For your convenience in preparing your protocol submission, we are providing the protocol form questions in this format. To ensure you are using the most current form, official IACUC protocol submissions need to be submitted via the live Qualtrics link on [Earlham’s IACUC webpage](https://earlham.edu/academics/collaborative-research/institutional-animal-care-and-use-committee/).

Lab/Teaching Protocol EC

Default Block

**Instructions**
 1. Answer every question. There are no word limits. Do not leave any answer spaces blank. If a question is not applicable, answer the question by explaining briefly why the question is not applicable. Please use language accessible to non-experts including non-scientists.

2. If you rely on the scientific literature or on any reference standards to explain or justify an answer, identify the reference.

 3. Audiovisual material (e.g., sound files, photographs) of your work may help the IACUC to understand your proposed research methods and techniques. If you submit such material, include descriptive captions for all photographs; i.e. what action is taking place, how, and why. Note: AV materials are an elective accompaniment to this form and may not serve as replacement to completing question blanks.

**Useful References for the Use of Animals in Laboratory Research and Education**

* [PHS Policy on Humane Care and Use of Laboratory Animals- National Institutes of Health Office of Laboratory Animal Welfare](https://grants.nih.gov/grants/olaw/references/phspolicylabanimals.pdf)
* [Guide for Care and Use of Laboratory Animals- National Resource Council](https://grants.nih.gov/grants/olaw/guide-for-the-care-and-use-of-laboratory-animals.pdf)
* [AVMA Guidelines for the Euthanasia of Animals: 2020 Edition](https://www.avma.org/sites/default/files/2020-01/2020-Euthanasia-Final-1-17-20.pdf)
* [Recognition and Alleviation of Pain in Laboratory Animals](https://www.ncbi.nlm.nih.gov/books/NBK32658/)
* [International Guiding Principles for Biomedical Research Involving Animals](https://olaw.nih.gov/sites/default/files/Guiding_Principles_2012.pdf)
* [Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research](https://grants.nih.gov/grants/olaw/national_academies_guidelines_for_use_and_care.pdf)

Submitting audiovisual material as an elective accompaniment to this form:

* Yes [Display follow up]
* No

(🡪 If yes) Please upload any AV materials here.

End of Default Block

Start of Block 1

**Section I. Basic Protocol Information:**

Principal Investigator Name:

Faculty Sponsor (if student proposal):

Title of Project:

Proposed dates of research:

Project is:

* Laboratory
* Teaching
* Other [Display follow up]

(🡪 If Other) If Other (describe here)

Is there an external funding source associated with this research?

* Yes [Display follow up]
* No

(🡪 If yes) Who is the external funder?

End of Block 1

Start of Block 2

**Section II. Purpose and Justification:**

Summarize your proposed project, including the goals of the project and the major variables to be manipulated or measured*.*

How will the study (a) increase our understand of evolution, development, biological or behavioral mechanisms, (b) increase our understanding of the species you are studying, or (c) provide results that benefit the health or welfare of people or other animals? (Answer as appropriate.)

Please briefly detail why animals must be studied rather than using an alternative such as a computer model.

Does the study duplicate earlier work?

* Yes [Display follow up]
* No

(🡪 If yes) Please justify. What is the merit in duplicating earlier work?

What steps will you take to monitor the animals' welfare throughout the study so that, if necessary, you may change any conditions that contribute to stress or suffering that is not justified by the importance of your study?

End of Block 2

Start of Block 3

**Section III. Subjects:**

 A. Species
 A.1. What species will you study? (List name(s) including scientific name, breed, strain)

A.2. What is the source of the animals? (Breeder/Vendor name)

A.3. Why is this species important in your studies? (If sex or age is an important factor, please note.) Has this species been used in previous research?

A.4. What is the evidence that this species is sufficiently abundant in nature that continued study of it at present levels would not be expected to reduce its genetic variability or hasten its extinction?

B. Laboratory Housing
To the greatest degree possible, housing should be adapted to conform to the natural ecology of the animal. Will you house animals in the laboratory or during transport at any time?

* Yes [Display B.1 – B.2]
* No

(🡪 If B = Yes) B.1. For how long will animals be housed in a laboratory or transportation setting?

(🡪 If B = Yes) B.2. What provisions will you make to provide:
a. Adequate space
b. Objects and material characteristic of the natural habitat
c. Companion animals (if you are working with a gregarious species)

C. Number of Animals
The number of animals should be sufficient to provide a clear answer to your question, but you should use the smallest number that is consistent with sound experimental design. Consider the following suggestions and then describe the number of animals you will use.

* If the procedure involves little stress, it may be more humane to use fewer subjects over a longer time rather than more subjects over a shorter period of time. If the procedure involves pain or stress, the reverse may be true.
* It is sometimes possible to economize on subjects and collect more data by collaborating with colleagues who are interested in related problems.

C.1. How many animals (of each species) do you expect to need? Please note to what time period this number corresponds (e.g. X per summer of research, X to complete this one-time study).

C.2. How did you determine the number of animals to be studied? You are encouraged to reduce the number to the minimum necessary for scientifically valid results.

End of Block 3

Start of Block 4

**Section IV. Procedures and Design:**

A. Deprivation.
Do you plan to deprive the animals of food or water? (Researchers are encouraged to consider withholding a preferred food or activity instead of depriving the animals of food or water generally. Depending upon the species, options include fruit, sunflower seeds carrots; access to a running wheel, a visual reinforcer, or a companion animal.)

* Yes [Display A.1 – A.5]
* No

(🡪 If Deprivation involved) A.1. What are you withholding from the animal?

(🡪 If Deprivation involved) A.2. Deprivation levels.

What levels of deprivation will you use (Answer in terms of hours, percentage ad libitum weight, or other specification.)?
How was this level determined (The minimal level of deprivation should be empirically determined.)?

(🡪 If Deprivation involved) A.3. How will you adapt your animals to this level? (e.g., you might withhold food for 6 hours the first two days, 8-12 hours the next.)

(🡪 If Deprivation involved) A.4. If you will be withholding food, will you gradually return your animals to free feeding at the end of the study and recalibrate ad libitum weight? If not, why not?

(🡪 If Deprivation involved) A.5. Would the results of your study have more generality if the deprivation was less extreme?

B. Adverse Stimulation.
Will you expose your subjects to any forms of aversive stimulation, e.g. electric shocks, exposure to toxic substances, or extreme environmental conditions (high or low temperature, atmospheric pressure, humidity, etc.)?

* Yes [Display B.1 – B.3]
* No

(🡪 If Adverse Stimulation involved) B.1. Describe the form of aversive stimulation and the steps you have taken to minimize stress to the animal.

(🡪 If Adverse Stimulation involved) B.2. Can the experimental question be answered without use of aversive stimulation? Why not?

(🡪 If Adverse Stimulation involved) B.3. Is the proposed treatment likely to be lethal to some or all of the animals? What justification is there for exposing animals to this procedure?

C. Surgery or Potentially Invasive Procedures.
Will the study entail surgery or other potentially invasive procedures such as drawing of blood?

* Yes [Display C.1 – C.5]
* No

(🡪 If Surgery involved) C.1. Briefly describe the surgery or other procedure in terms that the intelligent layman can understand including risks to life or health of animals and how their health and welfare will be monitored during the procedures.

(🡪 If Surgery involved) C.2. Describe the measures you will take to minimize the animals' discomfort before, during, and after the procedure.

(🡪 If Surgery involved) C.3. Will anesthesia be administered? If yes, describe route of administration and describe how the depth of anesthesia will be determined.

(🡪 If Surgery involved) C.4. Describe the post-operative care the animals will receive.

(🡪 If Surgery involved) C.5. Describe potential complications and how they will be handled.

D. Physical Restraint.
Will the animals be physically restrained at any time during the study, other than for surgery or injections or drawing of blood or fluids?

* Yes [Display D.1 – D.2]
* No

(🡪 If Restraint involved) D.1. Briefly describe the conditions of restraints, including the duration of restraint during a single session and the probable total number of sessions.

(🡪 If Restraint involved) D.2. Describe how these conditions were determined to be minimally stressful to the animal.

E. Plans for the animals after your experiments are concluded.

* Will they be used in additional experiments? [Display role question]
* Will they be euthanized or humanely killed? [Display method question]
* Other? [Display explanation question]

(🡪 If additional experiments) Explain their role in additional experiments.

(🡪 If euthanized) How will the animals be euthanized or humanely killed? Is the method consistent with the recommendations of the AVMA Panel on Euthanasia? If not, explain why.

(🡪 If other) Explain how animals will be used after your experiments conclude.

End of Block 4

Start of Block 5

**Section V. Personnel and Certification:**

 Personnel require appropriate training and experience to work with vertebrate animals in research and teaching. List all persons who will perform any technique with live animals. Give name, title and phone numbers. State the qualifications of the individuals to perform the specific techniques or procedures described in this proposal or how training will be obtained.

Names, titles and contact information:

Who will be responsible for animal care while animals are on campus?  State the qualifications of the individuals providing animal care.

I certify that the above information is accurate and complete and that deviations from this protocol, including any unanticipated injuries or death of animals, will be reported to the IACUC. Further, my level of supervision will be such that these procedures will be carried out in a humane and a scientifically acceptable manner as described herein. I understand that, as the research supervisor, I take responsibility for the conduct of anyone working under this approved protocol, and I will supervise the research to ensure that no work is conducted that is not covered herein or in a separate approved protocol. I certify that my research will be conducted in accordance with all relevant federal and state laws.

All work proposed herein is designed to avoid discomfort, distress, and pain to animals to the extent possible; does not unnecessarily duplicate previous experimentation; and non-animal alternatives have been considered.

Signature of Principal Investigator (Click & drag cursor to sign.)

Click “SUMIT” if you are ready to submit your protocol to the IACUC.

Upon submission of your protocol, you will be directed to a summary of your submitted responses so you can download a PDF copy for your files.

IACUC review typically takes about 1.5 weeks.

End of Block 5