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| A black background with a black square  Description automatically generated with medium confidence | **Animal Care and Use Protocol**  **Institutional Animal Care and Use Committee (IACUC)** | **For office use only**  **Protocol #:**  **IRBNet #:**  **Submitted:**  **Approved:** |

**Fundamental Animal Use Policies:**

* All uses of live vertebrate animals must be approved by the Institutional Animal Care and Use Committee (IACUC)
* Acquisition and housing of all live vertebrate animals must be approved by the Animal Facility Manager.

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| **A. Project Information** | |
| **Principal Investigator (PI) for Animal Project:** |  |
| **Faculty/Staff Title:** |  |
| **Faculty Sponsor (if applicable)** |  |
| **Sponsor title** |  |
| **Department:** |  |
| **E-mail address:** |  |
| **Office Phone:** |  |
| **Fax #:** |  |
| **Lab Phone:** |  |
| **Emergency contact #:** |  |
| **Personnel using live animals:**  (list names here; complete  Section I for each person) |  |
| **Animal Study Title:** |  |

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| **B. Module Checklist** (place **X** in appropriate boxes below)   * Please see questions in relevant Modules **before** completing protocol. * Detailed info provided in Modules need **not** be repeated in body of protocol. * Please paste relevant modules at the end of this protocol document. | | | |
| **Yes** | **No** | **Does proposed use of live animals include…** | **If “yes,” complete and attach …** |
|  |  | **Field studies**? | Module 1 |
|  |  | **Removal of live animals** from the UMSL centralized animal facility to any other site? | Module 2 |
|  |  | **Special or medicated feed or water**? | Module 3.A |
|  |  | **Restricting or regulating feed or water**? | Module 3.B |
|  |  | **Non-standard** animal housing (e.g. single housing, lack of enrichment, use of metabolism cages)? | Module 3.C |
|  |  | **Intentional animal stress** or **prolonged animal restraint** (>30 min. without anesthesia)? | Module 3.D |
|  |  | **Breeding**? | Module 4 |
|  |  | **Surgery**? | Module 5 |
|  |  | Administration of **non-pharmaceutical-grade substances** to live animals? See Module for more information. | Module 6 |
|  |  | Use of **genetically modified animals** or animals that have pre-existing or inherent **health problems**? | Module 7 |
|  |  | Use of **infectious agents** or **biological materials** (blood, serum, cells, etc.) or **require Biosafety Level 2 or greater**? | Module 8 |
|  |  | **Genetic manipulation** or use of **recombinant DNA**? | Module 8 |
|  |  | Use of **radioisotopes** in live animals? | Module 9 |
|  |  | **Hazardous chemical** use in live animals? | Module 10 |
|  |  | **Neoplasia (tumor growth)?** | Module 11 |

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| **C. Rationale for Animal Use (in lay terms)** |
| * Briefly describe the **purpose** and **importance** of the proposed animal use **in lay terms**. * Justify the **use of animals** & indicate the rationale for the **species** proposed for use. * Describe the potential **value** of the study with regard to human or animal health, the advancement of knowledge, or the betterment of society. * Justify **the number of animals** to be used in the experiments. * Use free text area below for entering your response. |

*(Remove this instruction and insert your information here in plain black font.)*

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| **D. Experimental Design and Methods** |
| * Describe step-by-step **all procedures** to be performed on live animals within **each experimental group**. * Indicate the **number of animals** in each group. * Describe how procedures and administered compounds will affect **animal health**. * Include information on the **duration** and **endpoint** of the animal studies and the **final disposition** of the animal(s). Save details of Euthanasia plan for Section H. * Procedures that are covered in **Protocol Modules** are to be listed as steps here, with procedure-specific details to be provided in respective Module(s). * Use free text area below for entering your response. |

*(Remove this instruction and insert your information here in plain black font.)*

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| **E. Categorization of Animal Use** | | | | |
|  | **Species A** | **Species B** | | **Species C** |
| **Animal species to be used →**  (common name, e.g., mouse, dog, rabbit, pig) |  |  | |  |
| **Total number of animals** to be used &/or produced (including ALL animals bred) for this protocol **→** (note that maximum protocol duration = 3 years) |  |  | |  |
| **Categories of animal pain &/or distress**  (as defined by federal regulations)  **↓** | **Categorization of number of animals to be used**  (place each species listed above in the **single** highest relevant use category) | | | |
| **Species A** | **Species B** | **Species C** | |
| Number of animals to be used in procedures with **minimal, momentary, or no pain *&/*or distress** →  (USDA Category C) |  |  |  | |
| Number of animals that will receive appropriate anesthetics, tranquilizers, or analgesics to **alleviate pain *&/*ordistress** →  (USDA Category D)**\*** |  |  |  | |
| Number of animals that will experience **pain *&/*ordistress without alleviation** →  (USDA Category E)**\*** |  |  |  | |

\* Section F must be completed for USDA Categories D and E.

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| **\*F. Verification of Lack of Alternative Methods** | |
| * This verification must be provided to support the use of any animal(s) entered in USDA Categories **D or E**. *Category C animal use is exempt from this requirement.* * Federal regulations in the Animal Welfare Act mandate that scientists describe how the lack of alternative methods was verified for all procedures that involve alleviated or unalleviated animal pain &/or distress. See [USDA Policy 12](https://awic.nal.usda.gov/sites/awic.nal.usda.gov/files/uploads/Policy%2012%20Final.pdf) for more specific information. * Alternatives for **each potentially painful/distressing procedure must be addressed**. * The narrative description must allow the Committee to readily assess whether the search topics were appropriate and whether the search was sufficiently thorough. * Please replace the samples inserted below with information that is applicable to this project. | |
| Names of databases searched: | PubMed, PLOS ONE, Science Direct, EMBASE, MedlinePlus, etc. |
| Date that search was conducted: | (please do search less than 1 month prior to protocol submission) |
| Years covered by the search: | 1985 – 2015 or similar |
| Keywords or search strategy | (use scientifically relevant keywords that pertain to area of study and specific animal procedures that will be performed) |
| Describe how the lack of alternative methods for painful &/or distressing procedures was assessed. | Example—please replace with relevant verbiage.  Our research team found no evidence in the scientific literature of any relevant alternatives to (specify painful procedures—e.g., surgery) in the pursuit of our scientific objective of (whatever it is). The computer models of (XX) are very limited/essentially non-existent because they cannot model processes that are not yet understood. In vitro models such as tissue culture do not provide an adequate means of testing XX. It is therefore necessary that we perform (painful procedures) in order to derive the valid scientific information on this condition that is crucial for developing better means of prevention and treatment. |

*(Remove this instruction and replace red text above with relevant information for this study.)*

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| **G. Animal Health Care and Monitoring** related to experimental use | | |
| Please mark **yes** or **no** with **X** in one box below based on **all** of the following criteria. If you answer “yes” for any of these procedures, you must submit a plan for treatment, monitoring, and resolution of animal health problems.   * Do animals undergo any procedures such as:   + **non-terminal surgery?**   + **inoculation with tumors, infectious agents, or carcinogens?**   + **induction of experimental disease?**   + **experimental drug administration?**   + **irradiation (lethal or sublethal)?**   + **deficient diet or other suboptimal care?**   + **behavioral modification or conditioning?** * Do animals have an altered genotype &/or phenotype? * Are there any research-related reasons that animals might experience health problems in conjunction with the proposed studies? | | |
| **Yes** | **No** | **Do animals experience ANY of the procedures/conditions listed above?**  **If “yes,” please complete the following sections.**  **If “no,” proceed to Section H.** |
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| Specify the procedures/conditions listed above that the animals will undergo. Specify the names, dosages (mg/kg), frequency, and duration of all **antibiotics**, **analgesics, or other supportive treatments** that will be administered to animals. If no treatment will be provided, describe rationale for not providing treatment. | | |
|  | | |
| Specify the **frequency,** **method, and duration** of animal monitoring to be provided by the research staff. | | |
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| Indicate **how** the need for **treatment or euthanasia** of an unhealthy animal will be determined. See the Pain and Distress Policy for a list of criteria that typically warrant provision of euthanasia. | | |
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| **H. Disposition of Animals Following Study** | | |
| * **All protocols** must include an appropriate euthanasia plan for each animal species in case euthanasia becomes necessary. * No live animal may leave the institution without specific permission from the IACUC. Contact the IACUC for more information on animal adoption and transfer requirements. * Justification must be provided if the proposed method of euthanasia lacks differs in any way from the institutional policy. See **IACUC Policy on Euthanasia** for more information. | | |
| **Yes** | **No** | Will **all animals** described in this protocol be euthanized upon completion of this experimentation? If “no,” describe proposed fate of animals(s): |
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| Specify the **method(s)** of euthanasia to be used for each animal species.   * Include drug name (generic), dose (mg/kg), and route if applicable. * Include scientific justification for use of methods with conditional status. | | |
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| List the individual(s) responsible for administering euthanasia: | | |
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| The IACUC supports the sharing of tissues as a method to reduce animal use. What (if any) tissues from euthanized animals will be available for utilization by other investigators? | | |
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| **I. Investigative Staff Training and Qualifications** | |
| * Federal law requires that the Committee evaluate the training and qualifications of personnel who intend to use live animals in research or teaching. See Training Policy for more information. * **Copy this section** for **each person** (as listed in Section A) who will have contact with live animals in conjunction with this study. * Please insert Section I for the Principal Investigator first, followed by a copy of Section I for each relevant research staff member. | |
| Applicant’s name: |  |
| Applicant’s e-mail address: |  |
| Applicant’s work phone: |  |
| Applicant’s emergency contact info: |  |
| Animal **species** the applicant will be working with: |  |
| Animal **procedure(s)** the applicant will perform: |  |
| Description of the applicant’s **experience &/or training** in proper conduct of the procedure(s) noted above: |  |
| If the applicant is **not experienced** with the animal species and/or procedures indicated above, describe how and by whom applicant will be trained: |  |
| Health and Safety Program review completion date: |  |
| Animal Exposure Report completion date: |  |
| IACUC orientation training (DVD) completion date: |  |

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| **J. Investigator's Statement** | |
| The information I have supplied above is a complete and accurate description of all procedures involving live animals in this project. I hereby assert the following:   * I have taken appropriate measures to ensure that I am using the **appropriate number** of animals to achieve my scientific goals. * I am **not unnecessarily duplicating** known results. * I agree that any **changes** in this protocol will be submitted to the Institutional Animal Care and Use Committee (IACUC) for review and approval **prior** to being instituted. * I agree to notify the IACUC promptly of any **problems** relating to animal care or use that arise during the conduct of this study. * I assure that all personnel under my direction will be appropriately **trained** prior to handling animals in accordance with the Training Policy. * I agree to abide by the animal care and use **policies** of this institution. * If Principal Investigator is not a faculty member, a signature from the faculty advisor or sponsor is required below, certifying that they have read the protocol and approve its submission | |
| **Signature(s) of Principal Investigator**  **and Faculty Advisor/Sponsor if Required**  ▼ | **Date**  **▼** |
| Name (PI):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature (PI):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| If required:  Name (Faculty):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature (Faculty):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

*[Insert relevant protocol module(s) on following pages to complete the protocol form as a SINGLE DOCUMENT prior to submission.]*