NICHOLLS STATE UNIVERSITY
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

APPLICATION FOR APPROVAL OF USE OF ANIMALS IN RESEARCH OR TEACHING

This application (6 copies) must be submitted to the IACUC Chair at least 15 working days prior to proposed initiation of teaching or research using warm-blooded vertebrate animals, including rats and mice. For projects that will require more than 12 months duration, application should be resubmitted annually. A new application must be submitted if there are any proposed changes in the project, changes in personnel assigned to work under this Application, or changes in the species or in the number of animal subjects used. The IACUC meets semiannually in March and September. Please type all information.

Section 1: Applicant Information

Project Director’s First Name:________________________________________________________

Project Director’s Last Name:________________________________________________________

NSU Phone: __________________________ Home Phone:___________________________

Email:___________________________________________________________________________

Department:________________________________________________ Room No.:___________

Co-Investigator (s):________________________________________________________________

Proposed Project Start Date:____________________ End Date:______________________

Will animal use begin prior to awarding of funds?  [ ] Yes [ ] No

Project Title (should be same as grant application):

_________________________________________________________________________________

Type of Application:   [ ] New   [ ] Renewal - Indicate Proposal #:________________

[ ] Expedited   [ ] Modification - Indicate Proposal #:________________

Funding Agency or Sponsor:__________________________________________________________

NSU IACUC: 3/26/01
Section 2a: Animal Subjects (please refer to attached Animal Use Pain or Stress Classification)

Species 1 (give common name of species, e.g. mouse): 

Total number required in project: 
Percent of total subjected to Pain/Distress Category I: 
Percent of total subjected to Pain/Distress Category II: 
Percent of total subjected to Pain/Distress Category III: 
Percent of total subjected to Pain/Distress Category IV: 
Source (give name of supplier or originating institution): 

Species 2 (give common name of species, e.g. mouse): 

Total number required for project: 
Percent of total subjected to Pain/Distress Category I: 
Percent of total subjected to Pain/Distress Category II: 
Percent of total subjected to Pain/Distress Category III: 
Percent of total subjected to Pain/Distress Category IV: 
Source (give name of supplier or originating institution): 

Other species: For additional species, provide information similar to that requested above on additional sheets.

Section 2b: USDA Pain or Distress Classification and Consideration of Alternatives (not applicable for animal subjects of the mouse or rat species, please refer to attached USDA Classifications and Examples)

<table>
<thead>
<tr>
<th>Species (common name)</th>
<th>USDA Classification</th>
<th>Number of animals used each year B, C, D, or E</th>
<th>3 year total number of animals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
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</tbody>
</table>

Total number of animals (should equal total from Section 2a):
Section 3: Limiting Pain, Discomfort, and Injury and Consideration of Alternatives (use additional sheets if necessary)

List or describe procedures designed to assure that discomfort, pain and injury to animals will be limited or unavoidable in the conduct of the proposed research or teaching procedures. If any procedures fall into USDA’s Classification D or E, causing more than momentary or slight pain or distress to the animals, describe your consideration of alternatives and your determination that alternatives are not available. Delineate the methods and sources used in the search. Database references must include databases searched, the date of the search, period covered, and the keywords used. Alternatives include methods that (1) refine existing tests by minimizing animal distress, (2) reduce the number of animals necessary for an experiment, or (3) replace whole-animal use with in vitro or other tests. When ascites production is used to produce antibodies, justification needs to be given as to why in vitro systems cannot be used. Note that you must certify in Section 16 that no valid alternative was identified to any described procedures which may cause more than momentary pain or distress, whether relieved or not.

Section 4: Animal Use Locations

List room(s) where non-surgical procedures will be performed:________________________________
List room(s) where survival surgery will be performed:______________________________________
List room(s) where non-survival surgery will be performed:__________________________________

Section 5: Animal Surgery-If proposed, complete the following: (use additional sheets if necessary)

1. Identify and describe the surgical procedure(s) to be performed. Include preoperative procedures (e.g., fasting, analgesic loading), and monitoring and supportive care during surgery. Include the aseptic methods to be utilized.

2. Who will perform surgery and what are their qualifications and/or experience?
3. Where will surgery be performed and postoperative care provided (building and rooms)?

4. If survival surgery, describe postoperative care required, frequency of observation, and identify the responsible individual(s). Include detection and management of postoperative complications during work hours, after hours, weekends and holidays.

5. Who will maintain surgical and post-surgical records? (list names)

6. Who will provide and/or monitor post surgical recovery/care (list names) and where will postoperative care be provided (building and rooms)?

7. If non-survival surgery, describe how humane euthanasia is enacted and how death is determined.

8. Are paralytic agents used during surgery? If yes, please describe how ventilation will be maintained and how pain will be assessed.

9. Has major survival surgery been performed on any animal prior to being placed on this study? [Major survival surgery penetrates and exposes a body cavity or produces substantial impairment of physical or physiologic functions (such as laparotomy, thoracotomy, crainotomy, joint replacement, or limb amputation).]

10. Will more than one major survival surgery be performed on an animal while on this study? If yes, please justify:

NSU IACUC: 3/26/01
Section 6: Drugs

Will any drugs be used? [ ] Yes [ ] No

If YES, list drug, dose, route of administration, frequency and duration of administration of each

Drug 1:______________________________________________________________

Drug 2:______________________________________________________________

Drug 3:______________________________________________________________

Section 7: Disposition of Animals at End of Project:

Are animals to be euthanized? [ ] Yes [ ] No

If NO, specify final disposition:
______________________________________________________________

If YES, describe method:

[ ] Barbiturate overdose

[ ] CO₂ asphyxiation (compressed CO₂ in cylinders only)

[ ] Cervical dislocation (mice or birds only)

[ ] Other (describe)________________________________________________________

How will remains be disposed?________________________________________________
Section 8: Potentially Hazardous Agents

Use of hazardous agents requires the approval of the Environmental Health and Safety Officer. Attach documentation of approval for the use of recombinant DNA or potential human pathogens.

Will the animal protocol involve *in vivo* use of:

<table>
<thead>
<tr>
<th>Hazardous Agent</th>
<th>Yes</th>
<th>No</th>
<th>Agent</th>
<th>Date of Environmental Health &amp; Safety Officer Approval</th>
<th>Tracking #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radioisotopes</td>
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<tr>
<td>Chemical Hazards</td>
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<tr>
<td>Infectious Organisms or Toxins</td>
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<td>Carcinogens</td>
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<tr>
<td>Human Tissues</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Recombinant DNA Molecules (including transgenics)</td>
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</tr>
</tbody>
</table>

Study Conducted at Animal Biosafety Level: 1 [ ]  2 [ ]  3 [ ]  4 [ ]

Describe the practices and procedures required for the safe handling and disposal of contaminated animals and material associated with this study. Also describe methods for removal of radioactive waste and, if applicable, the monitoring of radioactivity.

Additional safety considerations:

Section 9: Biological Material/Animal Products for Use in Animals (e.g. cell lines, antiserum, etc.)

If proposed, complete the following:

1. Specify Material:

2. Source: Material Sterile or Attenuated: Yes [ ] No [ ]

If derived from rodents, has the material been MAP/RAP/HAP tested? *MAP – Mouse Antibody Production; RAP – Rat Antibody Production; HAP – Hamster Antibody Production*

Yes [ ] (Attach copy of results) or No [ ]

3. Certify that the MAP/RAP/HAP tested materials to be used have not been passed through rodent species outside of the animal facility in question and/or the material is derived from the original MAP tested sample. To the best of my knowledge the material remains uncontaminated with rodent pathogens.

[ ] Initials of Principal Investigator

NSU IACUC: 3/26/01
Section 10: Overview of the Research or Teaching Project

Provide a brief overview of the research or teaching project, its intended benefits, and rational for the proposed project. This section may be a duplication of the grant abstract or be extracted from the Background and Significance of the Study for this application as long as a clear rationale for using animal subjects and the appropriateness of the species is included.

Section 11: Appropriateness of Animal Numbers

Describe how the number of animals to be used was determined and how the number is appropriate for the project.

Section 12: Description of Proposed Animal Use

Using additional pages, provide a complete description of proposed animal use. Include description of all procedures (injections, inoculations, etc.) to be used and descriptions of volumes and route of administration of test compounds, volume and frequency of withdrawal of blood and other body fluids, specialized restraint or housing, etc. When surgery is proposed, include pre-operative care, anesthesia, the operative procedure, aseptic procedures, intra-operative monitoring and postoperative monitoring/care. Information for this section may be extracted from the grant application but the text must be augmented as necessary to provide the level of detail indicated above.
Section 13: Description of Expected Clinical Signs or Lesions

Describe clinical signs or lesions (e.g. anorexia, lameness, lethargy, surgical wounds, tumors, etc.) resulting from this protocol.

Section 14: Qualifications and Training

For each individual 1) involved in animal handling, 2) performing surgical procedures or 3) performing behavioral procedures, describe the individual’s relevant experience with each species.

Section 15: Emergency Notification Data

Provide the name(s) and phone number(s) of the person(s) responsible for animal procedures/care in the P.I.’s absence.
Section 16: Principal Investigator’s Certifications

[ ] 1. I certify that I have reviewed the institutionally required investigator training materials appropriate for this research or teaching project.

   Year of Review:

[ ] 2. I certify that I have determined that the research proposed herein is not unnecessarily duplicative of previously reported research and that non-animal alternatives for the proposed animal use are not available.

[ ] 3. I certify that all individuals working on this proposal who are at risk are participating in the Institution’s Occupational Health and Safety Program.

[ ] 4. I certify that the individuals listed in Section 1 are authorized to conduct procedures involving animals under this proposal, have read the institutionally required investigator training materials and received training in: the biology, handling, and care of this species; aseptic surgical methods and techniques (if necessary); the concept, availability, and use of research or testing methods that limit the use of animals or minimize distress; the proper use of anesthetics, analgesics, and tranquilizers (if necessary); and procedures for reporting animal welfare concerns.

[ ] 5. For all USDA Classification D and E proposals (see section 2b): I certify that I have reviewed the pertinent scientific literature and the sources and/or databases as noted in Section 3 and have found no valid alternative to any procedures described herein which may cause more than momentary pain or distress, whether it is relieved or not.

[ ] 6. I certify that I will obtain approval from the IACUC before initiating any significant changes in this study.

[ ] 7. I certify that I will notify the IACUC regarding any unexpected study results that impact the animals. Any unanticipated pain or distress, morbidity or mortality will be reported to the attending veterinarian and the IACUC.

[ ] 8. I certify that I am familiar with and will comply with all pertinent institutional, state, and federal rules and policies.

Signature of Principal Investigator:___________________________________________

Date of submission:__________________________

Section 17: Concurrences

Proposal Number ______________ (leave blank)

Supervisory concurrence as applicable:

Name:_________________________ Signature:_________________________ Date:____________

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Section 17: Concurrences (continued)

Environmental Health and Safety Office certification of review and concurrence:
(Required of all studies utilizing hazardous agents.)

Name:_________________________ Signature:_________________________ Date:__________

Facility Manager/Veterinarian certification of resource capability in the indicated facility to support the proposed study:

Facility:_______________________________________

Name:_________________________ Signature:_________________________ Date:__________

Facility:_______________________________________

Name:_________________________ Signature:_________________________ Date:__________

Comments:

Attending Veterinarian certification of review and consultation of proper use of anesthetics and pain relieving medications for any painful procedures:

Name:_________________________ Signature:_________________________ Date:__________

Section 18: Final Approval

Certification of review and approval by the Institutional Animal Care and Use Committee:

Chair’s
Name:_________________________ Signature:_________________________ Date:__________

List any attachments here:
ANIMAL USE PAIN OR STRESS CLASSIFICATION

Animal care and use protocols are classified by the degree of pain or stress the animal subjects in the project incur. These classifications are used to review protocols and provide descriptions for use in reports to external regulatory agencies. Category IV projects always require justification from the investigator before review will be considered.

CATEGORY I: The use of animals in teaching, testing, or experimental procedures that would be expected to produce little or no pain or distress.

Examples
1. Housing animals for use in research or teaching.
2. Simple procedures such as injections, blood sampling, and tattooing.
3. Physical examinations.
4. IACUC-approved methods of euthanasia.
5. Simple, group behavioral observations.
6. Procedures on anesthetized animals which do not regain consciousness.

CATEGORY II: The use of animals in procedures that involve minor pain or distress of short duration.

Examples
1. Exposure of blood vessels or implantation of chronic catheters.
2. Behavioral studies or procedures that involve short-term restraint.
3. Food/water deprivation for short periods.
4. Noxious stimuli from which escape is possible.
5. Surgical procedures that may result in some minor post-surgery pain or distress.
6. Diagnostic procedures such as laparoscopy or needle biopsies.

CATEGORY III. The use of animals in procedures that involve significant, but unavoidable pain or distress to the animals.

Examples
1. Deliberate induction of behavioral stress, loss of sight, or similar debilitation that results in significant pain or distress.
2. Major surgical procedures such as the invasion and exposure of body cavities that result in significant post-operative pain or distress.
3. Induction of an anatomic or physiological deficit that will result in pain or distress.
4. Application of noxious stimuli from which escape is impossible or prolonged physical restraint.
5. Deprivation studies.
6. Induction of aggressive or self-mutilating behavior.
7. Procedures that produce pain or distress in which anesthetics are not used; such as _______ studies, radiation sickness, certain infections, and stress or shock research.
8. Infliction of minor burns or trauma.

CATEGORY IV: The use of animals in procedures that involve the infliction of severe or chronic pain or distress.

Examples
1. Infliction of severe burns or trauma without anesthetics.
2. Attempts to induce psychopathology through use of severe or chronic pain or distress.
3. Euthanasia by means other than those described as “acceptable’ or ‘conditional” in the 1993 Report of the AVMA Panel on Euthanasia.
4. Inescapable severe stress, terminal stress, or long-term use of physical restraints.
5. Performing any major surgical procedure without anesthetics.

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USDA CLASSIFICATION AND EXAMPLES

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

**Examples:**
- Breeding colonies of any animal species (USDA does not require listing of rats, mice, birds) that are held in legal sized caging and handled in accordance with the Guide and other applicable regulations. Breeding colony includes parents and offspring.
- Newly acquired animals that are held in proper caging and handled in accordance with applicable regulations.
- Animals held under proper captive conditions or wild animals that are being observed.

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

**Examples:**
- Procedures performed correctly by trained personnel such as the administration of electrolytes/ fluids, administration of oral medication, blood collection from a common peripheral vein per standard veterinary practice (dog cephalic, cat jugular) or catheterization of same, standard radiography, parenteral injections of non-irritating substances.
- Euthanasia performed in accordance with the recommendations of the most recent AVMA Panel on Euthanasia, utilizing procedures that produce rapid unconsciousness and subsequent human death.
- Manual restraint that is no longer than would be required for a simple exam; short period of chair restraint for an adapted nonhuman primate.

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

**Examples:**
- Surgical procedures conducted by trained personnel in accordance with standard veterinary practice such as biopsies, gonadectomy, exposure of blood vessels, chronic catheter implantation, laparotomy or laparoscopy.
- Blood collection by more invasive routes such as intracardiac or periorbital collection from species without a true orbital sinus such as rats and guinea pigs.
- Administration of drugs, chemicals, toxins, or organisms that would be expected to produce pain or distress but which will be alleviated by analgesics.

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

**Examples:**
- Procedures producing pain or distress unrelieved by analgesics such as toxicity studies, microbial virulence testing, radiation sickness, and research on stress, shock, or pain.
- Surgical and postsurgical sequella from invasion of body cavities, orthopedic procedures, dentistry or other hard or soft tissue damage that produces unrelieved pain or distress.
- Negative conditioning via electric shocks that would cause pain in humans.
- Chairing of nonhuman primates not conditioned to the procedure for the time period used.

**NOTE REGARDING CLASSIFICATION E:** An explanation of the procedures producing pain or distress in these animals and the justification for not using appropriate anesthetic, analgesic or tranquilizing drugs must be provided on Attachment 1. This information is required to be reported to the USDA, will be available from USDA under the Freedom of Information Act and may be publicly available through the Internet via USDA’s website.

NSU IACUC: 3/26/01
Attachment 1

Explanation for USDA Classification E
(This report is required to accompany USDA Form 7023 to support any USDA Classification E listing.)
This document must be typed.

Name of investigator:

Animal Study Proposal Title:

Species and number of animals listed in Classification E for each year:
Species:
Number of animals:
  year 1 –
  year 2 –
  year 3 –
  Total:

Description of project including reason(s) for species selection:

Provide a scientific justification to explain why the use of anesthetics, analgesics, sedatives or tranquilizers during and/or following painful or distressing procedures is contraindicated:

Signature of investigator:
Date:

Signature of IACUC Chairperson:
Date:

NSU IACUC: 3/26/01
OCCUPATIONAL HEALTH FOR ANIMAL CARE PERSONNEL PROGRAM VERIFICATION

I certify that I have received the following information regarding occupational health for animal care personnel (check all that apply):

[ ] Reporting Injury or Illness
[ ] Personal Hygiene
[ ] Zoonoses
[ ] Human Allergies to Animals
[ ] Other Hazardous Materials

I have read and understand this information. (Federal policy requires that Nicholls State University document that this information has been provided to you.)

_____________________________________________ _______________________
Signature of person who will be in contact with animals Date

_____________________________________________
Name Typed or Printed

Classification (check one)
   [ ] Student
   [ ] Faculty
   [ ] Staff

_____________________________________________ __________________________ __________________________
College Department Phone

If you are a principal investigator, please check here [ ]. If not, please name the investigator(s) for whom you work with animals.

_____________________________________________ __________________________ __________________________
_____________________________________________ __________________________

For University Health Services Personnel Only

This individual has provided information on his or her health and allergy history to the University Health Services and, if needed, has received an immunization against tetanus.

_____________________________________________ __________________________
Signature of University Health Services Representative Date

_____________________________________________
Name Typed or Printed