# University of Missouri - Kansas City

# Institutional Animal Care and Use Committee Animal Protocol Form

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| Responsibilities of the PI |

The Principal Investigator (PI) is responsible for keeping this protocol current. If changes to the original protocol become necessary, the PI must submit a request for approval of the proposed change(s) to the IACUC before the changes are implemented. The IACUC must approve the reported changes prior to implementing the revised procedure.

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| Amendments |

Animal care and use changes that require submission of an amendment include, but are not limited to the following examples:

1. Study objectives
2. Blood collection site, frequency, or volume
3. Surgery status (non-survival to survival surgery, minor to major surgery, change in surgery procedure or frequency)
4. Invasiveness or level of discomfort, pain or distress to animals
5. Tumor type in transplantation procedures
6. Personnel involved in animal procedures (PI, Co-investigators, faculty sponsor)
7. Species of animal
8. Increase from approved animal number
9. Animal procedures within the protocol
10. Anesthetic or analgesic drugs (additions or suspensions in administration, change in the drug being used)
11. Method of euthanasia
12. Duration, frequency, or number of procedures performed on individual animals
13. Source of funding

|  |
| --- |
| Approval: |

**IACUC approved animal care and use protocols are valid for a specified period of time not to exceed 3 years. However, annual review by the IACUC is necessary for continuation of the project. The Protocol must be submitted and approved as a new protocol prior to its three year expiration.**

**Any animal possession or experimentation is prohibited without an IACUC approval.**

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| Review and Submission: |

A protocol will be reviewed only afterall sections and appropriate documentation has been received by the IACUC office. Please complete all sections appropriately. Please do not refer to attached passages from grants or reprints and **do not embed web links** as a substitute for required information.

Submit your protocol to the IACUC for review by e-mailing the protocol and all appropriate documentation to the IACUC office. E-mail: UMKC-IACUC coordinator at UMKCIACUC@umkc.edu

|  |
| --- |
| **For IACUC Office Use Only** |
| **Former Protocol Number:** |  | **New Protocol Number:** |  |
| **Approval Date:** |  | **3-year Expiration Date:** |  |
| **Next Review Date:** |  | **Training Completed:** | **Yes** |  | **No** |  |
| **Number of Animals:** | **Species:** | **USDA Category:** |  |
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|  |  |
| **Chairperson or designee , Institutional Animal Care and Use Committee** | **Date** |

# University of Missouri - Kansas City

# Institutional Animal Care and Use Committee Animal Protocol Form

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| --- | --- | --- | --- | --- |
| **IACUC Protocol Number** |  |  | **Date Submitted**  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Initial Submission** |  | **3 Year Renewal** |
|  | **Major Amendment** |  | **Annual Continuation with changes** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species used :** |  | Mouse |  | Rat |  | Rabbit |  | Other: Please indicate |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Principal Investigator:**  |  | **Degree(s):** |  |
| **Office Address:**  |  | **School:** |  |
| **Campus Phone:** |  | **E-mail Address:** |  |
| **Animal Emergency Contact Name:** |  | **Animal Emergency Contact Phone** **(off campus):** |  |
| **Title of Protocol:** |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Is this Project Funded?**  |  | **Yes** |  | **No** |  |
| **Name of Funding Agency.** |  |
| **Title of the funded Project:** |  |
| **Grant Number:** |  |

***(A copy of the grant/funded proposal must be submitted for review with all funded research projects)***

|  |
| --- |
| **If not supported by a funding agency, please indicate how the work will be supported. (*NOTE – a scientific merit review must be performed if not funded by an approved funding agency* )** |
|  |

**CHECK LIST:**

This Checklist is part of your application. Indicate **YES** or **NO** as it applies to your research project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Yes** |  | **No** | Scientific Merit Review Completed by one of the [funding agencies on the IACUC list that conduct acceptable Scientific Merit Review](http://www.umkc.edu/ors/iacuc/docs/Scientific_Merit_Review_Guidelines.pdf)? |
|  | **Yes** |  | **No** | **If No** to the above, have two members of your department completed a Scientific Merit Review? Please attach a copy of the [Departmental Scientific Merit Review Memo](http://www.umkc.edu/ors/iacuc/) when you submit your protocol for IACUC review. |
|  | **Yes** |  | **No** | Have you (PI) and all the project personnel completed the [appropriate IACUC CITI training](http://www.umkc.edu/ors/iacuc/training.cfm)? |
|  | **Yes** |  | **No** | Have you (PI) and all the project personnel completed the [animal exposure report form](http://ors.umkc.edu/apps/iacuc/ohs.cfm)? |
|  | **Yes** |  | **No** | Does the need for animals **ONLY** involve euthanasia for the purpose of harvesting tissue? |
|  | **Yes** |  | **No** | Will animal manipulations, **including euthanasia**, be conducted in rooms/laboratories outside of the **Laboratory Animal Research Core** (LARC)? |
|  | **Yes** |  | **No** | Will animals be housed outside the LARC for [12 hours or longer](http://www.umkc.edu/ors/iacuc/training.cfm)? |
|  | **Yes** |  | **No** | Will special housing or environmental conditions be required within the LARC?  |
|  | **Yes** |  | **No** | Is prolonged **physical restraint** employed?  |
|  | **Yes** |  | **No** | Are **special diets and/or fluid/diet restriction** required?  |
|  | **Yes** |  | **No** | **Will** hazardous agents, such as [radioactive materials](http://www.umkc.edu/ors/rsc/), infectious agents, carcinogens, toxins, chemicals, human/animal blood, fluids, tissue, [recombinant DNA](http://www.umkc.edu/ors/ibc/) or other noxious/biohazardous agents be used?  |
|  | **Yes** |  | **No** | Will **non-pharmaceutical grade** compounds be used as part of this study? (a scientific justification will be necessary for approval) |
|  | **Yes** |  | **No** | Will **genetically altered animals (transgenic and knockout)** be used?  |
|  | **Yes** |  | **No** | Will you be breeding genetically altered animals to create new strains? If yes, please provide IBC protocol number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | **Yes** |  | **No** | Will **surgery (survival, non-survival or a combination)** be performed?  |
|  | **Yes** |  | **No** | Will **multiple surgeries** be performed? **(survival, non-survival or a combination, including surgeries performed at the vendor)**  |
|  | **Yes** |  | **No** | Will animals experience pain or distress (non-surgical)? If yes, please answer the following question. |
|  |  | **Yes** |  | **No** | Will **analgesic or anesthetic agents** be administered to relieve pain or distress?  |
|  | **Yes** |  | **No** | Does your animal research require the taking of photographs or videos within the LARC facilities? |

# Investigator Assurance:

To the best of my knowledge, I certify that the information provided in this Animal Protocol Form is complete and accurate. I understand that the IACUC approval is valid for one year only, that approval must be renewed annually, and that every third year I will be required to submit a new protocol in the form of a three-year renewal, possibly on an updated version of the IACUC protocol form.

**I understand that:**

Modifications of any type to the procedures described in this protocol require re-review of the protocol or approval of a protocol amendment by the IACUC. This includes (but is not limited to):

* Performing additional procedures not already described in this Animal Protocol Form.
* Changes in procedures that might increase the pain/distress category in which the animals are placed, or might otherwise be considered to be a significant departure from procedures described in this protocol.
* Use of additional animal species, increase in the number of animals used or increase in the number of procedures performed on an individual animal.
* Changing the agents or dosages for anesthesia, analgesia, tranquilization or euthanasia, or introducing the use of additional (bio)hazardous materials
* Using these animals on another of my IACUC-approved protocols or allowing another investigator to use these animals on their protocol without the proper animal transfer being competed by LARC Manager

**I further certify that**:

* No personnel will be allowed into the LARC or be able to perform animal procedures until they have been approved by the IACUC. I will ensure that all personnel listed on this Animal Protocol Form have completed their Animal Exposure Report Form and have completed the CITI Training modules for the specie(s) approved.
* All animal research personnel having insufficient training and/or experience to assure competency in performing the procedures described in this protocol will work only under direct supervision of a person who is fully competent until they have sufficient experience in the procedures.
* I have considered alternatives for the animal models proposed for use in this project and found other methods not feasible.
* I have determined that the experiments proposed herein do not unnecessarily duplicate any previously reported research.
* I will notify the IACUC of any unanticipated study outcomes that may have animal welfare implications. I will report any unanticipated pain or distress, morbidity, or mortality to the attending veterinarian and the IACUC.
* If this protocol involves breeding and/or maintenance of genetically modified animals, I recognize that possible adverse effects may occur as a result of the genetic modification. For example, embryonic mortality may occur and/or there may be unpredictable effects caused by interference with expression of normal genes or expression of the transgene. Animals exhibiting any unexpected phenotypes that cause them pain or distress will be sacrificed, or in the case of individual animals of particular scientific interest, the attending veterinarian will be consulted on methods for alleviating pain or distress.

I certify that I and all persons under my supervision involved in this project will comply with the appropriate regulations and guides United States Department of Agriculture (USDA), National Institution of Health (NIH), Office of Laboratory Animal Welfare (OLAW), Public Health Service (PHS), Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC), Drug Enforcement Administration (DEA), Bureau of Narcotics and Dangerous Drugs (BNDD), Department of Defense (DoD) Center for Disease Control (CDC) and UMKC IACUC policies.

|  |  |
| --- | --- |
|  | I have read and certify that the above statements are truthful to the best of my knowledge |

|  |  |  |  |
| --- | --- | --- | --- |
| **Principal Investigator:** |  | **Date of Certification** |  |

**Section I**

**Personnel Qualifications:**

In the table below explain the training or experience**, as it pertains to the procedures and related experiments in this protocol**, of the principle investigator (PI), co-investigator (Co-PI) and other personnel who will be responsible for performing experimental animal procedures or who will be responsible for the direct supervision or training of other personnel.

**NOTE**:

* The Animal Exposure Report Form must be completed once every three (3) years via the online submission process at <http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee/iacuc-animal-exposure-report>.
* CITI Training Modules must be completed once every three years. The CITI modules are found online at [www.citiprogram.org](http://www.citiprogram.org).

|  |  |  |  |
| --- | --- | --- | --- |
| **PI Name:** |  | **Degree(s):** |  |
| **e-mail address:** |  |
| **Species:** |  |
| **Description of training and experience related to the procedures and species described in this protocol or description of how training will be provided and by whom.** |  |
| ***IACUC and CITI Training:******IACUC will indicate the training that has been completed*** |
| **Animal Exposure Report Form** | **Group 2: Researchers** | **Working with Mice in a Research Setting** | **Working with Rats in a Research Setting** | **Working with Rabbits in a Research Setting** | **Other:** |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name:** |  | **Degree(s):** |  |
| **e-mail address:** |  |
| **Species:** |  |
| **Description of training and experience related to the procedures and species described in this protocol or description of how training will be provided and by whom.** |  |
| ***IACUC and CITI Training:******IACUC will indicate the training that has been completed*** |
| **Animal Exposure Report Form** | **Group 2: Researchers** | **Working with Mice in a Research Setting** | **Working with Rats in a Research Setting** | **Working with Rabbits in a Research Setting** | **Other:** |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Name:** |  | **Degree(s):** |  |
| **e-mail address:** |  |
| **Species:** |  |
| **Description of training and experience related to the procedures and species described in this protocol or description of how training will be provided and by whom.** |  |
| ***IACUC and CITI Training:******IACUC will indicate the training that has been completed*** |
| **Animal Exposure Report Form** | **Group 2: Researchers** | **Working with Mice in a Research Setting** | **Working with Rats in a Research Setting** | **Working with Rabbits in a Research Setting** | **Other:** |
|  |  |  |  |  |  |

**(*If additional tables are needed please copy and paste a new table below)***

**Section II**

 **Lay Description of Proposed Research**

1. Lay Summary of Purpose of Research:

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| --- |
| Using **non-technical language that a senior high school student would understand**, briefly describe the purpose of this research project and how this research project might improve the health of humans and/or animals or general scientific knowledge *(please limit to about a half page)* |
|  |

1. Lay Summary of Experimental Design/Proposed Use of Animals:

|  |
| --- |
| Using non-technical language that a senior high school student would understand briefly summarize the experimental design and explain how animals will be used in the research. List what procedures will be performed and the species/strain that will be used *(please limit to about a half page)*.  |
|  |

**Section III**

**Justification of Animal Numbers, Rationale for Use of Animals and Pain Categories:**

**A.) Rationale for use of animals:**

|  |
| --- |
| Justify the need for involving vertebrate animals and explain why non-animal alternatives such as mechanical models, computer simulations, bacteria, yeast, or systems other than live animals, such as cell/tissue culture, isolated organ preparations, etc., or invertebrate animals, are not appropriate to accomplish the research goals |
|   |

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| --- |
| Explain the rationale for selecting the species for the proposed studies. |
|   |

**B.) Source(s) of animals**:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Yes** |  | **No** |  | **Both** | LARC Approved Vendor? If No, please see [LARC SOP](http://www.umkc.edu/ors/larc/docs/LARC-01%20Rodent%20Acquisition%20and%20Quarantine%20from%20Non-Approved%20Vendors.pdf) and provide the name of the Vendor/Provider (If no, state the source and explanation why this source is necessary) |
| Source and explanation: |

**C.) Genetically Altered Animals: (Transgenic and Knockout)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Are Genetically Altered Animals Used? (Transgenic and Knockout)** |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  | **If No, go to section III D** |

|  |
| --- |
| **List the genotypes to be used, describe any phenotypic consequences of the genetic changes to the animals and the outcome of these consequences (e.g. whether or not any change in animal welfare is anticipated)** |
|  |

|  |
| --- |
| **Describe any special care or monitoring the animals will require.**  |
|  |

1. Justify the number of animals requested:

Describe **the statistical methods** (*e.g., power analyses*) **and/or other rationales** (*e.g., tissue collection needs, estimated yield of cells per animal, breeding efficiency, etc*.) that you used to determine the number of animals required. **Please be specific.**

Your justification should include:

* the number of animals per group,
* the number of experimental groups
* the total number of animals requested.

**Strongly consider using a chart or table to illustrate animal numbers required for each study component**.

*NOTE - If this is a pilot study, this should be clearly stated and although a power analysis may not be possible, a well-reasoned rationale for the number of animals used should be given*.

|  |
| --- |
|  **Justification of Experimental Animal Numbers**  |
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If you need to breed animals to obtain the required experimental animals, your justification should include the total number of animals produced, including breeders, experimental animals and animals that cannot be used (improper genotype and sex).

|  |
| --- |
| **Justification of Number of Animals in Breeding Program**  |
|  |

1. Summary of Animal Numbers by Pain Category:

In the table below, identify the experimental groups to be used and the pain categories that apply to them for each species (definitions of the pain categories are provided below). Add additional rows for experimental groups as needed.  In cases where multiple species are to be used, a separate table must be done for each species. Procedures that vary for different species used in a project must be clearly outlined to accurately describe animal use.

**Pain Categories:**

* **Category B:** Animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.
* **Category C:** Teaching, research, experiments, or tests conducted involving no or only brief pain or distress, with no need for or use of pain relieving drugs. Examples of this category include injections of non-irritating agents, most blood collections, and collection of tissues after euthanasia, tail clipping in mice less than 21 days of age.
* **Category D:** Experiments, teaching, research, or tests conducted involving potential pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs are used. Examples, major and minor surgery, tissue collections prior to euthanasia*,* prolonged restraint accompanied by tranquilizers, sedatives, or anesthetics, and experiments involving illness, infections, or injury that have provisions for immediate euthanasia to prevent pain and/or suffering, tail clipping of mice older than 21 days.
* **Category E:** Animals that undergo procedures involving pain or distress for which tranquilizers, analgesics, or anesthetics are NOT given because the use of anesthetic, analgesic, or tranquilizing drugs would adversely affect the outcome of the study. Examples include death as an endpoint, pain research, noxious stimulation, and addictive drug withdrawal without treatment.

|  |  |  |
| --- | --- | --- |
| **Species and Strain:** |  | **Number of Animals for 3 year Protocol Period** |
| **Pain Category** | **B** | **C** | **D** | **E** |
| **Species (Specify – Breed/Strain/Age Weight)** |  |  |  |  |
| **Experimental Groups (list)**  |  |  |  |  |
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| **TOTAL (for each category)** |  |  |  |  |
|  | **GRAND TOTAL (all categories)** |  |

**Section IV**

**Consideration of Alternatives to Painful Procedures and Avoiding Unnecessary Duplication of Experiments**

Federal regulations prohibit the unnecessary duplication of animal use. Therefore adequate justification must be provided for any experiments that duplicate previous work.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Yes** |  | **No** | Does the proposed use of animals in this study duplicate previous experimentation on this species? (If yes, explain why is the duplication necessary)  |
|  |

Investigators must consider alternatives to painful and stressful procedures as well as the species to be used in their protocol. In addition, the investigator must assure the proposed research does not unnecessarily duplicate previous work.

These alternatives are referred to as the 3 R's of Reduction, Refinement, and Replacement: the reduction in the number of animals used, refinement of techniques and procedures to reduce pain or distress, and the replacement of animals with non-animal techniques or use of less-sentient species.

You must perform a database search, using at least 2 databases, to meet the mandates.  Complete the table below for each database search you conducted. For assistance, go to <http://libguides.library.umkc.edu/alternatives>

|  |  |
| --- | --- |
| **Search Source** |  |
| **Key Words/Search Strategy:** |  |
| **Range of Years Searched:** |  |
| **Date of Search:**  |  |
| **Search Results:** |  |

|  |  |
| --- | --- |
| **Search Source** |  |
| **Key Words/Search Strategy:** |  |
| **Range of Years Searched:** |  |
| **Date of Search:**  |  |
| **Search Results:** |  |

**Section V**

**Experimental Procedures:**

|  |
| --- |
| **Description of Experimental Design and Animal Procedures** Explain in detail the experimental design and specify all animal procedures. This description should allow the reader to follow each animal from entry into the experiment to study endpoint. **Specifically address the following:*** Experimental injections or inoculations *(drugs, chemicals, infectious agents, radioisotopes, antigen, adjuvant, etc., dose, route, site, volume, and schedules)*
* Collection of blood or other biological samples *(volume, frequency, withdrawal sites, and methods)*
* General surgical and anesthesia procedures (*give a very brief general description here - details should follow in the “Surgical Procedures” section of the form*.)
* Radioactive materials (*Dosage and schedule*)
* Methods of restraint (collars, vests, slings, tethers, etc.). *(give a brief description/listing here– details should follow in section XI of the form)*
* Describe any other animal procedures. *(note – procedures for identification and genotyping of mice in breeding colonies are described in section VI and do not need to be described here*)
 |
|  |

1. Use of Non-pharmaceutical grade drugs/compounds/reagents.

Non-pharmaceutical-grade drugs/compounds/reagents can only be used in animals after approval by the IACUC for scientific necessity or non-availability of an acceptable veterinary or human pharmaceutical-grade product. Cost saving is not an adequate justification.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Yes** |  | **No** | **Will Non-pharmaceutical grade drugs/compound/reagents be used in this protocol?** |
| **Non-pharmaceutical agent** | **Dose range / volume** | **Concentration** | **Site** | **Route** |
|  |  |  |  |  |
|  |  |  |  |  |

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| **Justification for each agent(s)** |
|  |
| **Describe preparation of each agent:****Please include information on the vehicle, how sterility is assured and how agent is stored.****Describe how it was determined the preparation is not irritating or toxic to the animal** |
|  |

1. Euthanasia

Describe the method of euthanasia.

|  |  |  |
| --- | --- | --- |
| **Species** | **Agent** | Method, Dosage (mg/kg) andRoute (IM, IV, IP) of Administration  |
|  |  |  |
|  |  |  |
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| --- |
| **Confirmation of Death must be performed.****Physical methods to assure death following the use of agents listed above: check all that apply** |
| **Method** | Yes | Explanation |
| **Pneumothorax** |  |  |
| **Exsanguination** |  |  |
| **Cervical dislocation** |  |  |
| **Decapitation** |  |  |
| **Other** |  |  |

|  |
| --- |
| **Are all euthanasia methods acceptable** **according to the latest Report of the AVMA Panel on Euthanasia?** See [AVMA Panel on Euthanasia](https://www.avma.org/KB/Policies/Pages/Euthanasia-Guidelines.aspx) |
|  | Yes |  | No | If acceptable ***with conditions***, please checkmark the appropriate box(s) below  |

|  |  |  |
| --- | --- | --- |
|   | **CO2**  | Describe how conditions are met: |
|  | **Decapitation** |
|  | **Cervical Dislocation** |

|  |  |
| --- | --- |
| **Species** | **Name of Person(s) Responsible for Performing Euthanasia** |
|  |  |
|   |   |

1. Tissue harvesting and animal transfers: To reduce the number of animals used in research at this institution, some animals under existing protocols could be transferred for use under other approved protocols after they are no longer useful to the protocol under which they were obtained. If you would consider transfer of animals which qualify, please indicate below. *(Such transfer requires a letter from both the donor and recipient principal investigators stating the protocol numbers, number of animals to be transferred, species and proposed use)*

|  |
| --- |
| **Potential for Transfer** |
| **Yes** | **No** | **Animal Model(s)** | **Number of Animals** |
|   |  |   |   |
|  |  |  |  |

To reduce the numbers of animals used, tissues/organs from animals that are euthanized under approved protocols can be made available to other investigators. If you would consider cooperating with other investigators in arranging such uses, please indicate below.

|  |
| --- |
| **Tissue Harvesting** |
| **Yes** | **No** | **Animal Model(s)** | **Number of Animals** |
|   |  |   |   |
|  |  |  |  |

1. Photography and Videotaping in the LARC:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Does your animal research require the taking of photographs and/or video within the LARC facility?** |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  |  |

***NOTE – Please refer to the UMKC-IACUC policy on the taking of photographs and video within the LARC facilities and make sure that all your research staff follow this policy.***

|  |
| --- |
| **Describe and justify the need for photography and/or videotaping** |
|  |

**Section VI**

**Breeding colony procedures:**

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| --- |
| **Describe the method for obtaining tissue for genotyping (**e.g. ear punch, tail clip, etc.) |
|  |

|  |
| --- |
| **Describe the method for animal identification**  |
|  |

|  |
| --- |
| **Describe the disposition of retired breeders and undesired animals** (e.g. undesired genotype or gender) |
|  |

**Section VII**

**Anesthesia:**

1. Anesthetics. Using a separate line on the table below for each procedure which will require anesthetics list the species, procedure requiring anesthetic (e.g. probe implantation, reperfusion, exsanguination, etc.), duration of anesthesia, agent used, route of administration, dosage and volume.

| Species | Procedure Requiring Anesthetic | Anesthetic Agent Used | Routeof Administration | Dosage(mg/kg) / volume |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**B.) Supplemental Anesthetics**. Complete the table below for each procedure requiring supplemental anesthesia and list the species, agent used, route of administration, dosage and volume.

| Species | \*Supplemental AnestheticAgent to be Used | Route of Administration | Dosage (mg/kg) /volume |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

**C.) Monitoring depth of Anesthesia:**

|  |
| --- |
|  1) How will you ensure the animal has reached a sufficient depth of anesthesia? |
|  |

|  |
| --- |
| 2) Describe the method and frequency for monitoring depth of anesthesia. |
|  |

|  |
| --- |
| 3) How will you document anesthesia monitoring? |
|  |

|  |
| --- |
| **4) Describe the anesthesia recovery monitoring procedures.**Indicate the method(s) to be used, frequency and duration of monitoring through recovery and indicate when animal will be considered completely recovered and then how housed. |
|  |

1. Controlled drugs/substances:

|  |  |
| --- | --- |
| Name of controlled drug or substance: |  |
| Schedule (DEA classification): |  |
| Are you licensed with the DEA? |  | Yes |  | No |
| Are you licensed with the BNDD? |  | Yes |  | No |
| Storage location of controlled drugs/substances? |  | Building |  | Room |
| Do you maintain a log for use and disposition of controlled drugs/substances in compliance with DEA regulations? |  | Yes |  | No |

**Analgesic (*dosage/route/frequency)* to be used:**

|  |
| --- |
| **Analgesics for Mice** |
|  | **Agent** | **DEA****Schedule** | **Trade Name** | **Dosage (mg/kg)** | **Route** | **Frequency of dosing** |
|  | Buprenorphine | CIII | Buprenex | 0.05-0.1 | SC, IP, IV | 8-12 hr  |
|  | Butorphanol | CIV | Torbugesic | 1-5 | SC | 4 hr  |
|  | Flunixen |  | Banamine | 2.5 | SC, IM | 12 hr |
|  |  |  |  | 7.5 | PO | 4 hr |
|  | Ketoprofen |  | Ketofen | 1-2 | IM, SC |  |
|  | Meperidine | CII | Demerol | 12.5-25 | IP | 2-3 hr |
|  |  |  |  | 20 | SC | 2-3 hr |
|  | Morphine | CII |  | 1-2 | IP, SC | 2-4 hr  |

|  |
| --- |
| **Analgesics for Rats** |
|  | **Agent** | **DEA Schedule** | **Trade Name** | **Dosage (mg/kg)** | **Route** | **Duration** |
|  | Buprenorphine | CIII | Buprenex | 0.01-0.05 | SC, IP, IV | 8-12 hr  |
|  |  |  |  | 0.1-0.25 | PO | 8-12 hr |
|  | Butorphanol | CIV | Torbugesic | 2 | SC | 4 hr  |
|  | Fentanyl | CII |  | 0.032 | IM,IP |  |
|  | Flunixen |  | Banamine | 1.1-2.5 | SC, IM | 12 hr |
|  |  |  |  | 10-30 | PO | 4 hr |
|  | Ketoprofen |  | Ketofen | 1-2 | IM, SC |  |
|  | Meperidine | CII |  | 12.5-25 | IP | 2-3 hr |
|  |  |  |  | 20 | SC | 2-3 hr |
|  | Morphine | CII |  | 1-4 | IP, SC | 2-4 hr  |
|  | Xylazine |  | Rompun | 5-12 | SC | 2 hr  |

|  |
| --- |
| **Analgesics for Rabbits** |
|  | **Agent** | **DEA Schedule** | **Trade Name** | **Dosage (mg/kg)** | **Route** | **Frequency** |
|  | Aspirin |  |  | 100 | PO | 4 hr |
|  | Buprenorphine  | CIII | Buprenex | 0.01-0.05 | SC, IV | 6-12 hr  |
|  | Butorphanol | CIV | Torbugesic | 0.1-0.5 | SQ, IM, IV | 4 hr  |
|  | Flunixen |  | Banamine | 1.1 | IM | 12 hr |
|  | Ibuprofen |  |  | 10-20 | IV | 4 hr |
|  | Ketoprofen |  | Ketofen | 1-3 | IM |  |
|  | Meperidine | CII | Demerol | 5-10 | SC | 2-3 hr |
|  | Meloxicam |  | Metacam | 0.2 | SC | 24 hr  |
|  | Morphine | CII |  | 2.5 | SC | 2-4 hr  |
|  | Nalbuphine |  | Nubain | 1-2 | IV | 4-5 hr |

**Anesthetics *(dosage/route/frequency)* to be used**

|  |
| --- |
| **Injectable Anesthesia for Mice** |
|  | **Agent** | **DEA****Schedule** | **Dosage (mg/kg)** | **Route** | **Duration** |
|  | EMTU (Inactin) |  | 80 | IP | 60-240 min |
|  | Ketamine  | CIII | 80-100 | IM |  |
|  | CIII | 100 | IP |  |
|  | CIII | 50 | IV |  |
|  | Ketamine/acepromazine  | CIII | 100/2.5-5 | IM | 20-30 min |
|  | Ketamine/acepromazine/ xylazine  | CIII | 100/2.5/2.5 | IM | 20-30 min |
|  | Ketamine/diazepam  | CIII / CIV | 200/5 | IP, IM | 15-30 min |
|  | Ketamine/dex-medetomidine  | CIII | 75/0.5 -1 | IP | 20-30 min |
|  | Ketamine/xylazine  | CIII | 80-100/ 10 | IP, IM | 20-30 min |
|  | Pentobarbital  | CII | 30-50 | IP | 20-40 min |
|  | Propofol |  | 12-26 | IV | 5-10 min |
|  | Telazol  | CIII | 80-100 | IP |  |
|  | Tiletamine/ zolazepam/xylazine  | CIII | 20-40 / 5-10 | IP |  |
|  | Telazol/ butorphanol  | CIII / CIV | 20-40/1.25-5 | IP |  |
|  | Tribromoethanol (0.25%) (Avertin) |  | 125-250 | IP |  |

|  |
| --- |
| **Inhalation Anesthesia for Mice** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Isoflurane | 0.5-4% to effect | Inhalation | Requires use of a precision vaporizer |
|  | Carbon dioxide/oxygen | 50-80%/20-50% | Inhalation |  |

|  |
| --- |
| **Injectable Anesthesia for Rats** |
|  | **Agent** | **DEA****Schedule** | **Dosage (mg/kg)** | **Route** | **Duration** |
|  | Pentobarbital  | CII | 40-60 | IP | 20-60 min |
|  | EMTU (Inactin) |  | 80-100 | IP | 60-240 min |
|  | Ketamine  | CIII | 50-100 | IM |  |
|  | Ketamine/acepromazine  | CIII | 75-80/2.5 | IM | 20-30 min |
|  | Ketamine/diazepam  | CIII /CIV | 45-60/5-10 | IP | 15-30 min |
|  | Ketamine/dex-medetomidine CIII | CIII | 75/0.5 | IP | 20-30 min |
|  | Ketamine/xylazine  | CIII | 40-87/ 5-13 | IP, IM | 20-60 min |
|  | Tiletamine/zolazepam  | CIII | 20-40 | IP | 30-60 min |
|  |  |  | 20 | IM | 30-60 min |
|  | Tiletamine/ zolazepam/xylazine  | CIII | 20-40 / 5-10 | IP |  |
|  | Tiletamine/ zolazepam/ butorphanol  | CIII /CIV | 20-40/1.25-5 | IP | 30-60 min |
|  | Propofol |  | 7.5-10 | IV | 5-10 min |
|  | Tribromoethanol (0.25%)(Avertin) |  | 300 | IP |  |

|  |
| --- |
| **Inhalation Anesthesia for Rats** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Isoflurane | 0.5-4% to effect | Inhalation | Requires use of a precision vaporizer |
|  | Carbon dioxide/oxygen | 50-80%/20-50% | Inhalation |  |

|  |
| --- |
| **Injectable Anesthesia for Rabbits** |
|  | **Agent** | **DEA****Schedule** | **Dosage (mg/kg)** | **Route** | **Duration** |
|  | Ketamine  | CIII | 25-50 | IM |  |
|  | Ketamine/acepromazine  | CIII | 50-75/1-5 | IM | 20-30 min |
|  | Ketamine/diazepam  | CIII | 25/5 | IM | 20-30 min |
|  | Ketamine/dex-medetomidine  | CIII | 25/0.5 | IM | 30-40 min |
|  | Ketamine/xylazine  | CIII | 35-50/5-10 | IM | 25-40 min |
|  |  |  | 10/3 | IV | 20-30 min |
|  | Ketamine/xylazine/Acepromazine  | CIII | 35-40/3-5/0.75-1.0 | IM | 60-90 min |
|  | Pentobarbital  | CII | 20-60 | IV | 20-30 min |
|  | Propofol |  | 7.5-15 | IV | 10 min |

|  |
| --- |
| **Inhalation Anesthesia for Rabbits** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Isoflurane | 4-5% induction1.-2% maintenance | Inhalation | Requires use of a precision vaporizer |

**Sedatives and Tranquilizers for Mice**

|  |  |
| --- | --- |
|  | **Sedatives and Tranquilizers for Mice** |
|  | **Agent** | **DEA Schedule** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Acepromazine |  | 2-5 | SC, IP |  |
|  | Diazepam  | CIV | 5 | SC |  |
|  | Midazolam  | CIV | 5 | IP |  |

|  |  |
| --- | --- |
|  | **Sedatives and Tranquilizers for Rats** |
|  | **Agent** | **DEA Schedule** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Acepromazine |  | 2-5 | SC, IP |  |
|  | Diazepam  | CIV | 5-15 | SC |  |
|  | Midazolam  | CIV | 5 | IP |  |

|  |  |
| --- | --- |
|  | **Sedatives and Tranquilizers for Rabbits** |
|  | **Agent** | **DEA Schedule** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Acepromazine |  | 1-2 | IM |  |
|  | Diazepam  | CIV | 1-2 | IV |  |
|  | Midazolam  | CIV | 2 | IM, IV |  |

**Other/Miscellaneous for Mice**

|  |
| --- |
| **Miscellaneous for Mice** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Atropine | 0.04 | SC | Anticholinergic |
|  | Atipamezole | 0.1 – 1.0 | IP or SC | α2-antagonist |

|  |
| --- |
| **Miscellaneous for Rats** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Atropine | 0.04 | SC |  |
|  | Atipamezole | 0.1-1 | IP, SC |  |

|  |
| --- |
| **Miscellaneous for Rabbits** |
|  | **Agent** | **Dosage (mg/kg)** | **Route** | **Comments** |
|  | Atipamezole | 0.2 | IV | α2-antagonist |
|  | Glycopyrrolate | 0.1 | IM, SC | Anticholinergic |
|  | Naloxone | 0.001-0.1 | IV | Opiod reversal |

**References:**

1. Fox JG, Anderson LC, Loew FM, Quimby, FW. (2002) Laboratory Animal Medicine. Academic Press,

2nd Edition, New York, NY.

2. Hawk CT, Leary SL. (1999) Formulary for Laboratory Animals. Iowa State University Press, 2nd Edition, Ames, IA.

3. Thurmon JC, Tranquilli WJ, Benson GJ. (1996) Lumb and Jones Veterinary Anesthesia William & Wilkins, 3rd edition, Baltimore, MD

4. Quesenberry KE, Carpenter JW. (2003) Ferrets, Rabbits, and Rodents: Clinical Medicine and Surgery, Saunders, 2nd Edition, St. Louis, MO.

5. Kohn DF, Wixson S, White WJ, Benson GJ. (1997) Anesthesia and Analgesia in Laboratory AnimalsAcademic Press, New York, NY.

**Section VIII**

**Surgical Procedures:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Will surgical procedures be performed?** |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  | **If No, go to the next section** |
| **Location where surgery will be performed? (building & room number)** *If surgery is performed outside the LARC, the area must be inspected and approved by the IACUC before it can be used and will be inspected semi-annually.*  |  |

 **Definitions:**

* **Major surgery** penetrates and exposes a body cavity or produces substantial impairment of physical or physiological functions (e.g., laparotomy, craniotomy, thoracotomy, bone fracture).
* **Minor surgery** does not penetrate and expose a body cavity and does not produce substantive physical or physiological impairment (e.g., wound suturing, vessel cannulation, endoscopic procedures).
* **Survival surgery** is any surgical procedure from which the animal subject recovers consciousness after anesthesia.
* **Terminal surgery** is any surgical procedure in which the animal subject is terminated before recovering consciousness after anesthesia.

|  |
| --- |
| **List the Surgical Procedures to be performed** |
| **Major survival surgical procedures:** |  |
|  |
| **Major terminal surgical procedures:** |  |
|  |
| **Minor surgical procedures:** |  |
|  |

|  |
| --- |
| **Presurgical Preparation:**Include a description of fasting, pre-anesthetic medication (agent, route, dose volume) and preparation of the surgical site. |
|  |

|  |
| --- |
| **Detailed description of Surgical Procedure(s)** |
|  |

|  |
| --- |
| **If animals are subjected to more than one surgery, explain and justify the need for multiple surgeries (**including surgery performed at the vendor) |
|  |

**Qualifications of persons performing surgeries:**

|  |  |
| --- | --- |
| **Surgical Procedure** |  |
| **Species** | **Person(s) doing Surgery** | Qualifications or experience for this animal surgery or explanation of how training will be obtained |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| **Surgical Procedure** |  |
| **Species** | **Person(s) doing Surgery** | Qualifications or experience for this animal surgery or explanation of how training will be obtained |
|  |  |  |
|  |  |  |

**Post-Operative Care:**

|  |
| --- |
| **Explanation of Post-Operative Care:**(include medications [dose, route and frequency], treatments, observation schedule and suture removal)  |
|  |

**Documentation of Surgical and Post-Operative Care:**

Regulations require documentation of surgical procedures and post-operative care for all animals having surgery. The surgical and post-operative records must stay with the animal until sutures are removed or the animal is euthanized. For USDA covered species (excludes rats and mice) submission of these records to the LARC and retention in veterinary care files is required. You MUST use one of these two forms ([http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee-(iacuc))](http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee-%28iacuc%29%29) or submit your customized form for IACUC review/approval.

|  |
| --- |
| **Describe how you will document the Surgical Procedures and Post-Operative Care:**  |
|  |

|  |
| --- |
| **List individual(s) responsible for postoperative care and maintaining the records:** |
|  |

**Section IX**

**Pain and Distress / Humane Endpoint criteria:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Could the Procedures Used in this Study Potentially Cause Pain or Distress?**  |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  | **If No, go to the next section.** |

|  |
| --- |
| **Procedures used in this study that could potentially cause pain or distress include:** |
|  | Tumor or malignant cell growth |
|  | Exposure to toxic, irritating or infectious substances/agents |
|  | Addictive substances |
|  | Aversive stimuli use |
|  | Mother/infant separation |
|  | Abnormal environmental conditions |
|  |  Death as an Endpoint please refer to the UMKC policy found at <http://www.umkc.edu/ors/iacuc/training.cfm>  |
|  | Other (specify): |  |

**Please check all symptoms that could possibly occur as a result of procedures implemented in this protocol.**

|  |
| --- |
| **Change in general appearance** |
|  | Lack of grooming |  | Rough coat  |
|  | Nasal discharge  |  | Ocular discharge  |
|  | Abnormal posture  |  | Swelling |
|  | Tumor(s)  |
|  | Discoloration of fur, urine, or feces. Specify: |  |
|  | Other:  |  |

|  |
| --- |
|  **Change in normal respiration** |
|  | Rapid |  | Slow |
|  | Shallow  |  | Labored |
|  | Wheezing |  |   |
|  |  Other |  |

|  |
| --- |
| **Change in normal appetite** |
| Specify:  |  |

|  |
| --- |
| **Change in weight** |
|  |  Change in weight |  |  <10% weight loss  |
|  |  10-15% weight loss  |  |  >20% weight loss  |
|  | Other: |  |

|  |
| --- |
| **Changes in other physical characteristics** |
|  |  Hypothermia |  | Hyperthermia |
|  |  Muscle Atrophy  |  |  Bleeding |
|  |  Diarrhea |  | Constipation |
|  |  Infection |  | Blindness |
|  |  Paralysis |  |   |
|  | Other: |  |

|  |
| --- |
| **Change in behavior** |
|  | Hyperactivity  |  | Hypoactivity |
|  | Coma |  | Tremors |
|  | Convulsions |  | Limb Paralysis  |
|  | Prostration |  | Self-induced trauma or mutilation |
|  | Spasticity |  |  Agitation  |
|  | Depression |  |  Impaired ambulation |
|  | Other: |  |

|  |
| --- |
| **Other clinical signs:**  |
|     |

|  |
| --- |
| **Describe the procedures for ensuring that pain and distress will be limited to that which is unavoidable in the conduct of this project; include both analgesics and physical methods.** |
|  |

|  |
| --- |
| **Describe and provide your rationale for the anticipated or planned endpoints of the proposed experiments.** |
|  |

|  |
| --- |
| **Describe your criteria and procedures for timely intervention, removal of animals from a study or euthanasia if painful or stressful outcomes occur that are either anticipated as part of the planned study or are unanticipated.** |
|  |

|  |
| --- |
| **Provide a scientific justification for not alleviating pain or distress for any of the animal procedures in this protocol.** |
|  |

**Section X**

**Study location and animal transportation:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Will Live Animals be brought Outside the Laboratory Animal Research Core?**  |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  | **If No, go to the next section.** |

If animals will be transported or utilized outside of the LARC, you MUST follow the LARC animal transportation policy ([http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee-(iacuc](http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee-%28iacuc%29)) Please provide the following information:

|  |
| --- |
| **Laboratory Location** **(building and room number)** |
|  |

|  |
| --- |
| **What procedures (including euthanasia) are performed in the laboratory?** |
|  |

|  |
| --- |
| **Duration animals will be in the laboratory** |
|  |

If animals will be housed for **more than twelve (12) consecutive hours**, the space(s) must conform to the [Study Area Requirements](http://ors.umkc.edu/research-compliance/institutional-animal-care-use-committee-%28iacuc%29). The study area must be approved by the IACUC before animal can be housed.

|  |
| --- |
| **Provide a scientific justification for housing animals outside the LARC from more than 12 consecutive hours** |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Will animals be returned to the Laboratory Animal Research Core?**  |  | **Yes** | **If Yes, please contact the** [**LARC Manager**](http://www.umkc.edu/ors/home/contact.cfm) |
|  | **No** |

**(Note: Animals leaving the LARC cannot be returned to the general animal housing in the LARC. Special arrangements must be made with the LARC Manager for space in the “transition area”. Please contact the LARC Director to make arrangements. Space is limited and assigned on a first come/first serve basis.**

**Section XI**

**Animal care and husbandry:**

**Special Animal Care Requirements:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Is there a need for Special Animal Care?**  |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  | **If No, go to the next section** |

The UMKC Laboratory Animal Research Core adheres to husbandry, care and housing recommendations specified in the "Guide for the Care and Use of Laboratory Animals". If animals require special care (e.g. caging, diet or environment), please identify specific needs. Final arrangements for special care must be coordinated through the LARC Manager before any animals are ordered.

1. Describe special housing and husbandry requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Light Cycle: | Hrs. Light: |  | Hrs. Dark: |  |
| Caging type: |  |
| Cage / Bedding Changes/Week: |  | Bedding/litter Type: |  |

|  |  |
| --- | --- |
| **Other special instructions for animal care staff** |  |

1. Dietary Manipulation:

|  |
| --- |
| Species involved: |
|  |

|  |
| --- |
| Describe any dietary manipulations (e.g., caloric or nutrient restrictions or excesses, fasting): |
|  |

|  |
| --- |
| Duration of dietary manipulations. |
|  |

|  |
| --- |
| Age of animals on dietary manipulation |
|  |

|  |
| --- |
| Will animals be fasted beyond 24 hours? If yes, please provide a scientific justification |
|  |

|  |
| --- |
| Will neonates be fasted beyond 3 hours? If yes, please provide a scientific justification |
|  |

|  |
| --- |
| Will animals experience any pain and distress due to the dietary manipulations? If yes, please provide a scientific justification |
|  |

1. Fluid Restriction/Manipulations:

|  |
| --- |
| Species involved: |
|  |

|  |
| --- |
| Describe any fluid manipulation (e.g., additives to water, antibiotics, etc.): |
|  |

|  |
| --- |
| Duration of fluid manipulations: |
|  |

|  |
| --- |
| Age of animals on fluid manipulation: |
|  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Will the animals be provided LESS than *ad lib* drinking water for experimental reasons? |  | **Yes** |  | **No** |
| If yes, please provide information on the amount of water per day that the animals will receive and a scientific justification |
|  |

|  |
| --- |
| Will animals experience any pain and distress due to the fluid restrictions? If yes, please provide a scientific justification |
|  |

1. Physical Restraint: Complete if performing experiments involving animals in which they are restricted from full ambulation and free range of motion for more than brief procedures (does not include restraint while under anesthesia).

|  |
| --- |
| Species involved: |
|  |

|  |
| --- |
| Describe how the animals will be physically restrained. |
|  |

|  |
| --- |
| Duration and frequency of physical restraint. |
|  |

|  |
| --- |
| Scientific rationale for physical restraint |
|  |

|  |
| --- |
| Describe how the animals will be acclimated to the restraint |
|  |

|  |
| --- |
| How will you minimize the stress of physical restraint on these animals |
|  |

|  |
| --- |
| Define the animal welfare endpoints related to physical restraint and what course of action will be taken if animals show signs of pain or distress? |
|  |

|  |
| --- |
| Method and frequency of observations during the physical restraint: |
|  |

1. Environmental Enrichment: All animals in the LARC are provided with environmental enrichment.

|  |
| --- |
| If environmental enrichment cannot be offered for experimental reasons, please provide a scientific justification.  |
|  |

1. Socialization: All animals in the LARC are housed in pairs or groups.

|  |
| --- |
| If individual housing is required for experimental reasons, provide scientific justification. Include information on duration and frequency of individual housing. |
|  |

**Section XII**

**Hazardous materials:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Are Hazardous Materials Used in this protocol?** (Hazardous Chemicals; Radiation; Blood, Body Fluids, Normal or Neoplastic Tissues; rDNA) |  | **Yes** |  | **No** |
| **If Yes, please complete the following section.**  |  |
| **If Hazardous Materials will be used as part of this protocol, a Hazardous Materials SOP** **must accompany this form** |
| **Location where Hazardous Material will be used: (building and room number)** |  |

This protocol will not receive IACUC approval until the Principal Investigator provides evidence of approval from the appropriate compliance committee (e.g. IBC, (recombinant DNA), Radiation Safety)

**Hazardous Chemicals** (provide the following information):

 **(A Hazardous Chemical SOP must be completed and submitted with the protocol form**)

|  |  |
| --- | --- |
| Chemical Name: |  |
| Nature of chemical, e.g. carcinogen, toxin, teratogen: |  |
| Route of administration: |  |
| Dosage: |  |
| Route of excretion: |  |
| Is the bedding hazardous? |  | Yes |  | No |
| Will humans be exposed? |  | Yes |  | No |
| Will the carcass be hazardous? |  | Yes |  | No |
| Describe the method for disposal of wastes and carcasses. |  |
| Describe any PPE necessary for handling wastes and carcasses. |  |

|  |
| --- |
| **Chemical Materials Handling:** |
|  | In cabinet *(indicate type)*: |  | Fume Hood (not available in LARC) |  | Biosafety Cabinet |
| Procedures to be performed: |  |
| Describe decontamination of area after use: |  |

**Radiation** (provide the following information):

|  |  |
| --- | --- |
| Has the use of radiation been approved by the UMKC Radiation Safety Committee? (Provide AU permit number) |  |
| Where will the radiation be used *(bldg. and room no.)*: |  |
| Radioisotope or radiation source: |  |
| Route of Administration: |  |
| Dosage: |  |
| Route of excretion: |  |
| Is the bedding hazardous? |  | Yes |  | No |
| Will humans be exposed? |  | Yes |  | No |
| Will the carcass be hazardous? |  | Yes |  | No |
| Describe the method for disposal of wastes and carcasses. |  |
| Describe any PPE necessary for handling wastes and carcasses. |  |

|  |
| --- |
| **Radioactive Materials Handling:** |
|  | In cabinet *(indicate type)*: |  | Fume Hood (not available in LARC) |  | Biosafety Cabinet |
| Procedures to be performed: |  |
| Describe decontamination of area after use: |  |

**Infectious Agents** (provide the following information):

|  |  |
| --- | --- |
| Has the use of infectious agents been approved by the UMKC Biosafety Committee? |  |
| UMKC IBC protocol number: |  |
| Name of infectious agent(s): |  |
| Biosafety level: |  |
| Route of Administration: |  |
| Dosage: |  |
| If the agent is infectious to humans and/or animals indicate: |  | Humans |  | Animals |
| If the agent shed in feces, urine or body secretions indicate: |  | feces |  | urine |  | body secretions |
| Will the carcass be infectious? |  | Yes |  | No |
| Will the cage/ bedding be hazardous? |  | Yes |  | No |
| Describe the method for disposal of wastes and carcasses. |  |
| Describe any PPE necessary for handling wastes and carcasses. |  |

|  |
| --- |
| **Infectious Materials Handling:** |
|  | In cabinet *(indicate type)*: |  | Fume Hood (not available in LARC) |  | Biosafety Cabinet |
| Procedures to be performed: |  |
| Describe decontamination of area after use: |  |

**Blood, Body Fluids, Normal or Neoplastic Tissue:**

|  |  |
| --- | --- |
| Has the use of this material been approved by the UMKC Biosafety Committee? |  |
| UMKC IBC protocol number: |  |
| Type of material: |  |
| Biosafety level: |  |
| Route of Administration: |  |
| Dosage: |  |
| If the agent is infectious to humans or animals indicate: |  | Humans |  | Animals |
| If the agent is shed in feces, urine or body secretions indicate: |  | feces |  | urine |  | body secretions |
| Will the carcass be infectious? |  | Yes |  | No |
| Disposal method for wastes and carcasses? |  |
| Describe any additional PPE necessary for handling wastes and carcasses. |  |

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| **Blood, Body Fluids, Normal or Neoplastic Materials Handling:** |
|  | In cabinet *(indicate type)*: |  | Fume Hood (not available in LARC) |  | Biosafety Cabinet |
| Procedures to be performed: |  |
| Describe decontamination of area after use: |  |

**Recombinant DNA**:

|  |  |
| --- | --- |
| Has the use of recombinant DNA been approved by the UMKC Biosafety Committee? |  |
| UMKC IBC protocol number: |  |
| Describe the material being used: |  |
| What is the gene that will be modified? |  | Is this a gain or loss of function? |   |
| Route of Administration: |  |
| Dosage: |  |
| Is the agent a potential hazard to humans and/or animals? : |  | Humans |  | Animals |
| If the agent is shed in feces, urine or body secretions indicate: |  | feces |  | urine |  | body secretions |
| Will the carcass be hazardous? |  | Yes |  | No |
| Disposal method for wastes and carcasses? |  |
| Describe any additional PPE necessary for handling wastes and carcasses. |  |

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| **Recombinant DNA Materials Handling:** |
|  | In cabinet *(indicate type)*: |  | Fume Hood (not available in LARC) |  | Biosafety Cabinet |
| Procedures to be performed: |  |
| Describe decontamination of area after use: |  |