Animal Use Protocol

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Institutional Animal care and Use Committee (IACUC)

0106 HSC 608-785-5195

IACUC@uwlax.edu

**ANY USE OF VERTEBRATE ANIMALS MUST BE REVIEWED AND APPROVED BY THE IACUC BEFORE A PROJECT IS INITIATED**

**USE THIS FORM:**

For approval of all animal use proposals and three-year resubmissions.

**COMPLETION OF FORM:**

Fill out all of the questions on this form completely and attach the appropriate appendices. Delete all non-applicable appendices. Final submission must include all signatures (electronic signatures are accepted).

**PROTOCOLS INVOLVING HAZARDOUS AGENTS:**

Protocols involving hazardous biological or chemical substances, radiation or recombinant DNA will not be approved until the IACUC receives approval from the Institutional Biosafety Committee. <http://www.uwlax.edu/grants/compliance/IBC.htm>

**SUBMISSION DEADLINE: **

All protocol submissions must be pre-reviewed by the IACUC Administrator and the Veterinarian to prevent delays during the full committee review process. Therefore, protocols need to be submitted by the **15th of the month** with the completed, pre-reviewed formssubmittedprior to the **first business day of the Month** for review at the next IACUC meeting. Protocol forms must be submitted **electronically in Microsoft Word format** and emailedto**IACUC@uwlax.edu**

**MEETING DATE:** Second week of the month.

**ONCE APPROVED:** The protocol will be renewed and reviewed on an annual basis for two years. At the end of the third approval year, the protocol will expire and will need to be resubmitted for IACUC approval consideration.

**PROTOCOL MODIFICATIONS: **

Any changes to this approved protocol requires the submission of a protocol modification request form. Changes must not be implemented prior to IACUC review and approval.

**PERSONNEL REQUIREMENTS:**

THE IACUC ADMINISTRATOR WILL WITHOLD FINAL APPROVAL OF YOUR PROTOCOL UNTIL THE FOLLOWING TWO REQUIREMENTS HAVE BEEN MET:

1. All personnel working with animals must submit an Animal User Risk Assessment Form and review the on-line Occupational Health and Safety Information: https://www.uwlax.edu/iacuc/occupational-health-and-safety/
2. All personnel working with animals must review and pass all applicable on-line training tutorials: https://www.uwlax.edu/iacuc/training/

|  |
| --- |
| IACUC Use Only |
| Protocol Number:Expiration Date:USDA reporting code:  |



Institutional Animal care and Use Committee (IACUC)

Animal Use Protocol

Updated 2/24

# General Information

## A. Project Title:

|  |
| --- |
|  |

1. **Type of Application:**

|  |  |
| --- | --- |
|  | **New protocol** |
|  | **3-year renewal of protocol #**  |  |
|  | **Major Modification to existing protocol #** |  |

1. **Source of Funding:**

|  |
| --- |
|  |
| **If NIH, provide grant number(s):** |  |

1. **Principal Investigator:**

|  |  |
| --- | --- |
| **Name (Last, First, MI)** |  |
| **Mailing Address** |  |
| **Office Phone #** |  |
| **Cell Phone #** |  |
| **E-mail** |  |
| **PI Certification** | If the IACUC approves my application, I agree to execute this work as described; request approval from the IACUC for changes; comply with the guidelines set forth by the IACUC and be responsible for the training, supervision and work of my staff. I realize that failure to adhere to policies related to animal care and use may result in suspension or revocation of permission to perform animal research in UW-L facilities. The activities described in this study do not unnecessarily duplicate previous experiment. |
| **Date** | **Signature of PI** |
|  |  |
| **Date** | **Signature of support from Department Chair or College Dean** |
|  |  |

1. **Personnel who will have animal contact** (Including the PI whether or not they have animal contact). Copy and paste additional tables if needed:

|  |  |
| --- | --- |
| **Name**  |  |
| **Cell or Home Phone #** |  |
| **E-mail** |  |
| **Role in Project** |  |
| **Experience with proposed procedures** |  |
| **Personnel Certification** | I have read and am familiar with all of the approved animal procedures. I agree to execute this work as described and realize that failure to adhere to policies related to animal care and use may result in suspension or revocation of permission to perform animal research at UW-L.  |
| **Occupational Health and Safety Program** | I have submitted an Animal User Risk Assessment Form |
| **Training Requirements** | I have passed all the applicable training tutorials |
| **Date** | **Signature**  |
|  |  |

|  |  |
| --- | --- |
| **Name**  |  |
| **Cell or Home Phone #** |  |
| **E-mail** |  |
| **Role in Project** |  |
| **Experience with proposed procedures** |  |
| **Personnel Certification** | I have read and am familiar with all of the approved animal procedures. I agree to execute this work as described and realize that failure to adhere to policies related to animal care and use may result in suspension or revocation of permission to perform animal research at UW-L.  |
| **Occupational Health and Safety Program** | I have submitted an Animal User Risk Assessment Form |
| **Training Requirements** | I have passed all the applicable training tutorials |
| **Date** | **Signature**  |
|  |  |

|  |  |
| --- | --- |
| **Name**  |  |
| **Cell or Home Phone #** |  |
| **E-mail** |  |
| **Role in Project** |  |
| **Experience with proposed procedures** |  |
| **Personnel Certification** | I have read and am familiar with all of the approved animal procedures. I agree to execute this work as described and realize that failure to adhere to policies related to animal care and use may result in suspension or revocation of permission to perform animal research at UW-L.  |
| **Occupational Health and Safety Program** | I have submitted an Animal User Risk Assessment Form |
| **Training Requirements** | I have passed all the applicable training tutorials |
| **Date** | **Signature**  |
|  |  |

**F. Summary of Project:**  In straight-forward, nonmedical, nontechnical language that would be understandable to a layperson (aim for a high school-senior reading level), outline the specific scientific goal(s) and significance of this research. Be convincing as to why this work is important for advancement of knowledge, improving human or animal health, or for the good of society. Spell out all acronyms at first occurrence**. If this is a renewal submission** please provide a brief (2-3 sentences) description of your progress and productivity in the past three years to help the Committee evaluate animal usage. Since this summary may be made available to the public if requested, it is imperative that you carefully consider its content.

# II. Animal Species and Numbers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species** | **Total number of animals needed for 3-year protocol** | **Source (e.g. vendor, breeding colony)** | **Housing Location** | **Any special husbandry/housing needs?** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# III. Justification for the Use of Animals

 **A. Consideration of Alternatives to Live Animal Use, Painful Procedures and Unnecessary Duplication**

The Animal Welfare Act (AWA) regulations require principal investigators to consider alternatives to procedures that may cause more than momentary or slight pain or distress to the animals and provide a written narrative of the methods used and sources consulted to determine the availability of alternatives, including refinements, reductions, and replacements. The regulations require that you specify at least two sources or databases used to determine that the model and methods described in this protocol do not:

* Unnecessarily duplicate previous experiments
* Unnecessarily use animals, or
* Unjustifiably expose animals to potentially painful, uncomfortable or distressful procedures

The Animal Welfare Information Center (AWIC) is an information service of the National Agricultural Library specifically established to provide information about alternatives. AWIC offers expertise in formulation of the search strategy and selection of terminology and databases, access to unique databases, on- and off-site training of institute personnel in conducting effective alternatives searches, and is able to perform no-cost or low-cost electronic database searches. AWIC can be found at its web site at <https://www.nal.usda.gov/awic/alternatives-literature-searching>

|  |
| --- |
| **A.** **Database Searches**. Place an X in the checkboxes that apply to indicate which databases were used: |
|  | National Agricultural Library |  | Web of Science |  | PsycINFO |
|  | (AGRICOLA) |  | AltWeb |  | TOXLINE |
|  | BIOSIS Previews |  | CORDIS |  | Other - |
|  | MEDLINE via PubMed |  | NORINA |  | Other -  |
| **B. Date(s) the database search was performed**:(Must be within the last 3 months) |  |
| **C. Years covered by the search** (e.g., 1985 to present): |  |
| **D. Search strategy, keywords and concepts used**. The search strategy consists of the reduction and refinement phase and the replacement phase using keywords put together to create brief strings of words so that each search set covers a separate concept. These are words that will likely be found in the title, abstract, and descriptor fields of the citation. Use as many synonyms as possible and include all possible spellings of words. All potential alternatives should be included as keywords whether or not the researcher believes they will be useful. Many people make the mistake of putting the term alternatives in to the strategy and expect to find all possible alternatives. Because alternatives is a complex concept involving refinement, reduction and replacement, this term is best used only in those areas of study where larger amounts of research have been conducted on alternatives, such as in toxicology or education.  |
|  |
| **E. Database Search Narrative.** The written narrative should include adequate information for the IACUC to assess that a reasonable and good faith effort was made to determine the availability of alternatives or alternative methods. 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), explain why an alternative that had been found was not used. Describe the steps you have taken to replace the use of animals with in vitro procedures, reduce the number of animals used, and to refine the experimental design and procedural techniques.  |
| Discussion of Search Results: |  |
| Replacement: |  |
| Reduction: |  |
| Refinement: |  |

 **B. Rationale for the Use of Animals**

Federal regulations require that investigators provide a narrative describing the rationale for using animals, the appropriateness of the species, and the methods and specific sources used to determine that alternatives (e.g., replacement, reduction, refinement) to the use of animals and to the procedures have been considered.

 **1. Explain why animals are required for these studies, and why non-animal model replacements, such as cell culture or computer modeling, cannot fully replace animals:**

# 2. Describe the features of the species (e.g., anatomic, physiologic, genetic, etc) that make it desirable for the model. Contrast with other available models, if any. Cost considerations are not justifications.

# 3. How are the number of animals requested scientifically justified for this species? Include all control animals and breeding colony animals in this discussion. A table may help clarify different experimental groups or studies and the specific numbers needed for each. Include any statistical analysis used (e.g. power calculations) in determining the animal numbers.

# IV. Details of Animal Use

#  A. In this section describe the animals’ roles in your experiments including the treatments and procedures the animals will receive outside of normal husbandry, from the first experimental manipulation to the final outcome. This response should provide a clear understanding of what specifically happens *sequentially* to each animal or group of animals, and over what time period the procedures occur, including but not limited to:

* definitions of all materials given to animals, including dosage range, routes, and frequency of administration;
* the expected sequence, frequency, and duration of procedures;
* method, frequency, volumes, and numbers of biological samples taken;
* experimental diets;
* surgery as it relates to the study design. Surgical details should be provided in Appendix B.

|  |
| --- |
|  |

 **B. Complete the following table if administering animals with any substance:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Substance Used**  | **Species** | **Dose mg/kg** | **Route** | **Frequency** | **Pharmaceutical****Grade?** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

 **C. Appendices Checklist.** Check all that pertain to your project, complete the appropriate appendices, and attach as part of your application. Delete all non-applicable appendices.

|  |  |  |
| --- | --- | --- |
|  | **Surgery** | ***Appendix A*** |
|  | **Wild-caught Animals** | ***Appendix B*** |
|  | **Antibody Production** | ***Appendix C*** |
|  | **Toxicology Studies/Microbial Virulence Testing** | ***Appendix D*** |
|  | **Dietary Manipulations or Fluid Restriction** | ***Appendix E*** |
|  | **Use of Hazardous Biological Agents** | ***Appendix F*** |
|  | **Breeding Colonies** | ***Appendix G*** |
|  | **Use of Non-Pharmaceutical Grade Chemicals and Compounds** | ***Appendix H*** |
|  | **Use of Hazardous Chemicals, Radioactive Materials or Ionizing Radiation Sources**  | ***Appendix I*** |

**V. Potential Animal Pain and Distress**

**A. Briefly summarize all possible adverse effects that may present in the animals as a result of study procedures.** Adverse effects include any reaction, expected or unexpected, that may occur in the animals as a result of any experimental procedure or manipulation. Examples include drug toxicity, injury, surgical complications, etc.

|  |
| --- |
|  |

**B. How will pain and/or distress be monitored?** Provide specific clinical signs which will be monitored as well as frequency, including provisions for off hours. Clinical signs may include tumor growth, lack of appetite, lack of normal grooming behavior, lethargy, excessive weight loss, abnormal posture, licking or biting of the wound area, etc. An understanding of normal species-specific behavior is crucial in evaluating potential abnormal clinical signs.

|  |
| --- |
|  |

**C. Describe the management plan that will be used to assess and treat pain, distress and discomfort in the animals.** Include any special procedures that will be used (e.g., periodic weighing of animals) and any interventions that will be performed to relieve pain, distress and discomfort in the animals (e.g., analgesics, antibiotics, special housing/bedding, etc.).

|  |
| --- |
|  |

 **D. Describe how the monitoring of animals (e.g., daily observations, treatments performed by research staff) will be documented.**  Monitoring records must be readily available to inspectors and IACUC members at all times.

|  |
| --- |
|  |

**VI. Euthanasia/Disposition of Animals**

 **A. Describe the specific criteria for termination of animals if experiments could induce chronic disease, tumors, etc.** These criteria should be described in terms of tumor size, specific animal characteristics or behaviors, weight loss changes, observed clinical signs, etc.

|  |
| --- |
|  |

1. **Will the animal be euthanized at the end of the study?**

|  |  |
| --- | --- |
|  | **No – Describe their final disposition below** |
|  |

|  |  |
| --- | --- |
|  | **Yes – Complete the tables below (**Euthanasia must be in accord with the AVMA Guidelines for Euthanasia of Animals: <https://www.avma.org/KB/Policies/Documents/euthanasia.pdf> |
| **Species** | **Drug/Method** | **Dose of Agent if applicable** | **Route**  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| **Second method of euthanasia for assurance of death:** |
| **Species** | **Drug/Method** | **Dose of Agent if applicable** | **Route**  |
|  |  |  |  |
|  |  |  |  |

1. **How will the carcasses be disposed of?**

|  |
| --- |
|  |

*You have reached the end of this form. Please make sure that you have responded to every question on this application and that you have filled out all of the applicable appendices. Please delete any non-applicable appendices.*

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Institutional Animal care and Use Committee (IACUC)

**Appendix A**

Surgery

Complete this appendix for *each* surgical procedure and/or species even if the same information exists elsewhere in the application.

**1. Surgical procedure is:**

|  |  |
| --- | --- |
|  | **Non Survival** |
|  | **Survival** |

**2. Species:**

|  |
| --- |
|  |

**3. Name of surgeon(s):**

|  |
| --- |
|  |

**4. Relevant experience with the animal model and procedure being used for each individual performing the surgical procedure:**

|  |
| --- |
|  |

**5. Describe the surgical procedure:**

|  |
| --- |
|  |

# 6. Anesthetic(s) (Include dose/route/frequency AND criteria for judging depth of anesthesia):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Anesthetic Used**  | **Dose** | **Route** | **Frequency** | **Criteria for judging depth** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# For Survival Surgery (Major survival surgery is defined as penetrating a body cavity or having the potential for producing a permanent handicap for an animal expected to recover from surgery.)

**7. How long will the animals be maintained after surgery?**

|  |
| --- |
|  |

**8. Describe postoperative care to be given:** Include pain management, monitoring of incisions, fluids and body temperature.

|  |
| --- |
|  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Analgesic Used**  | **Dose** | **Route** | **Frequency** | **Criteria for monitoring pain** |
|  |  |  |  |  |
|  |  |  |  |  |
| **Antibiotic Used**  | **Dose** | **Route** | **Frequency** | **Duration** |
|  |  |  |  |  |

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Institutional Animal care and Use Committee (IACUC)

**Appendix B**

Wild-Caught Animals

**1. Does this research require federal or state permits?**

|  |  |
| --- | --- |
|  | **No** |
|  | **Yes –** Attach a copy or indicate the dates of permit application and agencies. |

|  |
| --- |
|  |

**2. If the research will have an effect on the survival or reproduction of the animal, explain the anticipated extent of the impact and the alternative protocols considered:**

|  |
| --- |
|  |

**3. Describe the methods of capture to be used and cite the literature reference if the method is standard procedure or provide a detailed description if it is a non-standard method:**

|  |
| --- |
|  |

# 4. Provide an estimate of the expected mortality for each capture method:

|  |
| --- |
|  |

**5. If blood or tissue samples are to be taken, indicate the type of sample, the method used, a literature reference if the method is standard procedure or provide a detailed description if it is a non-standard procedure. Include an estimate of the expected mortality for each sampling method.**

|  |
| --- |
|  |

**6. If the animals are held in captivity for a period longer than necessary to band, mark, measure, or take samples from, indicate the type of enclosure or cage, provide details on the care to be provided:**

|  |
| --- |
|  |

**7. Is Federal or state approval required to return the animals to the wild after being held in captivity?**

|  |  |
| --- | --- |
|  | **No** |
|  | **Yes** (Include copies of the approvals) |

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Institutional Animal care and Use Committee (IACUC)

**Appendix C**

Antibody Production

**1. List species:**

|  |
| --- |
|  |

**2. List antigen(s):** Note: If any of the components (including the vehicles) used in the preparation of the inoculum are non-pharmaceutical grade, please complete Appendix H. Refer to the [IACUC Policy](https://www.uwlax.edu/iacuc/use-of-non-pharmaceutical-grade-chemicals-and-substances-in-mammals/) for more information.

|  |
| --- |
|  |

**3. List or describe adjuvant(s):**

|  |  |
| --- | --- |
| **Initial immunization:** |  |
| **Subsequent immunizations:** |  |

**4. List or describe injection**: List anatomic site, volume administered per injection site, total volume administered at one time, injection frequency and total number of administrations:

|  |
| --- |
|  |

**5. List or describe procedure for collecting blood or other body fluids:** List site, volume, frequency and method used. Indicate anesthetics, analgesics, or tranquilizers to be used, if any, and duration of use.

|  |
| --- |
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Institutional Animal care and Use Committee (IACUC)

**Appendix D**

Toxicology Studies/Microbial Virulence Testing

**1. Describe materials to be evaluated:** If hazardous biological materials are used, complete Appendix F. If hazardous chemicals, radioactive materials or ionizing radiation sources are used, complete Appendix I.

|  |
| --- |
|  |

**2. Describe the route and duration of administration:**

|  |
| --- |
|  |

**3. Describe the testing method employed (LD50, etc):**

|  |
| --- |
|  |

**4. Describe criteria that will be used to ensure that the animal does not experience pain or distress and methods to monitor animals:**

|  |
| --- |
|  |

**5. If pain or distress are anticipated, how will they be minimized? Describe methods, including dose and route of administration, if appropriate:**

|  |
| --- |
|  |

**6. What are the endpoints of these studies?** Describe the specific criteria for termination of animals if experiments could induce chronic disease, tumors, etc. These criteria should be described in terms of tumor size, specific animal characteristics or behaviors, weight loss changes, observed clinical signs, etc.

|  |
| --- |
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Institutional Animal care and Use Committee (IACUC)

**Appendix E**

Dietary Manipulations or Fluid Restriction

**1. Describe any dietary manipulations or special feeding requirements:**

|  |
| --- |
|  |

**2. Describe length of time animals will be on experimental diet:**

|  |
| --- |
|  |

**3. Will animals be provided less than ad lib fluids or drinking water for experimental reasons?**

|  |  |
| --- | --- |
|  | **No** |
|  | **Yes** (*provide details below* including amount/day, monitoring of animals, criteria used to determine the well-being of animals and scientific justification) |

|  |
| --- |
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Institutional Animal care and Use Committee (IACUC)

**Appendix F**

Hazardous Biological Agents

If using hazardous biological agents, a copy of this protocol must be submitted to the Institutional Biosafety Committee (IBC) for review along with an IBC biosafety protocol form. A copy of the biosafety protocol form and a letter from the IBC stating your protocol has been reviewed and approved are required for final IACUC approval. Refer to the IBC website (https://www.uwlax.edu/grants/institutional-bio-safety-committee/) and [IACUC policy](https://www.uwlax.edu/iacuc/use-of-hazardous-agents-in-live-animals/) for more information.

If you have questions about whether your research materials qualify as a hazardous biological agent, please contact grants@uwlax.edu

1. **Recombinant Materials (including transgenic animals):**
2. **Details of Recombinant Material Use:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **What is the gene that will be modified? Is this a gain or loss of function(s)?** | **Route of Administration** | **Dosage** | **Is the agent infectious to humans or animals?** | **Route of Excretion** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**b. Outline How Recombinant Materials Will be Disposed:**

1. **Infectious Agents (e.g., microorganisms, viruses, prions):**
2. **Details of Infectious Agent Use:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of Agent** | **Biosafety Level** | **Route of Administration** | **Dosage** | **Is the agent infectious to humans or animals?** | **Route of Excretion** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. **Outline How Infectious Agents Will be Disposed:**
2. **Human and Non-Human Animal Tissues, Cell Lines, & Blood Products:**
3. **Details of Use:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of Agent** | **Biosafety Level** | **Route of Administration** | **Dosage** | **Is the agent infectious to humans or animals?** | **Route of Excretion** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. **Outline How Materials Will be Disposed:**
2. **Biological Toxins:**
3. **Details of Biological Toxin Use:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of Agent** | **Biosafety Level** | **Route of Administration** | **Dosage** | **Is the agent infectious to humans or animals?** | **Route of Excretion** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. **Outline How Biological Toxins Will be Disposed:**

**5. Safety Procedures for Animal Handlers:**

 **Personal Protection.** Check all personal protective apparel that will be used.

|  |  |  |
| --- | --- | --- |
|  | **Gloves – Type and single or double layer** |  |
|  | **Lab Coat** |
|  | **Shoe Covers** |
|  | **Safety Glasses** |
|  | **Chemical Goggles** |
|  | **Face Shield** |
|  | **Hair Cover** |
|  | **Surgical Face Mask** |
|  | **Particulate Respirator** |

 **Other Precautionary Measures and Procedures:**

|  |
| --- |
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Institutional Animal care and Use Committee (IACUC)

**Appendix G**

Breeding Colonies

**1. Breeding Colony Justification:** Provide a justification for establishing and maintaining a breeding colony. Note: Cost savings alone may not be a valid justification.

|  |
| --- |
|  |

**2. Who will be responsible for the breeding program?**

|  |  |
| --- | --- |
|  | **HSC Lab Animal Facility Personnel** |
|  | **PI** |
|  | **Other –** explain below |

|  |
| --- |
|  |

**3. Housing and breeding location:**

|  |  |
| --- | --- |
|  | **HSC**  |
|  | **Cowley Hall** |
|  | **Other –** explain below |
|  |

**4. Animal Information:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species & Strain** | **Est. number of breeders needed** **♂/♀** | **Est. number of offspring used in experiments** | **Est. number of offspring used as replacement breeders** | **Est. number of offspring NOTused in experiments or as breeders** |
|  |  |  |  |  |
|  |  |  |  |  |

**5. What is the final disposition of the unused offspring, why won’t they be used, and describe what will be done to minimize this number?**

|  |
| --- |
|  |

**6. What is the final disposition of the adult breeders when they are retired?**

|  |
| --- |
|  |

**7. Describe the breeding scheme (pair, trio, harem, timed, mix):**

|  |
| --- |
|  |

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Institutional Animal care and Use Committee (IACUC)

**Appendix H**

Use of Non-Pharmaceutical Chemicals and Compounds

USDA (Policy #3) and The Guide (8th Edition) requires the use of pharmaceutical-grade substances (medications, diluents, and extenders) when available. This ensures that the substances administered meet established documentable standards of purity and composition. This in turn helps ensure research animal health and welfare, as well as the validity of experimental results. The use of lower grade substances/compounds with undefined or higher levels of impurities or poorly formulated non-commercial preparations can introduce unwanted experimental variables or even toxic effects, and so should be avoided if at all possible.

It is important to understand that this pertains to all components, both active and inactive, contained in the preparation to be administered. Therefore, the vehicle used to facilitate administration of a compound is as important of a consideration as the active compound in the preparation.

Refer to the [IACUC policy](https://www.uwlax.edu/iacuc/use-of-non-pharmaceutical-grade-chemicals-and-substances-in-mammals/) for more information.

**1. List all of the substances** (anesthesia, analgesia, drugs, vehicles, fluids, substances, etc.) that will be administered to animals that are non pharmaceutical grade (USP, NF, or BP).

|  |
| --- |
|  |

**2. Provide a justification for the use of each non-pharmaceutical grade substance.**

|  |  |
| --- | --- |
| **Agent** | **Justification** |
|  |  |
|  |  |

**3. Provide the pH and the Osmolality of each non-pharmaceutical grade substance:**

|  |  |  |
| --- | --- | --- |
| **Agent** | **pH** | **Osmolality** |
|  |  |  |
|  |  |  |

**4. How will sterility be accomplished:**

|  |  |
| --- | --- |
| **Agent** | **Method** |
|  |  |
|  |  |

**5. How will the substances be stored?**

|  |
| --- |
|  |

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Institutional Animal care and Use Committee (IACUC)

**Appendix I**

Hazardous Chemicals, Radioactive Materials, and Ionizing Radiation Sources

If using hazardous chemical(s), radioactive materials, and/or ionizing radiation sources, a copy of this protocol must be submitted to UWL’s Environmental Health and Safety (EHS) Officer (dsweetman@uwlax.edu**)** for review and approval. If needed, contact EHS for guidance on containment and disposal. A copy of the application and a letter from EHS stating your protocol has been reviewed and approved is required for final IACUC approval. Refer to the [IACUC policy](https://www.uwlax.edu/iacuc/use-of-hazardous-agents-in-live-animals/) for more information.

If you have questions about whether your research materials qualify as a hazardous biological agent, please contact dsweetman@uwlax.edu

1. **Hazardous Chemicals:**
2. **Details of Chemical Use:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical Name** |  **Primary Chemical Hazard(s) (carcinogen, toxin, teratogen…)** | **Route of Administration** | **Dosage** | **Route of Excretion** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. **Details of Disposal:**

**Outline how chemicals will be disposed:**

**2. Radioactive Materials and Ionizing Radiation Sources:**

1. **Details of Use:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Radioactive Materials, X-Ray Equipment Used** | **Monitoring Equipment** | **Method of Exposure** | **Activity to be Administered****(µCi/mCi)** | **Route of Excretion** | **Activity Excreted (µCi/mCi)** | **Is the carcass hazardous?** | **Is the bedding or caging hazardous?** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. **Details of Disposal:**

**Outline how radioactive materials will be disposed:**

**3. Safety Procedures for Animal Handlers:**

1. **Describe Engineering Controls** (e.g., biological safety cabinet, fume hood, control of fugitive emissions of gases, barriers, enclosures):
2. **Describe Administrative Controls and Work Practices** (e.g., safety training provided to Animal Handlers, special/unique safety procedures, biological monitoring of animal handlers, pre-placement medical exam):

1. **Personal Protective Equipment (PPE).** Check all PPE that will be used.

|  |  |  |
| --- | --- | --- |
|  | **Gloves – Type and single or double layer** |  |
|  | **Lab Coat** |
|  | **Shoe Covers** |
|  | **Safety Glasses** |
|  | **Chemical Goggles** |
|  | **Face Shield** |
|  | **Hair Cover** |
|  | **Surgical Face Mask** |
|  | **Particulate Respirator (Training must be provided by EHS)** |

 **d. Other Precautionary Measures and Procedures:**

|  |
| --- |
|  |