

West Texas A&M University

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Memorandum to IO

To: Dr. Angela Spaulding, WTAMU VP Research and Compliance/IO;

From: WTAMU Institutional Animal Care and Use Committee

Subject: IACUC Semi-Annual Meeting May 2021

Date: May 19, 2021

This report summarizes the results of the IACUC committee's AWA required bi-annual program review and facility inspection, as required by the applicable Animal Welfare Act (AWA) regulations 9CFR2.31.

This report also meets the requirements of submission of semiannual reports to the Institutional Official as a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW). **This form may also be used for any by the IACUC committee for any requested inspections by the IO, and, as needed, to address any public and/or employees complaints.**

Pre-evaluation Checklist:

- ☒ All committee members have been provided access to the approved WTAMU/CREET IACUC proposals and supporting information for review well as the IACUC Committee evaluation checklist. (Note: The IACUC Committee Review Checklist is used as the basis of the bi-annual review and was designed to meet the bi-annual review requirements outlined under 9CFR2.31(d)i-xi.).
- ☒ All committee members have been notified of the program review and facility inspections.
- ☒ No committee member wishing to participate in any part of this evaluation has been excluded.

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Since the last review, the following changes have occurred in the institution's program for animal care and use:

I. Description of the Nature and Extent of the Institution's Adherence to the AWA (If a PHS or NIH Grant include PHS Policy, the OLAW Guide, 8th edition).

Departures from the AWA and PHS and OLAW if appropriate.

Select one:

- ☒ There were no departures during this reporting period.
- ☐ The following departures have been reviewed and approved by the IACUC:

II. Deficiencies in the Institution's Animal Care and Use Program

Animal Care and Use Program Review Date(s):

Select one:

- ☒ There were no deficiencies in the program during this reporting period.
- ☐ The following deficiencies have been identified: [describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of this Semiannual Program Review form and Facility Inspection Checklist.

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III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s): 05.19.2021

Select one:

- ☐ There were no deficiencies in the animal facility during this reporting period.
- ☒ The following deficiencies have been identified: [describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of this Semiannual Program Review form and Facility Inspection Checklist. The IACUC committee has the authority to require Principal Investigators and research programs to meet the requirements outlined in the AWA and implementing regulations 9CFR 2.31et. seq. as specified in Appendix A.

The Horse Center is experiencing severe flooding when it rains. AR-EHS is enlisting the help of SSC to get the roof patched, as needed, to assist with this within the next month.

Exposed extension cord at Nance Ranch. AR-EHS will contact SSC to put permanent cord on the chute within the next month.

Exposed cement at Horse Center and Feedlot. AR-EHS will have dirt taken out there before the end of July.

IV. Minority Views

Select one:

- ☒ No minority views were submitted or expressed.
- ☐ The following minority views were expressed: [insert minority views here or attach].

V. Status of AAALAC Accreditation [identify accredited facilities, if applicable]

N/A

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VI. Signatures [signatures of a majority of the IACUC members]

<div>DocuSigned by: <i>Dr. Gary Bigham</i> 016240F07667486...</div>	<div>DocuSigned by: <i>Dee Griffin</i> E6088FD7CF3848F...</div>	<div>DocuSigned by: <i>Donna Byers</i> 29ED88E14FA749D...</div>	<div>DocuSigned by: <i>Stephen Karaganis</i> 558DA0CF4D514B0...</div>	<div>DocuSigned by: <i>Maxine De Butte</i> 35D74CB098F3426...</div>
<div>DocuSigned by: <i>BJ McComer</i> 6821CD2CD589480...</div>	<div>DocuSigned by: <i>John Richeson</i> C23CEC8CBA7C440...</div>	<div>DocuSigned by: <i>Juan Pireiro</i> B1E0688D1F2498...</div>	<div>DocuSigned by: <i>Richard Posey - RV</i> 028DB88AAAF2460...</div>	
<div>DocuSigned by: <i>Jude Smith</i> FA15024047D848E...</div>			<div>DocuSigned by: <i>Reza Pjesky</i> BF68ADB2F7004A1...</div>	

VII. Institutional Official Signatures:

Lingela Apaulding

06/07/2021

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Attachments:

- I. Agenda
- II. Meeting Minutes
- III. Program Review
- IV. Facility Inspections
- V. PAM Reviews

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4/16/2021

I. Semiannual Program Review Checklist

Institutional Policies and Responsibilities

Date:

1. Animal Care and Use Program ^{NEW}

- Responsibility for animal well-being is assumed by all members of the program (Guide, p 1) [must] ✓
- IO has authority to allocate needed resources (Guide, p 13) ✓
- Resources necessary to manage program of veterinary care are provided (Guide, p 14) [must] ✓
- Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the Guide (Guide, pp 11, 15) ✓
- Program needs are regularly communicated to IO by AV and/or IACUC (Guide, p 13) ✓
- Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site (Guide, p 14) [must] ✓
- Inter-institutional collaborations are described in formal written agreements (Guide, p 15) ✓
- Written agreements address responsibilities, animal ownership, and IACUC oversight (Guide, p 15) ✓

A* M S C NA

2. Disaster Planning and Emergency Preparedness ^{NEW}

- Disaster plans for each facility to include satellite locations are in place (Guide, p 35, p 75) [must] ✓
- Plans include provisions for euthanasia (Guide, p 35) [must] ✓
- Plans include triage plans to meet institutional and investigators' needs (Guide, p 35) ✓
- Plans define actions to prevent animal injury or death due to HVAC or other failures (Guide, p 35) ✓
- Plans describe preservation of critical or irreplaceable animals (Guide, p 35) ✓
- Plans include essential personnel and their training (Guide, p 35) ✓
- Animal facility plans are approved by the institution and incorporated into overall response plan (Guide, p 35) ✓
- Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place (Guide, p 35) ✓

A* M S C NA

3. IACUC ^{NEW}

- Meets as necessary to fulfill responsibilities (Guide, p 25) [must] ✓
- IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions (Guide, p 26) [must] ✓
- Continuing IACUC oversight after initial protocol approval is in place (Guide, p 33) ✓
- IACUC evaluates the effectiveness of training programs (Guide, p 15) ✓

A* M S C NA

4. IACUC Protocol Review - Special Considerations

- Humane endpoints are established for studies that involve tumor models, infectious diseases, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessment of toxicologic effects, organ or system failure, and models of cardiovascular shock (Guide, p 27) ✓
- For pilot studies, a system to communicate with the IACUC is in place (Guide, p 28) ✓
- For genetically modified animals, enhanced monitoring and reporting is in place (Guide, p 28) ✓
- Restraint devices are justified in the animal use protocols (Guide, p 29) [must] ✓
- Alternatives to physical restraint are considered (Guide, p 29) ✓
- Period of restraint is the minimum to meet scientific objectives (Guide, p 29) ✓
- Training of animals to adapt to restraint is provided (Guide, p 29) ✓
- Animals that fail to adapt are removed from study (Guide, p 29) ✓
- Appropriate observation intervals of restrained animals are provided (Guide, p 29) ✓
- Veterinary care is provided if lesions or illness result from restraint (Guide, p 30) [must] ✓

A* M S C NA

Semiannual Checklist

v3/8/2012

2

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- Explanations of purpose and duration of restraint are provided to study personnel (*Guide, p 30*) ✓
- Multiple surgical procedures on a single animal are justified and outcomes evaluated (*Guide, p 30*) ✓
- Major versus minor surgical procedures are evaluated on a case-by-case basis (*Guide, p 30*) ✓
- Multiple survival procedure justifications in non-regulated species conform to regulated species standards (*Guide, p 30*) ✓
- Animals on food/fluid restriction are monitored to ensure nutritional needs are met (*Guide, p 31*) ✓
- Body weights for food/fluid restricted animals are recorded at least weekly (*Guide, p 31*) ✓
- Daily written records are maintained for food/fluid restricted animals (*Guide, p 31*) ✓
- Pharmaceutical grade chemicals are used, when available, for animal-related procedures (*Guide, p 31*) ✓
- Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (*Guide, p 31*) ✓
- Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (*Guide, p 32*) ✓
- Disposition plans are considered for species removed from the wild (*Guide, p 32*) ✓
- Toe-clipping only used when no alternative, performed aseptically and with pain relief (*Guide, p 75*) ✓

5. IACUC Membership and Functions

- IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, *IV.A.3.*) ✓
- Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user (*Guide, p 24*)ⁱⁱ ✓
- IACUC authority and resources for oversight and evaluation of institution's program are provided (*Guide, p 14*) ✓
- IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, *IV.B.*) ✓
- Conducts semiannual inspections of institutional animal facilities (PHS Policy, *IV.B.*) ✓
- IACUC organizationally reports to the Institutional Official (PHS Policy, *IV.A.1.b.*) ✓
- Methods for reporting and investigating animal welfare concerns are in place (*Guide, p 23*) [must] ✓
- Reviews and investigates concerns about animal care and use at institutionⁱⁱⁱ (PHS Policy, *IV.B.*) ✓
- Procedures are in place for review, approval, and suspension of animal activities^{iv} (PHS Policy, *IV.B.*) ✓
- Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, *IV.B.*) ✓
- Policies are in place for special procedures (e.g., genetically modified animals, restraint, multiple survival surgery, food and fluid regulation, field investigations, agricultural animals) (*Guide, p 27-32*) ✓
- Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS^v (*Guide, p 30*) [must] ✓

A* M S C NA

6. IACUC Training ^{NEW}

- All IACUC members should receive:
 - Formal orientation to institution's program (*Guide, p 17*) ✓
 - Training on legislation, regulations, guidelines, and policies (*Guide, p 17*) ✓
 - Training on how to inspect facilities and labs where animal use or housing occurs (*Guide, p 17*) ✓
 - Training on how to review protocols as well as evaluate the program (*Guide, p 17*) ✓
 - Ongoing training/education (*Guide, p 17*) ✓

A* M S C NA

7. IACUC Records and Reporting Requirements^{vi}

- Semiannual report to the IO (PHS Policy, *IV.B.*)
 - Submitted to IO every 6 months ✓
 - Compiles program review and facility inspection(s) results (Includes all program ✓

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Semiannual Checklist

v3/8/2012

3

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- and facility deficiencies)
- o Includes minority IACUC views
- o Describes IACUC-approved departures from the *Guide* or PHS Policy and the reasons for each departure^{vii}
- o Distinguishes significant from minor deficiencies
- o Includes a plan and schedule for correction for each deficiency identified^{viii}
- Reports to OLAW (PHS Policy, IV.F.)
 - o Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views
 - o Promptly advises OLAW of serious/ongoing *Guide* deviations or PHS Policy noncompliance (NOT-OD-05-034)
 - o Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC (NOT-OD-05-034)
- Reports to U.S. Department of Agriculture (USDA) or Federal funding agency^{ix}
 - o Annual report to USDA contains required information including all exceptions/exemptions
 - o Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards
 - o Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies
 - o Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency
- Records (PHS Policy, IV.E.)
 - o IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years
 - o Records of IACUC reviews of animal activities include all required information^x
 - o Records of IACUC reviews are maintained for 3 years after the completion of the study

8. Veterinary Care (See also next section - Veterinary Care)

- An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care^{xi}
- Veterinary access to all animals is provided (*Guide*, p 14) [must]
- Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (*Guide*, p 14) [must]
- Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (*Guide*, p 5) [must]
- Veterinarian provides consultation when interventional control is not possible (*Guide*, p 5) [must]
- If part time /consulting veterinarian, visits meet programmatic needs (*Guide*, p 14)
- Regular communication occurs between veterinarian and IACUC (*Guide*, p 14)
- Veterinarian(s) have experience and training in species used (*Guide*, p 15) [must]
- Veterinarian(s) have experience in facility administration/management (*Guide*, p 15)

9. Personnel Qualifications and Training

- All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science. Personnel included: [must]
 - o Veterinary/other professional staff (*Guide*, p 15-16)
 - o IACUC members (*Guide*, p 17)
 - o Animal care personnel (*Guide*, p 16)
 - o Research investigators, instructors, technicians, trainees, and students (*Guide*, pp 16-17)
- Continuing education for program and research staff provided to ensure high quality care and reinforce training (*Guide*, pp 16-17)
- Training is available prior to starting animal activity (*Guide*, p 17)
- Training is documented (*Guide*, p 15)
- Training program content includes: (*Guide*, p 17)
 - o Methods for reporting concerns (*Guide*, p 17)
 - o Humane practices of animal care (e.g., housing, husbandry, handling) ^{xii}
 - o Humane practices of animal use (e.g., research procedures, use of anesthesia,

Semiannual Checklist

v3/8/2012

4

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pre- and post-operative care, aseptic surgical techniques and euthanasia (*Guide*, p 17)^{xiii}

- o Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, *IV.A.1.g.*)
- o Research/testing methods that minimize animal pain or distress (PHS Policy, *IV.A.1.g.*)
- o Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (*Guide*, p 20)
- o Animal care and use legislation (*Guide*, p 17)
- o IACUC function (*Guide*, p 17)
- o Ethics of animal use and Three R's (*Guide*, p 17)

10. Occupational Health and Safety of Personnel

- Program is in place and is consistent with federal, state, and local regulations (*Guide*, p 17) [must]
- Program covers all personnel who work in laboratory animal facilities (*Guide*, p 18)
- Changing, washing, and showering facilities are available as appropriate (*Guide*, p 19)
- Hazardous facilities are separated from other areas and identified as limited access (*Guide*, p 19)
- Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) (*Guide*, p 20)
- Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) (*Guide*, p 20)
- Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place (*Guide*, p 21)
- Personal Protective Equipment for the work area is appropriate and available (*Guide*, p 21)
- Program for medical evaluation and preventive medicine for personnel includes:
 - o Pre-employment evaluation including health history (*Guide*, p 22)
 - o Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate (*Guide*, p 22)
 - o Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) (*Guide*, p 23)
 - o Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. (*Guide*, p 23)
 - o Promotes early diagnosis of allergies including preexisting conditions (*Guide*, p 22)
 - o Considers confidentiality and other legal factors as required by federal, state and local regulations (*Guide*, p 22) [must]
 - o If serum samples are collected, the purpose is consistent with federal and state laws (*Guide*, p 22) [must]
- Waste anesthetic gases are scavenged (*Guide*, p 21)
- Hearing protection is provided in high noise areas (*Guide*, p 22)
- Respiratory protection is available when performing airborne particulate work (*Guide*, p 22)
- Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:
 - o Tuberculosis screening provided for all exposed personnel (*Guide*, p 23)
 - o Training and implementation of procedures for bites, scratches, or injuries associated with macaques (*Guide*, p 23)
 - o PPE is provided including gloves, arm protection, face masks, face shields, or goggles (*Guide*, p 21)
 - o Injuries associated with macaques are carefully evaluated and treatment implemented (*Guide*, p 23)
- Occupational safety and health of field studies is reviewed by OSH committee or office (*Guide*, p 32)

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11. Personnel Security ^{NEW}

- Preventive measures in place include pre-employment screening, and physical and IT security (*Guide*, p 23)

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12. Investigating & Reporting Animal Welfare Concerns NEW

- Methods for investigating and reporting animal welfare concerns are established (*Guide, p 23*) [must]
- Reported concerns and corrective actions are documented (*Guide, p 24*)
- Mechanisms for reporting concerns are posted in facility and at applicable website with instructions (*Guide, p 24*)
 - Includes multiple contacts (*Guide, p 24*)
 - Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection (*Guide, p 24*)

A* M S C NA

✓

✓

✓

✓

* A = acceptable

M = minor deficiency

S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy IV.A.1.a-i) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

NOTES:

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Veterinary Care

Date:

1. Clinical Care and Management ^{NEW}

A* M S C NA

- Veterinary program offers high quality of care and ethical standards (*Guide, p 105*) [must] ✓
- Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia (*Guide, p 106*) ✓
- Veterinarian provides oversight to surgery and perioperative care (*Guide, p 106*) ✓
- Veterinary care program is appropriate for program requirements (*Guide, pp 113-114*) ✓
- Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records (*Guide, p 114*) ✓
- Procedures to triage and prioritize incident reports are in place (*Guide, p 114*) ✓
- Procedures are in place to address:
 - Problems with experiments to determine course of treatment in consultation with investigator (*Guide, p 114*) ✓
 - Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes (*Guide, p 114*) ✓
 - Veterinary review and oversight of medical and animal use records (*Guide, p 115*) ✓
- Procedures established for timely reporting of animal injury, illness, or disease (*Guide, p 114*) [must] ✓
- Procedures established for veterinary assessment, treatment, or euthanasia (*Guide, p 114*) [must] ✓
- Veterinarian is authorized to treat, relieve pain, and/or euthanize (*Guide, p 114*) [must] ✓

2. Animal Procurement and Transportation/Preventive Medicine

A* M S C NA

- Procedures for lawful animal procurement are in place (*Guide, p 106*) [must] ✓
- Sufficient facilities and expertise are confirmed prior to procurement (*Guide, p 106*) ✓
- Procurement is linked to IACUC review and approval (*Guide, p 106*) ✓
- Random source dogs and cats are inspected for identification (*Guide, p 106*) ✓
- Population status of wildlife species is considered prior to procurement (*Guide, p 106*) ✓
- Appropriate records are maintained on animal acquisition (*Guide, p 106*) ✓
- Animal vendors are evaluated to meet program needs and quality (*Guide, p 106*) ✓
- Breeding colonies are based on need and managed to minimize numbers (*Guide, p 107*) ✓
- Procedures for compliance with animal transportation regulations, including international requirements, are in place (*Guide, p 107*) [must] ✓
- Transportation is planned to ensure safety, security and minimize risk (*Guide, p 107*) ✓
- Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available (*Guide, pp 107-108*) ✓
- Appropriate loading and unloading facilities are available (*Guide, p 109*) ✓
- Environment at receiving site is appropriate (*Guide, p 109*) ✓
- Policies in place on separation by species, source, and health status (*Guide, pp 109, 111-112*) ✓
- Procedures in place for quarantine to include zoonoses prevention (*Guide, p 110*) ✓
- Quarantined animals from different shipments are handled separately or physically separated (*Guide, p 110*) ✓
- Procedures in place for stabilization/acclimation (*Guide, pp 110-111*) ✓
- Policies in place for isolation of sick animals (*Guide, p 112*) ✓
- Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation (*Guide, p 112*) ✓
- Diagnostic resources are available for preventive health program (*Guide, p 112*) ✓

3. Surgery

A* M S C NA

- Surgical outcomes are assessed and corrective changes instituted (*Guide, p 115*) ✓
- Researchers have appropriate training to ensure good technique (*Guide, p 115*) [must] ✓

Semiannual Checklist

v3/8/2012

7

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- Pre-surgical plans are developed and include veterinary input (e.g., location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping) (*Guide, p 116*)
- Aseptic surgery is conducted in dedicated facilities or spaces, unless exception justified and IACUC approved (*Guide, p 116*)
- Surgical procedures including laparoscopic procedures are categorized as major or minor (*Guide, pp 117-118*)
- For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean (*Guide, p 118*)
- Aseptic technique is followed for survival surgical procedures (*Guide, pp 118-119*)
- Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (*Guide, p 119*)
- Procedures for monitoring surgical anesthesia and analgesia are in place (*Guide, p 119*)
- For aquatic species, skin surfaces are kept moist during surgical procedures (*Guide, p 119*)
- Post-operative monitoring and care are provided by trained personnel and documented (e.g., thermoregulation, physiologic function, analgesia, infection, removal of skin closures) (*Guide, pp 119-120*)

4. Pain, Distress, Anesthesia and Analgesia

- Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training (*Guide, p 121*)
- Selection of analgesics and anesthetics is based on professional veterinary judgment (*Guide, p 121*)
- Painful procedures are monitored to ensure appropriate analgesic management (*Guide, p 122*)
- Nonpharmacologic control of pain is considered as an element of postprocedural care (*Guide, p 122*)
- Procedures are in place to assure antinociception before surgery begins (*Guide, p 122*) [must]
- Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (*Guide, p 122*)
- Special precautions for the use of paralytics are in place to ensure anesthesia^{xiv} (*Guide, p 123*)

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5. Euthanasia

- Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC (*Guide, p 123*)
- Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (*Guide, pp 123-124*)
- Training is provided on appropriate methods for each species and considers psychological stress to personnel (*Guide, p 124*)
- Procedures and training are in place to ensure death is confirmed (*Guide, p 124*) [must]

A* M S C NA

6. Drug Storage and Control ^{NEW}

- Program complies with federal regulations for human and veterinary drugs (*Guide, p 115*) [must]
- Drug records and storage procedures are reviewed during facility inspections (*Guide, p 115*)
- Procedures are in place to ensure analgesics and anesthetics are used within expiration date (*Guide, p 122*) [must]
- Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely (*Guide, p 122*)

A* M S C NA

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C = change in program (PHS Policy IV.A.1.a.-1.) (include in semiannual report to IO and in annual report to OLAW)

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NOTES:

Semiannual Checklist

v3/8/2012

8

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Agenda IACUC May 19, 2021

- 8:30 Call to Order
 - Opening Statements
 - COIs/Minority Views/etc.
 - Roll Call/Quorum
- Program Review
- Proposal Discussion
- Adjourn
- Local Facility Inspections
 - Mouse Lab
 - Feedlot
 - Nance Ranch
 - Horse Center
 - Rodeo
- Lunch 12:00PM

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Meeting Title: IACUC May 2021 Semi-Annual **Date:** 05.19.2021

Members in Attendance: Dr. Gary Bigham, Jude Smith, Dr. Byeng Min, Dr. Maxine Debutte, Dr. Lance Baker, Dr. John Richeson, Dr. Juan Pineiro, Dr. B.J. Newcomer, Dr. Stephen Karaganis; via Zoom: Dr. Rex Pjesky, Dr. Donna Byers, Dr. Dee Griffin

Others in Attendance: Tara Cash (AR-EHS)

Members Not in Attendance: Zack Nethery, Dr. Dan Posey

Quorum met? Yes

Meeting Called to Order: 8:31AM

Meeting Adjourned: 8:55AM

Date of Minutes Approval: 05.25.2021

Agenda One: Opening statements

Discussion: Dr. Bigham opened the meeting at 8:31 AM reminding everyone that if there is a conflict of interest, the person with the COI may recuse themselves temporarily from the room while the discussion takes place. He also reminded the IACUC that minority opinions are welcome and strongly encouraged and also informed them that the meeting is being recorded solely for the purpose of taking minutes. He then asked the members to introduce themselves as there were three new members present.

Agenda Two: Program review

Discussion Tara (AR-EHS) began with explaining what DMRs and FCRs were and why the protocols must be annually reviewed by DMR. She explained the new online process she and Dr. Bigham started last November in order to streamline the meetings, save paper and resources, and save time. The OLAW checklist is mostly administrative so Tara is taking over that aspect of it and making it available to the IACUC for their approval and questions. Dr. Karaganis asked if we could require IACUC applications to be digital only (no scans) to help with the DMR process. Tara said she will ask Richard.

Agenda Three: Protocol discussions

Discussion Dr. Bigham asked the IACUC if they noticed anything on any of the DMRs that needed to be addressed, and everyone said the protocols were in compliance. Dr. Karaganis did notice that our DMR questionnaire does not work for our Wildlife proposals. Tara agreed, and she and Dr. Bigham will revise it for the Wildlife protocols.

Agenda Four: Adjourn

Discussion: Meeting adjourned to conduct local facility inspections at 8:55AM.

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Agenda IACUC May 19, 2021

- 8:30 Call to Order
 - Opening Statements
 - COIs/Minority Views/etc.
 - Roll Call/Quorum
- Program Review
- Proposal Discussion
- Adjourn
- Local Facility Inspections
 - Mouse Lab
 - Feedlot
 - Nance Ranch
 - Horse Center
 - Rodeo
- Lunch 12:00PM

I. Semiannual Facility Inspection Checklist

Terrestrial Animal Housing and Support Areas

Date: 05.19.2021

Location: Mouse Lab KRC 180

	A*	M	S	C	NA
Location: <ul style="list-style-type: none"> animal areas separate from personnel areas (<i>Guide, p 134</i>) separation of species (<i>Guide, p 111</i>) separation by disease status (<i>Guide, p 111</i>) security and access control (<i>Guide, p 151</i>) 	✓	✓			✓
Construction: <ul style="list-style-type: none"> corridors (<i>Guide, p 136</i>) animal room doors (<i>Guide, p 137</i>) exterior windows (<i>Guide, p 137</i>) floors (<i>Guide, p 137</i>) drainage (<i>Guide, p 138</i>) walls and ceilings (<i>Guide, p 138</i>) heating ventilation and air conditioning (<i>Guide, p 139</i>) power and lighting (<i>Guide, p 141</i>) noise control (<i>Guide, p 142</i>) vibration control (<i>Guide, p 142</i>) environmental monitoring (<i>Guide, p 143</i>) 	✓	✓			✓
Room/Cage: <ul style="list-style-type: none"> temperature and humidity (<i>Guide, p 43</i>) ventilation and air quality (<i>Guide, p 45</i>) illumination (<i>Guide, p 47</i>) noise and vibration (<i>Guide, p 49</i>) 	✓	✓			✓
Primary Enclosure: <ul style="list-style-type: none"> space meets physiologic, behavioral^I, and social^{II} needs (<i>Guide, pp 51, 55-63</i>) secure environment provided (<i>Guide, p 51</i>) durable, nontoxic materials in good repair and no risk of injury (<i>Guide, p 51</i>) flooring is safe and appropriate for species (<i>Guide, p 51</i>) adequate bedding and structures for resting, sleeping, breeding (<i>Guide, p 52</i>) objective assessments of housing and management are made (<i>Guide, p 52</i>) procedures for routine husbandry are documented (<i>Guide, p 52</i>) socially housed animals can escape or hide to avoid aggression (<i>Guide, p 55</i>) cage height provides adequate clearance (<i>Guide, p 56</i>) animals express natural postures, can turn around, access food and water, and rest away from urine and feces (<i>Guide, p 56</i>) [must] rat onale^{III} for <i>Guide</i>/USDA space exceptions approved by IACUC and based on performance indices (<i>Guide, p 56</i>) dogs and cats allowed to exercise and provided human interaction (<i>Guide, p 58</i>) nonhuman primates are socially housed except for scientific, veterinary or behavior reasons (<i>Guide, pp 58-59</i>) single housing of nonhuman primates is for shortest duration possible (<i>Guide, p 60</i>) opportunities for release into larger enclosures is considered for single caged nonhuman primates (<i>Guide, p 60</i>) agricultural animals are housed socially (<i>Guide, p 60</i>) food troughs and water devices for agricultural animals allow access for all animals (<i>Guide, p 60</i>) 	✓	✓			✓
Environmental Enrichment, Behavioral and Social Management: <ul style="list-style-type: none"> structures and resources promote species typical behavior (<i>Guide, pp 52-54</i>) novelty of enrichment is considered (<i>Guide, p 53</i>) 	✓	✓			✓

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- species specific plans for housing including enrichment, behavior and activity are developed and reviewed regularly by IACUC, researchers and veterinarian (*Guide*, pp 53, 58, 60, 63)
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- stability of pairs or groups is monitored for incompatibility (*Guide*, p 64)
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 - weather protection and opportunity for retreat (*Guide*, p 54) [must]
 - appropriate size (*Guide*, p 54)
 - ventilation and sanitation of shelter (no waste/moisture build-up) (*Guide*, p 54)
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- **Naturalistic Environments:**
 - animals added /removed with consideration of effect on group (*Guide*, p 55)
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- **Food:**
 - feeding schedule and procedures including caloric intake management (*Guide*, pp 65-67)
 - contamination prevention (*Guide*, p 65)
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 - vermin control (*Guide*, p 66)
 - rotation of stocks (*Guide*, p 66)
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- **Sanitation:**
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 - care provided by qualified personnel every day (*Guide*, p 74)
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- o veterinary care available after hours, weekends, and holidays (*Guide*, pp 74, 114) ✓
- o must a disaster plan that takes into account both personnel and animals (*Guide*, p 75) ✓
- **Identification:**
 - o cage/rack cards contain required information (*Guide*, p 75) ✓
 - o genotype information included and standardized nomenclature used when applicable (*Guide*, p 75) ✓
- **Recordkeeping:**
 - o clinical records accessible and contain appropriate information (*Guide*, pp 75-76) ✓
 - o records are provided when animals are transferred between institutions (*Guide*, p 75) ✓
- **Breeding Genetics and Nomenclature:**
 - o appropriate genetic records, management and monitoring procedures (*Guide*, p 76) ✓
 - o phenotypes that affect wellbeing are reported to IACUC and effectively managed (*Guide*, p 77) ✓
- **Storage:**
 - o adequate space for equipment, supplies, food, bedding and refuse (*Guide*, p 141) ✓
 - o bedding in vermin-free area and protected from contamination (*Guide*, p 141) ✓
 - o food in vermin-free, temperature and humidity controlled area and protected from contamination (*Guide*, p 141) ✓
 - o refuse storage is separate (*Guide*, p 141) ✓
 - o carcass and animal tissue storage is separate, refrigerated below 7°C and cleanable (*Guide*, p 141) ✓
- **Personnel:**
 - o adequate space for locker rooms, administration and training (*Guide*, p 135) ✓

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M = minor deficiency

S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy IV.A.1.a.-i.) (Include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

NOTES:

Isotilurane expired Jan 21/21 Maxine DeButts

John

Joe 2020

John

Dan

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Obtained by Rise for Animals.
Uploaded to Animal Research Laboratory Oversight (ARLO) on 09/23/2022

Lindsey G001813

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NOTES:

Consider installing permanent wiring in place of extension cord at chute.

Day 3/1
Trent
A. Adams
[Signature]
[Signature]
[Signature]

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Obtained by Rise for Animals.
Uploaded to Animal Research Laboratory Oversight (ARLO) on 09/23/2022

Lindsey G001813

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Cash, Tara N.

From: Gray, James D. <jgray@wtamu.edu>
Sent: Friday, May 21, 2021 8:55 AM
To: Cash, Tara N.
Subject: work order for Nance Ranch electrical

Follow Up Flag: Follow up
Flag Status: Flagged

Request #:
98548

Type:
Corrective

Priority:
Routine

Location / Asset:
Outside

Short Description:

There is an extension cord that needs to be replace with a permanent electrical plug. It pinch chute. Please call Jimmy or Tara at the AR-EHS office for directions 651-2774

WT **JIMMY GRAY** ASSISTANT DIRECTOR
ACADEMIC AND RESEARCH, ENVIRONMENTAL HEALTH AND SAFETY
806.651.2774 | jgray@wtamu.edu | wtamu.edu
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NOTES:

Exposed concrete at low end of some pens.

L.A. Baker Day

[Handwritten signatures]

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Cash, Tara N.

From: Gray, James D. <jgray@wtamu.edu>
Sent: Friday, May 21, 2021 10:09 AM
To: Cash, Tara N.
Subject: feedlot exposed concrete

Follow Up Flag: Follow up
Flag Status: Flagged

Request #:
98550

Type:
Corrective

Priority:
Routine

Location / Asset:
WTAMU - WEST TEXAS

Short Description:

WT Feed Lot- The base of the pole fencing used in the cattle pens have exposed concrete dirt grade will need to be raised to cover the concrete. IACUC inspection reported as a contact Fil Polanco 651-2550 fpolanco@wtamu.edu or Dr. Richeson 651-2522 jricheson@wtamu.edu details. It may be a good idea to reach out to these gentlemen to discuss details before project.

WT **JIMMY GRAY** ASSISTANT DIRECTOR
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NOTES:

A couple of recently expired media in med cabinet



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Cash, Tara N.

From: Gray, James D. <jgray@wtamu.edu>
Sent: Friday, May 21, 2021 9:01 AM
To: Cash, Tara N.
Subject: Horse Center exposed concrete

Follow Up Flag: Follow up
Flag Status: Flagged

Request #:
98549

Type:
Corrective

Priority:
Routine

Location / Asset:
Outside

Short Description:

Pens have exposed concrete at the base of the pipe fence. IACUC inspections have the violation. Please contact Lance Baker 651-2561 lbaker@wtamu.edu or Dr. Pipkin 651-jpipkin@wtamu.edu for direction and access. Might be best to email first to set up a time problem.



JIMMY GRAY ASSISTANT DIRECTOR

ACADEMIC AND RESEARCH, ENVIRONMENTAL HEALTH AND SAFETY
806.651.2774 | jgray@wtamu.edu | wtamu.edu

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Terrestrial Animal Housing and Support Areas

Location: WTAMU Rodeo Grounds

- [illegible]

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 - o appropriate size (*Guide*, p 54)
 - o ventilation and sanitation of shelter (no waste/moisture build-up) (*Guide*, p 54)
 - o animal acclimation (*Guide*, p 55)
 - o social compatibility (*Guide*, p 55)
 - o roundup/restraint procedures (*Guide*, p 55)
 - o appropriate security (*Guide*, p 55)
- **Naturalistic Environments:**
 - o animals added /removed with consideration of effect on group (*Guide*, p 55)
 - o adequate food, fresh water, and shelter ensured (*Guide*, p 55)
- **Food:**
 - o feeding schedule and procedures including caloric intake management (*Guide*, pp 65-67)
 - o contamination prevention (*Guide*, p 65)
 - o vendor quality control (*Guide*, p 66)
 - o storage in sealed containers (*Guide*, p 66)
 - o expiration date labeling (*Guide*, p 66)
 - o vermin control (*Guide*, p 66)
 - o rotation of stocks (*Guide*, p 66)
- **Water:**
 - o ad libitum unless justified (*Guide*, pp 67-68)
 - o QC procedures (*Guide*, pp 67-68)
- **Bedding and Nesting Materials:**
 - o species appropriate (*Guide*, pp 68-69)
 - o keeps animals dry (*Guide*, pp 68-69)
 - o QC procedures (*Guide*, pp 68-69)
 - o minimizes scientific variables (*Guide*, pp 68-69)
- **Sanitation:**
 - o frequency of bedding/substrate change (*Guide*, p 70)
 - o cleaning and disinfection of microenvironment (*Guide*, pp 70-71)
 - o cleaning and disinfection of macroenvironment (*Guide*, p 72)
 - o assessing effectiveness (*Guide*, p 73)
- **Waste Disposal:**
 - o procedures for collection (*Guide*, pp 73-74)
 - o procedures for storage and disposal (*Guide*, pp 73-74)
 - o hazardous wastes are rendered safe before removal from facility (*Guide*, pp 73-74) [must]
 - o animal carcasses (*Guide*, pp 73-74)
- **Pest Control:**
 - o regularly scheduled (*Guide*, p 74)
 - o documented program including control of rodent pests and insecticide use (*Guide*, p 74)
- **Emergency, Weekend, and Holiday Animal Care:**
 - o care provided by qualified personnel every day (*Guide*, p 74)
 - o provision for accessible contact information (*Guide*, p 74)
 - o monitoring of backup systems (*Guide*, p 143)

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- o veterinary care available after hours, weekends, and holidays (*Guide, pp 74, 114*) ✓
- o ~~(must)~~ a disaster plan that takes into account both personnel and animals (*Guide, p 75*) ✓
- **Identification:**
 - o cage/rack cards contain required information (*Guide, p 75*) ✓
 - o genotype information included and standardized nomenclature used when applicable (*Guide, p 75*) ✓
- **Recordkeeping:**
 - o clinical records accessible and contain appropriate information (*Guide, pp 75-76*) ✓
 - o records are provided when animals are transferred between institutions (*Guide, p 75*) ✓
- **Breeding Genetics and Nomenclature:**
 - o appropriate genetic records, management and monitoring procedures (*Guide, p 76*) ✓
 - o phenotypes that affect wellbeing are reported to IACUC and effectively managed (*Guide, p 77*) ✓
- **Storage:**
 - o adequate space for equipment, supplies, food, bedding and refuse (*Guide, p 141*) ✓
 - o bedding in vermin-free area and protected from contamination (*Guide, p 141*) ✓
 - o food in vermin-free, temperature and humidity controlled area and protected from contamination (*Guide, p 141*) ✓
 - o refuse storage is separate (*Guide, p 141*) ✓
 - o carcass and animal tissue storage is separate, refrigerated below 7°C and cleanable (*Guide, p 141*) ✓
- **Personnel:**
 - o adequate space for locker rooms, administration and training (*Guide, p 135*) ✓

* A = acceptable

M = minor deficiency

S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy IV.A.1.a.-i.) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

NOTES:

Cable on open at end of arena needs stretched.

Day 31
L.A. Baker

RECORD FOR RELEASE

Obtained by Rise for Animals.
Uploaded to Animal Research Laboratory Oversight (ARLO) on 09/23/2022

Lindsey G001813

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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL# 01-06-18

DATE: May 2nd 2021

PI NAME: [REDACTED]

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? N/A

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? N/A

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? N/A

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? N/A

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? N/A

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? N/A

Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07887486...

IACUC Member Signatures

DocuSigned by: <i>Richard Posey</i> 029DB885AAF2460...	DocuSigned by: <i>Wahne Lubiano</i> C23CEC8CBA7C440...	DocuSigned by: <i>Stephen Karaganis</i> 55BDA0CF4D514B0...	DocuSigned by: <i>Jack Mether</i> A225D85548134B9...
DocuSigned by: <i>Dee Griffin</i> E6086FD7CF3848F...	DocuSigned by: <i>Juan Piñero</i> 81E66888D1F2459...	DocuSigned by: <i>Donna Byers</i> 28ED86E14FA740D...	
DocuSigned by: <i>BJ Newcomer</i> 8921CD2CD388480...	DocuSigned by: <i>Maxine De Butte</i> 35D74CB096F3426...	DocuSigned by: <i>Reza Pjesky</i> BF56AD52F7504A1...	DocuSigned by: <i>Jude Smith</i> FA15034047D848E...

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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2019.05.004 DATE: 4/15/2021
PI NAME: John Richeson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes ☒
Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes ☒
Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes ☒
Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A ☒
Comments:

B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A ☒

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A ☒

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? N/A ☒

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes ☒

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes ☒

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes ☒

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A ☐

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A ☐

Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A ☐

Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A ☐

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes ☐

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes ☐

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes ☐

Comments:

Results of Review: Approved ☐

Will a site visit be conducted? Yes ☐

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07887485...

IACUC Member Signatures

DocuSigned by: <i>Richard Posey</i> 029DB808AAF2480...	DocuSigned by: <i>Abelina Byers</i> 29ED88E14FA749D...	DocuSigned by: <i>Jude Smith</i> FA15034047D848E...	DocuSigned by: <i>Reza Pjesky</i> BF56ADE2F7034A1...
DocuSigned by: <i>Dee Griffin</i> E5086FD7CF3848F...		DocuSigned by: <i>Lance Baker</i> BBBD644D6D24458...	DocuSigned by: <i>Stephen Karaganis</i> 5BBD40CF4D514B9...
DocuSigned by: <i>BJ Newcomer</i> 6921CD2C0588480...	DocuSigned by: <i>Juan Piñero</i> B1E66668D1F2499...	DocuSigned by: <i>Maxine De Buitre</i> 35D74CB096F3426...	DocuSigned by: <i>Jack Nethery</i> A225D65548134B9...

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**Biological Research
Environmental Health and Safety
WEST TEXAS A&M UNIVERSITY**

WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2020 05 002

DATE: 04/14/2021

PI NAME: John Richeson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments: None

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments: None

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments: None

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes

Comments: None

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments: None

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments: None

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments: None

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments: None

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments: None

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments: None

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments: None

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments: None

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments: None

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments: None

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments: None

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments: None

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments: None

Results of Review:

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigkam
046240F07887486...

IACUC Member Signatures

DocuSigned by:
Richard Posey - AV
029D8998AAF2460...

DocuSigned by:
Juan Piñeiro
B1E66E68D1F2489...

DocuSigned by:
Mazine De Butte
35D74C8D93F3420...

DocuSigned by:
Dee Griffin
E6066FD7CF3840F...

DocuSigned by:
Donna Byers
29ED80E14FA739D...

DocuSigned by:
Jude Smith
FA15034047D848E...

DocuSigned by:
Rex Plesky
EF63ADB2F7E04A1...

DocuSigned by:
BJ Newcomer
6921CD2CD588480...

DocuSigned by:
Zach Mether
A225D6554813489...

DocuSigned by:
Lance Baker
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DocuSigned by:
Stephen Karaganis
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL #

DATE: 08/23/2022

PI NAME: John Richeson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? N/A

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

West Texas A&M University

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DocuSign Envelope ID: 36AF40DC-1C58-41DB-92DC-5A4E4E45A1F3

IACUC Chair Signature

DocuSigned by:
Dr. Gary Biglum
045240F07867486...

IACUC Member Signatures

DocuSigned by:
Richard Posey - DV
020DB868AAF2460...

DocuSigned by:
Juan Pinero
B1E8868BD1F2489...

DocuSigned by:
Mazine De Butte
35D74C8D96F3425...

DocuSigned by:
Dee Griffin
E6086FD7CF3848F...

DocuSigned by:
Donna Byers
29E086E14FA749D...

DocuSigned by:
Jude Smith
FA15034047D848E...

DocuSigned by:
Reje Presky
BFS6ADB2F9C4A1...

DocuSigned by:
BJ Newcomer
6921CD2CD588480...

DocuSigned by:
Zach Methery
A226D8554E134B9...

DocuSigned by:
Lance Baker
BBBD644D8D24458...

DocuSigned by:
Stephen Karaganis
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2020.10.002

DATE: August 2021

PI NAME: J. Richeson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Biglum
046240F07897486...

IACUC Member Signatures

DocuSigned by:
Richard Posey - AV
029DB968AAF2460...

DocuSigned by:
Lance Baker
B6B0644D8C24458...

DocuSigned by:
Rezo Pjesky
8F56AD82F7804A1...

DocuSigned by:
Dee Griffin
E6066F07CF3846F...

DocuSigned by:
Donna Byers
29ED86E14FA749D...

DocuSigned by:
Juan Piñero
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DocuSigned by:
Stephen Karaganis
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Maxine De Butte
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DocuSigned by:
Jude Smith
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DocuSigned by:
Zach Nethery
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2021-03-001

DATE: May 3rd, 2021

PI NAME: John Richeson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? N/A

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

West Texas A&M University

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07887426...

IACUC Member Signatures

DocuSigned by:
Richard Posey - Donna Byers
029DB968AAF2460... 29ED86E14FA749D...

DocuSigned by:
Mazine De Butte
35D74C8D96F3426...

DocuSigned by:
Dre Griffin
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DocuSigned by:
Jude Smith
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DocuSigned by:
Lance Baker
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DocuSigned by:
Stephen Karaganis
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Juan Piñeiro
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DocuSigned by:
Reza Pjesky
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DocuSigned by:
Zach Nethery
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2019-08-004

DATE: May 2021

PI NAME: Kendall Samuelson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? N/A

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? N/A

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

West Texas A&M University

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07887A8B...

IACUC Member Signatures

DocuSigned by:
Richard Posey - AV
029CB9B5AAF246D...

DocuSigned by:
Fach Nothony
A225D95548134B9...

DocuSigned by:
Maxine De Butte
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DocuSigned by:
Dee Griffin
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DocuSigned by:
Donna Byers
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DocuSigned by:
Jude Smith
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Stephen Karaganis
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BJ Newcomer
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DocuSigned by:
Juan Pireiro
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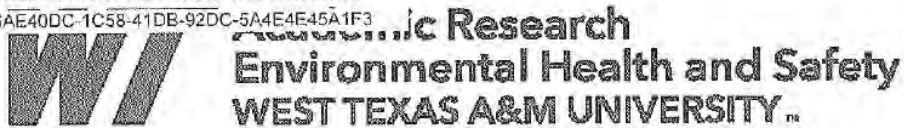
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Lance Baker
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DocuSigned by:
Rex Presky
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2019.08.004

DATE: 05/18/21

PI NAME: Dr. Kendall Samuelson

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied;

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? Yes

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? N/A

Comments:

Results of Review:

Will a site visit be conducted? No

If no, please justify. Site validated through August, 2021.

West Texas A&M University

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
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IACUC Member Signatures

DocuSigned by:
Richard Posey - DV
029DB968AAF2460...

DocuSigned by:
Juan Píreiro
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DocuSigned by:
Reza Pjuskij
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DocuSigned by:
Dee Griffin
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DocuSigned by:
Donna Byers
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DocuSigned by:
Lance Baker
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DocuSigned by:
Stephen Karaganis
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Johanna Riddison
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DocuSigned by:
Margine De Buit
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DocuSigned by:
Jack Nethering
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2020 09 001

DATE: May 3, 2021

PI NAME: Samuelson, Kendall

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? Yes

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? Yes

Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments:

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes

Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments:

Results of Review:

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07887486...

IACUC Member Signatures

DocuSigned by:
Richard Posey - DV
029DB968AAF2460...

DocuSigned by:
Juan Pinheiro
91E66968D1F2498...

DocuSigned by:
Margine De Butte
35D74CBD96F3426...

DocuSigned by:
De Griffin
E6026FD7CF3848F...

DocuSigned by:
Donna Byers
29ED36E14FA749D...

DocuSigned by:
Jude Smith
FA15034047D848E...

DocuSigned by:
Rep Presley
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Zach Nethery
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DocuSigned by:
Lance Baker
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DocuSigned by:
Stephen Karaganis
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**Biological Research
Environmental Health and Safety
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2020.05.003

DATE: 04/14/2021

PI NAME: Raymond Hollabaugh

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments: None

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? N/A

Comments: None

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments: None

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes

Comments: None

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments: None

C. Not include the use of paralytics without anesthesia:

Meets condition? Yes

Comments: None

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments: None

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments: None

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments: None

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments: None

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A

Comments: None

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A

Comments: None

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A

Comments: None

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A

Comments: None

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes

Comments: None

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? N/A

Comments: Animals used for roping practice only.

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes

Comments: None

Results of Review:

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
046240F07E87486...

IACUC Member Signatures

DocuSigned by:
Richard Posey - AV
029DB988AAF246D...

DocuSigned by:
John Richardson
C23CEC8CBA7C440...

DocuSigned by:
Lance Baker
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DocuSigned by:
Dee Griffin
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DocuSigned by:
Stephen Karagannis
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DocuSigned by:
Juan Pinheiro
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DocuSigned by:
Margine De Bult
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DocuSigned by:
Jack Nethery
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Donna Byers
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DocuSigned by:
Jude Smith
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DocuSigned by:
Rex Presky
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # IACUC# 03-07-18 DATE: 05/03/21
PI NAME: Johnson, James

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes
Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes
Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes
Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes
Comments:

B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? Yes

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? N/A

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? N/A

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A
Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? Yes
Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A
Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? Yes
Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes
Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes
Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes
Comments:

Results of Review: Approved

Will a site visit be conducted? No

If no, please justify: Location at Bitter Lake NWR Roswell NM

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
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IACUC Member Signatures

Alfred Strifflin, DVM

DocuSigned by:
Richard Posey - AV
029D9968AAF2469...

DocuSigned by:
John Richeson
C23CEC8CBA7C449...

DocuSigned by:
Jude Smith
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DocuSigned by:
Maxime De Brette
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DocuSigned by:
Stephen Karaganis
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DocuSigned by:
BJ Newcomer
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DocuSigned by:
Donna Byers
29ED86E14FA749D...

DocuSigned by:
Juan Pireiro
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DocuSigned by:
Lance Baker
3BBD644D8D24458...

DocuSigned by:
Reza Pjesky
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DocuSigned by:
Jack Nethery
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 03-07-18

DATE: 5/2/2021

PI NAME: Johnson, James

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes ☒

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? No ☒

Comments: No discussion of consideration of alternatives was found

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? No ☒

Comments: While rationale for the study has been provided, there is no statement explicitly addressing that current study does not duplicate previous experiments

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes ☒

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? No ☒

Comments: There is no mention of consultation with veterinarian/designee

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A ☒

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? N/A ☒

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? N/A ☒

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? N/A ☒

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes ☒

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? No ☐
Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A ☐
Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A ☐
Comments:

C. In other special-circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A ☐
Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes ☐
Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes ☐
Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? N/A ☐
Comments:

Results of Review: Approved ☐

Will a site visit be conducted? No ☐

If no, please justify. There is no housing facility for animals used in this study

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IACUC Chair Signature

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IACUC Member Signatures

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Wendy M. Nethery
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DocuSigned by:
Dee Griffin
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DocuSigned by:
Donna Byers
29ED66E14FA748D...

DocuSigned by:
Jude Smith
FA15034047D818E...

DocuSigned by:
Rex Presky
BF56ADB2F7904A1...

DocuSigned by:
BJ Newcomer
6921CD2CD368480...

DocuSigned by:
John Richeson
C23CEC9CBA7C440...

DocuSigned by:
Lance Baker
BBB0644D9D2445B...

DocuSigned by:
Stephen Karaganis
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West Texas A&M University

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Environmental Health and Safety
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 04-09-18

DATE: 05/04/21

PI NAME: Karaganis

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? N/A

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? N/A

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31, and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? N/A
Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? N/A
Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? N/A
Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? N/A
Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes
Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes
Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? N/A
Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

West Texas A&M University

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IACUC Chair Signature

DocuSigned by:
Dr. Gary Bigham
048240F07887485...

IACUC Member Signatures

DocuSigned by: *Lance Baker*
Richard Posey - DV
029D8568AAF2460...

DocuSigned by:
Juan Pinheiro
B1E6666D1F2469...

DocuSigned by:
Reza Pjesky
BF56ADB2F7904A1...

DocuSigned by:
Dee Griffin
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DocuSigned by:
Jude Smith
FA15034047D848E...

DocuSigned by:
John Richardson
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DocuSigned by:
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29ED86E14FA749D...

DocuSigned by:
BJ Newcomer
0021CD2CD588480...

DocuSigned by:
Zach Nothery
A225D85548134B9...

DocuSigned by:
Maxine De Butte
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WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2019.05.003

DATE: May 3, 2021

PI NAME: Karaganis, Stephen

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? Yes

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? Yes
Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? Yes
Comments:

B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? Yes
Comments:

C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? Yes
Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes
Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes
Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes
Comments:

Results of Review:

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

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Dr. Gary Bigham
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IACUC Member Signatures

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Juan Pinheiro
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Margine De Butte
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Jude Smith
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Rex Plesky
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John Richeson
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Lance Baker
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Animal Research
Environmental Health and Safety
WEST TEXAS A&M UNIVERSITY.

WTAMU/CREET IACUC Committee Review Checklist

IACUC REVIEW FOR VERTEBRATE ANIMAL USE

(Revised 02.08.2021)

The committee will review the following conditions for each IACUC submitted for review:

PROTOCOL # 2021.02.002

DATE: 05/03/2021

PI NAME: Karaganis, Stephen

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to animals:

Meets condition? Yes

Comments:

2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal, and has provided a written narrative description of the methods and sources, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available:

Meets condition? Yes

Comments:

3. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments:

Meets condition? Yes

Comments:

4. Procedures that may cause more than momentary or slight pain or distress to the animals will:

- A. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time:

Meets condition? Yes

Comments:

- B. Involve, in their planning, consultation with the attending veterinarian or his or his designee:

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Meets condition? Yes

Comments:

C. Not include the use of paralytics without anesthesia:

Meets condition? Yes

Comments:

5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure. Methods of euthanasia used must be in accordance with the definition of the term set forth in 9CFR part 1 Section 1.1 of Subchapter A, unless a deviation is justified for scientific reasons, in writing, by the investigator:

Meets condition? Yes

Comments:

6. The animals' living conditions will be appropriate for their species in accordance with part 3 of subchapter A 9CFR2.31. and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by the attending veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied:

Meets condition? Yes

Comments:

7. Medical care for animals will be available and provided as necessary by a qualified veterinarian:

Meets condition? Yes

Comments:

8. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures:

Meets condition? Yes

Comments:

9. Activities that involve surgery include appropriate provision for preoperative and post-operative care of the animals in accordance with established veterinary medicine and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques. Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Non-

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major operative procedures and all surgery on rodents do not require a dedicated facility, but must be performed using aseptic procedures. Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures:

Meets condition? Yes
Comments:

10. No animal will be used in more than one major operative procedure from which it is allowed to recover, unless:

- A. Justified for scientific reasons by the principal investigator, in writing:

Meets condition? Yes
Comments:

- B. Required as routine veterinary procedure or to protect the health or well-being of the animal as determined by the attending veterinarian:

Meets condition? Yes
Comments:

- C. In other special circumstances as determined by the Administrator on an individual basis. Written requests and supporting data should be sent to the Animal and Plant Health Inspection Service, Animal Care, 4700 River road, Unit 84, Riverdale, Maryland 20737-1234:

Meets condition? Yes
Comments:

11. Animals used in the study are of the appropriate species and quantity:

Meets condition? Yes
Comments:

12. The PI has demonstrated this research has relevance to the human or animal health, supports the advancement of knowledge, or benefits society:

Meets condition? Yes
Comments:

13. Transportation is provided by qualified and experienced personnel:

Meets condition? Yes
Comments:

Results of Review: Approved

Will a site visit be conducted? Yes

If no, please justify.

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IACUC Chair Signature

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Dr. Gary Bigham
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IACUC Member Signatures

DocuSigned by:
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Hee Striffin, DVM

DocuSigned by:
John Richardson
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Jude Smith
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Jack Nethery
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