

Institutional Animal Care and Use Committee (IACUC) Protocol Form for Research with Vertebrate Animals

For institutional review only

Instructions: Complete this application, taking care to ensure it contains sufficiently detailed responses to all questions. If any section does not apply to your project, please write "NA." Submit the completed application, including all required signatures, to the Office of Sponsored Programs and Research Services (OSPRS) via email at <a href="https://osprace.oss.osp.ncb/osprace.oss.osp.ncb/osprace.oss.osp.ncb/osprace.oss.osp.ncb/osprace.oss.osp.ncb/osprace.osprace.osp.ncb/osprace.osprac

jor:							
List any additional contact information for animal care issues (optional):							
List any additional contact information for animal care issues (optional).							

Approval Period:

All protocols are approved for three calendar years commencing on the date of approval.

1. Project Classification (Please select all that apply.):

Research and/or teaching field study that involves the capture/trapping, physical/chemical restraint, invasive procedures, and/or disruptive habitat disturbance impacting vertebrate animals. (Note: Field studies that do not included these activities and are only observational in nature are exempt from animal care and use approval.)

Research and/or teaching laboratory-based study in which vertebrate animals are maintained in a captive setting for a temporary or extended period.

2. Pain Category (Please select only one.):

- **A.** Animals used for teaching or research causing no or only momentary pain or distress (i.e. routine venipuncture), not requiring the use of anesthetics or pain-relieving drugs.
- **B.** Animals used for teaching or research causing more than momentary pain or distress to the animals and for which appropriate anesthetic, analgesics, tranquilizers, or euthanasia procedures will be used.
- **C.** Animals used for research or teaching causing more than momentary pain or distress, without the use of pain relieving drugs (analgesics, anesthetics, or tranquilizers), or protocols where animals will be allowed to die as a planned result of the study, with no intervention (i.e. euthanasia).

3. Funding (Please select only one.):

Internally Funded (No grant or contracts associated.)

Externally Funded Funding Agency: CCU grant account number (N/A if not yet awarded.):

4. What is the purpose/objective of the study? Describe the specific goals of the study and potential benefits to the field or society. Please respond in clear and concise language that can be understood by a layperson. This means minimal use of technical terms and a brief explanation of any specialized terms, which you must use. *If more space is needed, please attach an additional document when submitting this form.*

6a. Animals to be used in this activity: Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic 6b. Source of animals. List vendor/breeder, institution, wild capture, etc.	using animals and manipulat of analgesics or anesthetics. habitat. <i>If more space is needed</i>	ions of animals List any sampl	. Describe any s es to be collecte	surgical or invasived. For field studie	re procedures, including the use es, describe the location and
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
Species/Strain* Sex Age Pain Maximum number of animals (Include common name.) (M,F,U) (# of U) Category used during project *Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic					
*Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic	6a. Animals to be used in t	his activity:			
Strain is required if you have animals that are of specific genetic interest or are inbred, outbred, or transgenic	Species/Strain				
	(Include Common name.)	(M,F,U)	(# of U)	Category	used during project
6b. Source of animals. List vendor/breeder, institution, wild capture, etc.					
	*Strain is required if you have	e animals that a	are of specific g	enetic interest or	are inbred, outbred, or transgenio
					are inbred, outbred, or transgenic

6c. Justify the <u>species</u> and <u>number</u> of animals to be used. Make justifications relative to the study objectives and methodology, making statistical or procedural/logistical arguments for the numbers.

For studies under Pain Category B, you are also required to consider alternatives to procedures that may cause more than momentary or slight pain or distress to animals (USDA Policy 12 - Written Narrative for Alternatives to Painful Procedures: http://www.aphis.usda.gov/ac/policy/policy12).

Alternatives include:

- Replacement of vertebrate animals with in vitro models, computer models, or lesssentient animal species.
- **Refinement** of experimental procedures to minimize pain or distress (e.g., early endpoints, use of analgesics, anesthetics, or sedatives; techniques that reduce stress in the animal).
- Reduction in the number of animals by using appropriate statistical methods in the design and analysis of the study, reduction in variability by using animals of defined genetic or microbiological status, and maximizing the data gained from an individual animal.

You must describe how you searched for alternatives and why they were not found to be suitable for accomplishing the goals of the study. Methods to search for alternatives may include:

- Literature search: indicate databases/search engines searched, key words, years searched;
- Consultation with colleagues or veterinarians: indicate name(s), qualifications/title, content of consult; or
- Other.

For studies under Pain Category C, you are also required to: (1) consider alternatives to procedures that may cause more than momentary or slight pain or distress to animals (as explained above), and (2) provide a scientific justification for why pain and distress must remain unrelieved (per USDA regulations 9 CFR section 2.31 (d) (iv) (A)).

If more space is needed, please attach an additional document when submitting this form.

7. Where will the animals be housed/located?
8. Where will procedures take place?
9. Will your project require any specialized project related housing or husbandry? (e.g. sterile cages, wire bottom cages, environmental enrichment devices, or social isolation)
10. What known or potential animal-related problems can be anticipated during this project? Describe the issues and how they will be addressed. Under what circumstances, if any, would animals
be removed from the project?

	Euthanized in the lab, with or without further sampling postmortem; carcasses disposed capproved method.
	Released back into the natural habitat.
	Maintained under animal management conditions for future use in research.
	Transferred to another project. Please list protocol number and investigator, if possible.
	Other. Please describe.
method	thanasia. Describe euthanasia method(s) used as part of the study. For all projects, described of euthanasia to be used in emergencies. If more space is needed, please attach an additional documentating this form.
42 le	animal death without outbanasia a planned and point of the study?
13. Is	animal death <u>without euthanasia</u> a planned endpoint of the study? No
13. Is	No
13. Is	
13. Is	No
14. Pe permis	Yes. If yes, please provide a scientific justification. rmits. If additional permits or permissions are required for this research (state, federal, privat sion/MOU's), list them below and attach a copy of the permit. If a permit has or will be applied
14. Pe permis indicate	No Yes. If yes, please provide a scientific justification. rmits. If additional permits or permissions are required for this research (state, federal, private)
14. Pe permis indicate	Yes. If yes, please provide a scientific justification. rmits. If additional permits or permissions are required for this research (state, federal, private sion/MOU's), list them below and attach a copy of the permit. If a permit has or will be applied that below, including anticipated time-frame. Activities requiring a permit should not procee
14. Pe permis indicate	Yes. If yes, please provide a scientific justification. rmits. If additional permits or permissions are required for this research (state, federal, private sion/MOU's), list them below and attach a copy of the permit. If a permit has or will be applied that below, including anticipated time-frame. Activities requiring a permit should not procee
14. Pe permis indicate	Yes. If yes, please provide a scientific justification. rmits. If additional permits or permissions are required for this research (state, federal, private sion/MOU's), list them below and attach a copy of the permit. If a permit has or will be applied that below, including anticipated time-frame. Activities requiring a permit should not procee

15. Required Training: All personnel (employees and students providing direct care or supervision of animals) working in research or teaching must complete the online animal welfare training at https://www.citiprogram.org.

In the table below, enter each member of the research team (including PI) who interacts with, handles, or otherwise affects the welfare of animals, as described in this protocol.

If the PI is not the person responsible for the supervision of students or employees, please provide the name below of the person who will be responsible for supervising the project.

		REQUIRED for all.		!
	Dala/Dagnanaihility (Salast all	Physical Science Responsible Conduct of Research	REQUIRED for PI and Supervisor.	
Name:	Role/Responsibility (Select all that apply from the list below.)	CITI Completion #	CITI Working with IACUC CITI Completion #	CITI Species Specific CITI Completion #
Name.	that apply from the list below.	CITI Completion #	CITI Completion #	CITI Completion #

Responsibilities:

- a. Animal husbandry
- b. Animal handling/restraint
- c. Capture wild animals
- d. Behavioral training/experimentation
- e. Collect biological specimens (e.g. blood samples)
- f. Drug injections
- g. Identification procedures (e.g. tagging, ear clip, etc.)
- h. Surgical Procedures
- i. Medications/analgesics
- j. Post-operative care and/or health intervention
- k. Euthanasia
- I. Supervises exercise
- m. Other (please describe):

16. Principal Investigator and Faculty Advisor (if student research) Certifications

By signing this protocol form, I certify that:

all the information provided is accurate to the best of my knowledge and I will adhere to the procedures described;

the PI and all individuals working with animals on this project are or will be (prior to commencement of working with animals) trained and qualified for their specific duties involving animals under this proposal;

all persons listed on this protocol have or will read the protocol or will be provided access to the complete protocol approved by the committee before engaging in any animal use related to this project;

the activities described in this study do not unnecessarily duplicate previous experiments. If activities will duplicate previous experiments, I have included a written explanation and justification for the duplicative procedures.

In addition, I agree to:

obtain approval from the IACUC in advance of any changes in the project;

notify the Attending Veterinarian and/or the IACUC of any unexpected study results that impact animal welfare;

be familiar with and comply with all pertinent institutional, state, and federal rules and policies;

be responsible for the supervision and work of my staff; and

retain copies of this protocol and all correspondence associated with it for three years beyond the completion of the animal use.

Principal Investigator Signature and Date

Faculty Advisor Signature (if student research) and Date

Department approval certifies that this research complies with the standards of the unit/department and university policies and that any facilities and equipment described are appropriately committed to this project. If the PI is the Department Chair/Director, a Dean must sign.

Department Chair/Director/Dean Signature and Date

IACUC Chair Signature and Date

Date of Protocol Approval: