Appendix A - Research IACUC Application

1. Project Activity

a. What is the purpose of the study? In lay language, briefly summarize the overall intent/objectives of the study and why the study is important to human or animal health, the advancement of knowledge, or the good of society.

b. Harm/Benefit Analysis: In two or three sentences and using lay language, compare the potential harm to participating animals with the potential benefits of the research for humans, animals and/or the advancement of science.

c. In scientific language, provide a brief project/course summary describing the purpose of the experiments(s). If this is a triennial resubmission of a previously approved project, include original project number, summaries of findings during the previous 3 years of work and how these data will be expanded upon in the next 3 years. List the specific aims or objectives for the project.

2. Procedures to be applied to animals.

CHECK	PROCEDURE	INSTRUCTIONS
☐ Yes ☐ No	Breeding	Describe the need for breeding and methodology in **part 3a** below.
☐ Yes ☐ No	Animal identification methods	Describe details of ear tags, tattoos, collars, etc. in **part 3a** below.
☐ Yes ☐ No	Anesthesia	Describe **briefly in part 6a** below and provide **details in part 3b**
☐ Yes ☐ No	Blood collection	Describe volume, frequency, collection site, needle size, methodology in **part 3a** below.
☐ Yes ☐ No	Injections	Describe briefly in **part 3a** below.
☐ Yes ☐ No	Exposure to experimental substance	Describe details of oral gavage, instillation, topical, etc. **briefly in part 3a** below.
☐ Yes ☐ No	Non-pharmaceutical grade compounds	Identify any drugs, biologics, or reagents that will be administered to animals. If these agents are not human or veterinary pharmaceutical-grade substances, provide a scientific justification for their use and describe methods that will be used to ensure appropriate preparation and administration. Describe briefly in **part 3a** below.
☐ Yes ☐ No	Devices for prolonged restraint	Describe in **part 3a**.
☐ Yes ☐ No	Animal pain or distress	Describe the expected adverse effects on animals in **part 3a**.
☐ Yes ☐ No	Non-survival surgery	Describe procedures in detail in **part 3a**.
☐ Yes ☐ No	Tissues collected after euthanasia	List tissues to be harvested in **part 3a**.
☐ Yes ☐ No	Survival surgery	Describe briefly in **part 3a** and attach **IACUC supplemental form I**
☐ Yes ☐ No	Illness, experimental endpoint, induced disease, or pathological condition	Describe briefly in **part 3a** and attach **IACUC supplemental form II**
☐ Yes ☐ No	Special diets and/or food or water restriction	Describe briefly in **part 3a** and attach **IACUC supplemental form III**
☐ Yes ☐ No	Animal work done at another institution	Describe how the work at the other institution fits into the project in **part 3a**. Include the Animal Welfare Assurance Number for the other institution. Attach the completed proposal form and IACUC approval number from the other institution.

- Provide a **detailed description** of the use of animals. 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. Cover all items checked above as instructed in the table.

3b. Specify in the table below any drug you may use to anesthetize, provide medical treatment (analgesics, antibiotics, NSAIDs, etc.) and/or euthanize research animals. Where anesthetic combinations are called for, list each drug separately.

REASON FOR USE	DRUG	DOSE	ROUTE	EXPECTED DURATION OF AGENT

3c. Volatile (gas) anesthetic agents.

i. Are you using a volatile anesthetic (e.g. isoflurane)? ☐ Yes ☐ No

ii. How will this be vented (e.g., fume hood) or scavenged (e.g. charcoal canister)? _____

iii. List the location of the venting or scavenging equipment. _____

3d. List who will administer the anesthesia or euthanasia agents and the qualifications of each person listed.

Name: _____ Qualification: _____

Name: _____ Qualification: _____

4a. Animals to be used in this activity:

Species/strain* (include common name)	Sex	Approximate Age (if known)	Maximum number of animals used during this project

*Strain is required if you have animals that are specific genetic interest or are inbred, outbred, or transgenic.

4b. Animal Supplier/Source. *List vendor/breeder, stockyard, institution, other NMSU unit or herd etc.*

4c. Justify the *species* and *number* of animals to be used, statistically when applicable.

4d. Where will the animals be located?

- ☐ Animal Care Facility
- ☐ Foster Hall, room number ____
- ☐ Biology Annex, room number ____
- ☐ Knox Hall, room number ____
- ☐ Animal Metabolism and Physiology Building
- ☐ Campus Livestock Facility
- ☐ Livestock Entomology Facility
- ☐ Chihuahuan Desert Rangeland Research Center
- ☐ Corona Range and Livestock Research Center
- ☐ Clayton Livestock Research Center
- ☐ Jornada Experimental Range
- ☐ Other, please specify: _____
  _____

4e. Animal Housing

- ☐ Cage
- ☐ Indoor pen
- ☐ Metabolism crate
- ☐ Tie stall
- ☐ Outdoor pen
- ☐ Free range
- ☐ Other, please specify: _____
  _____

5. Where will the procedures take place (if transporting animals please describe the process and risks)**?**

6. Will your project require any specialized project related housing or husbandry (e.g. social isolation, environmental enrichment, etc.)**?**

- ☐ Yes – please describe: _____
- ☐ No

7. What known animal or potential animal-related problems can be anticipated during this project? How will these issues be addressed? Under what circumstances will animals be removed from the project?

8. What will be the disposition of the animals used in this project? When appropriate check more than one box.

- ☐ Euthanized in the lab, with or without further sampling postmortem; carcass disposed by incineration or other approved method.
- ☐ Harvested in commercial facilities under state or federal inspection with carcasses entering food chain.
- ☐ Released back to natural habitat.
- ☐ Maintained under animal management conditions for future use in research.
- ☐ Transferred to another project (list protocol number and investigator): _____
- ☐ Other (describe): _____

9. Euthanasia. Describe the method of euthanasia to be used. Even if euthanasia is not planned, provide the method to be used if it becomes necessary due to illness and/or injury. If the proposed method does not follow the guidelines of the American Veterinary Medical Association, include a justification for the alternative method such as taxon specific recommendations. If using a site-specific SOP please include SOP with training records of who is allowed to conduct euthanasia.

10. Is animal death (without euthanasia) a planned endpoint of the study?

- ☐ Yes
- ☐ No

If yes, provide justification.

Search for Alternatives to Animal Use

Federal regulations require the consideration of alternative to procedures that may cause more than momentary or slight pain or distress to animals.

- **Replacement** of vertebrate animals with in vitro models, computer models, or less-sentient animal species.
- **Refinement** of experimental procedures to minimize pain or distress (e.g. early endpoints, use of analgesics, anesthetics, or sedatives, techniques that reduce stress in the animal).
- **Reduction** in the number of animals using appropriate statistical methods in design and analysis of the study, reduction in variability using animals of defined genetic or microbiological status, and maximizing the data gained from an individual animal.

1. **Alternatives.** Describe how you have incorporated each of the above alternatives in the design of the study (*practicing the 3 R's*) or what alternatives were considered and why they were not found to be suitable for accomplishing the goals of the study.

2. **Methods used to search for alternatives**

☐ **Literature Search (required)**- A literature search for alternatives to the use of live animals must be conducted and you will be requested to provide detailed results. List a minimum of 2 databases consulted (e.g., PubMed, Agricola, Toxline, Biological Abstracts, ALTBIB, University of California Center for Animal Alternatives, Altweb, Animal Welfare Information Center (AWIC), Institute for In Vitro Sciences, European Centre for Validation of Alternative Methods).

Name of database(s)/search(es) utilized (e.g. AGRICOLA, PUBMED, MEDLINE, etc):

_____

Years searched (inclusive) From: _____ To: _____

Date the search was completed: _____

Keywords or search strategies used: _____

Provide a brief summary of your search results:

☐ **Consultation with colleague(s) (optional)**

Name(s): _____ Date of consult: _____

Qualifications of consultant: _____

Content of consult: _____

☐ **Other information services (optional;** please provide specific information):

3. Attending veterinarian consultation

☐ Yes Date Consulted: _____
☐ No

The AWA requires that the attending veterinarian must be consulted in the planning stages for projects with ***animals listed in Category D or E***. Please contact NMSU Attending Veterinarian Dr. Erin Weich at eiweich@nmsu.edu or 575-640-6203 if you have not consulted with her already on *this specific project*.