

**SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE**

**Animal Care & Use Protocol**

**Section 1 - Basic**

|  |
| --- |
| **FOR OFFICE USE ONLY** |
| Protocol # **Enter Text.** | Approval Date: **Enter Text.** | [ ] IACUC Approved Exception |
| Date Received: **Enter Text.**  | Expiration Date: **Enter Text.**  | [ ]  Animal Welfare Act covered species |
| Comments: **Enter Text.** |

**Part A. Administrative Data** **\*Note: [SHIFT] + [Enter] starts a new paragraph\***

1. Select Protocol typeSelect submission typeRenewal of protocol # (if applicable): **Enter Text**.
2. Additional sections completed: [ ]  [Section 2 - Surgery](#Section2) [ ]  [Section 3 - Breeding](#Section3) [ ]  [Additional Personnel](#AdditionalPersonnel)
3. Protocol Title: Enter Text.
4. External funding information:
* Funding Source: Enter Text. [ ]  Awarded [ ]  Submitted
* Effective Date: Enter Text. Expiration Date: Enter Text.
* Exact application title: Enter Text.
* University Account Number: Enter Text.
1. Provide the following information for **all** individuals authorized to conduct procedures involving animals under this proposal. [See Note 1.](#Note1)
2. **Principal Investigator:** Enter Text Department: Enter Text. Email: Enter Text.
* Work Tele. #: Enter Text. Home Tele. # (for after hour emergencies). Enter Text.
* Enrolled in [occupational health program](http://iacuc.siu.edu/_common/documents/occupational-health-and-safety/occupational-health-and-safety-policy.doc): Select
* Procedures performed on animals as part of this proposal:

[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

[ ] Other; explain: **Enter Text**.

* Describe specific animal related experience ensuring this individual is qualified to perform the procedures above on animals. For personnel without prior relevant experience, state how the person will be trained and who will do the training and the qualifications of the trainer.

**Enter Text.**

* Have viewed the following SIUC IACUC web training modules and successfully passed the corresponding quizzes (\*required):

[ ]  Working with IACUC\* [ ]  SIUC Animal Care\* [ ]  Reducing Pain & Distress\* [ ]  Surgery [ ]  Mice [ ]  Rats   [ ]  Genetically Modified Mice [ ]  Guinea Pigs [ ]  Hamsters [ ]  Rabbits [ ]  Wildlife [ ]  Amphibians [ ]  Fish

[ ]  Reptiles [ ]  Zebrafish [ ]  Non-human Primates [ ]  Cattle [ ]  Horses [ ]  Swine [ ]  Dogs

[ ]  Refresher Course

1. Name: **Enter Text**. Status Select
* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
* Enrolled in occupational health program: Select
* Procedures performed on animals as part of this proposal:

[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

[ ]  Other; explain: **Enter Text**.

* Describe specific animal related experience ensuring this individual is qualified to perform the procedures above on animals. For personnel without prior relevant experience, state how the person will be trained and who will do the training and the qualifications of the trainer.

 Enter Text.

* Have viewed the following SIUC IACUC web training modules and successfully passed the corresponding quizzes (\*required):

[ ]  Working with IACUC\* [ ]  SIUC Animal Care\* [ ]  Reducing Pain & Distress\* [ ]  Surgery [ ]  Mice [ ]  Rats [ ]  Genetically Modified Mice [ ]  Guinea Pigs [ ]  Hamsters [ ]  Rabbits [ ]  Wildlife [ ]  Amphibians [ ]  Fish

[ ]  Reptiles [ ]  Zebrafish [ ]  Non-human Primates [ ]  Cattle [ ]  Horses [ ]  Swine [ ]  Dogs

[ ]  Refresher Course

**Part B. Animal Data \*Note: [SHIFT] + [Enter] starts a new paragraph\***

1. Common animal name: **Enter Text**. Strain, Stock, Line or Breed: **Enter Text**.
2. Vendor or Source of animals: Select If other, describe: **Enter Text**.[See Note 2.](#Note2)
3. If the animals proposed for use have been used in previous experimental or teaching procedures, briefly describe previous activities: **Enter Text**.
4. Maximum number of animals to be used for the duration of this proposal (i.e. total #/3 years): **Enter Text**.
5. Pain or Distress Classification:
* Indicate the number of animals used in each classification. If more than one classification applies to a single animal, the animal should be counted in the higher classification. Total of all classifications should equal Part B.4.

B **Enter Text**. C **Enter Text**. D **Enter Text**. E **Enter Text**.

**B:** Animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery, but not yet used for such purposes.

**C:** Animals upon which teaching, research, experiments, or tests will be conducted involving no pain, distress, or use of pain-relieving drugs.

**D:** Animals upon which experiments, teaching, research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs will be used.

**E:** Animals upon which teaching, experiments, research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs will adversely affect the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.

* Justification for animals in classification E: **Enter Text**. [See Note 3.](#Note3)
1. Housing Site: Select If other, explain: **Enter Text**.
2. List laboratory or other location(s), not including animal housing facilities, where activities involving living animals may occur.
	* Building & Room number, or other description of location: **Enter Text**.
	* Will animals be held in any use area (other than housing site) for greater than 12 hours?

 [ ]  No [ ]  Yes; Justification: **Enter Text**.

1. Housing Type:

[ ] Standard caging or pens

[ ]  Immunodeficient rodent housing requiring sterile caging, food and water supplies

[ ] Rodent wire bottom cages; Justification (required): **Enter Text**.

[ ]  Aquaria

[ ]  Not applicable - animals are not housed.

[ ]  Other, describe: **Enter Text**.

1. Describe and justify any special husbandry requirements necessary to complete the scientific goals of the project:

|  |  |
| --- | --- |
| **Requirement** | **Description/Justification** |
| [ ]  Caging (single housing, no environmental enrichment)  | **Enter Text**. |
| [ ]  Water/feed (restriction, medication, treatment) | **Enter Text**. |
| [ ]  Waste disposal  | **Enter Text**. |
| [ ]  Other  | **Enter Text**. |

1. If food or water will be restricted for purposes other than in preparation for anesthesia, describe:
	* + Purpose: **Enter Text**.
		+ Duration: **Enter Text**. Frequency of restriction: **Enter Text**.
2. Describe situations, other than those scientifically justified above, social animals might be singly housed:

|  |  |  |
| --- | --- | --- |
| **Reason** | **Identification** [(See Note 4)](#Note4) | **Measures to be taken to minimize stress** |
| [ ]  Behavior  | **Enter Text**. | **Enter Text**. |
| [ ]  Illness/Recovery | **Enter Text**. | **Enter Text**. |
| [ ]  Attrition  | **Enter Text**. | **Enter Text**. |
| [ ]  Breeding  | **Enter Text**. | **Enter Text**. |
| [ ]  Other  | **Enter Text**. | **Enter Text**. |

1. If personnel other than Laboratory Animal Program staff will be providing husbandry care to the animals: [See Note 5.](#Note9)
* Has the IACUC approved a Standard Operating Procedure for husbandry? [ ]  Yes [ ]  No; if No an SOP must accompany this protocol for review and approval.
* Location of husbandry logs: **Enter Text**.
* Location of personnel training records: **Enter Text**.
1. If using wild caught animals:
* Have all applicable permits been obtained? [ ]  Yes [ ]  No
* Have all investigators been informed about potential zoonoses involved in the capture and handling of these animals? [ ]  Yes [ ]  No
* Describe means of animal capture: **Enter Text**.
* Describe methods used to minimize injuries: **Enter Text**.
* Describe steps taken if injuries involving humans or animals do occur: **Enter Text**.
* Describe personal protective equipment: **Enter Text**.

**Part C. Rationale for Animal Use and/or Establishing/Maintaining a Breeding Colony \*Note: [SHIFT] + [Enter] starts a new paragraph\***

1. Explain your rationale for animal use and the appropriateness of the species selected. [See Note 6.](#NewNote6)

**Enter Text.**

1. Justify the number of animals proposed for use. [See Note 7.](#Note5)

[ ] Group size for experimental design requires this number for statistical significance.

[ ]  Other (Please describe): **Enter Text.**

**Part D. Study Objective \*Note: [SHIFT] + [Enter] starts a new paragraph\***

Summarize, in language understandable to a layperson and without technical details, the aim of the study and its importance to human or animal health, the advancement of knowledge, the good of society or educational benefits

**Enter Text**.

**Part E. Instruments and Supplies \*Note: [SHIFT] + [Enter] starts a new paragraph\***

[ ]  Instruments and/or supplies will be used to enter or are administered into areas of animals which are normally considered sterile. [See Note 8.](#Note7)

Instruments & supplies are (check applicable boxes):

[ ]  clean but not sterile and will only be used for non-recovery procedures.

[ ]  acquired from commercial source(s) in a sterile form.

[ ]  autoclaved.

[ ]  passed through a 0.2 μ filter prior to being administered to animals.

[ ]  chemically sterilized. ([FDA guidance](https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ReprocessingofReusableMedicalDevices/ucm437347.htm))

Chemical sterilization methods:

* + Agent used: **Enter Text**. Contact time: **Enter Text**.
	+ Instruments &/or supplies will be rinsed with sterile **Enter Text**. prior to being used on animals.
	+ Other, describe: **Enter Text**.

**Part F. Methodology \*Note: [SHIFT] + [Enter] starts a new paragraph\***

Describe all non-surgical activities involving living animals. The description should enable the IACUC to understand the experimental process beginning from the animal’s acquisition until the endpoint of the study.

* Indicate how many animals will be used in each test group
* Indicate all activities/treatments any single animal will be used for
* Detail the sequence in which all procedures will be applied. (Details of surgical procedures should be provided in Section 2 - Surgery.)

**Enter Text**.

**Part G. General Information \*Note: [SHIFT] + [Enter] starts a new paragraph\***

1. If electrical shock will be used, complete the following: Select Strength: **Enter Text**.mA Duration: **Enter Text**.
2. If unanesthetized animals will be restrained by hand or mechanically, describe:
	* + Method of restraint: **Enter Text**. Duration of restraint: **Enter Text**. Frequency of restraint: **Enter Text**.
		+ Animal acclimation or training with respect to restraint device: **Enter Text**.
		+ Prolonged restraint justification (Applicable if > 30 minutes): **Enter Text**.
3. If blood will be collected, describe:
	* + Route/Site of collection: **Enter Text**. Total number of collections per animal: **Enter Text**.
		+ Frequency of collection: **Enter Text**. Maximum volume collected per time point: **Enter Text**.
		+ Anesthesia: [ ]  Yes [ ]  No (Required for intracardiac and retro-orbital blood collection. Provide details in Part M.)
4. If biological samples other than blood will be taken from living animals, describe:
* Sample type **Enter Text**.Frequency of collection: **Enter Text**.
1. If animals will be immunized: (Freund's complete adjuvant should only be used once in an individual animal.)
* Name of adjuvant(s): **Enter Text**.If using Freund's Complete Adjuvant, provide justification: **Enter Text**.
* Injection site: **Enter Text**. Frequency of injection: **Enter Text**.
* Number of sites: **Enter Text**. Volume of injection per site: **Enter Text**.
1. If fluid and/or electrolyte therapy is planned, describe:
* Fluid type: **Enter Text**. Route/Site administered: **Enter Text**.
* Volume administered: **Enter Text**.Frequency of administration: **Enter Text**.
1. If living animals are to be transported as part of this proposal, describe transportation methods:
* Describe provisions for ensuring animals are protected from environmental extremes: **Enter Text**.
* Describe any food and/or water that will be provided during transit: **Enter Text**.
* What is the approximate length of time in transit? **Enter Text**.
* What is the transport destination? **Enter Text**.
* Provide a brief description of the animal enclosures and vehicles, as applicable: **Enter Text**.
1. If animals will be subjected to periods of forced exercise (swimming, treadmills, etc.), describe:
* Proposed methods: **Enter Text**.
* Will animals be preconditioned to the activity? [ ]  Yes [ ]  No
* Length of time animal will be subjected to activity: **Enter Text**.
* Frequency of exercise periods: **Enter Text**.

**Part H. Drugs and Compounds**

1. If planning to administer drugs or medications, complete the appropriate sections of the table below. (If additional space is needed please attach a separate table and indicate “see attached” below)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Generic Drug Name | Dose (units) | Route & Site Administered | Frequency & Duration of Administration | Needle Gauge(if applicable) | Purpose |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. | **Enter Text**. |

1. Use of non-pharmaceutical grade drugs, substances or compounds: [See Note 9.](#Note10)
* Will all chemicals and substances used in animals be of pharmaceutical grade? [ ]  Yes [ ]  No
* If ***NO***, list compounds for which **a pharmaceutical grade is not available**: **Enter Text**.
* If ***NO***, describe methods used to formulate the dose given to animals, ensuring the sterility of the non-pharmaceutical grade compounds: **Enter Text**.
* If ***NO***, **and pharmaceutical grade is available**, list each nonpharmaceutical grade compound used and provide scientific justification for their use: **Enter Text**.
1. If controlled substances will be used as part of this protocol: [See Note 10](#Note8).
* Name of individual with Illinois Controlled Substance License and DEA registration:  **Enter Text**.
* ILDFPR Controlled Substance Registration #: **Enter Text**.
* DEA Controlled Substance Registration #: **Enter Text**.

**Part I. Hazardous Agents \*Note: [SHIFT] + [Enter] starts a new paragraph\***

Complete the applicable sections below if living animals will be exposed to potentially hazardous agents.

|  |  |
| --- | --- |
| Type | Description |
| Select | **Enter Text**. |
| Select | **Enter Text**. |
| Select | **Enter Text**. |
| Select | **Enter Text**. |
| Select | **Enter Text**. |
| Select | **Enter Text**. |

1. Approvals:
* [Institutional Biosafety Committee](https://cehs.siu.edu/about/committees/inst-bio-com-review-pro.php) approved Memorandum of Understanding Agreement number(s): **Enter Text**.
* [Application for Procurement and Use of Radioisotopes](http://cehs.siu.edu/radiation_safety/fact_sheets/rad_purchases.html) approval date(s): **Enter Text**.
1. Origin of cell lines or tissues:

[ ]  Human - Cell line name(s) (if applicable): **Enter Text**.

* Is there an Occupational Exposure Control Plan established for your laboratory?

[ ]  Yes [ ]  No Location: **Enter Text**.

* Have all personnel involved in this research received training for bloodborne pathogens within the last 12 months (required annually)?

[ ]  Yes [ ]  No (contact [CEHS](http://cehs.siu.edu/radiation_safety/fact_sheets/rad_purchases.html) to obtain training)

* Have all personnel involved in this research received Hepatitis B vaccinations?

[ ]  Yes [ ]  No; declination form on file

 [ ]  Animal - Cell line name(s) (if applicable): **Enter Text**.

* Check the appropriate box(es):

[ ]  Stock material is not of rodent origin and has not been previously passed in a rodent species at SIUC or any other institution.

[ ] Stock material has been previously passed in a rodent species but has been tested following its final passage and found to be free of adventitious rodent disease agents. (Please attach a copy of the results)

[ ]  It is not known whether the stock material has been previously passed in a rodent species. MAP/RAP/HAP, or other testing to detect rodent pathogens will be performed and the results forwarded to the attending veterinarian before inoculating any rodent species with material from the cell line.

1. Describe procedures used to ensure safe handling, containment and disposal of contaminated animals and materials associated with this study: **Enter text.**
2. Husbandry personnel may potentially be exposed to the hazardous agent and/or toxic by-products through exposure to the animals or animal waste [ ]  Yes [ ]  No
* Describe recommended procedures for their protections, including information about signs and symptoms of overexposure. **Enter Text**.

**Part J. Animal Endpoints \*Note: [SHIFT] + [Enter] starts a new paragraph\***

1. What is the experimental or teaching endpoint for the animals? (Check all that apply.)

[ ] Animals will be humanely euthanized at a predetermined time following the start of protocol procedures, as described in Part F.

[ ]  Animals will be humanely euthanized as part of the proposal but at a future undetermined time.

* Criteria for determining the time of euthanasia include: **Enter Text**.

[ ] Animals will be returned to the colony or herd for reassignment to future or other projects.

[ ] Animals captured from their natural habitat will be released back to their native environment or at a site comparable to the area from which they were captured.

[ ]  Animals will be permitted to live an undetermined length of time, will not be euthanized and will be allowed to expire naturally or due to protocol related procedures without other intervention,

* Scientific justification for using death as an endpoint: **Enter Text**.

[ ]  Other, describe: **Enter Text**.

**Part K. Pain and Distress** [See Note 11](#Note11)

Describe the nature of possible adverse or negative effects to animal(s) as a result of activities described in this protocol: **Enter Text**.

1. Describe how the animals will be assessed, the frequency and length of monitoring (include provisions for after hour, weekend and holiday care if applicable): **Enter Text**.
2. Describe criteria that will be used to determine when animals will be treated &/or euthanized, how the pain &/or distress will be alleviated, and clear directions concerning who can make the decision to euthanize &/or treat animals: **Enter Text**.
3. Describe the actions taken in the event of unexpected animal illness or injury: **Enter Text**.
4. For studies involving wild-caught animals:

[ ]  PI assures short term stress associated with capture and/or momentary handling will be minimized to the greatest extent possible when analgesia is not appropriate or is contraindicated

**Part L. Analgesia \*Note: [SHIFT] + [Enter] starts a new paragraph\***

Complete the applicable sections below if animals are expected to experience pain: [See Note 12](#Note12)

Analgesia will be administered: (provide drug details in [Part H](#PartH))

[ ]  Before procedure  [ ]  During procedure [ ]  After procedure [ ]  Analgesia will not be administered

Justification for not providing analgesia (if applicable, [see note 13](#Note13)): **Enter Text**.

Describe methods for use of non-pharmaceutical means of analgesia: **Enter Text**.

**Part M. Anesthesia, Tranquilization and Sedation \*Note: [SHIFT] + [Enter] starts a new paragraph\***

Complete the applicable sections (provide drug details in [Part H](#PartH)):

1. [ ]  Injectable Agents
2. [ ]  Inhalation Agents [See Note 14](#Note14)
* Method of administration: **Enter Text**.
* Method(s) of scavenging waste gases: **Enter Text**.
* If using a fume hood, date certified by CEHS: **Enter Text**.
* Other applicable information: **Enter Text**.
1. [ ]  Non-inhaled Agents
* Method of administration: **Enter Text**.
* Other applicable information: **Enter Text**.
1. [ ]  Paralytic Agents
* Describe how ventilation support will be provided. **Enter Text**.
1. [ ]  Non-pharmaceutical means of anesthesia
* Details: **Enter Text**.

**Part N. Euthanasia** (refer to [AVMA Guidelines](https://www.avma.org/KB/Policies/Documents/euthanasia.pdf)). **\*Note: [SHIFT] + [Enter] starts a new paragraph\***

Complete applicable section(s) below,

1. Physical method without anesthesia (Check all that apply)

[ ]  Decapitation [ ]  Cervical dislocation [ ]  Penetrating captive bolt [ ]  Pithing [ ]  Other; describe: **Enter Text**.

* [ ]  PI will ensure all personnel potentially performing the above technique have been properly trained.
* Scientific justification for withholding anesthesia: **Enter Text**.
* Describe methods to ensure equipment is functioning properly to perform rapid and humane euthanasia: **Enter Text**.
1. Physical method preceded by anesthesia (Check all that apply)

[ ] Decapitation [ ]  Cervical dislocation [ ]  Exsanguination [ ]  Other; describe: **Enter Text**.

* Anesthetic agent(s): **Enter Text**. (Provide drug details in [Part H](#PartH))
* Describe methods to ensure equipment is functioning properly to perform rapid and humane euthanasia: **Enter Text**.
* Additional information (If applicable.): **Enter Text**.
1. Chemical method
* Chemical Agent **Enter text.**(Provide drug details in [Part H](#PartH))
* Describe methods for ensuring and confirming death: **Enter Text**.
* [ ] PI certifies CO2 used for euthanasia is delivered from a compressed gas cylinder at a 30-70% chamber volume per minute displacement rate using an adjustable flow meter set according to [chamber specific calculations](http://www.euthanex.com/smartbox/calculating-avma-flow-rate.php)

**Part O. Assurance of Compliance**

1. I have considered the following alternatives to the animal research, teaching or testing procedures described in the attached protocol and have determined that no potential alternatives consistent with the goals of the proposal are currently available. (Indicate the options considered.)

[ ]  Cell or Tissue Culture [ ]  Computer Model [ ]  Non-animal Procedures [ ]  Less Invasive Procedures

1. I have considered the use of a phylogenetically lower species of animals and have determined that valid research results necessitate the use of the species indicated.
2. I certify the activities described in the attached protocol do not unnecessarily duplicate previous experiments.
3. I certify that I have reviewed the pertinent scientific literature and the sources and/or databases and have found no valid alternative to any procedures described herein which may cause more than momentary pain or distress, whether it is relieved or not. Below are the methods used and sources consulted to determine the availability of alternatives, including refinements, reductions, and replacements. [See Note 15](#Note15).

Names of databases searched: **Enter Text**. Date the search was performed (i.e. 9/9/18): **Enter Text**.

Period covered by search: **Enter Text**.Keywords and/or search strategy: **Enter Text**.

1. I have carefully considered the design of the study with respect to using the minimum number of animals necessary to ensure statistical validity and reliability of the obtained results.
2. I certify every effort has been made to minimize the amount of pain, distress and/or discomfort the animals may experience by providing anesthesia and/or analgesia whenever it does not interfere with proposal goals. Procedures involving animals will be carried out humanely and have been designed to ensure that discomfort and pain to animals will be limited to that which is scientifically unavoidable to meet study goals.
3. I agree that if an animal covered under this protocol becomes ill, is in pain or distress, and if the co-investigators or I cannot be reached, the attending veterinarian or designee may treat this animal including euthanasia for humane purposes.
4. I agree to track and have available upon request the number of animals in my possession, acquired or produced, or used as part of this proposal in each of the respective pain/distress classifications.
5. I agree to comply with all federal, state, and university animal welfare laws and policies during this project and to cooperate with the SIUC IACUC in its supervision of these laws and policies.
6. I certify that I will obtain approval from the SIUC’s IACUC before initiating any significant changes in this study and will promptly notify the IACUC of any changes in personnel participating in the project.
7. I certify that all individuals authorized to conduct procedures involving animals under this proposal have been appropriately trained in the procedures in which they are involved.
8. I certify that all individuals authorized to conduct procedures involving animals under this proposal have met the necessary SIUC’s Occupational Health Program requirements.

\*\*\*NOTE: Once committee review is complete, a pdf copy of the final protocol will be sent to you for electronic signature\*\*\*



**SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE**

**Animal Care & Use Protocol**

**Section 2 – Surgery**

|  |
| --- |
| **FOR OFFICE USE ONLY** |
| Investigator: Enter Text |
| Protocol Title: Enter Text. |
| Protocol #: **Enter Text.** |

1. Will surgery be performed on animals? Select

Non-survival surgery - Animals are anesthetized during the procedure and euthanatized before recovery from anesthesia. Tissue harvest from euthanized animals is not considered non-survival surgery.

Survival surgery - Animals recover from anesthesia following the surgical procedure.

1. Building and Room where surgery will be performed **Enter Text**.
2. If Survival Surgery is planned, what is the maximum number of survival surgeries any one animal may have and the time interval between surgeries? **Enter Text**.
3. If Major survival surgery is planned, what is the maximum number of major survival surgeries any one animal may have and the time interval between surgeries? **Enter Text**. (Major survival surgery penetrates and exposes a body cavity or produces substantial impairment of physical or physiologic functions. Multiple major survival surgical procedures on a single animal are discouraged but may be permitted if scientifically justified by the user and approved by the IACUC.)

Justification for performing multiple major survival surgeries on a single animal (if applicable): **Enter Text**.

1. If supplemental heat is to be provided intra and/or post-operatively, describe method used. (Maintenance of normal body temperature minimizes cardiovascular and respiratory disturbances caused by anesthetic agents. Circulating water warming blankets are the preferred means of providing supplemental heat. Care should be taken when using heat lamps and electric heating pads to prevent inadvertent thermal injury. When using heat lamps or electric heating pads, the temperature nearest the animal should be monitored and not permitted to exceed 42o C.) **Enter Text**.
2. Animal(s) will be fasted **Enter Text**. hours before surgery. (It is not necessary to fast rabbits and rodents to prevent vomiting and aspiration from occurring during anesthesia)
3. Will hair/fur be removed from surgical site(s) pre-operatively? Select

 If pre-operative skin antiseptics are planned for use, list agents and describe method of use: **Enter Text**.

1. Personnel performing surgery will scrub hands with **Enter Text**. prior to surgery.
2. Personnel performing surgery will wear:

[ ]  sterile gloves (for survival or non-survival surgery) [ ]  sterile surgical gown [ ]  face mask [ ]  shoe covers

[ ]  non-sterile gloves (for non-survival surgery only) [ ]  clean laboratory coat [ ]  scrub suit [ ]  hair covering

1. If multiple survival surgeries are planned using a single set of sterilized instruments (rodents only), describe:
* how instrument(s) are handled between surgeries. **Enter Text**.
* the maximum number of surgeries that may be done using a single set of sterilized instruments. (max. = 5) Select
1. Skin staples, clips or sutures will be removed no later than **Enter Text**. days postoperatively.
2. Describe how animals will be monitored during recovery from anesthesia? (Description should include: what is monitored (i.e. thermoregulation, cardiovascular and respiratory function, pain or discomfort), steps taken to ensure animal comfort, frequency and duration of monitoring, criteria used to stop monitoring and, if applicable, plans for enabling coverage during after hours, weekends and holidays.): **Enter Text**.
3. Describe animal care and support procedures during the post-operative period following anesthetic recovery? (Description should include: what is monitored (i.e. activity level, behavioral signs of pain or discomfort, surgical incisions, basic biologic functions of intake and elimination, signs of post-operative infection), specific post-operative care and support procedures (i.e. wound dressing, surgical incision care, catheter flushing, etc.), frequency and duration of monitoring, and, if applicable, plans for enabling coverage during after hours, weekends and holidays): **Enter Text**.
4. Describe surgical procedure(s): (For survival procedures, describe the site and size of the incision, operative manipulations, layers of closure, closure methods and materials (braided suture materials should be avoided in closing skin incisions unless completely buried beneath the skin), and any other pertinent information not previously addressed. For non-survival procedures, describe the surgical approach, general surgical procedures and time of euthanasia. Do not describe animal preparation or other non-surgical procedures in this section.) **Enter Text**.
5. Name(s) of person(s) performing surgery **Enter Text**.

**SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE**

**Animal Care & Use Protocol**

**Section 3 - Animal Breeding**

|  |
| --- |
| **FOR OFFICE USE ONLY** |
| Investigator’s Name: Enter Text |
| Protocol Title: Enter Text. |
| Protocol #: **Enter Text.** |

**Part. A Animal Data**

|  |  |
| --- | --- |
| 1. Species:
 | **Enter Text**. |
| 1. Genetic background:
 | Select |
| 1. Estimated number of animals used to begin breeding colony:
 | **\* Enter Text**. |
| 1. Number of animals to be purchased or acquired from sources other than breeding colony:
 | **\* Enter Text**. |
| 1. Estimated number of offspring to be produced:
 | **\* Enter Text**. |
| 1. Total number of animals used for breeding and offspring produced during the 3 year duration of this proposal (Sum total of Lines 2-4):
 | **\* Enter Text**. |
| 1. Approximate number of generations the breeding colony will be separated from the parent line at the end of each respective year.
 | Year 1 | Year 2 | Year 3 |
| **Enter Text**. | **Enter Text**. | **Enter Text**. |

\* Lines 2-5 should reflect the 3 year duration of the protocol

1. [ ]  I agree to:
* report the number of animals weaned to the Laboratory Animal Program (LAP) Office not less than quarterly.
* coordinate all animal transfers from this breeding protocol to research/teaching protocols through the LAP Office
* accurately track the number of generations the breeding colony is separated from the parent line **(Note: This information will be periodically requested.)**

**Part B. Breeding Colony Management**

1. How will the animals be identified (Each breeding animal should have a unique identifier that is not repeated in subsequent generations.)

[ ]  Ear notch [ ]  Ear tag [ ]  Tattoo [ ]  Microchip [ ]  Cage card [ ] Other: **Enter Text**.

1. Describe the breeding schemes used to ensure homozygosity of inbred strains or heterogeneity of outbred stocks and to minimize genetic drift: **Enter Text**.
2. How will breeding animals be grouped for mating? SelectIf other, describe: **Enter Text**.
3. Select Will a substrain designation identifying the genetic background of the animals be used when reporting the results of experiments involving animals from the breeding colony? If No, explain why: **Enter Text**.
4. Indicate the information recorded as part of the breeding colony's pedigree records:

[ ]  species and strain designation [ ]  # born [ ]  date of birth

[ ]  breeder identification numbers [ ]  # weaned [ ]  weaning date

[ ]  disposition of all offspring produced [ ]  mating date [ ]  phenotypes and genotypes

[ ]  offspring retained for colony maintenance [ ] animals culled [ ]  animals transferred

1. SelectWill the resultant offspring be genetically monitored?

If no, explain why: **Enter Text**.

If yes:

* How frequently are animals genetically tested? **Enter Text**.
* What tissue samples are collected?

[ ]  Tail clip (Details of anesthesia use should be describe in Section 1, Part L)

[ ]  Blood sample (Details of blood sampling should be described in Section 1, Part G, # 5)

If other, describe: **Enter Text**.

* At what age are the animals genotyped? **Enter Text**.
* What method of genetic analysis is used?

[ ]  PCR [ ]  Southern blot If Other, describe: **Enter Text**.

1. At what age will weaning occur? **Enter Text**.(Rodents are normally weaned at 3 weeks of age. Investigative personnel is responsible for ensuring animals are weaned at the appropriate time, current litters are removed prior to the birth of new litters and that cages/pens are not over populated.)
2. What criteria is used in selecting the future breeding stock? **Enter Text**.
3. Approximately how often will a breeding female be mated: Each year? **Enter Text**. In her lifetime? **Enter Text**.
4. How will you monitor and check for pregnancy? **Enter Text**.
5. If breeding a transgenic line, will you be creating the transgenic line yourself? Select

**Part C. Animal Disposition**

1. How long will individual breeding animals be maintained? **Enter Text**.
2. What criteria is used to discontinue using an animal as a breeder? **Enter Text**.
3. What is the disposition of retired breeders? **Enter Text**.
4. Progeny produced may (check all that apply):

[ ]  be retained for colony maintenance (i.e. to be used as breeders)

[ ]  be transferred to research/teaching protocols at SIUC (Contact the Laboratory Animal Program Office to transfer animals)

[ ]  be transferred to other institutions

[ ] not be suitable for needs of research/teaching protocols

If other, explain: **Enter Text**.

1. Approved protocols to which animals may be transferred:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Principal Investigator | Protocol # |  | Principal Investigator | Protocol # |
| **Enter Text**. | **Enter Text**. |  | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. |  | **Enter Text**. | **Enter Text**. |
| **Enter Text**. | **Enter Text**. |  | **Enter Text**. | **Enter Text**. |

1. What criteria is used to determine when progeny is not suitable for research/teaching protocols?

SelectIf Other, describe why animals cannot be utilized: **Enter Text**.

1. Describe the disposition of any animals that are produced in excess of your needs, or those that don't meet your needs.

[ ]  euthanize and dispose of the carcass through CEHS (Complete Section 1, Part J - Euthanasia)

If Other, describe: **Enter Text**.

**(Whenever possible, animals that cannot be used should be made available to other researchers. Contact LAP for more information.)**

1. What steps are taken to minimize the number of animals produced in excess of your needs and those that don't meet your needs? **Enter Text**.



**SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE**

**Animal Care & Use Protocol**

**Additional Personnel**

|  |
| --- |
| **PROTOCOL INFORMATION** |
| Investigator: Enter Text |
| Protocol Title: Enter Text. |
| Protocol #: **Enter Text.** |

Name **Enter Text**. Status Select

* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
* Enrolled in occupational health program: Select
* Procedures performed on animals as part of this proposal:

[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

If other, explain:

**Enter Text**.

* Describe specific animal related experience ensuring this individual is qualified to perform the procedures above on animals. For personnel without prior relevant experience, state how the person will be trained and who will do the training and the qualifications of the trainer. **\*Note: [SHIFT] + [Enter] starts a new paragraph\***

 **Enter Text**.

* Have viewed the following SIUC IACUC web training modules and successfully passed the corresponding quizzes (\*required):

[ ]  Working with IACUC\* [ ]  SIUC Animal Care\* [ ]  Reducing Pain & Distress\* [ ]  Surgery [ ]  Mice [ ]  Rats

[ ]  Genetically Modified Mice [ ]  Guinea Pigs [ ]  Hamsters [ ]  Rabbits [ ]  Wildlife [ ]  Amphibians [ ]  Fish

[ ]  Reptiles [ ]  Zebrafish [ ]  Non-human Primates [ ]  Cattle [ ]  Horses [ ]  Swine [ ]  Dogs

[ ]  Refresher Course

Name **Enter Text**. Status Select

* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
* Enrolled in occupational health program: Select
* Procedures performed on animals as part of this proposal:

[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

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[ ]  Refresher Course

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* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
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[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

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[ ]  Refresher Course

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* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
* Enrolled in occupational health program: Select
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[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

If other, explain: **Enter Text**.

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[ ]  Reptiles [ ]  Zebrafish [ ]  Non-human Primates [ ]  Cattle [ ]  Horses [ ]  Swine [ ]  Dogs

[ ]  Refresher Course

Name **Enter Text**. Status Select

* Work Tele. #: **Enter Text**. Home Tele. # (for after hour emergencies). **Enter Text**.
* Enrolled in occupational health program: Select
* Procedures performed on animals as part of this proposal:

[ ]  Basic animal handling [ ]  Husbandry [ ]  Surgery [ ] Drug administration [ ]  Euthanasia

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[ ]  Reptiles [ ]  Zebrafish [ ]  Non-human Primates [ ]  Cattle [ ]  Horses [ ]  Swine [ ]  Dogs

[ ]  Refresher Course

NOTES:

1. Only personnel current on occupational health program requirements and listed on an IACUC approved animal use protocol will be provided access to animal housing facilities. All personnel must assure they are qualified to perform the procedure(s) indicated by describing their experience &/or training.
2. Acceptance of all rodents and rabbits into the Laboratory Animal Program vivarium is contingent upon acceptable health surveillance information provided by the source institution to prevent inadvertent spread of infectious agents to other animals within the vivarium.
3. Provide scientific or regulatory justification for withholding pain/distress relief or state methods used to determine that pain and/or distress relief would interfere with test results. Stating that pain relief may interfere with test results is not adequate.
4. Describe how animals being housed singly for reasons other than scientific necessity will be identifiable to research staff and animal caretakers (such as a colored sticker on the cage/pen/tank)
5. All personnel caring for the animals have been appropriately trained for the species maintained. Standard operating procedures are available for animal husbandry related procedures. All personnel caring for the animals have completed the appropriate occupational health requirements
6. The rationale should include a justification of the species requested, the availability or appropriateness of the use of less-invasive procedures, other species, isolated organ preparations, cell or tissue cultures, or computer simulation. The species selected should be the lowest possible on the phylogenetic scale that is able to meet study goals. If breeding animals, the description should include how the colony contributes to the overall objectives of your research, why animals from commercial vendor sources are not appropriate, and if proposed solely to maintain a line for future use, include a discussion about why cryopreservation techniques are not appropriate.
7. The number of animals should be the minimum number required to obtain statistically valid results. Whenever possible, the number of animals should be justified statistically. If this is a request for breeding, the IACUC understands that you will not be able to give concrete statistical justification, however, you should be able to give an estimate of the number of animals you intend to breed and the reasoning behind that estimate.
8. Examples include but are not limited to surgical instruments, supplies for administering drugs, experimental or therapeutic compounds. Infectious agents used as part of an experimental protocol are excluded from this part but should be described in Part I.
9. Pharmaceutical or USP grade substances are approved by the FDA or have a chemical purity standard established by the U.S. Pharmacopeia. Please reference: <http://www.usp.org/> or <http://online.pheur.org/EN/entry.htm>
10. Controlled substances will be kept in a secure fashion in compliance with DEA standards. Only authorized personnel will be permitted access to controlled substance storage sites. Appropriate documentation relating to controlled substance usage will be maintained.
11. Unless the contrary is established, procedures that cause pain or distress in human beings may cause pain or distress in other animals. Procedures with animals that may cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons.)
12. Pre-operatively administration of analgesics or local anesthetics, referred to as "preemptive analgesia", has been suggested to delay the onset and severity of post-procedural pain. Preemptive analgesia's beneficial effects may not completely eliminate the need for post-operative analgesics but may minimize the dosage needed to maintain animal comfort.
13. Animals undergoing survival surgical procedures should either receive analgesics or an explanation for not using analgesic agents should be given.
14. If planning to use a bell jar for anesthetic administration, the animals should be prevented from contacting liquid anesthetic-soaked materials. Personnel using gas anesthetics must be informed of the potential health hazards of prolonged exposure. Fume hoods, purging of induction chambers with oxygen prior to opening to remove animals, and proper respirators are examples of measures to ensure personnel safety.
15. Documentation for this section is required for all mammals used in biomedical research or teaching. Performance of a database search may be the most effective and efficient method for demonstrating compliance with the requirement to consider alternatives to painful/distressful procedures. However, in some circumstances (as in highly specialized fields of study), conferences, colloquia, subject expert consultants, or other sources may provide relevant and up-to-date information regarding alternatives in lieu of, or addition to, a database search. When other sources are the primary means of considering alternatives, sufficient documentation, such as the consultant’s name and qualifications and the date and the content of the consultation, should be provided to the IACUC as a separate attachment. Also the Animal Welfare Information Center (AWIC) is an information service of the National Agricultural Library specifically established to provide information about alternatives. AWIC can be contacted at (301) 504-5755, or via its web site at <https://www.nal.usda.gov/awic>. If a database search or other source identifies a bona fide alternative method (one that could be used to accomplish the goals of the animal use proposal), the written narrative should justify why this alternative was not used.)