

## Allegheny College Institutional Animal R Committee Protocol

Draft revision June 2023

No research using vertebrate animals at Allegheny College is to proceed without approval of the Animal Research Committee (ARC). Failure to receive ARC approval before beginning experimental manipulation is a violation of College policy and it will be reported to the College Judicial Board or Provost. These measures are policy passed by the Allegheny College faculty; for a full statement of that policy, see the statement in the Faculty Handbook.

The ARC at Allegheny College follows the guidelines described in *The Guide for the Care and Use of Laboratory Animals*, 8<sup>th</sup> Edition (follow [this link](#) to download a free PDF) for all research using vertebrate animals. The PDF of this is freely available by clicking on the link above. To expedite the review process, please consult this document prior to submitting an ARC proposal.

**GENERAL INSTRUCTIONS:** Complete Sections 1-6 of this form electronically using Google Docs. Upon completion, rename and save your file to include your last name and year of submission in the file name (e.g., "Darwin2022.docx"). Attach the document to an email and send it to the ARC ([arc@allegheny.edu](mailto:arc@allegheny.edu)).

**STUDENT INVESTIGATORS:** When complete, send the form to your Faculty Supervisor for an internal review. Your Faculty Supervisor may provide you with comments that need to be addressed prior to ARC review. Your Faculty Supervisor will submit the ARC proposal on your behalf; the Animal Research Committee **will not** accept student-submitted ARC proposals.

## **Section 1: General Information and Personnel**

Date of Application:	<i>Date</i>
Title of Research Project (or course name):	<i>Title</i>
Type of Protocol: New, Revision, or Renewal	<i>Type</i>
Anticipated Start Date:	<i>Start Date</i>
Anticipated Completion Date:	<i>Completion Date</i>
<u>Faculty Supervisor</u> (or Principal Investigator):	<i>Name</i>
Department:	<i>Department</i>
Phone Number:	<i>Phone number</i>
Email Address:	<i>Email</i>
<u>Student Investigator</u> :	<i>Name</i>
Student/Faculty Department:	<i>Department(s)</i>
Student Phone Number:	<i>Phone number</i>
Student Email Address:	<i>Email</i>

## **Section 2: Training**

Allegheny College participates in various research courses offered through Collaborative Institutional Training Initiative (CITI). The completion (with at least an 80% proficiency) of the following courses are required for all faculty and students listed above:

The following courses are required by faculty every 3 years:

- *Responsible Conduct of Research*
- *Working with the IACUC*

The following courses are required for students every 2 years:

- *Responsible Conduct of Research*
- *Working with the IACUC*
- One or more species-specific electives for any species listed in Section 3 (below)
- *Minimizing Pain and Distress* in mice or rats if your research uses these species and causes more than momentary pain and distress (see Section 6, below)

In addition to the above, students should describe the type of training provided by your faculty supervisor and/or animal care technician.

*Describe laboratory training/orientation here*

**ARC proposals will be returned without review if a faculty member and/or student listed above has not yet completed the required CITI training.** Please see [this link](#) for instructions on how to register for the appropriate CITI courses.

**Section 3: Vertebrate Species and Animal Husbandry**

A. Please complete the following for any vertebrate study species to be used:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Number of Animals</u>

B. If the animals listed in Section 3A will be purchased from an animal supplier, please list the supplier (if known) from which the animals will be purchased or indicate that animals will come from General Colony animals on campus. If the animals will be collected from wild populations, please confirm that the appropriate local, state, and federal permits have been obtained.

*Source of animals*

C. Please list the building and room location(s) where the animals listed in Section 3A will be housed while at Allegheny College. Also list where any experimental manipulations/surgical procedures will take place.

*Location for housing of animals and data collection.*

- D. If any animal listed in Section 3A will be housed outside of Allegheny College, please describe the facilities and specify the length of stay. If not, please type “N/A”.

*Housing of animals outside of Allegheny College*

- E. Describe the general animal husbandry prior to any experimental manipulations for each animal listed in Section 3A. In your response, please indicate the type, amount, and frequency of food and water given to each vertebrate animal. Please also describe the bedding/water changes that will be performed prior to the start of the experiment.

*Describe pre-experiment animal husbandry here.*

#### **Section 4: Experimental Procedures**

- A. Briefly describe in narrative form, using lay terminology, the purpose of the proposed research involving the animals listed in Section 3A. Include a brief summary of your experimental design. If you are conducting a laboratory experiment with multiple experimental/treatment groups, briefly describe these and the appropriate control(s). This section should be no more than 300 words.

*Type brief description here*

- B. Describe the background information related to the purpose of the work described in Section 4A. Please use citations where appropriate and provide corresponding bibliographic information.

*Provide background information here*

- C. If your experimental procedure requires deviations from the standard animal husbandry described in Section 3E, describe those non-surgical experimental procedures and/or manipulations here. Common examples of these manipulations include, but are not limited to, raising vertebrate animals in different temperatures, using water/food deprivation, experimental infection with a pathogenic organism, using specialized behavioral chambers (such as water mazes or skinner boxes), etc.

If the experimental procedure involves the application of any chemicals or drugs (excluding anesthetics, analgesics, and/or euthanizing agents), indicate the dose, volume, route, and frequency of administration. Please describe the anticipated possible effects and toxicities of any listed chemicals on the experimental subjects for the short and long term. Provide citations and corresponding bibliographic information where appropriate to justify the use of these experimental procedures.

When describing the non-surgical experimental procedures, please also indicate the approximate sample size in each treatment group.

*Describe non-surgical procedures here (or type N/A)*

Note: if the experimental procedure you described in Section 4C uses any chemicals, the chemical storage and disposal protocol (including the disposal of water and/or any substrate treated directly or indirectly with a chemical) needs to be reviewed and approved by Allegheny College's Environmental Health and Safety Officer Jim Cessna. Faculty members should contact Jim at [JCessna@epsotvermont.com](mailto:JCessna@epsotvermont.com) with any questions.

## **Section 5: Surgical Procedures and Euthanasia**

- A. *The Guide for the Care and Use of Laboratory Animals* (8<sup>th</sup> Edition) categorizes surgical procedures as either “major” or “minor”. A major surgery is described as a procedure that produces substantial impairment of physical or physiological functions or involves extensive tissue dissection or transection (examples include: laparotomy, thoracotomy, limb amputation, etc.). A minor surgery is described as a procedure that does not expose a body cavity and causes little or no physical impairment (examples include: castration, wound suturing, and peripheral vessel cannulation). See page 117-118 of *The Guide for the Care and Use of Laboratory Animals* (8<sup>th</sup> Edition) for more details regarding surgical procedures.

*Indicate the type of surgical procedure (major or minor) or type N/A if not applicable to your study.*

- B. *The Guide for the Care and Use of Laboratory Animals* (8<sup>th</sup> Edition) also categorizes surgical procedures as either “survival” or “non-survival”.

*Indicate the type of surgical procedure (survival or non-survival) or type N/A if not applicable to your study.*

- C. Describe the surgical procedure(s) involved in the proposed research. For each procedure listed, please provide a citation that describes and justifies the procedure along with corresponding bibliographic information. If obtaining blood or other tissues, clearly describe the technique to be used, the volume to be collected, the frequency of collection, and the interval between collections. If obtaining blood or tissue, please also provide a citation with corresponding bibliographic information indicating that your proposed tissue collection falls within the normal collecting protocols for the vertebrate species used.

*Describe surgical procedure here or type N/A if not applicable to your study.*

- D. Please describe the dose, volume, route, and frequency of administration for all anesthetics as well as pre- and post-operative analgesics used in any surgical procedures.

*Describe anesthetics and/or analgesics here or type N/A if not applicable to your study.*

- E. If “non-survival surgery” was selected in Section 5B or If euthanasia of subjects is planned, as part of “non-survival surgery” described in Section 5B or for other reasons, please explain why euthanasia is appropriate for the proposed research and describe the euthanasia procedure (including information regarding the dose, volume, and route of euthanizing agent administration).

*Describe the euthanasia procedure here or type N/A if not applicable to your study.*

- F. If “survival surgery” was selected in Section 5B, please explain how, and by whom, the animals will be cared for when the experiment is completed.

*Describe animal care after the completion of the study or type N/A if not applicable to your study.*

### **Section 6: Assessment of Pain and Distress**

Please consult pages 120-121 in *The Guide for the Care and Use of Laboratory Animals* (8<sup>th</sup> Edition) for a description of Pain and Distress associated with surgical procedures before answering the following.

- A. Will any of the experimental manipulations and/or surgical procedure(s) cause the vertebrate species listed in Section 3A to experience *momentary or slight pain or distress*?

*Type Yes or No.*

If “yes”, describe those effects and justify why the level of pain or distress is unavoidable in the conduct of scientifically valuable research as evidenced, e.g., in cited sources (provide bibliographic information). Please also explain at what point, and by what criteria, the animals may be given euthanasia. Please also describe the frequency per day, and by whom, that the animals will be observed after the experimental manipulations and/or surgical procedure(s).

*Describe and explain the momentary or slight pain or distress anticipated and the reasons it is acceptable or type N/A if not applicable to your study.*

B. Will any of the experimental manipulations and/or surgical procedure(s) cause the vertebrate species listed in Section 3A to experience more than momentary or slight pain or distress?

*Type Yes or No.*

If “yes”, describe those effects and justify why the pain and discomfort is unavoidable in the conduct of scientifically valuable research and why alternative procedures are not available (provide citations and bibliographic information). Please also explain at what point, and by what criteria, the animals may be euthanized. Please also describe the frequency with which that the animals will be observed, and by whom, after the experimental manipulations and/or surgical procedure(s).



*Describe the more than momentary or slight pain/distress of the proposed research here or type N/A if not applicable to your study. (Provide citations and bibliographic information)*

- C. If “yes” was selected in either Section 6A or 6B and you selected “no” for Section 5D (the use of anesthetics/analgesics), please justify why withholding anesthesia/analgesics are appropriate for your experiments. (Provide citations and bibliographic information)

*Justify your response here or type N/A if not applicable to your study.*

- D. If death without euthanasia is an endpoint of the study, justify why an earlier endpoint is not acceptable.

*Justify your response here or type N/A if not applicable to your study.*

## **Section 7: Investigators Assurance**

Federal regulations hold Allegheny College responsible for the conduct of animal research on this campus and specific associated facilities. In response to this requirement, Allegheny College has established the following procedures:

1. Approval of an Institutional Animal Care and Use Committee protocol, by the Allegheny College Animal Research Committee (ARC), is required for all vertebrate animal use. Ongoing, and previously approved faculty ARC protocols, shall be resubmitted for re-approval every 3 years; however, a call for re-approval may be issued by the ARC sooner than that. The ARC is empowered to stop any objectionable procedures or projects. Investigators may appeal such action to the Provost as appropriate.
2. Any significant change in personnel, species usage, animal procedures, anesthesia, post-operative care, or biohazard procedures must be reported in writing as appropriate. Committee approval of the proposed changes is required prior to proceeding with the revised animal procedures under all but emergency conditions.
3. Unannounced inspections and observations of animal quarters and/or experimental procedures may be performed by the ARC. Where procedures are causing severe distress to an animal and the pain cannot be relieved, veterinarians are authorized to humanely euthanize that animal. When possible, institutional veterinarians will always make a concerted effort to discuss such situations with investigators prior to initiating such action.
4. The investigator(s) must ensure that the health and care of animal subjects be maintained throughout the entire course of the experiment. This includes arrangements made for appropriate future care of animals at the end of the experiment. This also applies if the investigator leaves campus (for a weekend or during a school break) during the course of the study.

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**I have read the above statements and agree to abide by the institutional policies governing the use of vertebrate animals. I further certify that the proposed work does not unnecessarily duplicate previous experiments.**

Name: Your name

Date: Date

**Electronic transmission of this document from your email account to the faculty supervisor (or if a faculty member, to the ARC) will be interpreted as submission of a signed document.**