

**Memorandum to:** Dr. Sarah Nusser, Vice President for Research, Institutional Official

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

**Subject:** Semiannual Report of the Program Review and Facility Inspection

**Date:** May 30, 2019

This report summarizes the IACUC's results of its most recent program review and facility inspection, as required by the Public Health Service (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. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

**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.): [optional]**

Beginning October 3, 2018, all applications including new, continuing reviews and modifications had to be submitted in a-tune as new protocols.

A new building was commissioned and was able to start housing animals in November of 2018. This location adds 1224 square feet of space. Since it opened, it has had an average daily inventory of 500 animals.

**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.

☒ B. The following departures have been reviewed and approved by the IACUC: [*include reason for each departure*]

The committee approved a study in which the PI has requested to not clean the floors because of concerns this could aerosolize any PEDV shed from individual infected animals and the PI would prefer to reduce potential exposure to PEDV, or risks of spreading PEDV on personnel, through this process. Also, from prior experience, animals of this age and length of the study produce minimal fecal material to create a need to clean the floors. This also reduces wet floors and animals that occur when floors are cleaned, which is an improvement in the environment for such animals. The PI has also noticed the animals transition to a milk diet very well, with some pelleted feed that animals consume entirely, leaving minimal to no residue on the floor. Finally, the PI would like to continue to conduct these bioassays similar to previous studies with PEDV and feed to reduce potential questions if unexpected results occur.

The committee approved a study in which the animal's sleep is fragmented. The PI has requested to do this to evaluate changes that occur in the composition of the gut microbiota. The sleep fragmentation bar will be programmed to perform variable sweeps once every 30 seconds to 2 minutes every day of the experiment to prevent any acclimation to the rhythm of the fragmentation cycle.

The IACUC approved a protocol in which animals, in the field, will be euthanized via a method of euthanasia that is not approved by the American Veterinary Medical Association (AVMA) to collect specimens to be used for teaching. This planned method of euthanasia will be thoracic compression which is supported by the Ornithological Society.

The IACUC approved a teaching protocol in which animals, in the field, will be euthanized via a

method of euthanasia that is not approved by the American Veterinary Medical Association (AVMA) in the event that an animal is injured and cannot be released. The PI will be euthanizing animals by thoracic compression which is supported by the Ornithological Society. The carcasses of these animals will be used as specimens for teaching.

The IACUC approved a protocol in which animals will be housed in metabolic cages overnight to collect urine for testing metabolic parameters.

The IACUC approved a research protocol in which animals, in the field, will be euthanized via a method of euthanasia that is not approved by the American Veterinary Medical Association (AVMA). This method of euthanasia will be utilized for both planned and unplanned euthanasia. The PI will be euthanizing animals by thoracic compression which is supported by the Ornithological Society.

The IACUC approved a protocol in which exposure to psychological stress is an experimental condition for this study. The psychological stressor employed is physical restraint for 30 minutes as it elicits a mild hormonal stress response thought to be mediated, at least in part, by the hippocampus. This is particularly important for assessing the function of new neurons formed in the hippocampus to the regulation of the stress response.

The IACUC approved a protocol in which animals will be housed in metabolism cages overnight to collect urine and feces to measure the hormonal levels in the urine.

The IACUC approved two protocols in which animals will be restrained for the entirety of the shock duration (1 hour 40 minutes of total restraint time). Experimental conditioning units are necessary to keep the rats from removing the shock electrodes or escaping the testing paradigm.

The IACUC approved a research protocol, conducted in the field, in which the PI will be euthanizing animals via a method approved by the Use of Fishes in Research Committee rather than the AVMA Guidelines. The planned method of euthanasia will be electroshock followed by decapitation.

The IACUC approved another research protocol in which the PI will be euthanizing animals via a method approved by the Use of Fishes in Research Committee rather than the AVMA Guidelines. This method of euthanasia, that will be used for both planned and unplanned euthanasia, will be electroshock followed by decapitation.

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

Animal Care and Use Program Review Date(s): April 3, 2019

Select A or B:

- ☒ A. There were no deficiencies in the program during this reporting period.
- ☐ B. 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 OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

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

Animal Facility Inspection Date(s): November 16, 2018; December 3, 2018; December 11, 2018; December 21, 2018; January 4, 2019; February 8, 2019; February 22, 2019; February 28, 2019; March 1, 2019; March 7, 2019; March 13, 2019; March 21, 2019; March 22, 2019; March 26, 2019; March 27, 2019; March 28, 2019; March 29, 2019; April 1, 2019; April 2, 2019; April 3, 2019; April 5, 2019; April 8, 2019; April 9, 2019; April 10, 2019; April 11, 2019; April 12, 2019; April 15, 2019; April 17, 2019; April 18, 2019; April 19, 2019; April 23, 2019; April 24, 2019;

April 25, 2019; April 26, 2019; April 29, 2019; May 1, 2019; May 2, 2019; May 3, 2019; May 6, 2019; May 7, 2019; May 8, 2019; May 9, 2019; May 10, 2019; May 16, 2019; May 21, 2019

Select A or B:

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

☒ B. 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 OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

Please see attached documents.

#### 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]*

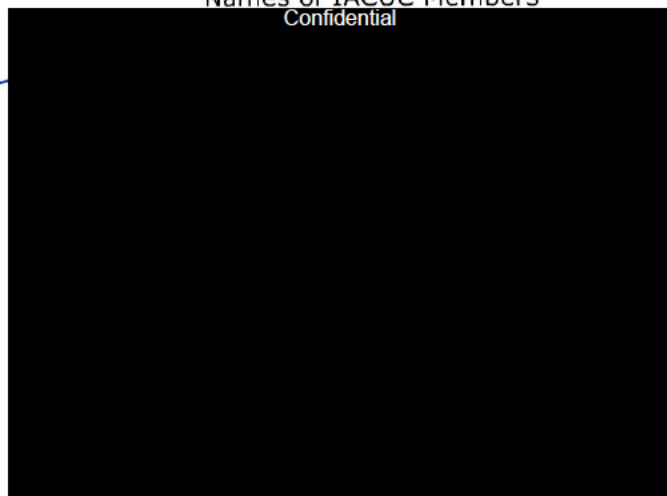
#### V. Status of AAALAC Accreditation *[identify accredited facilities, if applicable]*

Iowa State University Colleges of Veterinary Medicine and Human Sciences remain fully accredited.

**VI. Signatures** [*signatures of a majority of the IACUC members required by AWAR (§2.31,c,3), if applicable*]

Names of IACUC Members

Confidential

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Signatures

Confidential

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## Semiannual Facility Evaluation

**M = minor deficiency    S = significant deficiency**

**Significant deficiency:** is one that "is or may be a threat to the health or safety of animals".

**Minor deficiency:** examples of minor deficiencies include chipped paint and burnt out light bulbs.

Date	Location	Room	M	S	Notes
1/4/19	Confidential		X		Expired drugs ( <b>Correction:</b> All expired drugs will be removed from the lockbox by 3/31/19)
4/3/19			X		Light needs a water proof cover in ante room ( <b>Correction:</b> Water proof light fixture was added on 4/4/19)
4/3/19			X		Drain cover in ante room needs to be replaced ( <b>Correction:</b> Drain cover will be replaced by 5/1/19)
4/3/19			X		Drain cover in ante room needs to be replaced ( <b>Correction:</b> Drain cover was replaced on 4/4/19)
4/10/19			X		Add a year to the date on the Maxima bottle ( <b>Correction:</b> Adding year to the date by 4/26/19)
4/10/19			X		Pump bottle needs a label ( <b>Correction:</b> Adding a label including the expiration date by 4/26/19)
4/10/19			X		Bottles not used quickly need an expiration date vs date filled ( <b>Correction:</b> Replacing the contents and relabeling with expiration date by 4/26/19)
4/10/19			X		List expiration dates on bottles, not just prepared by ( <b>Correction:</b> Listing expiration dates by 4/26/19)
4/23/19			X		Expired Artificial Tears ( <b>Correction:</b> Bottle was immediately disposed of on 4/23/19)
4/23/19			X		Expired Atropine bottle ( <b>Correction:</b> Bottle was disposed of on 4/23/19)
4/25/19			X		No animal records in the room ( <b>Correction:</b> Records will be placed in the room by 5/20/19)
5/9/19			X		Expired bottle of isoflurane ( <b>Correction:</b> Will be removed by 6/30/19)

Confidential

## Semiannual Agricultural Production Farm Evaluation\*

**M = minor deficiency    S = significant deficiency**

\*No PHS-funded or USDA regulated activities

**Significant deficiency:** is one that "is or may be a threat to the health or safety of animals".

**Minor deficiency:** examples of minor deficiencies include chipped paint and burnt out light bulbs.

Date	Location	Room	M	S	Notes
3/1/19	Confidential		X		Lights out ( <b>Correction:</b> All deficiencies will be corrected by 5/1/19)
3/1/19			X		Lights out ( <b>Correction:</b> All deficiencies will be corrected by 5/1/19)
3/21/19			X		Pigeon Pox Vaccine expired ( <b>Correction:</b> Dropped off to EH&S on 5/17/19)
4/9/19			X		Oxytocin expired ( <b>Correction:</b> Removed 4/24/19)
4/15/19			X		Lab – CG8+ Cartridge expired ( <b>Correction:</b> Discarded by PI on 4/17/19)
4/24/19			X		Previously fixed rodent hole – rodents dug another hole ( <b>Correction:</b> Holes have been refilled on 5/1/19 and will refill any new holes with concrete)
4/24/19			X		Deficiency from last inspection – Fencing is falling apart - Fencing progress has been made but not complete ( <b>Correction:</b> Correction date previously noted 10/1/19) New – Drainage issue with tiling ( <b>Correction:</b> Completion of the Confidential drainage issue is 12/2/21)
4/24/19			X		Deficiency from last inspection – Improve Drainage ( <b>Correction:</b> Correction date previously noted 12/1/19)
4/24/19			X		Deficiency from last inspection – Dutch doors need to be fixed/ North side currently not in use ( <b>Correction:</b> Doors were constructed and installed before 5/1/19)
4/24/19			X		Deficiency from last inspection – Manure pit needs storage area ( <b>Correction:</b> Correction date previously noted 12/2/21)
4/24/19			X		Cable down ( <b>Correction:</b> Cable has been repaired on 5/7/19 and will continue to repair cables as they are broken)
4/29/19			X		Lights out ( <b>Correction:</b> Fixed immediately 4/29/19)
5/1/19			X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)
5/1/19			X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)

5/1/19	Confidential	X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)
5/1/19		X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)
5/1/19		X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)
5/1/19		X		Light out ( <b>Correction:</b> All lights will be replaced by 6/7/19)
5/3/19		X		Vitamin B Complex expired ( <b>Correction:</b> Removed/disposed of 5/10/19)