**St. Francis Xavier University**

***Animal Use Protocol Form***

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| **Principle Investigator (PI):** |       | **Date:** |       |
| **Brief Title:**  |       | **[x]** **Research**  | **[ ]** **Teaching** |
| **Keywords:**  |       |  | **[x]** **Funded** |
| **Grant Title:**  |       |
| **Protocol** **Start Date:** |       | **Protocol** **End Date:** |       | **Date Animals Needed:** |       |
| **Peer Review Agency:** |       | **Funding Source:** |       | **Course Number:** |       |
| **Peer Review Date:** |       | **Grant/Course Account #:** |       | **Course Name:** |       |
| **Emergency and After-Hour Contacts** (At least 2 required, Principle Investigator must be listed) |
| **Name** | **Office** | **Office Phone** | **Home Phone** |
|      , PI |       |       |       |
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**Declaration:**

* **Animal use will comply with the procedures given in this protocol and is in accordance with the requirements of the St. F X University Animal Care Committee, the guidelines of the Canadian Council on Animal Care (CCAC), and the requirements of the provincial legislation entitled “Animal Protection Act”, Chapter 33 of the Acts, 2008, of the Province of Nova Scotia.**
* All manipulations having the potential to cause pain and discomfort will, wherever possible, be refined in technique and reduced in numbers, to achieve the desired results with a minimum degree of discomfort to the animal.
* **I hereby certify that all person(s) named in this protocol are qualified to conduct the procedures described herein and that they have read and initialled this application. All animal manipulations will be carried out by these personnel, using only approved techniques. All students handling the animals in teaching labs will do so only after thorough instruction by qualified staff.**
* **I accept personal responsibility as Principal Investigator for all animal manipulations involved in this project.**

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|  | **Signature of Principle Investigator** |  | **Date** |
| ***ACC Approval:*** |  |  |
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|  | **Signature of Animal Care Committee Chair** |  | **Date** |

***II. INVESTIGATOR TRAINING & EXPERIENCE***

**Personnel:** List names of all personnel who will be handling live animals, their positions in the project, and date they have completed the St. FX animal user training course. Each project member is required to read the entire proposal and initial to indicate their compliance with this protocol\*.

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| **Name** | **Department** | **Title** | **Training Course**  | **Date Completed** | **Initials\*** |
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***\*By initialling you agree that you have read and will abide by all procedures outlined in this protocol.***

**Training and Experience:** Please comment on the specific animal handling qualifications and experience of each member of the project. Also please outline the supervision and training plan for any inexperienced personnel, such as undergraduate students or new technicians.

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***III. PROJECT OVERVIEW*:**

**Please outline the *scientific or pedagogical merit* of this protocol.**

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***Lay Summary-* Please provide a detailed lay summary of the proposed project outlining in easily understood language the purpose, methods, and expected outcomes of the project.**

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Check the boxes (more than one can be chosen) that best describes the Category of Invasiveness and the Purpose of Animal Use for this protocol.

*Category of Invasiveness (CI):*

# [ ]  A. Experiments on most invertebrates, eggs, and live tissue cultures.

# [ ]  B. Experiments which cause little or no discomfort or stress

# [ ]  C. Experiments which cause minor stress or pain of short duration

# [ ]  D. Experiments which cause moderate to severe distress or discomfort

[ ]  E. Procedures which cause severe pain near, at, or above the pain tolerance threshold of unanesthetized conscious animals

***Purpose of Animal Use (PAU):***

*[ ]*  0 Breeding colonies, herd, and holding protocols)

[ ]  1 Studies of a fundamental nature in sciences relating to essential structure or function.

[ ]  2 Studies for medical purposes, including veterinary medicine, that relate to human or animal disease or disorders.

[ ]  3 Studies for regulatory testing of products, for the protection of humans, animals, or the environment.

[ ]  4 Studies for the development of products or appliances for human or veterinary medicine.

[ ]  5 Education and training of individuals in post-secondary institutions or facilities.

***IV. EXPERIMENTAL DESIGN***

**Please outline the entire experimental design as it pertains to live animals. Provide detailed descriptions and brief rationales for all manipulations involving live animals. Indicate where surgical or invasive procedures will fit within the experimental design, but do not describe these in detail as this information will be given in section *V. The Three R’s*. Wherever appropriate provide monitoring schedules, graphical representations and reference ACC approved SOPs.**

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| **Do you anticipate any pain or distress associated with these procedures?**  | Y [ ] N[ ]  |
| **If so, then please describe the anticipated pain or distress and the monitoring procedures to assess the animal’s condition.**  |
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| **Describe how the anticipated pain or distress will be alleviated or minimized.** |
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If the following agents are to be used in animals then additional approval is required.

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| **Biological or biohazardous agents** | Y [ ] N[ ]  | **Approved** | **[ ]**  | **Approval Date:** |  |
| **Radioisotopes or radioactive agents** | Y [ ] N[ ]  | **Approved** | **[ ]**  | **Approval Date:** |  |
| **Other controlled or restricted agents** | Y [ ] N[ ]  | **Approved** | **[ ]**  | **Approval Date:** |  |

**Please list all chemical treatments and agents that will be used on live animals that are not associated with surgical procedures.**

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| **Treatments/Agents** | **Species** | **Purpose** | **Dosage, Concentration, Method and Duration** |
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| **Are there any health and safety risks to project personnel, animal care staff or to the other animals that might be inherent in this protocol?**  | Y [ ] N[ ]  |
| **Are you aware of any potential risk for transmission of a naturally-occurring infectious disease associated with this protocol?** | Y [ ] N[ ]  |
| **Please describe these potential risks and the measures that will be taken to prevent their occurrence. Contingency plans for the occurrence of these risks should also be included.**  |
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***V. THE THREE R’s***

*The concepts of Replacement, Reduction and Refinement (or the “Three R’s”) in animal based experimentation are widely accepted ethical principles, and are now embedded in the conduct of animal-based science in Canada, as recommended by the Canadian Council on Animal Care (CCAC). As such, investigators are asked to demonstrate their consideration and usage of these concepts in their protocols. If assistance is required in the incorporation of these concepts then the investigators should contact the ACC or visit the CCAC Three R Microsite at: 3rs.ccac.ca*

***REPLACEMENT***

**Explain why is it necessary to use sentient animals? (Not necessary for Category of Invasiveness - A)**

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**Indicate sources used to search for alternatives, any that were found, and a justification for not using these alternatives. (Required for ALL protocols except those with Category of Invasiveness - A)**

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| **Source** | **Alternative** | **Justification** |
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***REDUCTION***

**Provide a justification for the species and number of animals that will be used. Inclusion of statistical justification (power analysis) should be considered, as investigators will need to emphasize the reduction of animal use within the experimental design while ensuring sufficient numbers of animals are included to maintain scientific and statistical validity.**

**(Not necessary for Category of Invasiveness - A)**

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***REFINEMENTS***

**Please describe all housing and husbandry methods and environmental enrichments that will be used to refine animal care.**

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**Provide justification for any limitations or restrictions to environmental enrichment that would normally be offered by the institution, based on CCAC guidelines.**

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**For each surgical and or invasive procedure please provide detailed descriptions that include the location for the procedures, the techniques to be used, descriptions of the anaesthetics and analgesics to be used, and the pre and post-procedure monitoring. Wherever appropriate you should reference ACC approved SOPs and highlight the refinements and medical treatments, especially those recommended by the Consulting Veterinarian, that have been made to minimize animal pain and distress.**

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| **Have these procedures been discussed with the St. FX’s Consulting Veterinarian?** | Y [ ] N[ ]  |
| **Have all of the Consulting Veterinarian’s recommendations been included?** | Y [ ] N[ ]  |

**If the Consulting Veterinarian’s recommendations have not all been incorporated into the protocol then please provide a justification.**

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**Please list all drugs including anaesthetics and analgesics that will be used during the surgical or other invasive procedures.**

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| **Drugs** | **Species** | **Purpose** | **Dosage, Concentration, Method and Duration** |
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**If Anaesthetics or Analgesics are not to be given, then a justification must be provided.**

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**Please describe any additional procedural, timing, or other refinements that have been made to this protocol in an effort to minimize animal pain and distress.**

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***VI. EXPERIMENTAL ENDPOINTS***

**What criteria will be used to determine the endpoint of the experiment? Death without euthanasia is NOT an acceptable endpoint. If assistance is required in choosing an acceptable endpoint then investigators should consult the ACC or refer to the CCAC guidelines on choosing endpoints that is available at** *https://www.ccac.ca/Documents/Standards/Guidelines/Appropriate\_endpoint.pdf*

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**Please provide a strategy for mitigating any pain or distress that is beyond the levels anticipated in the proposed protocol. The strategy should clearly define the criterion that will be used to end the experiment prematurely and that will be used to euthanize the animal(s), for both the individual animal and for the entire experimental population.**

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***VII. Fate of animals***

**Post-experimentation all experimental animals are to be euthanized unless they are to be released or held for a specific purpose. Indicate the method of euthanasia or the specific purpose and the estimated timeframe of holding the animals.**

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| **Species** | **Post-experimental fate** | **Euthanasia method** | **Timeframe for holding** |
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**All conditionally accepted methods of euthanasia require justification. Please provide a justification if animals are to be euthanized by physical means OR if animals are to be euthanized by any other means than outlined in Sections 4 and/or 5 of the CCAC Guideline “Euthanasia of Animals Used in Science" (2010).**

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***VIII. ADDITIONAL INFORMATION***

**Is there any other pertinent information to this protocol that the ACC should be aware of, such as the results from previous protocols or pilot studies on the subject matter.**

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| ***For Office Use Only:******Amendments*** |
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***IX. ANIMAL CARE REQUIREMENTS AND PROCUREMENT***

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| **Does this protocol require animals to be held in the animal care facility (JBBH 118)?** | Y [ ]  N [ ]  |
| **If no then where are the animals to be held?** |       |
| **Does this protocol require experimental space with the animal care facility (JBBH 118)?** | Y [ ]  N [ ]  |
| **Has the space already been allocated by the Senior Animal Care Technician within the animal care facility for this protocol?** | Y [ ]  N [ ]  |

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| **Species** | **Source1** | **Housing Room** | **Procedure****Room** | **Annual Number Required** |
| **Common Name** | **Scientific Name** |  |  |  |  |
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 (1 - 3) #1 = wild-caught, #2 = biological supply-house purchase, #3 = in-house breeding

**All animals except those caught in the wild will be procured by the Animal Care Facility.**

**List preferred suppliers**

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| **Species** | **Supplier** |
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**Please describe any protocol requirements for animal care staff with respect to experimentation or animal care and housing.**

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***X. FIELD WORK***

**Fill out the following only if the animal use protocol involves field work.**

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| **Does the fieldwork require approval from an external agency?****(i.e. collection or banding permits)** | Y [ ] N [ ]  | **External Agency or Agencies:** |  |
| **Have you received approval?** **(Please attach copies of approvals)** | Y [ ] N [ ]  | **Approval Date(s):** |  |

**FIELD PROCEDURES: Provide details on all field procedures, including capture, restraint, handling, and transportation procedures to be used on animals in the field. Include information on housing and release criterion, and if trapping animals, describe the frequency for checking traps as well as description of all manipulations. Identify any potential injuries that may occur to target species and the procedures for dealing with such injuries.**

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**If markers (ear tags, leg bands, radio tags, etc.) are to be used then please describe the type and identifiers for the markers. Also please give an approximate percentage of weight of marker to weight of animal, or other relevant comparator to demonstrate that marking will not adversely affect the animal.**

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| **Species** | **Marker Type** | **Identifiers** | **%** |
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**Please address the issue of by-catch, identifying potential non-target species and the manner these species will be handled.**

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**Please outline any ecological impacts that could occur as a result of this study and the steps that will be taken to mitigate negative impacts.**

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**Please outline the health and safety risks that may occur to project personnel as part of these field studies and the procedures for preventing and dealing with injuries.**

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**Is there any other pertinent information about the field component of this protocol?**

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