MORGAN STATE UNIVERSITY
ANIMAL RESEARCH FORM

Protocol #_____

Submitted_____

Approved_____

Expiration_____

A. ADMINISTRATIVE DATA:

Department, Center or College/School_____

Principal Investigator_____

Building/Room_____Telephone _____Fax_____

Email:_____

Division_____

Project Title_____

_____

[ ] Initial Submission [ ] Renewal *or* [ ] Modification of Protocol# _____.

List the names of all individuals authorized to conduct procedures involving animals under this protocol and identify key personnel (i.e., Co-investigator(s), Technicians, etc.):

Who will be responsible for the training students and technicians in the laboratory?

Please briefly describe training provided to members on the specific procedures in this protocol. Please also attach verification of IACUC training/certification for each member working in the lab.

B. ANIMAL REQUIREMENTS: Except for rodents, all species must be submitted on separate research form

Species:_____ Age/Wt/Size_____

Sex M

Stock or Strain_____

Source(s)/ Commercial _____

Holding Location(s)_____

Animal Procedure Location(s)_____

Number of Animals to be Used_____, _____, _____ = _____
Year 1 Year 2 Year 3 Total

C. TRANSPORTATION: Transportation of animals must conform to all MSU Animal Core Facility guidelines/policies. If animals will be transported between facilities, describe the methods and containment to be utilized.

D. STUDY OBJECTIVES: Briefly explain in non-technical terms the aim of the study and why the study is important.

E. RATIONALE FOR ANIMAL USE: 1) Explain your rationale for animal use. 2) Justify the appropriateness of the species selected. 3) Justify the number of animals to be used.

F. DESCRIPTION OF EXPERIMENTAL DESIGN AND ANIMAL PROCEDURES: Briefly explain the experimental design and specify all animal procedures. This description should

allow the IACUC to understand the experimental course of an animal from its entry into the experiment to the endpoint of the study. Specifically address the following:

a. Injections or Inoculations (substances. e.g.. infectious agents. adjuvants, etc.. dose. sites, volume. route and schedules)
b. Blood Withdrawals (volume. frequency. withdrawal sites. and methodology)
c. Non-Survival Surgical Procedures (Provide details of survival surgical procedures in Section G.)
d. Radiation (dosage and schedule)
e. Methods of Restraint (e.g.. restraint chairs. collars. vests. harnesses. slings, etc.)
f. Animal Identification Methods (e.g.. ear tags. tattoos, collar. cage card. etc.)
g. Other Procedures (e.g.. survival studies. tail biopsies. etc.)
h. Resultant Effects, if any, the animals are expected to experience (e.g.. pain or discomfort, etc.)
i. Experimental Endpoint Criteria (i.e.. tumor size, percentage body weight gain or loss, inability to eat or drink, behavioral abnormalities. clinical symptomatology. or signs of toxicity) must be specified when THE ANIMAL GENOTYPE, the administration of tumor cells, biologics, infectious agents, radiation or toxic chemicals are expected to cause significant symptomatology or are potentially lethal.

G. SURVIVAL SURGERY: If proposed, complete the following.

a. Identify and describe the surgical procedure(s) to be performed. Include the aseptic methods to be utilized.
b. Who will perform surgery and what are their qualifications and/or experience?
c. Where will surgery be performed (building and room)?
d. Describe post-operative care required and identify the responsible individual.
e. Has major survival surgery been performed on any animal prior to being placed on this study? Y/N. If yes, please explain.
f. Will more than one major survival surgery be performed on an animal while on this study? Y/N. If yes, please justify:

H. PAIN OR DISTRESS CATEGORY: Check the appropriate category(ies) and indicate the approximate number of animals in each. Sum(s) should equal the total from Section B.

NUMBER OF ANIMALS USED EACH YEAR

	Year 1	Year 2	Year 3
[ ] USDA Column B- No Pain or Distress	_____	_____	_____
[ ] USDA Column C -Little Pain or Distress	_____	_____	_____
[ ] USDA Column D -Pain or Distress Relieved by Appropriate Measures	_____	_____	_____
[ ] USDA Column E- Unrelieved Pain or Distress*	_____	_____	_____

*IF ANIMALS ARE INDICATED IN COLUMN E, A SCIENTIFIC JUSTIFICATION IS REQUIRED TO EXPLAIN WHY THE USE OF ANESTHETICS, ANALGESICS, SEDATIVES OR TRANQUILIZERS DURING AND/OR FOLLOWING PAINFUL OR DISTRESSFUL PROCEDURES IS CONTRAINDICATED. PLEASE COMPLETE THE EXPLANATION FOR COLUMN E LISTINGS FORM AT THE END OF THIS DOCUMENT. THIS FORM WILL ACCOMPANY THE UMBI ANNUAL REPORT TO THE USDA AND IS AVAILABLE UNDER THE FREEDOM OF INFORMATION ACT.

I. ANESTHESIA, ANALGESIA, TRANQUILIZATION: For animals indicated in Section H, specify the anesthetics, analgesics, sedative or tranquilizers that are to be used. Include the name of the agent(s), the dosage, route and frequency of administration. Please verify that all drugs used will be pharmaceutical grade.

J. METHOD OF EUTHANASIA OR DISPOSITION OF ANIMALS AT END OF STUDY: Indicate the proposed method, and if a chemical agent is used, specify the dosage and route of administration. Specify how death will be verified (2 methods) and list the planned endpoint criteria. Indicate the method of carcass disposal if not as medical pathological waste.

K. FOOD RESTRICTION. Is there food or fluid restriction, and if so, how will this be monitored (for example by daily weighing with intervention id body weight falls below 20% or greater).

L. HAZARDOUS AGENTS: Use of hazardous agents requires the approval from the Office of Safety, Health, and Environment (OSHE). Registration Documents are required to be attached for the use of recombinant DNA, Biological Agents and Radionuclides.

M. ENVIRONMENTAL ENRICHMENT. Describe how environmental enrichment is provided (e.g., pair or group housing, nesting materials, toys, food enrichment etc.).

N. BREEDING. If rodents are breeding, describe the methods used to prevent cage overcrowding (e.g., trio breeding separation of females with pups into different cages, weaning at 3 weeks, etc.)

O. BIOLOGICAL MATERIAL/ANIMAL PRODUCTS (e.g., cell lines, antiserum, etc.):

1. Specify material_____

2. Source_____ Material Sterile or Attenuated (Y/N)_

3. If material has been derived or passaged through rodents, has it been PCR (Y/N) _____ (if yes, attach a copy of results)

4. I certify that the PCR 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 PCR tested sample. To the best of my knowledge the material remains uncontaminated with rodent pathogens.

Initial of the Principal Investigator _____

P. FUNDING SOURCE: CURRENT OR ANTICIPATED
PHS NSF STATE OF MARYLAND

_____Departmental/Internal Funds

_____Other External Funds (specify) _____

Q. SPECIAL CONCERNS OR REQUIREMENTS OF THE STUDY: List any special housing, equipment, animal care (i.e., special caging, water, feed, or waste disposal, etc.)

R. PRINCIPAL INVESTIGATOR CERTIFICATIONS:

1. I certify that I have attended an approved MSU investigator-training course

   Year of course attendance _____Location_____

2. I certify that I have determined that the research proposed herein is not unnecessarily duplicative of previously reported research.
3. I certify that all individuals working on this proposal who have substantial animal contact are participating in the MSU Occupational Health Risk Monitoring Program.
4. I certify that the individuals listed in Section A are authorized to conduct procedures involving animals under this proposal have attended the MSU course "Using Animals in Intramural Research: Guidelines for Animal Users" 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 animal welfare concerns.
5. A literature search is required both a) for alternatives to painful procedures (COLUMN D AND COLUMN E PROPOSALS) and b) for alternatives to animal use. Many people make the mistake of putting the term "alternatives" in the strategy and expect to find "all" possible alternatives. Because alternatives is a complex concept involving refinement, reduction and replacement, the use of "alternatives" as a search term is best used only in those areas of study where larger amounts of research have been conducted on alternatives, such as in toxicology or education. In other areas of research the term "alternatives" often retrieves results not related to the 3Rs. (see section H): For useful search terms, consult:https://www.nal.usda.gov/awic/3Rs-terms-examples

   DATABASE LITERATURE SEARCH:

   Identify the services (computer databases, literature searches, etc) that were used to obtain information on alternatives to painful procedures, use of live animals, and prevention of unnecessary duplication of research. Expert scientific guidance can be used in conjunction with the literature search.

   Please check below the databases searched and your search strategy of key words. A MINIMUM OF TWO DATABASES MUST BE USED. Please submit ONE ORIGINAL COPY of the search results. Refer to instructions for examples.
   DATE OF SEARCH: _____

INCLUSIVE DATE: _____

DATABASES: MEDLINE ____; AGRICOLA _____; EMBASE ____;PSYCHINFO_____;
OTHER (specify) _____

STRATEGY OR KEY WORDS:

I certify that I have reviewed the pertinent scientific literature and the sources and/or databases as noted below and have found no valid alternative to any procedures described herein which may cause more than momentary pain or distress. The methods and sources used in my search included the following:

6. Unrelieved pain and distress (USDA category E) should be avoided wherever possible and must be scientifically justified. Please provide justification below. Please note USDA category E protocols may be subject to Freedom of Information Act requests.

   I certify that USDA Pain category E procedures are avoided where possible, and if unavoidable are scientifically justified.

7. I will obtain approval from the IACUC before initiating any significant changes in this study.

Principal Investigator:

Signature_____ Date_____

S. FINAL APPROVAL:

Certification of review and approval by the MSU Animal Care and Use Committee Chairperson.

CHAIRPERSON

Signature_____Date _____