**Northern Kentucky University**Institutional Animal Care and Use Committee (IACUC)
Office of Research, Grants & Contracts Attn: IACUC Administrator, UC 405,

For IACUC Use Only

IACUC # \_\_\_\_\_\_\_\_\_\_ Date Received \_\_\_\_\_\_\_\_\_\_\_ Date Posted \_\_\_\_\_\_\_\_\_
[ ] Original Submitted [ ] RTC

Nunn Drive, Highland Heights, KY 41099

859-572-5168 (Email: iacuc@nku.edu)

**APPLICATION FOR IACUC RESEARCH PROTOCOL REVIEW**

Please enter information directly into this form. Applications must be returned via email (iacuc@nku.edu). Scanned signatures are acceptable.

Please remember to use the appropriate application. This application is for IACUC laboratory research projects, not wildlife or classroom projects. Please remember to sign and date the Investigator Certification on the last page of this application prior to submittal to the IACUC, attach the Addition of Personnel form, and complete the Animal Contact Assessment form.

# Section I: Administrative Items

|  |
| --- |
| **Application Type** |
| ***Choose One*** | [ ]  New research protocol/study [ ] Minor revision of current IACUC #­­[ ]  Major revision of current IACUC #  | [ ]  Three year renewal of current IACUC # [ ]  Annual review – minor revisions IACUC # [ ]  Annual review – major revisions IACUC # |
| ***Funding*** | This project is: [ ]  Unfunded [ ]  Funded by: |
| **Project Start & End Dates**(Research may not begin prior to IACUC approval) | Start Date:  | End Date:  |
| ***PROJECT TITLE*:** |  |
| Principal Investigator (last name, first name) | Department |
|  |  |
| Campus Address (“none” if applicable) | NKU Email | Campus Phone |
|  |  |  |
| This protocol involves: | Appendix Required |
| [ ]  Laboratory animals that will not be housed according to the Guide and/or NKU policies and procedures | Appendix A – IACUC Special Housing and Husbandry  |
| [ ]  The use of anesthetics/analgesics | Appendix B – Anesthetic and/or Analgesic Use |
| [ ]  Invasive and/or surgical procedures | Appendix C – Invasive and/or Surgical Procedures |
| [ ]  Hazardous agents or chemical-use | Appendix D – Hazardous Agents or Chemical Use |

|  |
| --- |
| [ ]  Standard Operating Procedures for care of these species as outlined in the NKU IACUC Policies and Procedures will be followed by personnel trained and experienced in nonmedical care, handling, and use of these animals. |

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| --- | --- |
|  [ ]  The PI has completed all required training. | [ ]  The PI has completed and submitted the Animal Contact Assessment Form. |

# Section II: Animal Information

Please provide the following information:

|  |
| --- |
| 1. Animal use information (fill in the appropriate space in this table).
 |
| Procedure Category | Species | Strain | Age | Number Male | Number Female | Total Number | Indicate the source of the animals |
|  |  |  |  |  |  |  | [ ] IACUC approved vendor – identify here:[ ] In-house breeding[ ] Other NKU researchers (please specify): [ ] Other (please specify):  |
|  |  |  |  |  |  |  |
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Procedure Category Examples:

|  |  |  |
| --- | --- | --- |
| **Class** | **Description** | **Examples** |
| C | Teaching, research, experiments, or tests that do not involve pain, distress, or use of pain relieving drugs in animals. | Euthanasia for tissue collection |
| Blood/body fluid collection |
| Adjuvant administration |
| Antibody production |
| Sight restriction |
| Behavioral training |
| Hypothermia (conscious) |
| Hyperthermia (conscious) |
| Food/water deprivation <18 hours |
| Physical restraint <12 consecutive hours |
| Escapable pain induction |
| D | Experiments, teaching, research, surgery, or tests are conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic or tranquilizing drugs will be used. | Surgery (survival and/or non-survival)  |
| death as endpoint, with pain or distress relief |
| Full thickness burn studies |
| Moribund state as endpoint |
| Food/water deprivation 18-48 hours |
| E | Teaching, experiments, research, surgery, or tests are 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. | Death as an endpoint |
| Inescapable or chronic pain induction |
| Food/water deprivation >48 hours |
| Physical restraint >12 consecutive hours |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. Indicate locations for the following:
 | SC 132 | SC 162 | SC 129 A | FH Facilities (specify) | Other (specify) |
| Housing |[ ] [ ] [ ] [ ]  [ ]  |
| Procedures |[ ] [ ] [ ] [ ]  [ ]  |

|  |
| --- |
| All locations are subject to IACUC compliance inspections, including those external to NKU. |

# Section III: Scientific Justification

|  |
| --- |
| 1. Indicate that this activity does not unnecessarily duplicate previous work.
 |
|  |
| 1. Summarize your latest literature review.
 |
|  |
| a. Date of most recent literature review. | b. Years searched (from – to) |
|  |  |
| c. Databases used.  |
|  |
| d. Keywords and search strategy used. |
|  |  |
| 1. Summarize the goals of the proposed research. (Use non-technical language that a layperson can understand.)
 |
|  |
| 1. Rationale for Animal Use
 |
| 1. Provide a rationale for use of animals. (Explain in language that a layperson can understand and cite reference sources.)
 |
|  |
| 1. What are the probable benefits of this work to human or animal health, the advancement of knowledge, or the good of society?
 |
|  |
| 1. Explain why computer simulation, in vitro biological systems or audiovisual demonstration are not acceptable alternatives to the use of animals in this project.
 |
|  |
| 1. Justify use of the animal species listed in item #1. Describe the biological characteristics of the animal that are essential to the proposed study. Include evidence of experience with the proposed animal model and manipulation.
 |
|  |
| 1. Specifically address why fewer animals cannot be used.
 |
|  |

# Section IV: Pain/Distress

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| --- |
| 1. Describe any form of:
 |
| 1. Prolonged animal [restraint](#Restraint" \o "Physical Restraint Physical restraint is the use of manual or mechanical means to limit some or all of an animal's normal movement for the purpose of examination, collection of samples, drug administration, therapy, or experimental manipulation. ). Include time, frequency, and method.
 | [ ] N/A |
|  |
| 1. Painful or aversive procedures (examples include blood draw, stressful stimuli, etc.).
 | [ ] N/A |
|  |
| 1. Where applicable to minimize pain, discomfort, or distress, give name of drugs, approximate dosage and route of administration. (Procedures such as injection, tattooing and blood sampling normally do not require pain relieving drugs.)
 | [ ] N/A |
|  |
| 1. If pain is likely to occur and pain relieving drugs will not be used, give specific details as to why and cite reference sources.
 | [ ] N/A |
|  |

# Section V: Procedures

|  |
| --- |
| 1. Please complete the following table for each non-invasive/non-surgical procedure relevant to the protocol.
 |
| [x]  | Procedure | Details/Explanations |
| [ ]  | Blood or DNA collection  | Site  |  |
|  |  | Method |  |
|  |  | Volume Collected |  |
|  |  | Interval/Frequency |  |
|  |  | Method of Restraint |  |
| [ ]  | Animal Identification |  Select: | Please explain: |
|  |  |[ ]  Banding |  |
|  |  |[ ]  Micro-tattooing |  |
|  |  |[ ]  Microchip |  |
|  |  |[ ]  Ear-tagging |  |
|  |  |[ ]  Ear-punching |  |
|  |  |[ ]  Toe-clipping (altricial neonates only) |  |
|  |  |[ ]  Other |  |
| [ ]  | Food or water restriction |[ ]  Scheduled Access |  |
|  |  | [ ]  | Restricted Schedule |  |
|  |  | Weigh in schedule per week |  |
|  | Provide reference sources regarding the use of these schedules by others or by the PI.  |  |
| [ ]  | Special diets | Special diet detail |  |
|  |  | Feeding schedule |  |
|  |  | If you plan on documenting intake and weight, please describe. |  [ ] N/A |
|  |  | What are the possible consequences of the diet change? | [ ] N/A |
| [ ]  | Other | Describe |  |
| 1. If the protocol involves the use or production of rederivation of transgenic animals, please describe below. Be sure to address the following in your answer: a general description of the genetic modification, how the animals are derived, are any behavioral or physical changes expected, and the method of genotyping.
 | [ ] N/A |
|  |
| 1. If non-standard methods of transportation will be utilized, please describe them below. How will the animals be transported outside of their designated facility? Describe measures that will be taken to avoid potential disease transmission to researchers and other animals.
 | [ ] N/A |
|  |
| 1. Describe the use or production of monoclonal or polyclonal antibodies.
 | [ ] N/A |
|  |
| 1. Pharmaceutical, Therapeutic or Chemical Drug Treatments
 | [ ] N/A |
| 1. List the pharmaceutical, therapeutic or chemical drugs treatment being utilized. Do not include anesthetics or analgesics.
 |
|  |
| 1. Describe and share references for the dosing plan.
 |
|  |
| 1. Describe possible adverse reactions
 |
|  |
| 1. Non-pharmaceutical grade agents.
 | [ ] N/A |
| 1. List and justify the use of non-pharmaceutical grade agents.
 |
|   |
| 1. Describe the measures taken to ensure solution sterility.
 |
|  |
| 1. Use of neuromuscular blocking agents.
 | [ ] N/A |
| 1. Describe the paralytic agent, dosage, route and frequency.
 |
|  |
| 1. Provide a justification for the use of this paralytic agent.
 |
|  |
| 1. Please provide reference sources regarding the use of the drug for the intended purpose.
 |
|  |
| 1. Tumor production procedures.
 | [ ] N/A |
| 1. Describe any tumor production procedures being utilized.
 |
|  |
| 1. Describe the monitoring schedule per week.
 |
|  |
| 1. Describe the treatment of pain/distress
 |
|  |
| 1. Footpad injection.
 | [ ] N/A |
| 1. Justify the use of footpad injections.
 |
|  |
| 1. Describe the method of monitoring pain/distress.
 |
|  |
| 1. Describe the treatment of the pain/distress.
 |
|  |
| 1. Please describe any non-invasive procedures (e.g. behavioral assays) not covered in Section V.
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|  |

# Section VI. Euthanasia

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| 1. Where will animals be euthanized?
 |
|  |
| 1. At what stage in the experiment will animals be euthanized?
 |
|  |
| 1. How will animals be euthanized?
 |
| [ ]  Carbon dioxide (compressed gas only) | [ ]  Perfusion with fixative under anesthesia |
| [ ]  Decapitation | [ ]  Cervical dislocation |
| [ ]  Exsanguination | [ ]  Anesthetic overdose (list drug, route and dose below) |
| Specification of Anesthetic Overdose:  |  |
| [ ] I certify that the selected methods are consistent with current AVMA or related standards for the species to be used. |
| 1. Check any symptom that could be anticipated as an outcome of the proposed work and would be allowed to persist for purposes of the research including at what point the animal will be euthanized.
 |
| * 1. Select
 | Symptom | Adverse Event | Endpoint Description |
|[ ]  Weight Loss |  |  |
|[ ]  Tumor |  |  |
|[ ]  Dehydration |  |  |
|[ ]  Neurological Abnormalities |  |  |
|[ ]  Inability to Defecate or Urinate |  |  |
|[ ]  Respiratory Distress |  |  |
|[ ]  Ocular Abnormalities |  |  |
|[ ]  Impaired Motor Movements |  |  |
|[ ]  Other |  |  |
|[ ]  None, Animals will be euthanized if adverse events noted |
| * 1. Justify why animals will be allowed to persist in an adverse state until the end point is met.
 |
|  |

# Section VII: Housing, Locations, Handling

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| --- |
| 1. Select one:

[ ]  This project will not involve housing and husbandry of animals.[ ] Animals **will not** follow standards for housing and husbandry set forth by the NKU IACUC and the Guide. Appendix A is attached to this application. [ ]  This study **will** follow standards for housing and husbandry set forth by the NKU IACUC and the *Guide*. Describe how animals will be housed below. |
|  |

# Section VIII. Biohazards

|  |  |
| --- | --- |
| 1. Does this study include any biohazardous materials such as, radioisotopes, pathogens, toxins, and carcinogens?
 | [ ]  Yes[ ] No, Skip to [Section](#_Section_VIII:_Miscellaneous) IX.  |
| 1. If yes, does the study require IBC review and approval?
 | [ ]  Yes [ ] No |
| [ ] If yes to question 25, I have completed the Hazardous Agents or Chemical Use Appendix |

# Section IX: Veterinary Care

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| --- |
| 1. [ ]  Medical care for animals housed at NKU **will** be available and provided by the NKU IACUC approved Veterinarian.[ ]  This protocol **will not** use the NKU IACUC approved Veterinarian. The NKU IACUC Veterinarian Exception Form is attached to this application.
 |

# Section X: Investigator Certification

[ ] I understand that I am required to submit a revised protocol if any of the above procedures are changed.

I understand that any failure to comply with the provisions of the Animal Welfare Act and the requirements of the PHS Guide for the Care and Use of Laboratory Animals as implemented by the NKU IACUC may result in the suspension of my animal studies. I hereby provide assurance that the people doing the research are properly trained and qualified and that this work is not unnecessarily duplicative. If toxic materials are to be used in this research project, I have notified the NKU Department of Safety and Emergency Management.

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Signature: Principal Investigator Date

 **REVIEW BY THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

Approval status – This classroom/teaching protocol has been reviewed by the Northern Kentucky University IACUC.

[ ] Approved by Full Board [ ] Approved by Reviewer [ ] Approved with the provisions listed below [ ] Disapproved

**PROVISIONS**

Provisions/Explanations: Click here to enter text.

Researcher’s Acceptance of Provisions, Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_