

REPORT OF THE SEMI-ANNUAL INSPECTION AND EVALUATION OF THE VIVARIA BY THE UCR INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

Prepared: OCTOBER 12, 2020

Reviewed and Approved at the convened meeting of the IACUC on October 19, 2020

Specific items from Fall 2019:

- A wound from a fight was noted on 10/3 and the vivarium staff notified the lab, however, the animals have not been separated as of this morning.

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. A sticky note was used to notate that the PI will change the cages instead of the 'PI will change cage' card.	1. Use the 'PI Will Change' card instead of sticky note.
2. Old cage cards were in use.	2. Use new cage cards (available from the animal technician).
3. Two vials of Systane eye drops were expired in the multiphoton procedure room. 190 proof ethanol gallon bottle was stored on its side.	3. The expired eye drops must be discarded as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals." 190 proof ethanol gallon bottle should be stored upright. (Mary Hamer should be cc'ed on correspondence.)
4. Old cage cards were in use.	4. Use new cage cards (available from the animal technician).
5. Old cage cards were in use.	5. Use new cage cards (available from the animal technician).
6. Old cage cards were in use. Rusty surgical instruments for biopsy collection were in the lab's supplies.	6. Use new cage cards (available from the animal technician). Replace rusty surgical instruments.
7. Sucrose solution was not labeled with an expiration date, 95% ethanol bottle was not labeled flammable.	7. Email was sent to the PIs using that room to claim the sucrose and ethanol bottles and properly label them. If not claimed, the bottles will be disposed. Ethanol bottle should be labeled with either the word flammable or the flammable symbol.
8. Old cage cards were in use. Cage cards were not filled out to justify single housing of mice. Lab 99% isopropyl alcohol in procedure room is expired.	8. Use new cage cards (available from the animal technician). Provide justification on the cage cards for any mice housed individually. Replace expired isopropyl alcohol in procedure room as per

	"Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
9. [REDACTED] No expiration date on the jar of antibiotics and contaminants were floating in the solution.	9. [REDACTED] This container of antibiotics must be disposed of. Label with expiration date in the future.
10. [REDACTED] Expired dextrose (10-18-12) in procedure room drawer.	10. [REDACTED] Dispose of expired dextrose (10-18-12) in procedure room drawer as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
11. [REDACTED] 10% bleach bottle in procedure room missing date.	11. [REDACTED] Add date to 10% bleach bottle in procedure room.
12. [REDACTED] PBS solution in procedure room drawer did not have a date.	12. [REDACTED] Add date to PBS solution in procedure room drawer or dispose of if expired as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
13. [REDACTED] Spray bottle of ethanol dated 10-26-18 and sodium hypochlorite bottle lacked expiration date and concentration in procedure room. Surgery cage cards were lacking date <i>and time</i> for some post-surgery injections.	13. [REDACTED] Replace spray bottle of ethanol dated 10-26-18 and add expiration date and concentration to sodium hypochlorite bottle in procedure room. Label ethanol bottle with either the word flammable or the flammable symbol. Record all dates <i>and times</i> for some post-surgery injections on the surgery cage cards.
14. [REDACTED] Old cage cards were in use.	14. [REDACTED] Use new cage cards (available from the animal technician).
15. [REDACTED] Old cage cards were in use.	15. [REDACTED] Use new cage cards (available from the animal technician).

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

None.

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] 10% bleach bottle with no date.	1. [REDACTED] Write date diluted on bleach bottle. <i>Note: Once bleach is diluted, it expires after 24 hours.</i>
2. [REDACTED] Date for Neosporin was recorded, but not time.	2. [REDACTED] Date and time must be listed on the card for all medications administered.
3. [REDACTED] Times were not recorded for drug administrations.	3. [REDACTED] Date and time must be listed on the card for all medications administered.
4. [REDACTED] Tail snips on 4-week mice, though AUP says tail snips will be performed at <3 weeks. P2 MEC procedure listed, though it is unclear which procedure in the AUP that refers to.	4. Tail snips on mice older than 3 weeks have not been approved. If mice are older than 3 weeks, anesthesia must be used for tail snips. Write

	procedure name that can be referenced in the AUP.
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DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:
None.

Fall 2020:

Date: 10/6/2020

Specific items from this inspection:	RECOMMENDATION:
1. Procedure room: Ethanol bottle was not labeled flammable.	1. Procedure room: Label ethanol bottle with either the word flammable or the flammable symbol.
2. Procedure room: Unlabeled bottle with dark yellow liquid.	2. Procedure room: Discard liquid. In the future, label all bottles with contents and date.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

Specific items from this inspection:

- Cage cards for lab were not legible.
- One cage card for listed an expired AUP.

Fall 2020:

Date: 10/7/20

Specific items from this inspection:	RECOMMENDATION:
1. Light in the room is out.	1. Submit work order to have light replaced.
2. Date and time were not recorded for drug administrations.	2. Date and time must be listed on the card for all drugs administered.
3. Only Dexamethazone listed on surgery cards. Carprofen administration not noted.	3. Date and time must be listed on the surgery card for all drugs administered. Per Policy 529-323 (Policy on Animal Surgery): " <u>Vivaria Surgical Records</u> : Annotate cage card with procedure and date. Record anesthetic, analgesic, antibiotic administration and animal's condition on surgical

	cage card." Carprofen was not given post-surgery. <u>{This is a significant deficiency.}</u>
4. [REDACTED] Times were not recorded for drug administrations.	4. [REDACTED] Date and time must be listed on the card for all drugs administered.
5. [REDACTED] Only one injection of buprenorphine recorded, two days after the experiment.	5. [REDACTED] All post-surgery drug administrations must be recorded on the surgery cards. Per Policy 529-323 (Policy on Animal Surgery): " <u>Vivaria Surgical Records</u> : Annotate cage card with procedure and date. Record anesthetic, analgesic, antibiotic administration and animal's condition on surgical cage card." No analgesics were given from the time of surgery to the injection recorded. <u>{This is a significant deficiency.}</u>
6. [REDACTED] Old cage cards were in use.	6. [REDACTED] Use new cage cards (available from the animal technician).
7. [REDACTED] AUP 20170013 is listed on cage cards.	7. [REDACTED] Update cage cards with current AUP.
8. [REDACTED] Bat colony room: The room is not in use and is very dirty.	8. [REDACTED] Bat colony room: Thoroughly clean room to remove dust build up.

DEFICIENCY LEVEL: Significant and should be corrected by February 15, 2021.

[REDACTED]

Specific items from Fall 2019:

- [REDACTED] Racks and cages are not secured against earthquakes.
- [REDACTED] – Inspectors again noted soiled bedding on the floor of both wheel rooms. The soiled bedding is a cause for concern as the animals are infected with parvovirus. ***[NOTE: this is a repeat finding.]***
- [REDACTED] An uncovered container of food was on the counter.
- [REDACTED] The large food storage bin was not properly covered.
- [REDACTED] The logs for cage changes and cleaning of the room were not available. ***[NOTE: this is a repeat finding.]***
- [REDACTED] large amounts of rust in sink.

Fall 2020:

[REDACTED]

Date: 10/6/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Tanks are changed regularly, but ammonia levels are not spot checked.	1. [REDACTED] Recommendation to spot check ammonia levels in tanks.
2. [REDACTED] Rust in sink, cardboard in room, wood broom handle.	2. [REDACTED] Remove rust in sink. Remove cardboard from room; replace with nonporous containers/bins if needed. Replace broom with one that has a non-porous handle.
3. [REDACTED] Paint peeling on wall.	3. [REDACTED] Patch and paint wall.

4. [REDACTED] Cardboard in room.	4. [REDACTED] Remove cardboard from room; replace with nonporous containers/bins if needed.
5. [REDACTED] Cardboard in room.	5. [REDACTED] Remove cardboard from room; replace with nonporous containers/bins if needed.
6. [REDACTED] Cardboard in room/cardboard holding up a pump.	6. [REDACTED] Remove cardboard from room; replace with nonporous containers/bins if needed.
7. [REDACTED] Dates are handwritten on room log. Though sweeping/mopping has been recorded in the log, cleaning of other room surfaces has not been recorded.	7. [REDACTED] Have dates pre-printed on log sheets. Log must include cleaning of all surfaces (e.g., counters, shelves and walls). It is suggested that the lab use the vivarium's template.
8. [REDACTED] Log unavailable for cage cleaning.	8. [REDACTED] Keep log of cage cleaning in room.
9. [REDACTED] Deposit build up on top of tanks.	9. [REDACTED] Clean tanks to remove deposit build up.
10. [REDACTED] Bedding on floor. [NOTE: this is a repeat finding.]	10. [REDACTED] Sweep/mop floor to remove bedding. <i>If after one month this has not been corrected, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
11. [REDACTED] Tacky mats have not been installed at the entrance nor were room-specific shoes or disinfectant available. [NOTE: this requirement was communicated to the PI on March 12, 2020.]	11. [REDACTED] Install Tacky mats at the entrance or have room-specific shoes or disinfectant available. <i>If after one month this has not been corrected, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
12. [REDACTED] Dirt on ceiling by vent.	12. [REDACTED] Clean ceiling to remove dirt by vent.
13. [REDACTED] Logs unavailable for room cleaning, cage cleaning and feeding. [NOTE: this is a repeat finding.]	13. [REDACTED] Logs must be maintained in room which detail room cleaning, cage cleaning and feeding. <i>If after one month this has not been corrected, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
14. [REDACTED] Temperature and time are identical for several days in a row on the log, which means the hygrothermometer was not reset daily.	14. [REDACTED] The hygrothermometer must be reset daily.
15. [REDACTED] Sink is dirty (bedding and rust).	15. [REDACTED] Clean sink and scrub off rust.
16. [REDACTED] Bedding on floor and counters. [NOTE: this is a repeat finding.]	16. [REDACTED] Clean floor and counters to remove bedding. <i>If after one month this has not been corrected, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
17. [REDACTED] Hydrogel is expired.	17. [REDACTED] Dispose of expired hydrogel.
18. [REDACTED] Wood handle wire brush is rusting.	18. [REDACTED] Dispose of wood handle wire brush.
19. [REDACTED] Cardboard in room.	19. [REDACTED] Remove cardboard from room; replace with nonporous containers/bins if needed.

20. [REDACTED] Silverfish coming up from drain. When grate removed, drained is packed with feces and bedding.	20. [REDACTED] Thoroughly clean floor and clean out drain. Add this step to the room cleaning SOP. Work with vivarium for proper pest control. <i>If after one month this has not been corrected and the revised SOP(s) provided to the IACUC, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
21. [REDACTED] Expired AUP listed on wall.	21. [REDACTED] Update AUP information on wall.
22. [REDACTED] Logs unavailable for room cleaning, cage cleaning and feeding. [NOTE: this is a repeat finding.]	22. [REDACTED] Logs must be maintained in room which detail room cleaning, cage cleaning and feeding. <i>If after one month this has not been corrected, the Office of the Campus Vet (OCV) will take over care of the animals and the PI will be charged the normal per diem rate.</i>
23. [REDACTED] Old cage cards were in use.	23. [REDACTED] Use new cage cards (available from the animal technician).

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021, unless a different deadline is specified in the Recommendations section.

[REDACTED]
Specific items from Fall 2019: NA

Fall 2020:

[REDACTED]

Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Cardboard in room.	1. [REDACTED] Remove cardboard from room; replace with nonporous containers/bins if needed.
2. [REDACTED] Kroger isopropyl alcohol expired 9/2020.	2. [REDACTED] Dispose of expired isopropyl alcohol as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]

Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. Ethanol bottle was not labeled flammable.	1. Label ethanol bottle with either the word flammable or the flammable symbol.
2. Daily logs for chambers when in use (temperature, humidity, etc.) were not available.	2. Have logs available in the room.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. Ethanol bottle was not labeled flammable.	1. Label ethanol bottle with either the word flammable or the flammable symbol.
2. Styrofoam used as a secondary container for vacuum flask.	2. Replace Styrofoam with a plastic bin for secondary container for the vacuum flask.
3. No e-waste tag for waste in hood.	3. Create e-waste tag for waste in the hood.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019: NA

Fall 2020:

[REDACTED]

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. Ethanol bottle not labeled flammable.	Label ethanol bottle with either the word flammable or the flammable symbol.
2. The CO2 euthanasia guidelines have not been updated.	<i>The AVMA Guidelines for the Euthanasia of Animals has updated the flow rate for rodent CO2 euthanasia. Use the instructions below for calculations:</i> Measure the inside of chamber in cm (or convert to cm) a. Multiply L x D x H = cm ³

	b. Divide by 1000 to get your total liter volume c. Multiple by whatever percentage you determine to use d. Then, find a flow meter in LPM that gives you that number <i>Example:</i> If chamber is 20cm x 25cm x 40cm = 20,000 cm ³ or 20L At 50%, 20L x 0.5 = 10 LPM
3. Isoflurane machine last certified in 2017.	1. Contact vendor to have Isoflurane machine re-certified.
4. Surgical instruments autoclaved once a month, ethanol used between surgeries.	2. Surgical Instruments must be sterilized between surgeries. A bead sterilizer can be used. Alternatively, instruments can be submerged in 10% bleach for 30 minutes, followed by rinsing with saline or 70% ethanol.
5. Empty waste bottles.	3. Submit e-tag to have the bottles picked up by EH&S and disposed of.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019:

None.

Fall 2020:

[REDACTED]

Date: 10/6/2020

Specific items from this inspection:	RECOMMENDATION:
None	

[REDACTED]

[REDACTED]

Specific items from Fall 2019:

[REDACTED] Lab logs are completed but do not contain year.
[REDACTED] Lab logs are completed but do not contain year.
[REDACTED] Lab logs are completed but do not contain year [NOTE: this is a repeat finding.]
[REDACTED] Posted AUP information was outdated. [NOTE: this is a repeat finding.]

Wooden panels were found to not have been removed nor appropriately painted/epoxied as requested in the Fall 2017 Semi-Annual inspections. The PI has asked the physical plant to treat the wooden surface.

Fall 2020:

[REDACTED]

Date: 10/6/2020

Specific items from this inspection:	RECOMMENDATION:
None	

[REDACTED]

[REDACTED]

Specific items from Fall 2019:

- Some aquariums were overdue for cleaning

Fall 2020:

[REDACTED]

Date: 10/6/2020

Specific items from this inspection:	RECOMMENDATION:
None	

[REDACTED]

Specific items from Fall 2019:

- The current induction set up would expose lab personnel to isoflurane.
- Ethanol bottle was not labeled as flammable.

Fall 2020:

[REDACTED]

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
None	

[REDACTED]

[REDACTED]

Fall 2020: None.

Fall 2020:

[REDACTED]

[REDACTED]
Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. No cage cleaning log available.	1. Create a cage cleaning log that will be available in the room.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]
[REDACTED]
[REDACTED] None.

Fall 2020:

[REDACTED]
[REDACTED]

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Two birds disappeared over the weekend.	1. Report this officially to the IACUC and have facilities block small hole at the bottom of the cage.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]
[REDACTED]

Fall 2019: This area was not inspected.

Fall 2020:

[REDACTED]
[REDACTED]

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Air exchanges for the room have not been recorded.	1. [REDACTED] Contact EH&S to have air exchanges recorded for the room.
2. [REDACTED] Cage racks may be visible from the outside	2. [REDACTED] Check from the outside to see what is visible in the room. If cage racks are visible, a window covering may be needed.
3. [REDACTED] A key to the rooms must be provided to the Campus Veterinarian.	3. [REDACTED] will assist with providing the room key to the Campus Veterinarian.
4. [REDACTED] Rooms have not been confirmed to be snake-proof.	4. [REDACTED] PI to survey rooms and confirm no escape routes are available for the snakes.
5. [REDACTED] Confirmed that during surgeries and experiments when snakes are present, doors will be locked and signs posted stating 'experiment in progress, call XXXX number for access.'	5. NA

6. [REDACTED] Confirmed that emergency information will be posted.	6. NA
7. [REDACTED] Confirmed cleaning and cage changes logs will be created and available in the room.	7. NA
8. [REDACTED] Confirmed that only members of the lab will have access. Custodial and facilities personnel will not be allowed in the room without a chaperone.	8. NA

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. No light in the room, likely circuit was not on.	1. Room is not currently in use. PI will have electricity/circuit issue addressed before using again.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

[REDACTED]

Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Logbook sheets had old AUP number.	1. [REDACTED] Update logbook sheets with the new AUP number.
2. Urethane 2 dated 1/04/2011; no logs for the urethane bottles. Pentobarbital (powdered) 'received 11/4/2013.'	2. Work with EH&S to have expired drugs and controlled substances disposed of properly.
3. Non-pharmaceutical grade pentobarbital on site.	3. The current AUPs only approve Nembutol and non-pharmaceutical grade pentobarbital is not approved. Work with EH&S to properly dispose of the controlled substance.

4. Overfilled sharps container with recapped syringe in the top.	4. Have sharps container picked up and remind students to not recap syringes.
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DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

- Ethanol bottles in [REDACTED] were not labeled as flammable.
- The CO2 tank in [REDACTED] lacked a flow meter.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
None.	

Fall 2019: The CO2 tank in Room 2215 lacked a flow meter.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. The CO2 euthanasia guidelines have not been updated.	<p>1. <i>The AVMA Guidelines for the Euthanasia of Animals</i> has updated the flow rate for rodent CO2 euthanasia. Use the instructions below for calculations:</p> <p>Measure the inside of chamber in cm (or convert to cm)</p> <ol style="list-style-type: none"> Multiply L x D x H = cm³ Divide by 1000 to get your total liter volume Multiple by whatever percentage you determine to use Then, find a flow meter in LPM that gives you that number <p><i>Example:</i> If chamber is 20cm x 25cm x 40cm = 20,000 cm³ or 20L At 50%, 20L x 0.5 = 10 LPM</p>

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: None.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Isoflurane machine did not have a certification date.	1. Provide proof of the isoflurane machine's more recent certification to the IACUC.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: None.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Surgical cards were not completely filled out.	1. Complete surgery cards, including dates and times medication is administered.
2. Old cage cards were in use.	2. Use new cage cards (available from the animal technician).

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: N/A.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Isoflurane machine certification is expired.	1. Contact vendor to have Isoflurane machine re-certified.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

- The charcoal scavenging canister was sitting directly on counter.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Sp BSC certification is expired.	1. Contact vendor to have BSC re-certified.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: None.

Fall 2020:

Date: 10/5/2020

Specific items from this inspection:	RECOMMENDATION:
1. Old cage cards were in use.	1. Use new cage cards (available from the animal technician).

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Spring 2019: NA

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. Eye wash station has not been tested since August.	1. Contact the building manager to have it tested monthly.

2. [REDACTED] Eye wash station has not been tested since August.	2. [REDACTED] Contact the building manager to have it tested monthly.
3. [REDACTED] New isoflurane machine is not in use and has no certification date.	3. [REDACTED] Tag machine as 'Not in Use/Needs Certification' or put it in storage.
4. [REDACTED] Diluted buprenorphine is unstable and should be discarded after one month.	4. [REDACTED] Contact EH&S for disposal as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
5. [REDACTED] Diluted ketamine/xylazine is unstable and should be discarded after one month.	5. [REDACTED] Contact EH&S for disposal as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

Specific items from Fall 2019: NA

Fall 2020:

[REDACTED]

Date: 10/8/20

Rooms [REDACTED] will not be used for live animals

Specific items from initial inspection to be addressed:	
1. [REDACTED]	Contact EH&S to check air exchanges in room and whether there is a positive or negative air flow. Report results to the IACUC.
2. [REDACTED]	Label ethanol bottles with either the word flammable or the flammable symbol.
3. [REDACTED]	Diluted buprenorphine from 8/31/18. Contact EH&S for disposal as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
4. [REDACTED]	Xylazine expired August 2018. Contact EH&S to dispose of it as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
5. [REDACTED]	install door sweep.
6. [REDACTED]	Door window to be covered (film).
<i>The surgical area must be dedicated and separate from the animal overnight housing. In order to house animals for more than a few hours, one of the behavior rooms should be used for housing and the following will be needed:</i>	
1.	Notify the IACUC of which room will be used for housing.
2.	Provide housing SOP, including how food will be stored and cages will be cleaned.
3.	Use a light and timer to create 12-hour light/dark cycles.
4.	Contact EH&S to check air exchanges in room. Report results to the IACUC.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

Specific items from Fall 2019: NA

Fall 2020:

Date: 10/7/2020

wishes to keep up to five cages in the hood for several weeks. Disposable cages will be used.

Specific items from initial inspection to be addressed:

1. Contact EH&S to check air exchanges in the hood (120 flow rate on label) and report to the IACUC.
2. Door window to be covered (film).
3. Install door sweep.
4. Monitor humidity by propping open hood and placing a humidity monitor in the room for several days to a week and report results to the IACUC.
5. Use a light and timer to create 12-hour light/dark cycles in the hood.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: NA

Fall 2020:

Date: 10/8/2020

Specific items from initial inspection to be addressed:

1. Contact EH&S to check air exchanges in the room and report to the IACUC.
2. Door window to be covered (film).
3. Temperature of the room must be checked and logged daily.
4. If animals will be in room overnight, use a light and timer to create 12-hour light/dark cycle.
5. Label ethanol bottle with either the word flammable or the flammable symbol.
6. Eye wash station had not been tested since August. Contact the building manager to have it tested.
7. Contact EH&S to check air exchanges in the room and report to the IACUC.
8. Door window to be covered (film).
9. The CO2 euthanasia guidelines have not been updated.

The AVMA Guidelines for the Euthanasia of Animals has updated the flow rate for rodent CO2 euthanasia. Use the instructions below for calculations:

Measure the inside of chamber in cm (or convert to cm)

- a. Multiply $L \times D \times H = \text{cm}^3$
- b. Divide by 1000 to get your total liter volume
- c. Multiple by whatever percentage you determine to use
- d. Then, find a flow meter in LPM that gives you that number

Example:

If chamber is 20cm x 25cm x 40cm = 20,000 cm³ or 20L

At 50%, 20L x 0.5 = 10 LPM

10. 42 [REDACTED] Cardboard box used to hold biohazard bag. Biohazard bag must be placed in a container with lid.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]
[REDACTED]
Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]
[REDACTED]
Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
None	

[REDACTED]
[REDACTED]
Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]
[REDACTED]
Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. Door window uncovered.	1. Cover door window (film).

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]
[REDACTED]
Specific items from Fall 2019:

- [REDACTED] *Windows in door are uncovered.*
- [REDACTED] *No door sweep on doors.*
- [REDACTED] *Room needs to be equipped with a timer controlled light system to create a diurnal cycle for animal housing.*

Fall 2020:

[REDACTED]
[REDACTED]
Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. Confirm that the room is on a 12-hour light/dark cycle.	1. Test to see if lights go out during the day. If they do use a lamp for the light cycle.
2. Eye wash station has not been tested.	2. Contact the building manager to have it tested monthly.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

- Certification for the anesthesia machine in [REDACTED] could not be found.

Fall 2020:

Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Old cage cards were in use.	1. [REDACTED] Use new cage cards (available from the animal technician).
2. [REDACTED] Cleaning log does not specify how the floors are cleaned.	2. [REDACTED] Floors log should designate if floors were swept or mopped. Room should be mopped once a week.
3. [REDACTED] Log blank for October 2 and 3 and animals were not checked.	3. [REDACTED] Animals must be checked every day (including weekends) and this must be documented.
4. [REDACTED] Food not dated.	4. [REDACTED] Label food with the mill date.
5. [REDACTED] Fabric chair.	5. [REDACTED] Cover chair with nonporous fabric or replace.
6. [REDACTED] Ethanol bottle was not labeled flammable.	6. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.
7. [REDACTED] IACUC had not been previously notified that this was a surgery room. (The IACUC had been notified that [REDACTED] was the surgery room.)	7. [REDACTED] Inform the IACUC of animal use room changes. A room cannot be used for animals until an initial IACUC inspection has occurred.
8. [REDACTED] Contact EH&S to check air exchanges in room and whether there is a positive or negative air flow.	8. [REDACTED] Report results to the IACUC.
9. Door window uncovered.	9. Cover door window (film).
10. [REDACTED] Empty sterile vials that expired 2017.	10. [REDACTED] Dispose of empty sterile vials.
11. [REDACTED] Ketamine/xylazine constituted 5/2019.	11. [REDACTED] Once diluted, Ketamine should only be kept for one month. Call EH&S to dispose of the controlled substance.
12. [REDACTED] Two ketamine vials expired 9/2020.	12. [REDACTED] Call EH&S to dispose of the controlled substance; see "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
13. [REDACTED] Buprenex expired 6/2020.	13. [REDACTED] Call EH&S for disposal; see "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: NA

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. The CO2 euthanasia guidelines have not been updated.	<p>1. <i>The AVMA Guidelines for the Euthanasia of Animals</i> has updated the flow rate for rodent CO2 euthanasia. Use the instructions below for calculations:</p> <p>Measure the inside of chamber in cm (or convert to cm) Multiply L x D x H = cm³ Divide by 1000 to get your total liter volume Multiple by whatever percentage you determine to use Then, find a flow meter in LPM that gives you that number</p> <p><i>Example:</i> If chamber is 20cm x 25cm x 40cm = 20,000 cm³ or 20L At 50%, 20L x 0.5 = 10 LPM</p>
2. Ketamine is expired.	2. Contact EH&S to dispose of expired controlled substances; see "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: NA

Fall 2020:

Date: 10/8/2020

Specific items from this inspection:	RECOMMENDATION:
1. No sharps container in lab.	1. Contact EH&S for a sharps container.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019: None.

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. Power cord cover strips moves.	1. Tape power cord cover strip to floor.
2. Non-pharmaceutical grade Ketamine.	2. Only pharmaceutical grade drugs can be used as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals." Contact EH&S to dispose of this controlled substance.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

- Chair in surgical area had a fabric back.

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. Ethanol bottle was not labeled flammable.	1. Label ethanol bottle with either the word flammable or the flammable symbol.
2. Cardboard boxes in room.	2. Remove cardboard from room; replace with nonporous containers/bins if needed.
3. Iodine expired 6/2019.	3. Properly dispose of and replace iodine as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
4. Saline opened on 8/21/2020	4. Opened saline should be discarded after one week.
5. Ethanol bottle was not labeled flammable	5. Label ethanol bottle with either the word flammable or the flammable symbol.
6. Saline with no date.	6. Date saline bottles. Opened saline should be discarded after one week.

7. [REDACTED] Ethanol bottle was not labeled flammable	7. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.
8. [REDACTED] Eye wash needs inspection tag. Eye washes and showers should be checked monthly.	8. [REDACTED] Check with facilities for tag and inspections.
9. [REDACTED] Controlled substances key is kept in a nearby unlocked drawer.	9. [REDACTED] Controlled substances key should be secured or locked up so that only authorized personnel can access it.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

Specific items from Fall 2019:

None.

Fall 2020:

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Ethanol bottle was not labeled flammable.	1. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.
2. [REDACTED] Recovering mouse fully on heating pad.	2. [REDACTED] Recommend that once mouse is waking up, cage should be half on and half off the heating pad to allow it to move away from the heat.
3. [REDACTED] Ketamine constituted 11/2019.	3. [REDACTED] Once diluted, Ketamine should only be kept for one month as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
4. [REDACTED] Tools not sterilized between surgeries.	4. [REDACTED] Instruments must be sterilized between surgeries. A bead sterilizer can be used. Alternatively, instruments can be submerged in 10% bleach for 30 minutes, followed by rinsing with saline or 70% ethanol.
5. Adipamisol and saline mixture 7/31/20 mixed up.	5. Once diluted, it should be kept only one month as per "Policy#: 529-340: Non-Pharmaceutical Grade Substances in Animals."
6. [REDACTED] Cloth chair.	6. [REDACTED] Remove chair or cover with a non-porous cover.
7. [REDACTED] Room currently not in use. Papers and other items scattered on floor.	7. [REDACTED] Clean/organize room in preparation for site visit.
8. [REDACTED] Ethanol bottle was not labeled flammable.	8. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.
9. [REDACTED] Cloth chair.	9. [REDACTED] Remove chair or cover with a non-porous cover.
10. [REDACTED] Overhead cords tucked into ceiling tiles.	10. [REDACTED] Secure cords with ceiling tile hooks.
11. [REDACTED] Boxes directly on floor.	11. [REDACTED] Boxes should be off the floor and on a shelf

12. [REDACTED] Ethanol bottle was not labeled flammable.	12. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.
13. [REDACTED] Unsterilized surgical instruments.	13. [REDACTED] Instruments must be sterilized between surgeries. A bead sterilizer can be used. Alternatively, instruments can be submerged in 10% bleach for 30 minutes, followed by rinsing with saline or 70% ethanol.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

Specific items from Fall 2019: NA

Fall 2020:

[REDACTED]

Date: 10/7/2020

Specific items from this inspection:	RECOMMENDATION:
1. [REDACTED] Ethanol bottle was not labeled flammable.	1. [REDACTED] Label ethanol bottle with either the word flammable or the flammable symbol.

DEFICIENCY LEVEL: Minor and should be corrected by February 15, 2021.

[REDACTED]

[REDACTED]

Specific items from Fall 2019: None.

Fall 2020:

[REDACTED]

Date: 9/1/2020

Specific items from this inspection:	RECOMMENDATION:
None	

AREAS NOT INSPECTED, Fall 2020

[REDACTED]

Spring 2020:

This room was not inspected. The investigator has confirmed no animals will be kept in the space more than 12 hours.

[REDACTED]
Fall 2020:

This room was not inspected. It will be inspected when/if this section of the course is taught.

[REDACTED]
Fall 2020:

This area was not inspected. PI does not use live animals.

[REDACTED]
Fall 2020:

This area was not inspected. No animals will be kept in the space more than 12 hours.

[REDACTED]
Fall 2020:

This area was not inspected. The investigator has confirmed there will be no surgery performed in the upcoming 6 months.

Boyce Hall Room 1411 and 1431
[REDACTED]

Fall 2020:

This area was not inspected. The investigator has relocated to a new building.

[REDACTED]
Fall 2020:

This area was not inspected. Rooms are not in use.

[REDACTED]
Fall 2020:

This area was not inspected. Space is no longer in use.

[REDACTED]
Fall 2020:

This area was not inspected. No animals will be kept in the space more than 12 hours.

[REDACTED]
Fall 2020:

No animals will be kept in the space more than 12 hours.

[REDACTED]
Fall 2020:

This area was not inspected. No longer using live animals.

I. Semiannual Program Review Checklist ⁱ

Institutional Policies and Responsibilities

Date: Reviewed and Approved by the IACUC at a convened meeting on October 19, 2020

1. Animal Care and Use Program ^{NEW}		A*	M	S	C	NA
• Responsibility for animal well-being is assumed by all members of the program (<i>Guide, p 1</i>) [must]	X					
• IO has authority to allocate needed resources (<i>Guide, p 13</i>)	X					
• Resources necessary to manage program of veterinary care are provided (<i>Guide, p 14</i>) [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, pp 11, 15</i>)	X					
• Program needs are regularly communicated to IO by AV and/or IACUC (<i>Guide, p 13</i>)	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, p 14</i>) [must]	X					
• Inter-institutional collaborations are described in formal written agreements (<i>Guide, p 15</i>)	X					
• Written agreements address responsibilities, animal ownership, and IACUC oversight (<i>Guide, p 15</i>)	X					
2. Disaster Planning and Emergency Preparedness ^{NEW}		A*	M	S	C	NA
• Disaster plans for each facility to include satellite locations are in place (<i>Guide, p 35, p 75</i>) [must]	X					
• Plans include provisions for euthanasia (<i>Guide, p 35</i>) [must]	X					
• Plans include triage plans to meet institutional and investigators' needs (<i>Guide, p 35</i>)	X					
• Plans define actions to prevent animal injury or death due to HVAC or other failures (<i>Guide, p 35</i>)	X					
• Plans describe preservation of critical or irreplaceable animals (<i>Guide, p 35</i>)	X					
• Plans include essential personnel and their training (<i>Guide, p 35</i>)	X					
• Animal facility plans are approved by the institution and incorporated into overall response plan (<i>Guide, p 35</i>)	X					
• Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place (<i>Guide, p 35</i>)	X					
3. IACUC ^{NEW}		A*	M	S	C	NA
• Meets as necessary to fulfill responsibilities (<i>Guide, p 25</i>) [must]	X					
• IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions (<i>Guide, p 26</i>) [must]	X					
• Continuing IACUC oversight after initial protocol approval is in place (<i>Guide, p 33</i>)	X					
• IACUC evaluates the effectiveness of training programs (<i>Guide, p 15</i>)	X					

4. IACUC Protocol Review - Special Considerations		A*	M	S	C	NA
• 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 (<i>Guide, p 27</i>)	X					
• For pilot studies, a system to communicate with the IACUC is in place (<i>Guide, p 28</i>)	X					
• For genetically modified animals, enhanced monitoring and reporting is in place (<i>Guide, p 28</i>)	X					
• Restraint devices are justified in the animal use protocols (<i>Guide, p 29</i>) [must]	X					
• Alternatives to physical restraint are considered (<i>Guide, p 29</i>)	X					
• Period of restraint is the minimum to meet scientific objectives (<i>Guide, p 29</i>)	X					
• Training of animals to adapt to restraint is provided (<i>Guide, p 29</i>)	X					
• Animals that fail to adapt are removed from study (<i>Guide, p 29</i>)	X					
• Appropriate observation intervals of restrained animals are provided (<i>Guide, p 29</i>)	X					
• Veterinary care is provided if lesions or illness result from restraint (<i>Guide, p 30</i>) [must]	X					
• Explanations of purpose and duration of restraint are provided to study personnel (<i>Guide, p 30</i>)	X					
• Multiple surgical procedures on a single animal are justified and outcomes evaluated (<i>Guide, p 30</i>)	X					
• Major versus minor surgical procedures are evaluated on a case-by-case basis (<i>Guide, p 30</i>)	X					
• Multiple survival procedure justifications in non-regulated species conform to regulated species standards (<i>Guide, p 30</i>)	X					
• Animals on food/fluid restriction are monitored to ensure nutritional needs are met (<i>Guide, p 31</i>). Monitoring details are included in the Animal Use Protocol and reviewed and approved by the IACUC.	X					
• Body weights for food/fluid restricted animals are recorded at least weekly (<i>Guide, p 31</i>)	X					
• Daily written records are maintained for food/fluid restricted animals (<i>Guide, p 31</i>)	X					
• Pharmaceutical grade chemicals are used, when available, for animal-related procedures (<i>Guide, p 31</i>)	X					
• Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (<i>Guide, p 31</i>)	X					
• Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (<i>Guide, p 32</i>)	X					
• Disposition plans are considered for species removed from the wild (<i>Guide, p 32</i>)	X					
• Toe-clipping only used when no alternative, performed aseptically and with pain relief (<i>Guide, p 75</i>)	X					
5. IACUC Membership and Functions		A*	M	S	C	NA
• IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, <i>IV.A.3.</i>)	X					
• Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user (<i>Guide, p 24</i>) ⁱⁱ	X					
• IACUC authority and resources for oversight and evaluation of institution's program are provided (<i>Guide, p 14</i>)	X					
• IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, <i>IV.B.</i>)	X					
• Conducts semiannual inspections of institutional animal facilities (PHS Policy, <i>IV.B.</i>).	X					
• IACUC organizationally reports to the Institutional Official (PHS Policy, <i>IV.A.1.b.</i>)	X					
• Methods for reporting and investigating animal welfare concerns are in place (<i>Guide, p 23</i>) [must]	X					
• Reviews and investigates concerns about animal care and use at institution ⁱⁱⁱ (PHS Policy, <i>IV.B.</i>)	X					
• Procedures are in place for review, approval, and suspension of animal activities ^{iv} (PHS Policy, <i>IV.B.</i>)	X					
• Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, <i>IV.B.</i>)	X					

<ul style="list-style-type: none"> 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				
<ul style="list-style-type: none"> Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS* (<i>Guide</i>, p 30) [must] 	X				

6. IACUC Training NEW A* M S C NA

<ul style="list-style-type: none"> All IACUC members should receive: <ul style="list-style-type: none"> Formal orientation to institution's program (<i>Guide</i>, p 17) Training on legislation, regulations, guidelines, and policies (<i>Guide</i>, p 17) Training on how to inspect facilities and labs where animal use or housing occurs (<i>Guide</i>, p 17) Training on how to review protocols as well as evaluate the program (<i>Guide</i>, p 17) Ongoing training/education (<i>Guide</i>, p 17) 	X				
	X				
	X				
	X				
	X				

7. IACUC Records and Reporting Requirements^{vi} A* M S C NA

<ul style="list-style-type: none"> Semiannual report to the IO (PHS Policy, IV.B.) <ul style="list-style-type: none"> Submitted to IO every 6 months Compiles program review and facility inspection(s) results (includes all program and facility deficiencies) Includes minority IACUC views Describes IACUC-approved departures from the <i>Guide</i> or PHS Policy and the reasons for each departure^{vii} Distinguishes significant from minor deficiencies Includes a plan and schedule for correction for each deficiency identified^{viii} Reports to OLAW (PHS Policy, IV.F.) <ul style="list-style-type: none"> Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views Promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or PHS Policy noncompliance (NOT-OD-05-034) 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} <ul style="list-style-type: none"> Annual report to USDA contains required information including all exceptions/exemptions Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency Records (PHS Policy, IV.E.) <ul style="list-style-type: none"> IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years Records of IACUC reviews of animal activities include all required information* Records of IACUC reviews are maintained for 3 years after the completion of the study 	X				
	X				
	X				
	X				
	X				
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	X				
	X				
	X				
	X				
	X				
	X				

8. Veterinary Care (See also next section - Veterinary Care) A* M S C NA

<ul style="list-style-type: none"> 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 (<i>Guide</i>, p 14) [must] Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (<i>Guide</i>, p 14) [must] Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (<i>Guide</i>, p 5) [must] 	X				
	X				
	X				
	X				

<ul style="list-style-type: none"> Veterinarian provides consultation when interventional control is not possible (<i>Guide</i>, p 5) [must] If part time /consulting veterinarian, visits meet programmatic needs (<i>Guide</i>, p 14) Regular communication occurs between veterinarian and IACUC (<i>Guide</i>, p 14) 	X				NA
	X				

• Veterinarian(s) have experience and training in species used (<i>Guide, p 15</i>) [must]	X				
• Veterinarian(s) have experience in facility administration/management (<i>Guide, p 15</i>)	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. Personnel included: [must]					
○ Veterinary/other professional staff (<i>Guide, p 15-16</i>)	X				
○ IACUC members (<i>Guide, p 17</i>)	X				
○ Animal care personnel (<i>Guide, p 16</i>)	X				
○ Research investigators, instructors, technicians, trainees, and students (<i>Guide, pp 16-17</i>)	X				
• Continuing education for program and research staff provided to ensure high quality care and reinforce training (<i>Guide, pp 16-17</i>)	X				
• Training is available prior to starting animal activity (<i>Guide, p 17</i>)	X				
• Training is documented (<i>Guide, p 15</i>)	X				
• Training program content includes: (<i>Guide, p 17</i>)					
○ Methods for reporting concerns (<i>Guide, p 17</i>)	X				
○ Humane practices of animal care (e.g., housing, husbandry, handling) ^{xii}	X				
○ Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (<i>Guide, p 17</i>) ^{xiii}	X				
○ Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, <i>IV.A.1.g.</i>)	X				
○ Research/testing methods that minimize animal pain or distress (PHS Policy, <i>IV.A.1.g.</i>)	X				
○ Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (<i>Guide, p 20</i>)	X				
○ Animal care and use legislation (<i>Guide, p 17</i>)	X				
○ IACUC function (<i>Guide, p 17</i>)	X				
○ Ethics of animal use and Three R's (<i>Guide, p 17</i>)	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, p 17</i>) [must]	X				
• Program covers all personnel who work in laboratory animal facilities (<i>Guide, p 18</i>)	X				
• Changing, washing, and showering facilities are available as appropriate (<i>Guide, p 19</i>)	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:					
○ Pre-employment evaluation including health history (<i>Guide, p 22</i>)	X				
○ Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate (<i>Guide, p 22</i>)	X				
○ Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) (<i>Guide, p 23</i>)	X				
○ Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. (<i>Guide, p 23</i>)	X				
○ Promotes early diagnosis of allergies including preexisting conditions (<i>Guide, p 22</i>)	X				
○ Considers confidentiality and other legal factors as required by federal, state and local regulations (<i>Guide, p 22</i>) [must]	X				
○ If serum samples are collected, the purpose is consistent with federal and state laws (<i>Guide, p 22</i>) [must]					NA
• Waste anesthetic gases are scavenged (<i>Guide, p 21</i>)	X				
• Hearing protection is provided in high noise areas (<i>Guide, p 22</i>)					NA

• Respiratory protection is available when performing airborne particulate work (<i>Guide, p 22</i>)	x				
• Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:					
o Tuberculosis screening provided for all exposed personnel (<i>Guide, p 23</i>)					NA
o Training and implementation of procedures for bites, scratches, or injuries associated with macaques (<i>Guide, p 23</i>)					NA
o PPE is provided including gloves, arm protection, face masks, face shields, or goggles (<i>Guide, p 21</i>)					NA
o Injuries associated with macaques are carefully evaluated and treatment implemented (<i>Guide, p 23</i>)					NA
• Occupational safety and health of field studies is reviewed by OSH committee or office (<i>Guide, p 32</i>) Update – UC has a system-wide program to address field studies.	x				
11. Personnel Security NEW	A*	M	S	C	NA
• Preventive measures in place include pre-employment screening, and physical and IT security (<i>Guide, p 23</i>)	x				
12. Investigating & Reporting Animal Welfare Concerns NEW	A*	M	S	C	NA
• Methods for investigating and reporting animal welfare concerns are established (<i>Guide, p 23</i>) [must]	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

Veterinary Care

Date: October 19, 2020

1. Clinical Care and Management NEW		A*	M	S	C	NA
• Veterinary program offers high quality of care and ethical standards (<i>Guide, p 105</i>) [must]		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>) [must]		x				
• Procedures established for veterinary assessment, treatment, or euthanasia (<i>Guide, p 114</i>) [must]		x				
• Veterinarian is authorized to treat, relieve pain, and/or euthanize (<i>Guide, p 114</i>) [must]		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>) [must]		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				
• Random source dogs and cats are inspected for identification (<i>Guide, p 106</i>)						NA
• Population status of wildlife species is considered prior to procurement (<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>) [must]		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
• Surgical outcomes are assessed and corrective changes instituted (<i>Guide, p 115</i>)		X				
• Researchers have appropriate training to ensure good technique (<i>Guide, p 115</i>) [must]		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, p 116</i>)		X				
• Surgical procedures including laparoscopic procedures are categorized as major or minor (<i>Guide, pp 117-118</i>); this will be accounted for in the revision of the AUP form. Currently, the IACUC requires that all surgical procedures, whether major or minor, be reviewed by the full committee at a convened meeting of a quorum of members.		X				
• For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean (<i>Guide, p 118</i>)		X				
• Aseptic technique is followed for survival surgical procedures (<i>Guide, pp 118-119</i>)		X				
• Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (<i>Guide, p 119</i>)		X				
• Procedures for monitoring surgical anesthesia and analgesia are in place (<i>Guide, p 119</i>)		X				
• For aquatic species, skin surfaces are kept moist during surgical procedures (<i>Guide, p 119</i>)		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, pp 119-120</i>)		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, p 121</i>)		X				
• Selection of analgesics and anesthetics is based on professional veterinary judgment (<i>Guide, p 121</i>)		X				
• Painful procedures are monitored to ensure appropriate analgesic management (<i>Guide, p 122</i>)		X				
• Nonpharmacologic control of pain is considered as an element of postprocedural care (<i>Guide, p 122</i>)		X				
• Procedures are in place to assure antinociception before surgery begins (<i>Guide, p 122</i>) [must]		X				
• Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (<i>Guide, p 122</i>)		X				
• Special precautions for the use of paralytics are in place to ensure anesthesia ^{xiv} (<i>Guide, p 123</i>)		X				
5. Euthanasia		A*	M	S	C	NA
• Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC (<i>Guide, p 123</i>)		X				
• Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (<i>Guide, pp 123-124</i>)		X				
• Training is provided on appropriate methods for each species and considers psychological stress to personnel (<i>Guide, p 124</i>) training – vivaria yes; consider providing similar training to lab personnel		X				
• Procedures and training are in place to ensure death is confirmed (<i>Guide, p 124</i>) [must]		X				

6. Drug Storage and Control ^{NEW}					A*	M	S	C	NA
• Program complies with federal regulations for human and veterinary drugs(<i>Guide</i> , p 115) [must]					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) [must]					x				
• Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely (<i>Guide</i> , p 122)					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

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

II. Endnotes

ⁱ 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.

ⁱⁱ 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]

ⁱⁱⁱ 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]

^{iv} 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]

^v 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]

^{vi} 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]

^{vii} 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]

^{viii} 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*]

^{ix} 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]

^x 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...”

^{xi} 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]

^{xii} 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.”

^{xiii} 2.32(c) - additional specifications include:

- “proper use of anesthetics, analgesics, and tranquilizers for any species of animals used by the facility”
- “methods whereby deficiencies in animal care and treatment are reported, including deficiencies in animal care and treatment reported by any employee of the facility...”
- “utilization of services (e.g., National Agricultural Library, National Library of Medicine) to provide information on appropriate animal care and use, alternatives to the use of live animals in research, that could prevent unintended and unnecessary duplication of research involving animals, and regarding the intent and requirements of the Act.” [USDA training specifications are more detailed than PHS Policy].

^{xiv} 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.”