection (fluids, cells, tissues, or organs) |  |  | Attachment C |
| Other experimental procedures (behavioral manipulations, noxious stimuli, forced exercise, physical restraint) |  |  | Attachment D |
| Surgical procedures |  |  | Attachment E |
| Injection, inoculation, or delivery of anesthesia, analgesia, or tranquilization  |  |  | Attachment F |
| Death as an endpoint |  |  | Attachment G |
| Post-mortem specimen collection (fluids, cells, tissues, or organs) |  |  | Attachment I |

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| F. PAIN OR DISTRESS |
| Describe in detail the possible adverse effects for each experimental procedure and/or agent administered to the animals. Describe the clinical parameters specific to the species used and the procedure that will be monitored to indicate adverse effects, pain, or distress to the animals.  |
| Check the appropriate category(s) and indicate the approximate number of animals in each. If multiple procedures are to be performed, place the animal in the category for the most painful/distressful procedure. The animal total in this section should equal the animal total in the protocol. **Include Attachment F if any animals are included in the categories “Alleviated Pain or Distress” or “Unalleviated Pain or Distress.”** |
|  | **Year 1** | Year 2 | Year 3 |
| **No Pain or Distress:** Number of animals involved in procedures that are anticipated to have the potential to produce more than momentary or slight pain, discomfort, or distress. |  |  |  |
| **Alleviated Pain or Distress:** Number of animals for which anesthesia or analgesia will be administered to avoid or alleviate pain or distress (eg. general anesthesia for surgical procedures, analgesia or anti-inflammatory agents). |  |  |  |
| **Unalleviated Pain or Distress:** Number of animals where alleviation of pain or distress are contraindicated for justifiable reasons. **A detailed justification is required.** |  |  |  |
| Place the study in the appropriate USDA pain category below based on the most painful/distressful procedure an animal could experience as a normal result of this protocol: |
| **☐ USDA Category B** Breeding or Holding ColonyProtocols | **☐ USDA Category C** No more than momentary orslight pain or distress and nouse of pain-relieving drugs, orno pain or distress. Forexample: euthanatized fortissues; just observed undernormal conditions; positivereward projects; routineprocedures; injections; andblood sampling. | **☐ USDA Category D** Pain or distress appropriatelyrelieved with anesthetics,analgesics and/or tranquilizer drugs or other methods for relieving pain or distress. | **☐ USDA Category E**Pain or distress or potentialpain or distress that is notrelieved with anesthetics,analgesics and/or tranquilizer drugs or other methods for relieving pain or distress. |

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| G. DISPOSITION OF ANIMALS AT END OF STUDY |
| Experimental Endpoint. Check all that apply. |
| ☐ | Capture and Release |
| ☐ | Euthanasia (complete Euthanasia section below) |
| ☐ | Death as an endpoint refers to projects in which the animals’ experimentally induced death is required as a measured data point. It does not refer to projects in which the animals will be euthanized prior to non-experimentally induced death for tissue collection or project termination. All "death as an endpoint" protocols without relief of pain or distress are identified as USDA Pain Level E. (ex. LD 50 study) If yes, include Attachment G |
| ☐ | Available for transfer to another protocol. Animals that have undergone major survival surgery are not eligible for transfer to another survival surgery protocol. |
|[ ]  Post-mortem animal tissues from this protocol may be available for use by other researchers. Euthanasia of animals for the sole purpose of providing tissues to another researcher is not permitted. |
| Early Endpoint. Specify results that will enable animal to be dismissed from the study; e.g., percentage body weight gain or loss, survival to specified study day, abnormal behavior, etc.) |
| **Euthanasia.** Even if you do not intend to end animals’ lives at any point in your project, a method of euthanasia or humane killing must be listed in cases of emergency except in instances where permits or statutes prohibit the killing of individuals of the species involved. If euthanasia or humane killing is prohibited by law or by permit conditions, provide supporting documentation. The American Veterinary Medical Association published its revised [Guidelines for the Euthanasia of Animals](https://www.avma.org/KB/Policies/Documents/euthanasia.pdf) in 2013. If the circumstances of field settings or study requirements preclude the use of methods deemed acceptable by the AVMA for euthanasia, investigators may request approval of alternative methods to humanely end the lives of wild animals. Such a request is consistent with the AVMA guidelines which recognize that ending the life of wild animals in field settings might more appropriately be considered humane killing than euthanasia (AVMA pg. 81). |

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| H. PRINCIPAL INVESTIGATOR CERTIFICATION |
| Statement of ResponsibilityI acknowledge that federal and institutional regulations require that any significant changes in my research protocol (i.e., animal model, procedures, personnel) must be approved prior to implementation. I assume responsibility for compliance with such regulations by PHS policy, USDA Regulations, the National Research Council Guide for the Care and Use of Laboratory Animals, all federal regulations, and policies of Old Dominion University governing the use of animals in research or teaching. Failure to comply with these regulations could result in a suspension of my protocol.☐ A. I declare that all personnel having direct live animal contact on this project, including myself, have been or will be trained in humane and scientifically acceptable procedures for animal handling, procedural techniques, administration of anesthesia, analgesia and euthanasia to be used in this project to ensure that no unnecessary pain or distress will be caused as a result of the procedures/manipulations, and all are aware of the hazards involving the use of live animals and tissues. (A “Qualifications for Working with Animals, Form B” must be on file in the Office of Research for all personnel on this protocol)☐ B. If survival surgery is to be done, I certify that the individuals listed in Section A of this protocol have received training in aseptic surgical methods and techniques; proper use of anesthetics, analgesics and or tranquilizers; and procedures for reporting animal welfare concerns. ☐ C. If significant, long-lasting pain or distress will result from the procedures described in this protocol (USDA Pain Category “D” or “E”), I certify that I have reviewed the pertinent scientific literature and have found no valid alternatives to any procedures described herein.  ☐ D. If live vertebrate animals will be housed at Old Dominion University I will permit emergency veterinary intervention, even if it could compromise my experiments, for animals showing evidence of pain or illness not addressed specifically in the approved protocol, in addition to appropriate veterinary care as prescribed for individual species. I understand that it is my responsibility to provide current and updated emergency contact information if veterinary intervention will compromise my experiments.☐ E. I certify that the information provided within this application is accurate to the best of my knowledge. I also understand that should I use the project described in this application as a basis for a proposal for funding (either intramural or extramural), it is my responsibility to ensure that the description of animal use in such funding proposal is identical in principle to that contained in this application.☐ F. I certify that all personnel on this project will complete the mandatory CITI Training and will receive training from the animal facility manager if this project requires use of the animal facility in MGB or IRP2.☐ G. I am aware that the use of hazardous agents in animals may only be initiated after approval from IACUC, the Biosafety committee, and the Office of Environmental Health & Safety (OEHS).☐ H. I understand that this protocol is valid for a period not to exceed one year from the date of approval and that further approvals are required to continue animal use under this protocol. ☐ I. I certify that the activities described in this protocol do not unnecessarily duplicate previous experiments. |
| **Printed Name of Principal Investigator:**  |
| **Signature of Principal Investigator:**  |
| **Date:**  |
| J. APPROVAL BY INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE  |
| **Printed Name of IACUC Chair or Designee:**  |
| **Signature of IACUC Chair or Designee:**  |
| **Date:**  |

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|  **CHECKLIST FOR ANIMAL PROTOCOLS****PI MUST COMPLETE AND INCLUDE THIS WITH THEIR PROTOCOL** |
| **Subject** | **Item included?1** | **Page** |
| **A. Administrative Data** |  |  |
| Project Title |  |  |
| Principal Investigator |  |  |
| Other responsible personnel |  |  |
| Proposed start date and end date |  |  |
| Approvals of other regulatory committees |  |  |
| **B. Animal Requirements** |  |  |
| Species of vertebrate and field location  |  |  |
| Total number of animals used and standing colony maximum number, if appropriate |  |  |
| **C. Study Objectives** |  |  |
| Lay description |  |  |
| Technical abstract |  |  |
| **D. Rationale for Animal Use** |  |  |
| Lay rationale |  |  |
| Appropriateness of species used |  |  |
| Search of two databases |  |  |
| Consultation with experts in the field |  |  |
| **E. Animal Procedures** |  |  |
| Description of experimental design |  |  |
| Statistical justification of animal numbers |  |  |
| Other than standard husbandry – if yes, attach Attachment A |  |  |
| Test substances – if yes, attach Attachment B |  |  |
| Ante-mortem specimen collection - if yes, attach Attachment C |  |  |
| Other experimental procedures - if yes, attach Attachment D |  |  |
| Surgical procedures - if yes, attach Attachment E |  |  |
| Injection, inoculation, or delivery of anesthesia, analgesia, or tranquilization - if yes, attach Attachment F |  |  |
| Death as an endpoint - if yes, attach Attachment G |  |  |
| Post-mortem specimen collection - if yes, attach Attachment I |  |  |
| F. Pain or Distress |  |  |
| Description of possible adverse effects |  |  |
| Pain categories – total number must equal number of animals in study |  |  |
| Alleviated Pain or Distress” or “Unalleviated Pain or Distress – Attach Attachment F |  |  |
| Pain and distress: specify the number of animals that will be given anesthetic, analgesic or tranquilizing drug |  |  |
| **G. Disposition of Animals at the End of the Study** |  |  |
| Experimental endpoint: specify when animal dismissed from study |  |  |
| Experimental endpoint: Death as an endpoint – if yes, attach Attachment G |  |  |
| Early endpoint: specify when animal dismissed from study |  |  |
| Is the method of euthanasia described and the lethal agent indicated?  |  |  |
| **H. Certifications** |  |  |
| Statements of responsibility read and checked? |  |  |
| PI signature: typed name and date? |  |  |
| 1Check if included; 0 if not included; N/A if not applicable. |