

**Memorandum to:** David M. Anderson  
**From:** Institutional Animal Care and Use Committee  
**Subject:** Semiannual Report of the Program Review and Facility Inspection  
**Date:** 29 January 2020

This report summarizes results of the IACUC's 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.](#)):**

In November we received notice of continued full accreditation by AAALAC International. In September, the IACUC approved providing oversight of research and teaching using cephalopods. The new Life Sciences Building (LSB) zebrafish facility is in full operation, but the rest of the vivarium has yet to house animals due to ventilation balancing difficulties. The primate center opened the new Ellingson Building at the WaNPRC Arizona Breeding Center. And during the past six months five new members joined the IACUC and five left the committee; one OAW member also rotated to alternate status while their alternate rotated to voting status.

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

All animal care and use at the University of Washington adheres to PHS Policy, the Guide, and the AWA, as described in our Assurance. Within that framework, the IACUC has approved the following departures from PHS Policy, the AWA and the Guide:

- 49 protocols with prolonged restraint (bats, birds, fish, mice, pigs, non-human primates, wild mammals)
- 4 protocols with housing at non-standard temperatures (2 mice, 2 zebrafish)
- 1 general cage floor-area variance, with added vertical space, for improved grooming-contact housing of non-human primates

The following IACUC approved general departures remain in place

- 1 general cage height variance for infant non-human primates
- 1 general cage floor-area variance, with added vertical space, for juvenile non-human primates
- 1 general exception for placing NHP feed on compound floors

Details are included in [Appendix C](#).

While not departures, the IACUC has also approved the following exceptions to its policies that implement PHS Policy, the AWA and the Guide:

- 11 protocols with cage size variances (7 for mice, 2 chicks, 2 rats)
- 6 protocols with wire bottom cages (5 mice, 1 rats)
- 49 protocols with weaning variances (47 mice, 2 rats)
- 2 protocols with a non-AVMA endorsed euthanasia method (1 small birds, 1 frogs/salamanders)
- 38 protocols with multiple major surgeries (6 species)
- 14 protocols with other policy variances (11 mice, 3 rats)

Details of these can be reviewed via reports in HoverBoard.

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

Animal Care and Use Program Review Date(s): July through December 2019

- A. There were no deficiencies in the program during this reporting period.  
 B. The following deficiencies have been identified:

Over the past six months, 10 adverse events or non-compliances were reported to the IACUC and, as required, to OLAW, AAALAC, or USDA. See [Appendix A](#) for details.

Teams of IACUC members recently reviewed all elements of the University's animal care and use program, guided by the OLAW-provided checklist. They found the program to be strong, and identified no deficiencies. Specific comments and suggestions for improvement are detailed in [Appendix D](#). The IACUC and OAW will pursue the suggestions in the coming year.

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

Animal Facility Inspection Date(s): July through December 2019

- A. There were no deficiencies in the animal facility during this reporting period.  
 B. The following deficiencies have been identified

Over the past six months 162 deficiencies were identified during IACUC facility inspections or self-reported. One was considered significant and was immediately corrected. Counts by type are shown below.

Type	Minor	Significant	Type	Minor	Significant
Facility and furnishings	36		Signage and information	10	
Sanitation	25		Feed	6	
Personnel Precautions	21		Environment	6	
Drugs	19		Equipment	5	
Husbandry	19		Protocol and procedures	3	1
Supplies	11				

153 have been resolved while 9 are pending corrective action. See [Appendix B](#) for deficiency details.

## IV. Minority Views

Select A or B:

- A. No minority views were submitted or expressed.  
 B. The following minority views were expressed:

## V. Status of AAALAC Accreditation

Reference Assurance: #000523  
Most Recent AAALAC Site Visit: 05/31/2019 through 06/07/2019  
Most Recent Full Accreditation issued: 11/01/2019

VI. **Signatures** ([see also attached email images](#))

<b>IACUC Members</b>	<b>concurrence</b>	<b>date</b>
A.B. (Andrew)	concur	17 January 2020
A.S. (Aubrey)	concur	23 January 2020
A.W. (Aaron)	concur	17 January 2020
C.H. (Charlotte)	concur	17 January 2020
C.M. (Carolyn)	concur	18 January 2020
D.M. (Dave)	concur	17 January 2020
F.R.R. (Ric)		
G.S. (Garret)	concur	24 January 2020
J.A. (Jacqui)	concur	24 January 2020
J.M. (Jeanot)	concur	17 January 2020
J.P.V.H. (Preston)	concur	24 January 2020
J.S. (Jane)	concur	16 January 2020
K.G. (Ken)	concur	16 January 2020
K.S. (Kim)	concur	22 January 2020
M.B. (Michelle)	concur	16 January 2020
M.K. (Michael)	concur	17 January 2020
M.L. (Molly)	concur	24 January 2020
S.J.H. (Sarah)	concur	24 January 2020
S.L. (Steve)	concur	16 January 2020
S.R.H. (Scott)	concur	16 January 2020

**Appendix A Deficiencies in the Institution’s Animal Care and Use Program**

<b>Severity</b>	<b>Repeat?</b>	<b>Location</b>	<b>Deficiency and Corrective Action Plan</b>	<b>State</b>	<b>Date Complete</b>
Significant	no	vivarium	Miscalculation of vehicle concentration given to mice. The investigator recognized and promptly reported the mistake and took action to make sure that this oversight does not happen in the future.	Complete	9/19/2019
Significant	no	vivarium	Mortality involving early weaning of mice. The scientists involved met with the AV and were retrained on weaning procedures and when to call in veterinary services. The IACUC policy on the number of animals maintained in a breeding cage was sent electronically to group members and reviewed with them.	Complete	9/19/2019
Significant	no	vivarium	Rats placed into autoclave leading to death. Major changes in procedure were implemented by DCM to prevent another occurrence. The animal technician involved received final counseling with a performance plan.	Complete	9/19/2019
Significant	no	lab space	Protocol non-compliance: Increased impact energy of exposures in ferrets. Animals did not appear to suffer harm, but the researcher took responsibility for not understanding what was approved for the pilot experiments. He met with the IACUC to discuss the research. The AV will be directly involved in planning and monitoring any additional pilot experiments, and the IACUC will review the pilot data prior to combining this procedure with the group's neonatal injury model.	Complete	10/17/2019
Minor	no	lab space	FHL fish course work not covered under a protocol. In the interest of preserving the fish already captured for use in this course, the instructor was added to an existing protocol. The class work was restricted to observational non-invasive experiments/procedures listed on this protocol, to allow completion of the vertebrate use portion of the class.	Complete	10/1/2019
Significant	yes	vivarium	Mouse mortality due to no food in cage	Complete	11/15/2019
Significant	no	lab space	Rat skin lesion due to heating pad. The group replaced the heating pad with a different one.	Complete	12/10/2019

Severity	Repeat?	Location	Deficiency and Corrective Action Plan	State	Date Complete
Significant	no	lab space	Rat skin lesions due to heating pad. The group discontinued the use of the electric heating pad.	Complete	12/10/2019
<p>Note: the above heating pad issues were two different, unrelated research groups. The IACUC has initiated a subcommittee to review and make recommendations regarding heating pad use.</p>					
Significant	no	lab space	Mouse mortality/morbidity due to dilution error. The PI spoke to relevant lab personnel about double-checking dilutions and infection protocols, to ensure this issue does not arise in the future.	Complete	12/10/2019
Significant	no	vivarium	Mouse mortality due to no access to water. The animal technician was retrained. Cage wash personnel were reminded to ensure that red dot cages (that do not have lixits) do not go to facilities that have automated watering systems. DCM also sent reminders to all vivarium users about red dot cages.	Complete	12/10/2019

## Appendix B Deficiencies in the Institution's Animal Facility

Severity	Is Repeat	Building	Concern Description	Date Correction Due	Date Complete
Significant	no	Friday Harbor Laboratories	Lab 11, Room 101 & main hallway fish housing tanks: Temporary holding, pending set up of #11 Rm 111/112 – Sand Lance present in flowing water tank – no PI tank Label on tank, no IACUC protocol, no animal care log present. Baker is the instructor, all fish captured from Jackson Beach, San Juan Island, used Summers' WDFW capture permit. See also Concerns CON00002568 and CON00002594 resulting from this incident. Fish to be cared for by Summers staff and assigned to Summers protocol until this non-compliance issue can be resolved. Summers will add to protocol for 4 weeks. Decentralized Aquatics Per Diem for these tanks to be used will be charged to a UW budget # that Baker must provide for Autumn Quarter 2019 – 4 tanks. Add contact info for Monthly Morbidity Mortality Report.	10/18/2019	10/1/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	Friday Harbor Laboratories	Due to a boat being out of commission, a student course that normally does open water observational work was changed to include catching of fish via beach seine netting and placement of the fish in holding tanks at FHL. This change in plans was not covered under an approved IACUC protocol and the fish were caught without a WA State Fish and Wildlife permit. In addition, the instructor and the students involved were not enrolled in the Occupational Health Program and the students had not taken the required training for participation in vertebrate animal classes at UW FHL. See also Concerns CON00002567 and CON00002568 resulting from this incident. Reported to OLAW on 10/11/19	2/29/2020	Pending WDFW permit and protocol approval
Minor	no	Friday Harbor Laboratories	Beach seining with 4 students not on IACUC PRF & no AUMS. See also Concerns CON00002567 and CON00002594 resulting from this incident. The class work will be restricted to only the procedures listed on this protocol; specifically observational non-invasive experiments/procedures for 4 weeks to allow completion of the vertebrate use portion of this class and then followed by appropriate disposition of these fish (release at point of capture or euthanasia). The instructor is the only person handling the fish being held in the tanks.	10/18/2019	10/18/2019
Minor	no	Friday Harbor Laboratories	MS-222 - 100 gm bottle in stock room – expired March 2019 to be disposed of immediately by PI. Note this is the missing bottle from earlier in year. We could not find the new bottle used during summer quarter, must have been used completely by previous class.	11/8/2019	10/8/2019
Minor	no	Friday Harbor Laboratories	Lab 2 “Willows Lab” Octopus use space for Gire Lab: Open floor drains will need non-wooden covers. Remove unsealed wooden furniture, repair rusted refrigerator exterior surfaces/freezers, remove rust from bases of island desk shelving units (like previously completed for Lab 7), hole in southwest wall.	3/31/2020	
Minor	no	HSB: K-Wing Vivarium	I015N: Heating pad needs to be in a container.	8/16/2019	8/6/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	HSB: K-Wing Vivarium	K017B (Weinstein): Surgical sutures expired (6/19), eye lubricating gel expired (3/19). Please discard expired items.	8/2/2019	8/9/2019
Minor	no	HSB: K-Wing Vivarium	K024E (Stuber): Isoflurane induction chamber needs to be cleaned (bits of paper towel stuck on bottom). Please be sure it is cleaned before next use. Also, visual post-operative checks are performed but not documented. Discussed with group options for how to document; will be adding a post-op section to their electronic surgery logs.	8/16/2019	8/12/2019
Minor	no	HSB: K-Wing Vivarium	I015B: Several cages without wire tops but no SSR from researcher.	8/16/2019	7/25/2019
Minor	no	HSB: K-Wing Vivarium	I015Q: Storage room but could not enter due to broken lock. Facility already has a work order placed for this.	9/30/2019	7/22/2019
Minor	no	HSB: K-Wing Vivarium	K024C: Buprenorphine expired. Bottle labeled and drug log updated during visit.	7/10/2019	7/10/2019
Minor	no	HSB: K-Wing Vivarium	K018G: Daily weight records were not available for review (they are kept in the researcher's notebook). Group is considering moving these records to an electronic format/on a central server for easier access.	8/16/2019	8/14/2019
Minor	no	HSB: K-Wing Vivarium	K028 (Irradiator): The most recent log entry did not include an "out" time. Please be sure that logs are completed.	8/16/2019	7/17/2019
Minor	no	HSB: K-Wing Vivarium	K018C: Room temperature is cool (<68F). Already working with facility services to address.	9/30/2019	8/7/2019
Minor	no	HSB: K-Wing Vivarium	K018G: No gloves in the room. Please be sure that PPE is appropriately stocked/available.	8/16/2019	7/17/2019
Minor	no	HSB: K-Wing Vivarium	K024C: Eyewash is not checked weekly. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	8/16/2019	7/17/2019
Minor	no	HSB: K-Wing Vivarium	K024E: Visual post-operative checks are performed, but not documented. Discussed with group options for how to document; will be adding a post-op section to their electronic surgery logs.	8/16/2019	8/19/2019
Minor	no	HSB: K-Wing Vivarium	I012F: Electrical outlet is pulled away from wall, work order has been placed.	9/30/2019	7/26/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	HSB: K-Wing Vivarium	K018B (Phillips): All cage cards stated that animals are "F w/PND21" – this was not accurate. Cages typically had 2 rats, male or female. Please be sure cage cards accurately reflect sex and number of animals in cage.	8/2/2019	8/2/2019
Minor	no	Brotman Laboratory Spaces	447: Eyewash log had a lot of missing dates. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	8/2/2019	7/17/2019
Minor	no	Foege Laboratory Spaces	N433A: Diluted buprenorphine labeled only with an expiration date of 5/20. Diluted drugs should also be labeled with the date of preparation and lab should re-evaluate expiration date determination for diluted drugs (1 month is commonly used unless there are references/data to support a different time frame).	8/2/2019	7/18/2019
Minor	no	Foege Laboratory Spaces	N433A: Unlabeled, opened fluid bag, discarded at time of visit. Lab should have a system for how to label/store opened fluids used for animals.	7/12/2019	7/12/2019
Minor	no	Foege Vivarium	N053: Bare paper posted is not sanitizable and needs to be encased in plastic sleeves or laminated.	8/16/2019	7/12/2019
Minor	no	Foege Vivarium	N051: Daily care log not maintained; if room not in use and chores not performed, please indicate on log.	8/16/2019	7/15/2019
Minor	no	Foege Laboratory Spaces	N409A: Expired alcohol wipes, discarded during visit.	7/12/2019	7/12/2019
Minor	no	Foege Vivarium	N051: Clidox expired, no dilution strength marked.	8/16/2019	7/12/2019
Minor	no	Foege Vivarium	N070: Eye wash needs to be tested and logged weekly. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	8/16/2019	8/12/2019
Minor	no	Foege Vivarium	N053: Recapped needles in sharps. OAW to provide a needle recapper.	8/16/2019	7/19/2019
Minor	no	Foege Vivarium	N035 (Scott lab): Storage bin contained expired Vetbond. Please discard.	8/9/2019	7/19/2019
Minor	no	Foege Laboratory Spaces	N415A: Expired equipment (biopsy punches), discarded at time of visit.	7/12/2019	7/12/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	Foege Laboratory Spaces	N415A: Eyewash needs to be tested and logged weekly. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	8/2/2019	7/16/2019
Minor	no	Foege Laboratory Spaces	N433A: Expired disinfectant wipes, and artificial tears discarded during visit.	7/12/2019	7/12/2019
Minor	no	Foege Laboratory Spaces	N423D: Bare paper posted is not sanitizable and needs to be encased in plastic sleeves or laminated.	8/2/2019	7/15/2019
Minor	no	HSB: 6th Floor Vivarium	C613 (Chavkin): Some cages there is no wire bar lid and food on floor. There was no SSR in the room.	8/16/2019	8/7/2019
Minor	no	HSB: 6th Floor Vivarium	G616: SOPs posted in the room are from 2011. Any updates since then?	8/16/2019	8/19/2019
Minor	no	HSB: 6th Floor Vivarium	C609: Privacy curtain in the room did not look particularly solid.	8/30/2019	8/28/2019
Minor	no	HSB: 6th Floor Vivarium	C609: No autoclave date for stored water bottles.	8/16/2019	8/19/2019
Minor	no	HSB: 6th Floor Vivarium	C609: 2 containers with mouse chow indicate the feed has expired (9/2/18 mill date, 4/3/19 expiration; 12/5/18 mill date, 7/5/19 expiration). Please note that unless otherwise approved, chow expires 6 months after mill date.	8/16/2019	8/19/2019
Minor	no	HSB: 6th Floor Vivarium	C608 (Zweifel behavioral room): Cages of mice in the room waiting turn in operant boxes. Water bottles turns up so water isn't available and no other water source in the cage. How long are these mice held in this room without access to water? If > 4 hours, then the water bottle should be placed so animals can access it or add gel per the IACUC Food and Fluid Restriction policy.	8/16/2019	7/24/2019
Minor	no	HSB: 6th Floor Vivarium	C606 (Hofstetter): Recapped needles found in one sharps container (may have been inherited from another group); however, the room does not have a needle recapper.	8/16/2019	7/25/2019
Minor	no	HSB: 6th Floor Vivarium	Cagewasher: Only 1 side has emergency egress pull cable. Does DCM want to install a pull cable on the other side?	9/30/2019	9/13/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	HSB: 6th Floor Vivarium	G618 (Perkel bird housing room): Monthly task last done on 6/3/19 and not done yet for July. DCM just started handling the husbandry in this room. Does monthly means sometime within that month or 30 days? If sometime within a month, then "monthly" tasks could be done almost every 2 months. What is the DCM definition of monthly?	8/30/2019	8/27/2019
Minor	no	HSB: 6th Floor Vivarium	C613: Researcher has been completing the Chart 5053 Mouse Chow log with a marker pen. The pen has bled and it is impossible to read. Please use a ballpoint pen.	8/16/2019	8/19/2019
Minor	no	HSB: 6th Floor Vivarium	C618 (Palmiter): Group does many of the husbandry tasks in this room. Very poor tracking of completion of husbandry tasks. For example: Monthly Rodent Room Care logs – some tasks not marked off as complete in June and some task have 5/17/19 date for both May and June. July tasks check off but no completion date. Wipe down of racks – no notations for June. Cage changing logs – notations don't make sense. Notations didn't make sense and were illegible in some cases (is it a 7? a 1? a 2?)	8/16/2019	7/24/2019
Minor	no	HSB: 6th Floor Vivarium	C609: Wire bar lids and filter tops are being changed every calendar month (e.g., 6/26 and 7/26), rather than the required 28 day interval.	8/30/2019	8/29/2019
Minor	no	HSB: 6th Floor Vivarium	C606: Multiple expired items were disposed of during visit.	7/17/2019	7/17/2019
Minor	no	HSB: 6th Floor Vivarium	C609: Missing June monthly room care duties. Please remind the techs to complete the logs.	8/16/2019	8/20/2019
Minor	no	HSB: 6th Floor Vivarium	C608 (Palmiter): According to the DCM host, the research groups provide the water bottles for those cages that don't have a wire bar lid. DCM does not sanitize the water bottles, but is only responsible for topping off low water bottles. The DCM host did not know how the water bottles are sanitized or how often they are changed. These procedures need to be reviewed with DCM staff to ensure sanitation is performed effectively and at appropriate intervals.	8/16/2019	7/22/2019
Minor	no	HSB: 6th Floor Vivarium	C609: A problem with one of the banks of lights (a tube kept intermittently flashing). Apparently there is a work order for this, but it is not an issue with the tube – there is some kind of poor connection in the system.	12/31/2019	12/13/2019

Severity	Is Repeat	Building	Concern Description	Date Correction Due	Date Complete
Minor	no	HSB: 6th Floor Vivarium	C606 (Hofstetter): Group uses an autoclave in the department of Neurology to sterilize their surgical instruments. The group labels the sterile packs with autoclave temperature tape, but does not know if the autoclave is being monitored routinely for sterilization efficacy (e.g., chemical integrators, biological indicators). Appropriate sterilization efficacy monitoring should be instituted to ensure instruments have been properly sterilized.	8/16/2019	8/16/2019
Minor	no	Ninth & Jefferson Building	3NJ383.2: On the right front of the PET scanner, there's a hole in the floor that should be filled.	2/29/2020	
Minor	no	Ninth & Jefferson Building	3NJ383.2: Damaged ceiling tile (has a hole), part of the sub-ceiling is bent forming a gap in the ceiling tiles.	2/29/2020	
Minor	no	CHDD Vivarium	076 (hallway): One set of cabinet doors does not stay closed. This is a hazard for people using the space. Should be adjusted or fixed to remain closed. DCM to submit work order.	2/29/2020	1/14/2020
Minor	no	SLU 3.1: 0 Level Vivarium	E027: Feeding log on one cage which did not seem to make sense.	8/30/2019	8/12/2019
Minor	no	SLU 3.1: 0 Level Vivarium	E064: A couple of overhead light bulbs are burned out, need to be replaced. DCM to submit work order.	9/30/2019	8/12/2019
Minor	no	SLU 3.1: 0 Level Vivarium	E021B (Mice), E027 (Mice), E045 (Rat): Rooms had mice singly housed, but there was no single housing exception posted.	8/30/2019	8/14/2019
Minor	no	SLU 3.1: 0 Level Vivarium	E082: Expired items (eye drops and eye lubricant) from the Pepper lab found and discarded during visit. Group should go through all items to make sure supplies are not out of date.	8/2/2019	8/2/2019
Minor	no	SLU 3.1: 0 Level Vivarium	E071 (Dirty cage wash): Mops and squeegees need to be kept up off the ground when not in use.	8/30/2019	8/9/2019
Minor	no	SLU 3.1: 0 Level Vivarium	E042: Room recorded as storage, but should be labeled as "Lab Space".	8/30/2019	8/9/2019
Minor	no	Brotman Vivarium	P164A (procedure room): One expired drug, removed during the visit.	8/8/2019	8/8/2019
Minor	no	SLU 2 Laboratory Spaces	N131A: Seat of several chairs was damaged, exposing foam that is difficult to clean. Please replace or swap out for in tact chairs.	8/30/2019	8/12/2019
Minor	no	Brotman Vivarium	P152 (Necropsy): Clidox dilution not marked on bottle, corrected during visit.	8/8/2019	8/8/2019
Minor	no	SLU 2 Laboratory Spaces	N117: Chips and scrapes along wall next to biosafety cabinet. Please repair/repaint. Lab group to submit work order for repair.	12/31/2019	8/19/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	SLU 2 Laboratory Spaces	N101: Water stain/hole in ceiling needs repair. Lab group to submit work order for repair.	12/31/2019	9/11/2019
Minor	no	SLU 2 Laboratory Spaces	N131A: Rust damage on floor under tanks. Please clean/repair. Lab group to submit work order for repair.	12/31/2019	8/12/2019
Minor	no	Brotman Vivarium	P168: 3 cages of nude mice with no enrichment in the cage. Nudes should not be given nestlets as enrichment but could get a plastic dome. Supervisor spoke to the room's animal tech during the site visit and told them that a plastic dome should be placed in these cages with nude mice as enrichment. Action completed.	8/8/2019	8/8/2019
Minor	no	SLU 2 Laboratory Spaces	For all spaces, please remember to check eyewashes on a weekly basis (currently checked 1-2 times/month). Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	8/30/2019	8/12/2019
Minor	no	HSB: T-Wing Vivarium	T119 (Cole behavioral area): 1 vial of expired sterile saline. Discarded at the time of the inspection.	8/14/2019	8/14/2019
Minor	no	HSB: T-Wing Vivarium	T125 (Chamberlain): Impound cards present on Chamberlain cages. The card is labeled with former OAW director's email address. She no longer works at the UW. Cards were removed, but need to be updated.	8/30/2019	8/19/2019
Minor	no	HSB: T-Wing Vivarium	T129 (Moritz): Rodent anesthesia nose cone with a latex glove diaphragm was present. The hole in the diaphragm appeared large and cut in such a way (in an "X" or "T" pattern, rather than circular) to not provide a tight seal around an animal's snout. Anesthetic gas could leak into the environment and be a potential health hazard. To ensure personnel safety, always make sure the opening of the nose cone diaphragm is cut in a circle and to a size appropriate for the size of the animal.	8/30/2019	8/18/2019
Minor	no	HSB: T-Wing Vivarium	T121: Expired Virkon labeled with 7/9.	8/30/2019	8/27/2019
Minor	no	HSB: T-Wing Vivarium	T135: Expired cereal 7/2/2019. Please discard.	8/30/2019	8/19/2019
Minor	no	HSB: T-Wing Vivarium	T117 (Froehner): Expired vetbond skin glue (1/2016); thrown away during visit.	8/14/2019	8/14/2019

Severity	Is Repeat	Building	Concern Description	Date Correction Due	Date Complete
Minor	no	HSB: T-Wing Vivarium	T129: 1 packet of expired suture. Please discard or label for use in non-survival surgery only.	8/30/2019	8/16/2019
Minor	no	HSB: T-Wing Vivarium	T129 (Hofstetter): Expired high calorie gel (4/2019). Please discard.	8/30/2019	8/19/2019
Minor	no	SLU 2 Laboratory Spaces	S243: Expired artificial tears ointment. Please discard.	9/6/2019	8/22/2019
Minor	no	SLU 2 Laboratory Spaces	S185: Expired Beuthanasia solution needs to be picked up/disposed. Please arrange drug disposal through the Drug Services website: <a href="https://depts.washington.edu/drugsvcs/home/">https://depts.washington.edu/drugsvcs/home/</a>	9/27/2019	10/10/2019
Minor	no	SLU 2 Laboratory Spaces	S185: Controlled drug log should be updated to include the date that the drug is withdrawn from the vial, as well as the remaining vial volume after each use.	9/27/2019	9/27/2019
Minor	no	SLU 2 Laboratory Spaces	S243: Expired Betadine. Please dispose of.	9/6/2019	8/22/2019
Minor	no	SLU 2 Laboratory Spaces	S243: Anesthesia/Isoflurane machine is overdue for service. Please post a sign stating "Do Not Use Until Calibrated."	9/27/2019	8/22/2019
Minor	no	Benjamin Hall	365: Some gas cylinders are safely secured, but some are not. See photo - the 3 green short/narrow canisters in the middle do not appear secure (would not remain upright if there were an earthquake).	10/4/2019	9/16/2019
Minor	no	Benjamin Hall	366: Eyewash not being flushed weekly. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	9/20/2019	9/2/2019
Minor	no	WaNPRC: Western	303 (air lock): Door frame around window is bent, may need to be repaired.	12/31/2019	9/16/2019
Minor	no	WaNPRC: Western	309 (procedure room being used for storage): Dirty step ladder needs to be cleaned.	10/11/2019	10/11/2019
Minor	no	WaNPRC: Western	219: On the AT observation log, two days of observations were not documented.	10/11/2019	10/11/2019
Minor	no	WaNPRC: Western	235: Expired hydrogen peroxide wipes. Disposed of during visit.	9/4/2019	9/4/2019
Minor	no	WaNPRC: Western	213 (clean cagewash): Paint along the ceiling is starting to bubble and peel. Please repair.	12/31/2019	12/11/2019
Minor	no	WaNPRC: Western	309 (procedure room being used for storage): Expired bite kit found in room.	10/11/2019	9/13/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	WaNPRC: Western	322, 323, 324, 325, 326, 328 (compounds): Larger plastic play structures are looking a little grungy, could use a good scrubbing/deep clean.	10/11/2019	9/8/2019
Minor	no	WaNPRC: Western	314 (corridor): Dripping hose and water-damaged paint need to be repaired.	12/31/2019	12/4/2019
Minor	no	WaNPRC: Western	327 (treatment): Expired drugs found, marked during visit.	9/4/2019	9/4/2019
Minor	no	WaNPRC: Western	306: Shutter is missing from door, needs to be replaced.	12/31/2019	9/16/2019
Minor	no	WaNPRC: Western	234: Expired vacutainers. Disposed of during visit.	9/4/2019	9/4/2019
Minor	no	WaNPRC: Western	219: Social contact sheet needs to be updated (a pair of NHPs currently in the room were not on the list; Group is aware and working to update).	10/11/2019	9/16/2019
Minor	no	WaNPRC: Western	229: High temperatures all week. Facility services has been contacted to address. Also, replacing hygrometer in the room.	10/11/2019	10/11/2019
Minor	no	HSB Laboratory Spaces	H330E: Paper towels were found taped down on the rig in this room. All absorbable materials must be disposed of promptly in the appropriate biohazard container.	9/27/2019	9/11/2019
Minor	no	WaNPRC: I-Wing Vivarium	J025B: Hallway wall outside clean cagewash room has gouges. WaNPRC to submit facility repair request.	2/29/2020	
Minor	no	WaNPRC: I-Wing Vivarium	I045: Expired hydrogen peroxide wipes. Discarded during site visit.	9/6/2019	9/6/2019
Minor	no	HSB Laboratory Spaces	H330C: Paper towels were found taped down on a dissecting scope. All absorbable materials must be disposed of promptly in the appropriate biohazard container.	9/27/2019	9/12/2019
Minor	no	HSB Laboratory Spaces	I516D: Cardboard boxes should be moved from the shelves directly over the electroporation set-up.	9/27/2019	9/23/2019
Minor	no	WaNPRC: I-Wing Vivarium	Loading dock food/bedding storage area: Periodic increased temps (over 70F), e.g., maximums of 71.7F. Discussed possibility of IACUC considering an exemption for this space since it is difficult to consistently maintain temperature below 70F in summer months.	10/18/2019	10/13/2019
Minor	no	WaNPRC: I-Wing Vivarium	I061: Chipped paint by I061. WaNPRC to submit facility repair request.	2/29/2020	
Minor	no	HSB Laboratory Spaces	I516C, I516D: Bare paper signage posted in both rooms. Need to laminate or encase in a plastic sleeve.	9/27/2019	9/26/2019

Severity	Is Repeat	Building	Concern Description	Date Correction Due	Date Complete
Minor	no	HSB Laboratory Spaces	H330C: Small ding on surface of benchtop should be repaired (Rieke Lab will do this with an epoxy they have in the lab).	9/27/2019	9/12/2019
Minor	no	HSB Laboratory Spaces	H330E: Damaged, torn tape on floor at entrance to room, needs to be replaced so there are no sticky surfaces that could attract dirt.	9/27/2019	9/11/2019
Minor	no	WaNPRC: I-Wing Vivarium	5th floor hall: Scaletonix scale hasn't been sanitized since 2018. Please sanitize as per the protocol.	10/18/2019	10/18/2019
Minor	no	HSB Laboratory Spaces	D626: Bare paper signage posted. Need to laminate or encase in a plastic sleeve.	9/27/2019	9/10/2019
Minor	no	WaNPRC: I-Wing Vivarium	I047: Expired betadine. Discarded during site visit.	9/6/2019	9/6/2019
Minor	no	WaNPRC: I-Wing Vivarium	J025A (dirty cagewash): Coving of washdown, ceiling have significant cracks and holes. WaNPRC to submit facility repair request.	2/29/2020	
Minor	no	HSB Laboratory Spaces	I310: Chair has small rip on seat. Please repair or replace so that chair is sealed/sanitizable. Tear-Aid Vinyl Seat Repair Kit: <a href="https://www.amazon.com/Tear-Aid-Vinyl-Seat-Repair-Blue/dp/B07VNGN5RG/ref=pd_lpo_sbs_200_img_0?_encoding=UTF8&amp;refRID=6XV23F374RDB2MAW9CJR">https://www.amazon.com/Tear-Aid-Vinyl-Seat-Repair-Blue/dp/B07VNGN5RG/ref=pd_lpo_sbs_200_img_0?_encoding=UTF8&amp;refRID=6XV23F374RDB2MAW9CJR</a>	10/11/2019	9/12/2019
Minor	no	HSB Laboratory Spaces	I607L: Floor is dirty (including food pellets). Please sweep/clean.	10/11/2019	9/20/2019
Minor	no	WaNPRC: RR-Wing Vivarium	RR051: 2 bottles of expired hydrogen peroxide disinfectant spray – removed at time of site visit.	9/23/2019	9/23/2019
Minor	no	WaNPRC: RR-Wing Vivarium	RR143 (Curnow lab): IVF laminar flow hood used by Curnow (PI) for embryo manipulation – no notation on the hood of when or if the hood is tested/certified. As these embryos would be placed into a female NHP, the function of the hood should be assessed to ensure that embryos are being protected in the hood. OAW contacted EH&S to evaluate.	11/22/2019	9/27/2019
Minor	no	HSB Laboratory Spaces	K087: Bleach solution bottle needs to be dated.	10/25/2019	10/7/2019
Minor	no	HSB Laboratory Spaces	K092: Janitorial services need to be provided - sweep and mop floor.	10/25/2019	9/27/2019
Minor	no	HSB Laboratory Spaces	K092: Damaged chair (taped arm rest) needs to be removed/replaced. Link to the Tear-Aid Vinyl Seat Repair Kit.	10/25/2019	9/27/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	HSB Laboratory Spaces	K082: Need to have tape and paper (without plastic cover) removed from fume hood where fish work is conducted. Please laminate or encase in a plastic sleeve.	10/25/2019	9/27/2019
Minor	no	HSB Laboratory Spaces	K092: Insulated pipe from floor needs to have insulation resealed, peeling. Please submit a work order to Facilities Services.	12/31/2019	10/17/2019
Minor	no	WaNPRC: Arizona Ellingson	Lights in hospital room need to be on timer rather than occupancy sensor.	2/29/2020	
Minor	no	WaNPRC: Arizona	Upper floor: Chipped paint on ledges to animal pens.	12/31/2019	12/23/2019
Minor	no	WaNPRC: Arizona	AA152: Chipped paint on ceiling.	12/31/2019	12/23/2019
Minor	no	WaNPRC: Arizona Ellingson	Windows in doors needed to animal areas.	2/29/2020	
Minor	no	WaNPRC: Arizona	Feed room (around new air conditioner): Patch and paint where old air conditioner was mounted.	12/31/2019	12/23/2019
Minor	no	WaNPRC: Arizona Ellingson	Emergency kits need to be available in large holding room. These should be in containers that can be kept closed and easily sanitized without affecting contents. They should contain at a minimum squirt bottles of eye wash, flashlights, and catch gloves. Suggest putting one in each dead-end corridor so that eye wash will always be available within a 50 ft walk.	10/31/2019	10/11/2019
Minor	no	WaNPRC: Arizona Ellingson	Prior to occupancy: Building control/environmental monitoring system/lighting control software set up needs to be completed. Could not be accessed during site visit.	10/31/2019	10/11/2019
Minor	no	HSB Laboratory Spaces	J681H: Portable mouse ventilated rack has HEPA filters that should be on a change out schedule and noted on a log sheet. Group is currently only using the unit for holding mice during the day – no overnight housing at this point.	10/25/2019	10/18/2019
Minor	no	HSB Laboratory Spaces	H153: Several closed full sharps containers in the room – should dispose of those containers.	10/25/2019	10/9/2019
Minor	no	Guthrie Laboratory Spaces	409A: Dead, preserved fish are being stored in same the refrigerator as fish food (brine shrimp eggs).	10/25/2019	10/25/2019
Minor	no	Guthrie Laboratory Spaces	351C: Non-sanitizable tape should be removed and should not be used in room. Only sanitizable lab tape (e.g. Timed Tape) should be used.	11/8/2019	10/11/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	Guthrie Laboratory Spaces	356: Chair seat is badly torn/damaged, patched with duct tape. Old chair should be replaced with a sanitizable (i.e. non-cloth) chair that does not have holes or tears.	11/8/2019	10/24/2019
Minor	no	Guthrie Laboratory Spaces	408A: Expired drugs and vetbond discovered during visit, need to be clearly labelled as expired and discarded.	10/25/2019	11/24/2019
Minor	no	Guthrie Laboratory Spaces	052: Large gas tank has only a single retaining strap. Second, dangling strap should be repaired so tank is well secured.	11/22/2019	10/24/2019
Minor	no	Guthrie Laboratory Spaces	414 (Common terminal procedure room): Guillotine log is now present, but incomplete. Someone should create an SOP for this log— at a minimum, blade sharpness testing and results should be logged at a predetermined frequency. OAW can provide some tubing for testing guillotine blade sharpness. Also, moving the blade leads to very loud squeaky sound; movement should be smooth (probably needs some kind of lubricant).	11/1/2019	11/5/2019
Minor	no	Guthrie Vivarium	369: Carboy of diluted Clidox had no mixed or expiration date on it.	11/1/2019	10/9/2019
Minor	no	HSB Laboratory Spaces	G530: Floor needs cleaning. Please develop a cleaning schedule.	11/15/2019	11/15/2019
Minor	no	HSB Laboratory Spaces	J083B: Some fish tanks had dates in 2015. How are old fish monitored? The IACUC generally asks investigators for additional monitoring of older animals.	11/22/2019	10/25/2019
Minor	no	HSB Laboratory Spaces	G530: Ketamine in locked drawer was expired earlier this year. Based on logs, it looked like it had been used as recently as 10/1/19. Please label expired, do not use.	12/31/2019	12/31/2019
Minor	no	Chemistry Library Building	066: Laser was in use in room, but 2 of the lab personnel working in the laser area were not wearing protective eyewear (occupational health concern).	11/22/2019	11/15/2019
Minor	no	Chemistry Library Building	066: Expired Puralube eye ointment. Please discard.	11/8/2019	10/16/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	HSB Laboratory Spaces	NW141A: Expired Meloxicam, marked and set aside for disposal during visit. Contact EH&S Environmental Programs at <a href="mailto:chmwaste@uw.edu">chmwaste@uw.edu</a> for hazardous waste collection inquiries. Request drug disposal pickups through MyChem. Specifics are on the Hazardous Drugs website: <a href="https://www.ehs.washington.edu/chemical/specific-chemical-hazards/chemotherapy-hazardous-drugs">https://www.ehs.washington.edu/chemical/specific-chemical-hazards/chemotherapy-hazardous-drugs</a>	10/15/2019	10/15/2019
Minor	no	HSB Laboratory Spaces	NW141A: All posted paper signage should be encased in plastic sleeves or laminated.	11/8/2019	10/23/2019
Minor	no	HSB Laboratory Spaces	J106: Eyewash needs to be tested and logged weekly, not monthly. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	11/1/2019	11/1/2019
Minor	no	HSB Laboratory Spaces	J136: Remove tape dangling from top of imaging/recording chamber.	11/1/2019	10/17/2019
Minor	no	HSB Laboratory Spaces	H428A: Bare paper signage (including post-it notes) posted on walls should be encased in plastic sleeves or laminated or removed. Use 'cleanable' tape (e.g., Timed Lab Tape) to post signage and remove any tape that is not being used (no sticky surfaces should be exposed).	11/1/2019	10/23/2019
Minor	no	HSB Laboratory Spaces	NW141A: Disposable surgical supplies (cotton swabs) were found that had been autoclaved over 5 years ago. Unclear if the cotton swabs should be discarded or perhaps re-autoclaved.	11/8/2019	10/23/2019
Minor	no	HSB Laboratory Spaces	H431: Eyewash needs to be flushed weekly and recorded in a log. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	11/8/2019	10/16/2019
Minor	no	HSB Laboratory Spaces	Eyewash needs to be flushed weekly and recorded in a log. Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	11/8/2019	10/24/2019
Minor	no	ARCF (Animal Research & Care Facility)	B284: Weekly tasks on procedure room check list not consistently documented. Please be sure that all tasks on room check list are performed and documented as outlined.	11/22/2019	11/22/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	ARCF (Animal Research & Care Facility)	B227 (DCM side of kitchen): Expired Kennelsol solution (due to be changed 10/7).	11/22/2019	12/4/2019
Minor	no	ARCF (Animal Research & Care Facility)	B285: Daily tasks on October procedure room check list not consistently documented. Please be sure that all tasks on room check list are performed and documented as outlined.	11/22/2019	11/8/2019
Minor	no	ARCF (Animal Research & Care Facility)	B227: Eyewash station not checked weekly (last checked 9/23). Eyewash station requires flushing once per week to protect personnel from potential build-up of contaminants in the water line and must be recorded in a log.	11/22/2019	11/23/2019
Minor	no	ARCF (Animal Research & Care Facility)	B284: Expired frozen monkey treats (10/16) – removed at time of visit.	10/21/2019	10/21/2019
Minor	no	ARCF (Animal Research & Care Facility)	B284: Expired husbandry environmental monitoring swabs – removed at time of visit.	10/21/2019	10/21/2019
Minor	no	ARCF (Animal Research & Care Facility)	B278: Wall chip by door. Please repair/repaint so that surface is sealed and sanitizable.	2/29/2020	
Minor	no	ARCF (Animal Research & Care Facility)	B241: Biological indicator test log showed that no test was performed in September. Site visit host thinks the machine was out of service that month, but please confirm.	11/15/2019	10/28/2019
Minor	no	ARCF (Animal Research & Care Facility)	B173: Room door won't shut properly. DCM to submit work order request.	12/31/2019	12/13/2019
Minor	no	ARCF (Animal Research & Care Facility)	B144A: Expired food must be discarded.	11/22/2019	12/4/2019
Minor	no	ARCF (Animal Research & Care Facility)	Cagewash equipment monitoring logs: Sporadic missing cage wash (rack washer/tunnel washer) temperature strips for several weeks; no biological indicator results for September for Autoclaves 1-3; multiple missing monthly test results for Autoclave 4.	11/22/2019	10/31/2019

<b>Severity</b>	<b>Is Repeat</b>	<b>Building</b>	<b>Concern Description</b>	<b>Date Correction Due</b>	<b>Date Complete</b>
Minor	no	ARCF (Animal Research & Care Facility)	Hydropac maintenance tasks are supposed to be done before each use according to the log; this isn't being done. Hydropac chlorine testing is missing test dates from 7/11/19 to 10/8/19.	11/22/2019	10/31/2019
Minor	no	ARCF (Animal Research & Care Facility)	B167 (Giachelli breeder cages rack AR48A): Several cages are labeled with a "do not change" index card and the laboratory members will change the cages. While the group is indicating when the cage has been changed there were several that had a change date of 9/20 and the next change date was 10/8. This is longer than the required every 14-day cage change. Please clarify.	11/22/2019	10/30/2019
Minor	no	ARCF (Animal Research & Care Facility)	B178: Monthly September room and hood cleaning log were not complete.	11/22/2019	12/12/2019
Minor	no	ARCF (Animal Research & Care Facility)	B178, B185: Rooms have a noticeable smell of ammonia.	11/22/2019	12/4/2019

## Appendix C Departures

### Prolonged restraint

Active protocols with approved prolonged restraint are as follows:

- Wild bats, held in cloth bags for transport – 1 protocol
- Wild Birds, held and hooded for transport or equipment attachment –4 protocols
- Wild mammals, held during capture – 3 protocols
- Wild fish, captured in gill nets – 4 protocols
- Zebrafish, held in a matrix for imaging – 3 protocols
- Mice, held in tubes for various procedures – 13 protocols
- Mice, held by head posts – 7 protocols
- Nonhuman primates, held in chairs or tubes with or without head posts – 13 protocols
- Nonhuman primates, constrained by swaddling – 2 protocols
- Pigs, held in slings – 1 protocol

### Housing at Non-standard Temperature

Active protocols with approved housing at non-standard temperatures are:

- Zebrafish at following human cell transplantation or for heat-shock gene activation – 2 protocols
- Mice housed under cold stress or at thermo-neutral temperatures during metabolic experiments – 2 protocols

### Others

- The IACUC has approved housing infant monkeys (age 2 weeks to a body weight of 1 kg) in cages that meet floor space requirements but are only 24" high. These animals climb up well, but are not adept at climbing down. The lower cage height reduces the risk of injury if an animal should fall.
- The IACUC has approved co-housing 4 juvenile nonhuman primates (up to 5 kg body weight) as a group in a Group 3 sized 4-cage rack with both vertical dividers and one horizontal divider removed. This innovative configuration meets the volume regulations for Group 3 animals and, while being shy of the floor area standard, provides the animals increased opportunity to express species-typical behavior.
- The IACUC has approved housing two group 5 primates in three group 4 (6.0 sq. ft.) Lab Product cages, each having access to two group 4 floors with one cage opened to both upper and lower cages, thus providing double the normal height of a group 4 (64 inches). This innovative configuration allows for grooming contact between the animals as well as additional vertical access between upper and lower spaces, which offers more choice and encourages species-typical behavior such as locomotion and exploration. Additionally, functional vertical space has been found to reduce locomotor stereotypy.
- The IACUC has approved scattering food on the floor of NHP housing compounds to minimize contamination and ensure access to food and foraging opportunities for all animals.

## Appendix D IACUC Program Review

The Animal Care and Use Program is, in general, excellent, and responsibilities are well-defined. We requested and received information from the Office of Animal Welfare, and are satisfied that the process for investigating and reporting animal welfare concerns meets the requirements of the Guide. Suggestions for improvement:

- Regarding "IO has authority to allocate needed resources", the IACUC sent a letter of concern to the IO regarding lack of funding for facility repairs in 2019. Although the IO has attempted to obtain funds, to our knowledge the fund for facility repairs has not yet been re-established.
- Disaster Planning and Emergency Preparedness: both DCM and WaNPRC have written disaster plans. However, the IACUC would like to evaluate the actual plans themselves, and are waiting for a copy of the DCM plan.
- Personnel Security: The University of Washington performs basic criminal background checks. Beyond that, it can be more difficult to evaluate suitability for particular jobs, but during the hiring process employers should ask appropriate interview questions.

Veterinary Care Program is strong. Suggestions for improvement:

- Need to ensure appropriate information is available about providing vet care to cephalopods/octopuses
- Involve Veterinary staff in updating of the training program (primarily rodent) to facilitate better surgery, anesthesia, and analgesia, post anesthesia/post procedural monitoring
- Ensure upcoming revisions to the AVMA Guidelines for Euthanasia are incorporated into IACUC policies (e.g. Euthanasia of Research and Teaching Animals), SOPs, protocol standard procedures, and signage
- Ensure the AAALAC program description is updated to reflect the above, as well as challenges with having Primates that other institutions do not have -especially public perception. It should also note that the majority of breeding primates are at ABC

IACUC Protocol Review is good. Suggestions for improvement:

- It would be a good idea to emphasize training of personnel responsible for assessment and recognition of the humane endpoint and the response upon reaching the endpoint. Have Scientific Liaisons from OAW specifically discuss this with the lab groups to ensure they are aware of the importance of knowing and following the defined endpoints laid out in their protocol.
- Daily written records for food/fluid restricted animals should be checked during IACUC site visits and Scientific Liaisons can remind PIs and their lab groups that these records need to be maintained.
- Should the IACUC have a specific policy regarding toe clipping? (i.e., should only be done when there is no alternative, performed aseptically and with pain relief.)

Personnel Qualifications and training is strong. Suggestions for improvement:

- Increase refresher training through multiple methods and channels; make it more a form of continuing education
- Make participation in webinars easier for research groups, staff, and the IACUC.

Occupational Health and Safety of Personnel program is strong

IACUC is functioning very well. Membership and Training are good. Records and Reporting are good. Note that much is dependent on the Office of Animal Welfare – e.g. reporting and resolving deficiencies, handling concerns, reporting exceptions and non-compliances, preparing and submitting required reports. Suggestions for improvement:

- Develop ways to evaluate training effectiveness.

## Concurrence Letters



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## Minority Views

None