IACUC Protocol #:

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| --- |
| NSU Animal Care and Use Protocol |

Check one:

**[ ]  New Protocol** **[ ]  Three Year Review** **[ ]  Amendment**

|  |  |
| --- | --- |
| **Principal Investigator** |  |
| **Department** |  |
| **Address** |  |
| **Phone** |  |
| **E-mail address** |  |
| **Alternate contact** (emergency/study related action with Authority in PIs absence) |  |
| **Alternate Phone**  |  |
| **Alternate E-mail** |  |
| **Protocol Title** |  |
| **Funding Source** |  |
| **Grant Number and Title** |  |
|  |

|  |
| --- |
| **This protocol has been reviewed and approved by NSU Animal Care and Use Committee** |
|  |  |
| David Kerstetter, IACUC Chair Date |

TABLE OF CONTENTS

[1. Study Objectives 5](#_Toc17376789)

[2. PERSONNEL 5](#_Toc17376790)

[3. ANIMAL USAGE, JUSTIFICATION and Environmental Enrichment 6](#_Toc17376791)

[4. PAIN AND DISTRESS CATEGORIES 7](#_Toc17376792)

[5. PROCEDURES 11](#_Toc17376793)

[6. SURGICAL PROCEDURES 11](#_Toc17376794)

[7. ANIMAL MONITORING AND EUTHANASIA 13](#_Toc17376795)

[8. PROLONGED PHYSICAL RESTRAINT 14](#_Toc17376796)

[9. ALTERNATIVES TO PROCEDURES THAT MAY CAUSE MORE THAN MOMENTARY OR SLIGHT PAIN AND DISTRESS 15](#_Toc17376797)

[10. PHARMACEUTICAL COMPOUNDS 16](#_Toc17376798)

[11. HAZARDOUS AGENTS 16](#_Toc17376799)

[12. DISPOSITION OF ANIMALS 18](#_Toc17376800)

[13. SIGNATURE 18](#_Toc17376801)

**INTRODUCTION**

NSU’s Institutional Animal Care and Use Committee (IACUC) requires that all animal facilities and the care and use of animals meet the guidelines and regulations found in the Guide for the Care and Use of Laboratory Animals, Laboratory Animal Welfare Regulations and the Public Health Service Policy on Humane Care and Use of Laboratory Animals.

Research experiments involving the use of animals is regulated by the United States Department of Agriculture (USDA) Animal Welfare Act. The Animal Welfare Act was signed into law in 1966 and amended 7 times (1970, 1976, 1985, 1990, 2002, 2007 and 2008). It may be found in United States Code of Federal Regulations (CFR), Title 7, Chapter 54, and Sections 2131 through 2159. It is one of the laws in the United States that regulates the treatment of USDA-covered species in research, exhibition, transport, and by dealers. The USDA Animal Welfare Act covers all mammals used in research except rats of the genus *Rattus* and mice of the genus *Mus* that are bred for use in research. The USDA and Animal and Plant Health Inspection Service (APHIS) Animal Care (AC) enforce the Animal Welfare act.

Under the Department of Health and Human Services (HHS) guidelines were established for the proper care and treatment of research animals and for the organization and operation of animal care and use committees. The Health Research Extension Act of 1985 provides the legislative mandate for the Public Health Service (PHS) Policy, which applies to all institutions receiving animal research funds from PHS organizations e.g. NIH. This Policy applies to all vertebrate species. Institutions that receive PHS funds must have an Assurance on file at the Office of Laboratory Animal Welfare (OLAW) stating that they will abide by PHS Policy.

NSU’s IACUC, will utilize this experimental protocol to accurately record and monitor all animal research activities at NSU to maintain compliance with requirements of the aforementioned regulations.

**INSTRUCTIONS**

For **New Protocols** indicate on the first page that this is a new protocol and fill out form as needed.

For an **Annual One Year Review,** review your current approved protocol and fill out the **NSU Animal Care and Use Annual Renewal Form** (located on the NSU IACUC website at <https://www.nova.edu/rtt/animal-subjects.html>).If changes are necessary, retrieve the latest word version of your protocol from the Vivarium manager and follow the instructions for an amendment below.

For a **Three-Year Review** indicate on the first page that this is a three-year review and fill out a new protocol form.

For **Amendments** to this protocol**:**

* Retrieve the original protocol from the Vivarium Manager and leave all existing information intact.
	1. *NOTE: Amendments submitted on a version that was not received from the Vivarium Manager will not be accepted.*
* On the first page indicate it is an amendment
* Add new information under the appropriate questions. Include any necessary or requested justifications using track changes.
* Fill out the **NSU Animal Care and Use Amendment Form** (located on the NSU IACUC website at <https://www.nova.edu/rtt/animal-subjects.html>) and include it with your amendment submission.

Forms should be typed in a computer-printed format. **PLEASE MINIMIZE** formatting changes. All fillable fields are set at Arial, 12, blue.

This Protocol must be signed by the principal investigator (proxy is not accepted).

Protocols must be received by the first of each month by 12:00pm in order to be reviewed at that months IACUC meeting. All protocols received after this date and time will be reviewed at the next month’s IACUC meeting. Please submit all protocols to **NSUIACUC@nova.edu**

For questions, please contact the NSU IACUC administration at NSUIACUC@nova.edu, the IACUC Chair, Dr. David Kerstetter at kerstett@nova.edu, or the Vivarium Manager, Dominique Ouimet at douimet@nova.edu.

# Study Objectives

a. In layman’s terms, describe the specific scientific goals, significance of this research, and an overview of how animals will be used in this research. Be convincing as to why this work is important for the advancement of scientific knowledge or improving animal and human health to help the committee evaluate animal usage. If this is a **renewal**, please also provide a brief description of your progress over the last 3 years and new directions that will be taken over the next 3 years. (**NOTE:** A scientific abstract from a grant application using highly technical terms is NOT acceptable. Use simple terms and define all abbreviations or acronyms.

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# PERSONNEL

a. List PI and only individuals who will be working hands on with animals on this protocol

|  |  |
| --- | --- |
| Name, degree, email | Role in Protocol |
|  |  |
|  |  |
|  |  |
|  |  |

NOTE: NSU requires that all personnel engaged in animal research take training in the Humane Care and Use of Laboratory Animals in order to work in the vivarium. Individuals must also demonstrate prior experience working with the specific species or take species-specific training prior to being approved on this protocol. Training must be renewed every 3 years.

b. In this section, please list procedures (surgery, injections, euthanasia, etc..) and functions (post-procedure monitoring, health checks, etc.) that each person listed in 2a will be performing. For each individual, describe their training and years of experience with all listed species and procedures they will be conducting under this protocol. If the person does not have experience or has less than one-year experience, specific to the procedures they will perform, please indicate who will be responsible for the training and supervision:

|  |
| --- |
|  |

# ANIMAL USAGE, JUSTIFICATION AND ENVIRONMENTAL ENRICHMENT

Check the appropriate boxes:

a. Species of animal and quantity needed for each category of pain (section 4) over 3 years:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Strain | Pain Category | Number Year 1 | Number Year 2 | Number Year 3 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Total per year |  |  |  |
| **Grand Total for all 3 years** |  |

If animals are used in more than one category, only count them at the **highest level** of pain for that animal.

If this is protocol application is for a three-year review, please only include the number of animals your study will need. Do not include animals already used in your prior approval period.

b. Specifically justify the use of animals for this research. Explain why it is imperative to use animals. Explain why there are no other non-animal alternatives, such as, in vitro methods or computer simulations.

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|  |

c. Justify choice of each species/strain of animal used in this protocol.

|  |
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d. Explain how the number of animals was determined and justify that need. Demonstrate how statistical calculations or power analysis were used to derive sample sizes. If the project involves euthanizing animals for tissue harvest, the amount of tissue or number of cells needed for the experiments must be directly correlated to the number of animals required to produce that amount e.g., each animal produces X amount of tissue, which is needed to perform Y experiments.

NOTE: Consultation with a biostatistician is recommended.

|  |
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|  |

e. List the experimental groups/subgroups and indicate the number of animals in each

group. For many studies, this information can effectively be shown in a graph or a table

|  |
| --- |
|  |

 f. Source of Animals

|  |  |  |
| --- | --- | --- |
| [ ]  | Commercial vendor |  |
| [ ]  | Other |  |

g. Housing Area:

Vivarium

|  |
| --- |
| [ ]  |
| [ ]  |

Barrier

Non-Barrier

If animal(s) will not be housed in the CCR Vivarium, please provide the location where animals will be housed:

Building :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Room #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

h. Single Housing:

|  |
| --- |
| [ ]  |

Yes

|  |
| --- |
| [ ]  |

No

If **NO**, proceed to the next section. If **YES**, describe housing requirements and provide scientific justification for single housing of social species:

|  |
| --- |
|  |

i. Environmental Enrichment:

Each species housed at NSU will be provided suitable environmental enrichment devices to comply the Guide for the Care and Use of Laboratory Animals.

Does your protocol require an exemption from environmental enrichment?

|  |
| --- |
| [ ]  |

Yes

|  |
| --- |
| [ ]  |

No

If **NO**, proceed to the next section. If **YES**, please provide a scientific justification in the below box.

|  |
| --- |
|  |

j. Identification of Animals:

[ ]  Ear Tagging

[ ]  Tattooing

[ ]  Microchipping

[ ]  Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

k. Genetically Modified Animals

**NOTE:** The construction of transgenic animals must be approved by NSU’s Institutional Biosafety Committee (IBC).

Does your protocol involve the production, breeding or use of genetically modified animals? [ ] Yes [ ] No

If **YES**,

Describe the phenotype, any pain/distress as a result of the phenotype, duration of survival after the expression of the phenotype, monitoring or treatment plan to alleviate pain or distress. (see Section 7).

|  |
| --- |
|  |

Describe any special care/husbandry required to maintain the genetically modified animals

|  |
| --- |
|  |

l. Is permit required for capturing / using the Animals? [ ] Yes [ ] No

If **YES**, please submit a copy of your permit with your protocol application.

# PAIN AND DISTRESS CATEGORIES

a. To ensure the health of the laboratory animals, the previous use of animals in other projects must be considered and how these previous manipulations may have compromised the animal’s health for this protocol. **Animals that have undergone major procedures in other protocols are not eligible for major procedures in subsequent protocols unless scientific justification is provided.**

Have any of the animals listed above been a part of other protocols? [ ] Yes [ ]  No

If **YES,** briefly justify why these animals must be used and how you determined that the previous use of these animals will not compromise the animal’s fitness and research for this protocol.

|  |
| --- |
|  |

b. USDA Category C: Procedures that do **NOT** require pain relieving drugs or that will only cause momentary distress/pain.

[ ] Housing only

[ ] Breeding only

[ ] Observation without manipulating animal or environment

[ ] Behavioral observation or brief restraint (no restraint device used):

[ ] Ear punching

[ ] Change in routine cycle (light, room temperature etc.)

[ ] Anesthesia for non-invasive/non-surgical procedures

[ ] Forced exercise

[ ] Gavage

[ ] Irradiation

[ ] Infection with microbiological agents, toxins or chemicals (not causing illness)

[ ]  Simple Injections (list all administered substances below):

|  |
| --- |
|  |
|  |
|  |

[ ]  Non-surgical collection of body fluids, List below:

|  |
| --- |
|  |
| [ ]  Other: |  |

c. USDA Category D: Procedures that will involve pain/distress and for which appropriate pain-relieving drugs or anesthesia **WILL** be used.

**NOTE**: The USDA Animal Care Resource Guide Policy #11 defines a painful procedure as” any procedure that would reasonably be expected to cause more than slight or momentary pain or distress in a human being to which that procedure is applied, that is pain in excess of that caused by injections or minor procedures”

**NOTE**: This is a list of procedures that cause pain/distress for which appropriate pain-relieving drugs will be used. If the procedure you perform will not cause pain/distress, list them under “Category C: Other.” Additionally, procedures that are performed where pain-relieving drugs or anesthesia will NOT be used should be listed under “Category E: Other.”

**NOTE**: For all procedures marked in this section, an alternatives search will have to be performed in Section 9 below.

**NOTE**: All procedures marked in this section a monitoring schedule will have to be described in Section 7.

**NOTE**: The USDA Animal Welfare Act 9 CFR Part 2 section 2.31 d (iv. B) requires consultation with a veterinarian for all Category D procedures.

[ ] Surgical procedures

[ ] Antibody production, ascites (with pain relieving drugs)

[ ] Antibody production, non-ascites

[ ] Food or water deprivation or restriction

[ ] Footpad injections

[ ] Infection/injection of microbiological agents or toxins (causing illness), See Section 11:

[ ] Lavage

[ ]  Survival surgery

[ ] Non-survival surgery

[ ] Biopsies

[ ] Retro-orbital eye bleed

[ ] Restraint device

[ ] Tumor induction or implantation

[ ] Unusual prolonged restraint, see section 8

[ ] Noxious electrical shock or thermal stress

[ ] Paralytic agents

[ ] Genetically engineered phenotype that causes pain or distress that will be alleviated

|  |  |
| --- | --- |
| [ ]  Other |  |

**IMPORTANT\*\*\*For all procedures checked above, fill in the following information.**

Provide scientific justification for procedures checked above.

|  |
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|  |

Describe the analgesics/pain relieving measures you will provide. Include drug names, dosages, route of administration, special pre- and post-procedure care, etc.:

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| --- |
|  |

|  |  |
| --- | --- |
| Was a veterinarian consulted for these procedures? | [ ] Yes [ ]  No |
| Name of Veterinarian: |  | Date: |  |
| Signature/email confirmation (attached): |  | Date: |  |

**NOTE:** The email from the veterinarian should be attached to this proposed protocol.

d. USDA Category E, Procedures that involve pain/distress for which pain-relieving drugs or anesthesia will **NOT** be used.

**NOTE**: USDA Animal Care Resource Guide Policy #11 requires that animals exhibiting signs of pain, discomfort or distress receive appropriate relief unless written scientific justification is provided in the protocol and approved by the IACUC.

**NOTE:** This is a list of procedures that cause pain/distress for which appropriate pain-relieving drugs will not be used. If the procedure you perform will not cause pain/distress, list them under “Category C: Other.” Additionally, procedures that are performed where pain-relieving drugs or anesthesia will NOT be used should be listed under “Category E: Other.”

**NOTE**: For all procedures marked in this section, an alternatives search will have to be performed in Section 9 below.

**NOTE**: For all procedures marked in this section a monitoring schedule will have to be described in Section 7.

**NOTE**: The USDA Animal Welfare Act 9 CFR Part 2 section 2.31 d (iv. B) requires consultation with a veterinarian for category E procedures.

[ ] Death as an endpoint

[ ] Lethal Dose Studies

[ ] Ocular or skin irritancy testing

[ ] Pain study

[ ] Irradiation

[ ] Injection of Freud’s Complete Adjuvant

[ ] Tumor induction or implantation

[ ] Genetically engineered phenotype that causes pain or distress that will NOT be alleviated

[ ] Food or water deprivation beyond that necessary for pre-surgical preparation

[ ] Any procedure for which needed analgesics, sedatives, or anesthetics are withheld for justifiable research purposes

|  |  |
| --- | --- |
| [ ]  Other |  |

**IMPORTANT\*\*\***Provide scientific justification for procedures checked above. Describe any special care that the animals may receive.

|  |
| --- |
|  |

|  |  |
| --- | --- |
| Was a veterinarian consulted for these procedures? | [ ] Yes [ ]  No |
| Name of Veterinarian: |  | Date: |  |
| Signature/email confirmation (attached): |  | Date: |  |

**NOTE:** The email from the veterinarian should be attached to this proposed protocol.

# PROCEDURES

a. Describe the procedures, checked in Section 4, that are to be conducted on the animals. *Please ensure that all procedures performed on the animals are included in this section. Include details such as injection type(s), injection site, needle size and injection volume(s). Please indicate the surgical procedures to be performed, but include details requested in Section #6 below*.

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b. Using a visual flowchart, describe the schedule for the animal procedures and include time points when animals will be euthanized, if applicable.

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# SURGICAL PROCEDURES

a. Does this protocol involve surgical procedures? [ ]  Yes [ ]  No

If **NO**, proceed to the next section. If **YES**, fill out sections b-j below

b. List the names of the individuals listed on this protocol that will perform surgery on the animals in this study. For each person listed describe the individual’s training and years of experience with the surgery they will be conducting under this protocol. If the person has less than one year of experience, indicate who will be responsible for the training and supervision.

|  |  |
| --- | --- |
| Name/contact #/email | Description of surgical training/experience |
|  |  |
|  |  |
|  |  |

c. How many animals listed under Section 4a/c will undergo surgery (list separately for each species)?

|  |
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d.. Where will the surgery be performed?

Non-Barrier:

[ ]  Necropsy (629) [ ]  Small Animal Surgery (629B) [ ]  Procedure Room (634A)

Barrier:

[ ]  Procedure Room (640A) [ ]  Procedure Room (640F) [ ]  Imaging (643)

e. Describe the Anesthetic method used. Include how you will monitor the level of anesthesia.

|  |
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|  |

f. Will any paralytic agents be used? [ ]  Yes [ ]  No

If **YES,** indicate what paralytic agent will be used, provide scientific justification for its use, and any special monitoring techniques.

|  |
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|  |

g.. List aseptic procedures that will be used to maintain a sterile environment during surgery.

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h. Describe the surgical procedure. Please include incision closure methods, needle size, suture type and size, and suture/clip/staple removal time and recovery time.

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i. Will the animals be allowed to recover from the surgery? [ ]  Yes [ ]  No

If **YES**, describe post-surgical monitoring and care procedures. Include all drugs and dosages, who will perform the monitoring and how often, and the parameters that will be monitored.

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j. Will any animal be involved in more than one major surgical procedure? [ ]  Yes [ ]  No

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If YES, provide scientific justification, the species and number of animals and the length between surgical procedures.

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# ANIMAL MONITORING AND EUTHANASIA

a. Describe how frequently and who will monitor the animals to ensure they are not experiencing pain, discomfort or procedural complications. **NOTE:** If any boxes were checked in Section 4c or 4d a monitoring schedule will need to be described here

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b. Describe clinical signs (lethargy, hunched posture, ruffled fur, tumor size etc.) that you will look for when monitoring.

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c. Do you expect experimental conditions to induce pain and distress?

[ ] Yes [ ] No

If **YES**, describe criteria for euthanasia of animals experiencing pain and distress (i.e. Body Condition Score (BCS), tumor size, weight loss, specific animal characteristics, etc.).

|  |
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|  |

d. Select euthanasia methods (select all that apply)

NOTE: Consult the American Veterinary Association (AVMA) Guidelines on Euthanasia for appropriate euthanasia methods.

[ ]  Euthanex CO2 smart box

[ ]  Decapitation

[ ] Cervical dislocation

[ ]  Immersion (fish only)

[ ]  Pithing (reptiles and amphibians)

[ ]  Barbiturate injection (explain rationale):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Other, explain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# PROLONGED PHYSICAL RESTRAINT

a. Does this protocol involve the use of prolonged physical restraint devices? [ ]  Yes [ ]  No

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 (Guide). Prolonged physical restraint is defined as physical restraint of a conscious animal lasting longer than 15 minutes. Prolonged restraint, should be avoided unless it is essential for achieving research objectives and is specifically approved by the IACUC

**Note:** If routine restraint is not prolonged (>15 minutes) and does not cause distress or discomfort to the animal, a detailed description is **NOT** required below.

If **NO**, proceed to the next section. If **YES**, fill out sections 8b-8d below

b. Describe the restraint device or method, the expected duration of restraint, and any monitoring of restrained animals.

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c. Justify the use of the restraint device(s) and discuss if/how you will train animals to adapt to the restraint.

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d. If **YES** is checked above, perform a database search for alternatives to using a restraint device (include in alternatives section 9a below).

# ALTERNATIVES TO PROCEDURES THAT MAY CAUSE MORE THAN MOMENTARY OR SLIGHT PAIN AND DISTRESS

**NOTE**: There may be alternatives to procedures that cause more than momentary or slight pain and distress that will not affect the scientific goals of this protocol. Federal regulations 9 CFR Part 2 Section 2.31 d (ii), requires alternative methods must be considered for procedures that cause more than momentary or slight pain and distress. To satisfy this requirement, the USDA believes that a database search is the most effective and efficient method for demonstrating compliance with this requirement (Animal Care Resource Guide Policy #12)

a. Will any of the proposed procedures cause more than slight or momentary pain or distress to the animals? (If you checked any procedures listed under section 3d and 3e, you must answer **YES**.)

[ ] Yes [ ] No

If **YES**, perform a database search to determine if alternatives exist for each procedure that causes more than momentary or slight pain or distress. The Animal Welfare Information Center (AWIC) is an information service of the National Agricultural Library specifically established to provide information about alternatives. AWIC can be contacted at (301) 504-6212, via e-mail at *awic@nal.usda.gov**,*  or its web site at [*http://www.awic.nal.usda.gov*](http://www.awic.nal.usda.gov)*.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Procedure  | Electronic Databases SearchedExample: Medline, Embase, PubMed, etc. | Date Range of the SearchExample:1934 to 2019 | Date Search was Performed | Key Words  |
|  |  |  |  |  |
|  |  |  |  |  |
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b. Please provide a short narrative of the findings from your search. If an alternative does exist explain why the alternative is unsatisfactory. Also, discuss how you will minimize pain and distress to the animals used in this protocol.

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# PHARMACEUTICAL COMPOUNDS

The use of pharmaceutical-grade chemicals and other substances ensures that toxic or unwanted side effects are not introduced into studies conducted with experimental animals. They should therefore be used, when available, for all animal-related procedures (USDA 1997b).

1. Will the study require the use of non-pharmaceutical grade compounds? [ ] Yes [ ] No
2. If yes, please list and describe the compounds, method used to sterilize, and how you will store them. Justify the use.

|  |
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# HAZARDOUS AGENTS

a. Check and list category as it applies to this protocol:

|  |  |  |  |
| --- | --- | --- | --- |
| [ ]  | Recombinant DNA |  |  |
| [ ]  | Genetically altered materials |  |  |
|  | Infectious agents: |  |  |
| [ ]  |  Bacteria |  |  |
| [ ]  |  Virus |  |  |
| [ ]  |  Prion |  |  |
| [ ]  |  Other |  |  |
| [ ]  | Carcinogen or mutagen |  |  |
| [ ]  | Toxic agent |  |  |
| [ ]  | Human-derived materials |  |  |
| [ ]  | Radioactive material |  |  |
| [ ]  | Other |  |  |

Microbiological Substances/Toxins/Chemicals

For each microbiological agent/toxin/chemical listed answer the following:

|  |  |
| --- | --- |
| 1. Microbiological Agent/Toxin/Chemical: |  |
| BSL Classification: |  |
| Survival Outside the Host: |  |
| Shed In: | [ ] Feces [ ] Saliva [ ] Blood [ ] Urine [ ] Aerosols [ ] Not Shed |
| Route(s) of Infection: |  |
| Clinical Signs of illness and duration: |  |

|  |  |
| --- | --- |
| 2. Microbiological Agent/Toxin/Chemical: |  |
| BSL Classification: |  |
| Survival Outside the Host: |  |
| Shed In: | [ ] Feces [ ] Saliva [ ] Blood [ ] Urine [ ] Aerosols [ ] Not Shed |
| Route(s) of Infection: |  |
| Clinical Signs of illness and duration: |  |

|  |  |
| --- | --- |
| 3. Microbiological Agent/Toxin/Chemical: |  |
| BSL Classification: |  |
| Survival Outside the Host: |  |
| Shed In: | [ ] Feces [ ] Saliva [ ] Blood [ ] Urine [ ] Aerosols [ ] Not Shed |
| Route(s) of Infection: |  |
| Clinical Signs of illness and duration: |  |

b. Tumors/cells derived from humans or rodents are potential sources of rodent viruses that could spread throughout animal facilities.

Have you had the tumor/cell line tested for rodent infectious agents? (If YES, provide the results with the protocol submission or if NO, contact the Vivarium Manager for additional information.)

 YES [ ]  NO[ ]

# DISPOSITION OF ANIMALS

Upon termination of the experiment animals will:

[ ] be euthanized

[ ] die prior to euthanasia due to experimental design. **NOTE**: If this box is checked death as an endpoint must be checked in section 4

[ ]  survive experiment

# SIGNATURE

The **Principal Investigator** is required to sign this form certifying that:

* The proposed work in this protocol does not unnecessarily duplicate previous experiments.
* I will have a current animal use protocol, approved by the NSU IACUC, before any activities involving live or dead vertebrate animals is begun.
* I will comply with all applicable federal regulations, laws and policies
* I understand that a renewal request must be submitted annually. I further understand that every third year, the NSU IACUC must perform a new review of the protocol for which I will be required to complete a new submission of the IACUC protocol application.
* No personnel will perform procedures that are not listed and approved by the NSU IACUC. When new or additional personnel become involved, I will submit their qualifications to the NSU IACUC and seek approval before they are involved in any activities regarding live animal studies.
* I am responsible assuring that all personnel are properly trained in the humane care and use of animals in research.
* I am responsible for maintaining animal records in a secure but accessible location. Records will always be available for review by the Attending Veterinarian, the NSU IACUC, and representatives of the USDA and/or PHS.
* I will assure that all controlled substances are stored according to NSU SOP 102
* I will ensure that all research staff listed on this protocol are enrolled in the institutional Occupational Health and Safety Program prior to their contact with animals, or have declined, in writing, to participate as appropriate.
* I will obtain the necessary approvals from radiation safety, occupational health and safety, and recombinant DNA committees.
* I will follow all policies and procedures outlined in the NSU IACUC Policies and Procedures Manual.
* I will provide my after-hours telephone numbers to the animal care staff in case of an emergency.

The **Principal Investigator** on this protocol is required to sign this form certifying that all **personnel** listed under this protocol.

* have read the protocol and agree that the information provided in this protocol is complete and accurate;
* are familiar with all the rules regulations and policies governing the care and use of animals relating to their activities and agree to follow the provisions outlined in these regulations;
* are familiar with the requirements outlined in this protocol;
* have had an opportunity to ask questions and receive adequate answers;
* understand that all research not explicitly described in this protocol is prohibited in the absence of an amendment;
* have completed all necessary training; and
* understand that allowing investigators to use these animals on other protocols is strictly prohibited

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| Principal Investigator Name | Principal Investigator Signature | Date |
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| APPROVAL DATES: | MODIFICATION DATE: |
| Original:  |  |

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| **Amendment Submissions:** | **Approval Date:** |
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