

**Memorandum to:**

**From:** Institutional Animal Care and Use Committee

**Subject:** Semi-Annual Report of the Program Review and Facility Inspection

**Date:** April 28, 2020

This report summarizes the results of the IACUC's most recent program review and facility inspection, as required by the PHS Policy on Humane Care and Use of Laboratory Animals ([Policy](#)), Section [IV.B.1.-3.](#), the *Guide for the Care and Use of Laboratory Animals* ([Guide](#)), and the Animal Welfare Act ([AWA](#)) regulations, as applicable.

**Since the last review, the following changes have occurred in the institution's program for animal care and use (PHS Policy [IV.A.1.a.-i.](#)):**

The IACUC is satisfied with the state of the Animal Care and Use Program since the last review. There are no ongoing animal welfare concerns at this time.

Since the last Program Review, the following changes to IACUC membership have occurred:

- stepped down as Chair
- transitioned from Associate Chair to Chair
- , alternates for , stepped down

The following IACUC policies were reviewed by the IACUC. Any new or revised policies will be posted on the IACUC website after IO endorsement.

- Animal Transportation Policy (revise)

**Facility/Resource Requests:** The AV updated the IACUC during semi-annual program review (and as needed) with any changes to this list. Additional information regarding facility needs are outlined on page 4 of this document, under item *III. Deficiencies in the Institution's Animal Facility*.

**In the last report, the IACUC identified an urgent programmatic need to move the online IACUC training into the Bridge training module, implemented by Talent Development. The IACUC maintains that moving the IACUC online training to Bridge is the first step in reducing administrative burden for our researchers by creating a centralized location for research compliance training modules.**

As stated previously, the IACUC supports the infrastructure needs to enhance the animal facilities as a component of the Research and Scholarly Success Initiative. The priorities identified enhance research on Main campus, Foothills campus and the South campus, with the following items still outstanding:

- Construction for the ECRC North Holding pens still have not been completed due to lack of funding.
- The flooring in an animal holding room in A/Z must be sealed to meet AAALAC accreditation expectations. The PI and graduate student were relocated into this space because facilities refused to turn the water back on in their previous location.

**I. Description of the Nature and Extent of the Institution's Adherence to the PHS Policy, the *Guide*, and the AWA**

Departures from the PHS Policy, the *Guide*, and the AWA.

Select A or B:

[ ] A. There were no departures during this reporting period.

[XX] B. The following departures have been reviewed and approved by the IACUC:

Nature and Extent of Institution's Adherence to PHS Policy and *the Guide*:

CSU OLAW Assurance was updated and submitted to OLAW for review. It was approved and is effective June 19, 2018 through June 30, 2022.

According to the IACUC's review of the program, the majority of the deviations from the provisions of *the Guide* and Animal Welfare Act Regulations (AWARs) are not departures because they are either protocol-specific deviations from specifically described exceptions outlined in *the Guide* and AWARs, they are scientifically justified deviations that are included in IACUC reviewed and approved protocols, or they are program-specific deviations which are according to locally established performance standards.

The IACUC-approved protocol deviations from the provisions of *the Guide* with *Guide*-specific exceptions to those provisions, or scientifically justified deviations in IACUC reviewed and approved protocols (for experimental reasons) are as follows:

- Medium-term feed restriction: removal of feed overnight, but for more than 12 hours, prior to anesthesia or euthanasia in mice (Genus Mus), rats (Genus Rattus), sheep
- Forced exercise on treadmills of animals
- Singly housing social animals
- Multiple major survival surgeries as integral parts of a single study.
- Temporary physical restraint of animals

The IACUC has approved a number of program-specific deviations which are based on established performance standards. These are included below and are reviewed annually during fall semiannual program review.

- Deviation to allow room level relative humidity (RH) of a minimum of 15-20% (studies have shown that cage level RH is generally 10% higher than room level).
- Deviation to allow cage top and wire bar lid sanitization frequency of once every 30-40 days (no adverse effects have been noted due to this schedule as observed in the morbidity and mortality reports).
- Deviation to allow 5 mice to be housed in Thoren cages measuring 69 square inches, as opposed to the recommendation of 15 square inches per mouse (no adverse effects have been noted due to this housing regimen as observed in the morbidity and mortality reports).
- Exemption for the housing conditions of prion infected mice in disposable caging. House up to 4 adult mice in the disposable caging which is 64 square inches per cage, which is less than what is outlined in the Guide. Bedding is changed every two weeks and disposable cage reused, for up to 12 weeks.

CSU received an exception from the USDA APHIS Animal Care Administrator on September 13, 2016 allowing us to house camels in pastures with natural barriers and fencing in lieu of the required double fencing.

The Occupational Health Program (OHP) Coordinator provided the IACUC with a summary of overall animal user medical surveillance compliance since the fall semiannual program review. Additionally, RICRO IACUC staff confirm that all IACUC protocol personnel working with animals are checked for OHP enrollment during review/approval of IACUC protocols. This is done for all new protocols, amendments, and continuing review submissions.

Overall, the IACUC agree that OHP for protocol personnel is adequate to meet the needs of the Animal Care and Use Program.

Nature and Extent of Institution's Adherence to AWA:

The last USDA unannounced annual inspection occurred January 28-30, 2020. There was one citation on report of three dead bats found in the enrichment cloth used in the bat rooms. This was self-identified and reported to the IACUC prior to the citation.

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

Animal Care and Use Program Review Date(s): April 28, 2020

Select A or B:

☒ A. There were no deficiencies in the program during this reporting period.

☐ B. The following deficiencies have been identified:

Please see **Attachment 1: Semiannual Program Review Checklist**

The program review subcommittee evaluated the CSU Animal Care and Use Program (ACUP) against the attached Semiannual Program Review Checklist which is a slightly modified version of the OLAW example checklist. It found that the program was acceptable in all applicable areas.

## III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s):

- February 4, 6, 17-21, 25, 27, 2020
- March 2, 5, 9-10, 18-19, 2020
- May 11, 12, 2020

Select A or B:

☐ A. There were no deficiencies in the animal facility during this reporting period.

☒ B. The following deficiencies have been identified, all of which were Minor and for which corrections have been either made or scheduled:

Please see **Attachment 2: Semiannual Facility Inspection Report**

The semiannual inspection of the animal facilities revealed no significant deficiencies. All of the deficiencies noted have either been corrected or have a correction plan with reasonable date for correction included in the Semiannual Facility Inspection Report. The inspection of the facilities did not reveal any unacceptable housing practices, as all animal husbandry either conforms to the Guide and the Animal Welfare Act Regulations or follows IACUC approved deviations from the Guide which have been measured against performance standards, or scientifically justified in the IACUC reviewed and approved protocol(s).

There continues to be ongoing concerns related to the animal facility infrastructure for animals used in research and teaching at CSU.

- The outdoor animal facilities need to be addressed. There continues to be a need for fencing upgrades at the VTH and ARBL for the livestock used in teaching. The bison facility acquired from the USDA is also in need of repair.
- The rodent caging is in need of replacement as the ventilated caging system are approaching their life span.

The design and construction of the Bay Facility on the South Campus continues to move forward.

## IV. Minority Views

Select A or B:

☒ A. No minority views were submitted or expressed.

☐ B. The following minority views were expressed: *[insert minority views here or attach]*

None.

## V. Status of AAALAC Accreditation

CSU has maintained AAALAC Accreditation since 1994. The following entities are included in the accredited unit:

- College of Veterinary Medicine and Biomedical Sciences (CVMBS)
- College of Natural Sciences (CNS)
- College of Applied Human Sciences (CAHS)
- Laboratory Animal Resources (LAR), a division within the Office of the Vice President for Research.

The accredited facilities are noted as such on the Semiannual Facility Inspection Report document in the attachments.

CSU's AAALAC accreditation was confirmed July 13, 2018. Application for the next accreditation site visit will be submitted by December 1, 2020.

# Semiannual Program Review Checklist<sup>i</sup>

## Institutional Policies and Responsibilities

Date: April 28, 2020

| 1. Animal Care and Use Program  |  | A* | M | S | C | NA |
|---|--|----|---|---|---|----|
| • Responsibility for animal well-being is assumed by all members of the program ( <i>Guide</i> , p 1) [must]  |  | X  |   |   |   |    |
| • IO has authority to allocate needed resources ( <i>Guide</i> , p 13)  |  | X  |   |   |   |    |
| • Resources necessary to manage program of veterinary care are provided ( <i>Guide</i> , p 14) [must]   |  | X  |   |   |   |    |
| • Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> ( <i>Guide</i> , pp 11, 15)   |  | X  |   |   |   |    |
| • Program needs are regularly communicated to IO by AV and/or IACUC ( <i>Guide</i> , p 13)  |  | X  |   |   |   |    |
| • Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site ( <i>Guide</i> , p 14) [must]  |  | X  |   |   |   |    |
| • Inter-institutional collaborations are described in formal written agreements ( <i>Guide</i> , p 15)  |  | X  |   |   |   |    |
| • Written agreements address responsibilities, animal ownership, and IACUC oversight ( <i>Guide</i> , p 15)   |  | X  |   |   |   |    |
| 2. Disaster Planning and Emergency Preparedness   |  | A* | M | S | C | NA |
| • Disaster plans for each facility to include satellite locations are in place ( <i>Guide</i> , p 35, p 75) [must]  |  | X  |   |   |   |    |
| • Plans include provisions for euthanasia ( <i>Guide</i> , p 35) [must]   |  | X  |   |   |   |    |
| • Plans include triage plans to meet institutional and investigators' needs ( <i>Guide</i> , p 35)  |  | X  |   |   |   |    |
| • Plans define actions to prevent animal injury or death due to HVAC or other failures ( <i>Guide</i> , p 35)   |  | X  |   |   |   |    |
| • Plans describe preservation of critical or irreplaceable animals ( <i>Guide</i> , p 35)   |  | X  |   |   |   |    |
| • Plans include essential personnel and their training ( <i>Guide</i> , p 35)   |  | X  |   |   |   |    |
| • Animal facility plans are approved by the institution and incorporated into overall response plan ( <i>Guide</i> , p 35)  |  | X  |   |   |   |    |
| • Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place ( <i>Guide</i> , p 35)  |  | X  |   |   |   |    |
| 3. IACUC  |  | A* | M | S | C | NA |
| • Meets as necessary to fulfill responsibilities ( <i>Guide</i> , p 25) [must]  |  | X  |   |   |   |    |
| • IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions ( <i>Guide</i> , p 26) [must]  |  | X  |   |   |   |    |
| • Continuing IACUC oversight after initial protocol approval is in place ( <i>Guide</i> , p 33)   |  | X  |   |   |   |    |
| • IACUC evaluates the effectiveness of training programs ( <i>Guide</i> , p 15)   |  | X  |   |   |   |    |
| 4. IACUC Protocol Review - Special Considerations   |  | A* | M | S | C | NA |
| • Humane endpoints and animal monitoring regimens are established appropriate to each animal use activity ( <i>Guide</i> , p 27; p 28; p 29)  |  | X  |   |   |   |    |
| • The IACUC protocol form, and the IACUC review of it, adequately addresses the need to review special considerations, including: <ul style="list-style-type: none"> <li>○ Communication with the IACUC regarding pilot studies</li> <li>○ Restraint devices are justified, alternatives and refinements, and provisions for adapting animals to restraint, as necessary, are considered in animal use protocols (<i>Guide</i>, p 29) [must]</li> <li>○ Multiple surgical procedures on a single animal, regardless of species, are justified and outcomes evaluated (<i>Guide</i>, p 30)</li> <li>○ Major versus minor surgical procedures are evaluated on a case-by-case basis (<i>Guide</i>, p 30)</li> </ul> |  | X  |   |   |   |    |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| <ul style="list-style-type: none"> <li>Animals on food/fluid restriction are monitored to ensure nutritional needs are met, and appropriate schedules used for monitoring and recording body weight and animal condition (<i>Guide</i>, p 31)</li> <li>Pharmaceutical grade chemicals are used, when available, for animal-related procedures (<i>Guide</i>, p 31)</li> <li>Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (<i>Guide</i>, p 31)</li> <li>Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (<i>Guide</i>, p 32)</li> <li>Disposition plans are considered for species removed from the wild (<i>Guide</i>, p 32)</li> <li>Toe-clipping only used when no alternative, performed aseptically and with pain relief (<i>Guide</i>, p 75)</li> </ul> |  |  |  |  |  |
|--|--|--|--|--|--|

## 5. IACUC Membership and Functions A\* M S C NA

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

## 6. IACUC Training A\* M S C NA

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

## 7. IACUC Records and Reporting Requirements<sup>vi</sup> A\* M S C NA

|   |   |  |  |  |  |
|---|---|--|--|--|--|
| • Semiannual report to the IO (PHS Policy, IV.B.)   |   |  |  |  |  |
| o Submitted to IO every 6 months  | X |  |  |  |  |
| o Compiles program review and facility inspection(s) results (includes all program and facility deficiencies)                                       | X |  |  |  |  |
| o Includes minority IACUC views   | X |  |  |  |  |
| o Describes IACUC-approved departures from the <i>Guide</i> or PHS Policy and the reasons for each departure <sup>vii</sup>                         | X |  |  |  |  |
| o Distinguishes significant from minor deficiencies   | X |  |  |  |  |
| o Includes a plan and schedule for correction for each deficiency identified <sup>viii</sup>  | X |  |  |  |  |
| • 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 | X |  |  |  |  |



|  |   |  |  |  |  |
|--|---|--|--|--|--|
| o Promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or PHS Policy noncompliance ( <a href="#">NOT-OD-05-034</a> ) | X |  |  |  |  |
| o Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC ( <a href="#">NOT-OD-05-034</a> )     | X |  |  |  |  |
| • Reports to U.S. Department of Agriculture (USDA) or Federal funding agency <sup>ix</sup>                                       |   |  |  |  |  |
| o Annual report to USDA contains required information including all exceptions/exemptions  | X |  |  |  |  |
| o Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards                         | X |  |  |  |  |
| o Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies                | X |  |  |  |  |
| o Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency                                 | X |  |  |  |  |
| • Records (PHS Policy, <a href="#">IV.E.</a> )   |   |  |  |  |  |
| o IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years  | X |  |  |  |  |
| 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  | X |  |  |  |  |

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

|  | A* | M | S | C | NA |
|--|----|---|---|---|----|
| • An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care <sup>xi</sup>               | X  |   |   |   |    |
| • Veterinary access to all animals is provided ( <i>Guide</i> , <a href="#">p 14</a> ) <b>[must]</b>   | X  |   |   |   |    |
| • Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use ( <i>Guide</i> , <a href="#">p 14</a> ) <b>[must]</b> | X  |   |   |   |    |
| • Veterinarian provides consultation when potential pain and distress exceeds anticipated level in protocol ( <i>Guide</i> , <a href="#">p 5</a> ) <b>[must]</b> | X  |   |   |   |    |
| • Veterinarian provides consultation when interventional control is not possible ( <i>Guide</i> , <a href="#">p 5</a> ) <b>[must]</b>                            | X  |   |   |   |    |
| • If part time /consulting veterinarian, visits meet programmatic needs ( <i>Guide</i> , <a href="#">p 14</a> )  | X  |   |   |   |    |
| • Regular communication occurs between veterinarian and IACUC ( <i>Guide</i> , <a href="#">p 14</a> )  | X  |   |   |   |    |
| • Veterinarian(s) have experience and training in species used ( <i>Guide</i> , <a href="#">p 15</a> ) <b>[must]</b>   | X  |   |   |   |    |
| • Veterinarian(s) have experience in facility administration/management ( <i>Guide</i> , <a href="#">p 15</a> )  | X  |   |   |   |    |

## 9. Personnel Qualifications and Training

|   | A* | M | S | C | NA |
|---|----|---|---|---|----|
| • All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science prior to initiating work. Personnel included: <b>[must]</b> <ul style="list-style-type: none"> <li>o Veterinary/other professional staff (<i>Guide</i>, <a href="#">p 15-16</a>)</li> <li>o IACUC members (<i>Guide</i>, <a href="#">p 17</a>)</li> <li>o Animal care personnel (<i>Guide</i>, <a href="#">p 16</a>)</li> <li>o Research investigators, instructors, technicians, trainees, and students (<i>Guide</i>, <a href="#">pp 16-17</a>)</li> <li>o Continuing education for program and research staff provided to ensure high quality care and reinforce training (<i>Guide</i>, <a href="#">pp 16-17</a>)</li> <li>o Training is documented (<i>Guide</i>, <a href="#">p 15</a>)</li> </ul> | X  |   |   |   |    |
| • Training program content includes: <ul style="list-style-type: none"> <li>o Methods for reporting concerns (<i>Guide</i>, <a href="#">p 17</a>)</li> <li>o Humane practices of animal care and use (e.g., housing, husbandry, handling, and research procedures, anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (<i>Guide</i>, <a href="#">p 17</a>)<sup>xii</sup></li> <li>o Concepts and availability of the 3 Rs (PHS Policy, <a href="#">IV.A.1.g.</a>; <i>Guide</i>, <a href="#">p 17</a>)</li> <li>o IACUC Function and Animal care and use legislation (<i>Guide</i>, <a href="#">p 17</a>)</li> <li>o Occupational Health and Safety Training as applicable (<i>Guide</i>, <a href="#">p 20</a>)</li> </ul>   | X  |   |   |   |    |

## 10. Occupational Health and Safety of Personnel

|  | A* | M | S | C | NA |
|--|----|---|---|---|----|
| • Program is in place and is consistent with federal, state, and local regulations ( <i>Guide</i> , <a href="#">p 17</a> ) <b>[must]</b> | X  |   |   |   |    |
| • Program covers <i>all</i> personnel who work in laboratory animal facilities ( <i>Guide</i> , <a href="#">p 18</a> )                   | X  |   |   |   |    |
| • Changing, washing, and showering facilities are available as appropriate ( <i>Guide</i> , <a href="#">p 19</a> )                       | X  |   |   |   |    |

|  |   |  |  |  |   |
|--|---|--|--|--|---|
| • Hazardous facilities are separated from other areas and identified as limited access ( <i>Guide, p 19</i> )  | X |  |  |  |   |
| • Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) ( <i>Guide, p 20</i> ) | X |  |  |  |   |
| • Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) ( <i>Guide, p 20</i> )                                | X |  |  |  |   |
| • Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place ( <i>Guide, p 21</i> )                     | X |  |  |  |   |
| • Personal Protective Equipment for the work area is appropriate and available ( <i>Guide, p 21</i> )  | X |  |  |  |   |
| • Program for medical evaluation and preventive medicine for personnel includes:   |   |  |  |  |   |
| o Pre-placement evaluation including health history ( <i>Guide, p 22</i> )   | X |  |  |  |   |
| o Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate ( <i>Guide, p 22</i> )   | X |  |  |  |   |
| o Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) ( <i>Guide, p 23</i> )   | X |  |  |  |   |
| o Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. ( <i>Guide, p 23</i> )                                     | X |  |  |  |   |
| o Promotes early diagnosis of allergies including preexisting conditions ( <i>Guide, p 22</i> )  | X |  |  |  |   |
| o Considers confidentiality and other legal factors as required by federal, state and local regulations ( <i>Guide, p 22</i> ) <b>[must]</b>             | X |  |  |  |   |
| o If serum samples are collected, the purpose is consistent with federal and state laws ( <i>Guide, p 22</i> ) <b>[must]</b>                             |   |  |  |  | X |
| • Waste anesthetic gases are scavenged, as appropriate ( <i>Guide, p 21</i> )  | X |  |  |  |   |
| • Hearing protection is provided in high noise areas ( <i>Guide, p 22</i> )  | X |  |  |  |   |
| • Respiratory protection is available when performing airborne particulate work ( <i>Guide, p 22</i> )   | X |  |  |  |   |
| • Occupational safety and health of field studies is reviewed by OSH committee or office ( <i>Guide, p 32</i> )  | X |  |  |  |   |

## 11. Personnel Security

**A\* M S C NA**

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| • Preventive measures in place, as appropriate to the risks determined by the institution ( <i>Guide, p 23</i> ) | X |  |  |  |  |
|--|---|--|--|--|--|

## 12. Investigating & Reporting Animal Welfare Concerns

**A\* M S C NA**

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

\* **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:



## Veterinary Care

Date: April 28, 2020

| 1. Clinical Care and Management  | A* | M | S | C | NA |
|--|----|---|---|---|----|
| • Veterinary program offers high quality of care and ethical standards ( <i>Guide, p 105</i> ) <b>[must]</b>   | X  |   |   |   |    |
| • Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia ( <i>Guide, p 106</i> )                | X  |   |   |   |    |
| • Veterinarian provides oversight to surgery and perioperative care ( <i>Guide, p 106</i> )  | X  |   |   |   |    |
| • Veterinary care program is appropriate for program requirements ( <i>Guide, pp 113-114</i> )   | X  |   |   |   |    |
| • Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records ( <i>Guide, p 114</i> )                                   | X  |   |   |   |    |
| • Procedures to triage and prioritize incident reports are in place ( <i>Guide, p 114</i> )  | X  |   |   |   |    |
| • Procedures are in place to address:  |    |   |   |   |    |
| o Problems with experiments to determine course of treatment in consultation with investigator( <i>Guide, p 114</i> )  | X  |   |   |   |    |
| o Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes ( <i>Guide, p 114</i> )   | X  |   |   |   |    |
| o Veterinary review and oversight of medical and animal use records ( <i>Guide, p 115</i> )  | X  |   |   |   |    |
| • Procedures established for timely reporting of animal injury, illness, or disease ( <i>Guide, p 114</i> ) <b>[must]</b>  | X  |   |   |   |    |
| • Procedures established for veterinary assessment, treatment, or euthanasia ( <i>Guide, p 114</i> ) <b>[must]</b>   | X  |   |   |   |    |
| • Veterinarian is authorized to treat, relieve pain, and/or euthanize ( <i>Guide, p 114</i> ) <b>[must]</b>  | X  |   |   |   |    |
| 2. Animal Procurement and Transportation/Preventive Medicine   | A* | M | S | C | NA |
| • Procedures for lawful animal procurement are in place ( <i>Guide, p 106</i> ) <b>[must]</b>  | X  |   |   |   |    |
| • Sufficient facilities and expertise are confirmed prior to procurement ( <i>Guide, p 106</i> )   | X  |   |   |   |    |
| • Procurement is linked to IACUC review and approval ( <i>Guide, p 106</i> )   | X  |   |   |   |    |
| • Appropriate records are maintained on animal acquisition ( <i>Guide, p 106</i> )   | X  |   |   |   |    |
| • Animal vendors are evaluated to meet program needs and quality ( <i>Guide, p 106</i> )   | X  |   |   |   |    |
| • Breeding colonies are based on need and managed to minimize numbers ( <i>Guide, p 107</i> )  | X  |   |   |   |    |
| • Procedures for compliance with animal transportation regulations, including international requirements, are in place ( <i>Guide, p 107</i> ) <b>[must]</b>                         | X  |   |   |   |    |
| • Transportation is planned to ensure safety, security and minimize risk ( <i>Guide, p 107</i> )   | X  |   |   |   |    |
| • Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available ( <i>Guide, pp 107- 108</i> )                       | X  |   |   |   |    |
| • Appropriate loading and unloading facilities are available ( <i>Guide, p 109</i> )   | X  |   |   |   |    |
| • Environment at receiving site is appropriate ( <i>Guide, p 109</i> )   | X  |   |   |   |    |
| • Policies in place on separation by species, source, and health status ( <i>Guide, pp 109, 111-112</i> )  | X  |   |   |   |    |
| • Procedures in place for quarantine to include zoonoses prevention ( <i>Guide, p 110</i> )  | X  |   |   |   |    |
| • Quarantined animals from different shipments are handled separately or physically separated ( <i>Guide, p 110</i> )  | X  |   |   |   |    |
| • Procedures in place for stabilization/acclimation ( <i>Guide, pp 110-111</i> )   | X  |   |   |   |    |
| • Policies in place for isolation of sick animals ( <i>Guide, p 112</i> )  | X  |   |   |   |    |
| • Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation ( <i>Guide, p 112</i> )   | X  |   |   |   |    |
| • Diagnostic resources are available for preventive health program ( <i>Guide, p 112</i> )   | X  |   |   |   |    |
| 3. Surgery   | A* | M | S | C | NA |
| • Researchers have appropriate training to ensure good technique ( <i>Guide, p 115</i> ) <b>[must]</b>   | X  |   |   |   |    |
| • Pre-surgical plans are developed and include veterinary input (e.g., location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping) ( <i>Guide, p 116</i> ) | X  |   |   |   |    |

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

#### 4. Pain, Distress, Anesthesia and Analgesia A\* M S C NA

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| • Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training ( <i>Guide</i> , p 121) | X |  |  |  |  |
| • Selection of analgesics and anesthetics is based on professional veterinary judgment ( <i>Guide</i> , p 121)                             | X |  |  |  |  |
| • Painful procedures are monitored to ensure appropriate analgesic management ( <i>Guide</i> , p 122)                                      | X |  |  |  |  |
| • Procedures are in place to assure antinociception before surgery begins ( <i>Guide</i> , p 122) <b>[must]</b>                            | X |  |  |  |  |
| • Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated ( <i>Guide</i> , p 122)   | X |  |  |  |  |
| • Special precautions for the use of paralytics are in place to ensure anesthesia <sup>xiii</sup> ( <i>Guide</i> , p 123)                  | X |  |  |  |  |

#### 5. Euthanasia A\* M S C NA

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| • Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC ( <i>Guide</i> , p 123)                       | X |  |  |  |  |
| • Training is provided on appropriate methods for each species and considers psychological stress to personnel ( <i>Guide</i> , p 124) | X |  |  |  |  |
| • Procedures and training are in place to ensure death is confirmed ( <i>Guide</i> , p 124) <b>[must]</b>                              | X |  |  |  |  |

#### 6. Drug Storage and Control A\* M S C NA

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| • Program complies with federal regulations for human and veterinary drugs ( <i>Guide</i> , p 115) <b>[must]</b>                     | X |  |  |  |  |
| • Drug records and storage procedures are reviewed during facility inspections ( <i>Guide</i> , p 115)                               | X |  |  |  |  |
| • Procedures are in place to ensure analgesics and anesthetics are used within expiration date ( <i>Guide</i> , p 122) <b>[must]</b> | X |  |  |  |  |

\* 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:

## • Endnotes

<sup>i</sup> The PHS Policy requires that Assured institutions comply with the regulations (9 CFR, Subchapter A) issued by the U.S. Department of Agriculture (USDA) under the Animal Welfare Act, as applicable. The endnotes below are specific USDA regulatory requirements that differ from or are in addition to the PHS Policy. This list is not intended to be all inclusive. For additional information please refer to 9 CFR Subchapter A - Animal Welfare.

<sup>ii</sup> Part 2 Subpart C - Research Facilities

- 2.31(b)(2) - "The Committee shall be composed of a Chairman and at least two additional members;... at least one shall not be affiliated in any way with the facility...such person will provide representation for general community interests in the proper care and treatment of animals." [PHS policy requires 5 members]

<sup>iii</sup> 2.32(c)(4) - "...No facility employee, Committee member, or laboratory personnel shall be discriminated against or be subject to any reprisal for reporting violations of any regulation or standards under the Act." [USDA requirement additional to PHS Policy]

<sup>iv</sup> 2.31(d)(5) - "...shall conduct continuing reviews of activities.. not less than annually." [PHS Policy requires a complete new review every 3 years utilizing all the criteria for initial review]

<sup>v</sup> 2.31(d)(1)(x) - "...no animal will be used in more than one major operative procedure from which it is allowed to recover unless...(it is) justified for scientific reasons...(or is) required as routine veterinary procedure...or other special circumstances as determined by the Administrator on an individual basis." [this last point is an additional USDA justification for multiple survival surgeries]

<sup>vi</sup> 2.36 - "...each reporting facility shall submit an annual report to the APHIS, AC sector supervisor for the State where the facility is located on or before December 1 of each calendar year." [The USDA annual report has a list of requirements which differ from PHS annual report]

<sup>vii</sup> 2.36(b)(3) - "...exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the IACUC. A summary of all such exceptions must be attached to the facility's annual report." [Refers to USDA annual report]

<sup>viii</sup> 2.31(c)(3) - "...Any failure to adhere to the plan and schedule that results in a significant deficiency remaining uncorrected shall be reported in writing within 15 business days by the IACUC, through the institutional official, to APHIS and any Federal agency funding that activity." [PHS Policy requires prompt reporting to OPRR of serious or continuing noncompliance with the PHS Policy or serious deviations from the provisions of the *Guide*]

<sup>ix</sup> 2.36 - "...each reporting facility shall submit an annual report to the APHIS, AC sector supervisor for the State where the facility is located on or before December 1 of each calendar year." [The USDA annual report has a list of requirements which differ from PHS annual report]

<sup>x</sup> In addition to PHS requirements for IACUC review/application for funding, USDA regulations require:

2.31(d)(1)(ii) - "The principal investigator (PI) consider alternatives to procedures that cause more than momentary or slight pain or distress to the animals, and has provided a written narrative description of the methods and sources...used to determine that alternatives were not available."

2.31(d)(1)(iii) - "The PI has provided written assurance that the activities do not unnecessarily duplicate previous experiments."

2.31(d)(1)(iv) - "Procedures that may cause more than momentary or slight pain or distress to the animals will:

- involve in their planning, consultation with the attending veterinarian or his or her designee; [PHS Policy does not specify veterinary consultation]
- not include paralytics without the use of anesthesia;"

2.31(d)(1)(x) - "No animal will be used in more than one major operative procedure from which it is allowed to recover, unless justified for scientific reasons by the principal investigator, in writing..."

<sup>xi</sup> 2.33(a)(1) - "In the case of a part-time attending veterinarian or consultant arrangements, the formal arrangements shall include a written program of veterinary care and regularly scheduled visits to the research facility." [USDA requirement additional]

<sup>xii</sup> 2.32(c) - "Humane methods of animal maintenance and experimentation, including the basic needs of each species, proper handling and care for the various species of animals used by the facility, proper pre-procedural and post-procedural care of animals, and aseptic surgical methods and procedures."

<sup>xiii</sup> 2.31(d)(iv)(C) - "Procedures that may cause more than momentary or slight pain or distress to the animals will.. not include the use of paralytics without anesthesia."

**Attachment 2**  
**Semi-Annual Facility Inspection Report – Spring 2020**

| Date  | Location | Deficiency Category (M or S*) | Deficiency  | Corrective Action/Plan   | Responsible Party | Correction Schedule and Interim Status                     |
|---|----------|-------------------------------|---|--|-------------------|--|
| <b>Agricultural Research, Development and Education Center (ARDEC) &amp; Conference Center</b>                      |          |                               |   |  |                   |  |
| 5/11/20   | General  | M                             | Expired vaccines, feed stored on floor, expired nutritional supplements, human food/drink in facilities | Disard expired items, store feed appropriately, reminder not to store human food/drink in animal housing/procedure areas |                   | confirmed on 5/27/2020 that all items have been addressed. |
| <b>Anatomy/Zoology (AAALAC Accredited)</b>  |          |                               |   |  |                   |  |
| 2/21/20   |          |                               | No deficiencies   |  |                   |  |
| <b>Animal Disease Laboratory (ADL) (AAALAC Accredited)</b>  |          |                               |   |  |                   |  |
| 3/5/20  |          |                               | No deficiencies   |  |                   |  |
| <b>Animal Reproduction and Biotechnology Lab (ARBL) (AAALAC Accredited)</b>   |          |                               |   |  |                   |  |
|   |          |                               | POSTPONED   |  |                   |  |
| <b>Aquatic Toxicology Lab, Colorado Parks and Wildlife (CPW) &amp; and Quonset Hut</b>                              |          |                               |   |  |                   |  |
|   |          |                               | POSTPONED   |  |                   |  |
| <b>Bellvue Research Hatchery, Colorado Parks and Wildlife (CPW)</b>   |          |                               |   |  |                   |  |
|   |          |                               | POSTPONED   |  |                   |  |
| <b>Biology</b>  |          |                               |   |  |                   |  |
| 2/27/20   |          |                               | No deficiencies   |  |                   |  |
| <b>Block House</b>  |          |                               |   |  |                   |  |
| 2/4/20  |          |                               | No deficiencies   |  |                   |  |
| <b>Deer Facility I &amp; II, SARA (AAALAC Accredited)</b>   |          |                               |   |  |                   |  |
| 2/4/20  |          |                               | No deficiencies   |  |                   |  |
| <b>Eastern Colorado Research Center (ECRC; Akron, CO)</b>   |          |                               |   |  |                   |  |
|   |          |                               | POSTPONED   |  |                   |  |
| <b>Education and Outreach Center (EOC)/Natural &amp; Environmental Sciences Building (NESB) (AAALAC Accredited)</b> |          |                               |   |  |                   |  |
| 2/18/20   |          |                               | No deficiencies   |  |                   |  |
| <b>Equine Performance Analysis Facility (EPAF) (AAALAC Accredited)</b>  |          |                               |   |  |                   |  |
|   |          |                               | POSTPONED   |  |                   |  |
| <b>Equine Reproduction Laboratory (ERL) (AAALAC Accredited)</b>   |          |                               |   |  |                   |  |
| 3/18/20   |          |                               | No Deficiency   |  |                   |  |

**Semi-Annual Facility Inspection Report – Spring 2020, Continued**

| Date   | Location | Deficiency Category (M or S*) | Deficiency  | Corrective Action/Plan   | Responsible Party | Correction Schedule and Interim Status  |
|--|----------|-------------------------------|---|--|-------------------|---|
| <b>Equine Teaching and Research Center (ETRC)</b>                    |          |                               |   |  |                   |   |
|  |          |                               | POSTPONED   |  |                   |   |
| <b>Foothills Fisheries Lab (FFL)</b>                                 |          |                               |   |  |                   |   |
| 5/12/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Global Food Innovation Center (GFIC)</b>                          |          |                               |   |  |                   |   |
| 2/20/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Gifford (AAALAC Accredited)</b>                                   |          |                               |   |  |                   |   |
| 3/2/20   |          |                               | No deficiencies   |  |                   |   |
| <b>Infectious Disease Research Center (IDRC) (AAALAC Accredited)</b> |          |                               |   |  |                   |   |
|  |          |                               | POSTPONED   |  |                   |   |
| <b>LaPorte</b>   |          |                               |   |  |                   |   |
| 3/18/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Microbiology (AAALAC Accredited)</b>                              |          |                               |   |  |                   |   |
| 2/19/20  |          |                               | No deficiencies   |  |                   |   |
| <b>MOBY (AAALAC Accredited)</b>                                      |          |                               |   |  |                   |   |
| 3/19/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Molecular and Radiological Biosciences (AAALAC Accredited)</b>    |          |                               |   |  |                   |   |
| 2/25/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Painter Center (AAALAC Accredited)</b>                            |          |                               |   |  |                   |   |
| 2/17/20  |          |                               | No deficiencies   |  |                   |   |
| <b>Pathology (AAALAC Accredited)</b>                                 |          |                               |   |  |                   |   |
| 3/10/20  | 309      |                               | No deficiencies   |  |                   |   |
| 3/2/20   | 218/219  |                               | No deficiencies   |  |                   |   |
| 3/10/20  | 9C       | M                             | Large charcoal waste reclamation canister (fAIR)- only had one date from 2018- currently in use at time of inspection | Scavenging (fAIR) canister must have weight recorded after each use to determine when it needs to be replaced. | lab               | Emailed 3/18 and 5/12 and 5/22. responded on 5/22/2020 this was addressed by 3/25/2020. |
| <b>Physiology (AAALAC Accredited)</b>                                |          |                               |   |  |                   |   |
| 2/21/20  |          |                               | No deficiencies   |  |                   |   |



**Semi-Annual Facility Inspection Report – Spring 2020, Continued**

| Date  | Location                        | Deficiency Category (M or S*) | Deficiency   | Corrective Action/Plan | Responsible Party | Correction Schedule and Interim Status  |
|---|---------------------------------|-------------------------------|--|------------------------|-------------------|---|
| <b>Rampart (AAALAC Accredited)</b>  |                                 |                               |  |                        |                   |   |
| 3/18/20   |                                 |                               | No deficiencies  |                        |                   |   |
| <b>Rouse Ranch (Saratoga, WY)</b>   |                                 |                               |  |                        |                   |   |
|   |                                 |                               | POSTPONED  |                        |                   |   |
| <b>Temple Grandin Equine Center (Denver; video)</b>   |                                 |                               |  |                        |                   |   |
|   |                                 |                               | POSTPONED  |                        |                   |   |
| <b>Translational Medicine Institute (TMI) (AAALAC Accredited?) – includes PSRL and Continuing Education</b> |                                 |                               |  |                        |                   |   |
| 3/19/20   |                                 |                               | No deficiencies  |                        |                   |   |
| <b>Veterinary Teaching Hospital (VTH) (AAALAC Accredited)</b>   |                                 |                               |  |                        |                   |   |
| 3/18/20   | Fencing of all VTH outdoor pens | M                             | In general, the fencing of the VTH pastures has multiple integrity issues and needs to be replaced. Examples included below: | Repair fencing         | VTH               | responded 5/12/2020- they are working on these issues and aim to complete in a month. |
| 3/18/20   | Pastures- Llama pen             |                               | White gate on the east side of shelter hanging off hinges  |                        |                   |   |
| 3/18/20   | Pastures- Cow pen               |                               | Loose bars on fence near water and south west corner   |                        |                   |   |
| 3/18/20   | Pastures- Cow pen               |                               | West side of fence leaning/bowing  |                        |                   |   |
| 3/18/20   | Pastures- Sheep pen             |                               | East side of fence- angled fence support has sharp ends sticking out   |                        |                   |   |
| 3/18/20   | Pastures- north east pen        |                               | Large dig hole in north east corner  |                        |                   |   |
| 3/18/20   | Pastures – North east pen       |                               | North side of fence tops of fence posts loose- top line of fence not supported in sections                                   |                        |                   |   |
| 3/18/20   | Pastures- horse pen             |                               | South side of fence-fence tops of fence posts loose- top line of fence not supported in sections                             |                        |                   |   |

**Semi-Annual Facility Inspection Report – Spring 2020, Continued**

| Date   | Location            | Deficiency Category (M or S*) | Deficiency  | Corrective Action/Plan                              | Responsible Party  | Correction Schedule and Interim Status |
|--|---------------------|-------------------------------|---|---|--------------------|--|
| 3/18/20  | Pastures-horse pens |                               | U clips broken in several spots around pen- chain link not secured to posts |   |                    |  |
| 3/18/20  | Pastures-horse pen  |                               | Thin piece of fence along south side sticking out along bottom of fence     |   |                    |  |
|  |                     |                               | REMAINING AREAS POSTPONED   |   |                    |  |
| <b>Wagar</b>   |                     |                               |   |   |                    |  |
| 3/9/20   |                     |                               | No deficiencies   |   |                    |  |
| <b>Private Vet Clinics for VetDC/FDA Grant (Various Locations, n=6 total; video)</b> |                     |                               |   |   |                    |  |
|  |                     |                               | POSTPONED   |   |                    |  |
| <b>Privately-owned horse facility</b>  |                     |                               |   |   |                    |  |
| 2/27/20  | Feed storage        | M                             | Open bags feed on floor of storage room                                     | Place feed in closed containers on elevated surface | PI and ranch owner | PI emailed that this was done 3/4/2020 |