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ANIMAL CARE AND USE COMMITTEE
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Memorandum

To: Timothy L. Denning, Ph.D.
Vice President for Research and Economic Development,
Institutional Official for Animal Care and Use

From: Institutional Animal Care and Use Committee

Subject: Report of the IACUC's Evaluations - Animal Care and Use Program
Review and Facilities Inspection

Date: May 20, 2021

This represents the semiannual report of the Institutional Animal Care and Use Committee (IACUC), as required by the PHS Policy on Humane Care and Use of Laboratory and as a condition of this institution's Animal Welfare Assurance on file with the Office of Laboratory Animal Welfare (OLAW), and USDA Animal Welfare Regulations, 9 CFR Chapter I, subchapter A, as applicable.

Evaluation of the Animal Care and Use Program

1. The IACUC conducted its semiannual evaluation of the institution's animal care and use program on April 23, 2021, using the 8th Edition of the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31

The Committee used the NRC Guide for the Care and Use of Laboratory Animals and other pertinent resources, e.g., the PHS Policy, the Code of Federal Regulations (Animal Welfare) as a basis for the review. To facilitate the evaluation, the Committee used a checklist based on the Sample OLAW Program and Facility Review Checklist from the OLAW website. The evaluation included, but was not necessarily limited to, a review of the following: a) IACUC Membership and Functions; b) IACUC Records and Reporting Requirements; c) Husbandry and Veterinary Care (all aspects); d) Personnel Qualifications (Experience and Training); e) Occupational Health and Safety; and f) disaster planning. In addition, the evaluation included a review of the Institution's PHS Assurance. No member was involuntarily excluded from participating in any portion of the review.

2. Accreditation.

The Institution's Program for Laboratory Animal Care and Use is accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care International (AAALAC-Int'l).

3. IACUC Approved Departures from the NRC "Guide", PHS Policy and the AWA.

The reason for these exemptions to Regulations are listed below:

USDA

"IACUC Functions: Review ... programs ... and inspect ... using the [USDA regs] as a basis for evaluation. [IACUC] reports must contain a description of ... facility's adherence to the [USDA regs] and must identify specifically any departures [from them] and must state the reasons for each departure."

PHS Policy p. 7

"Functions of the IACUC review ... programs ... inspect using the Guide as a basis for evaluation." "[IACUC] reports must contain a description of the nature and extent of the Institution's adherence to the Guide and this Policy and must identify specifically any departures from the provisions of the Guide and this Policy and must state the reasons for each depart."

9 CFR AWA Part 3 (Subpart B) §3.28(b)(3)(i)

"The interior height of any primary enclosure used to confine hamsters shall be at least 6 inches."

Roborovskii dwarf hamsters (*P. roborovskii*) have been housed in 5-inch-high cages because it is documented that 6-inch-high cages are detrimental to the growth of a similar sized hamster species (*P. sungorus*) [Gilman WC, et.al "Effect of the New USDA Cage Height Standard on Body Weights of Weanling and Djungarian Dwarf Hamsters (*Phodopus sungorus*). Contemporary Topics in Lab Animal Science, 32(1): 17-19, 1993.]

9 CFR AWA Part 3 (Subpart B) §3.31(a) (1)

"[Hamster] enclosures shall be sanitized at least once every 2 weeks..."

Cage accessories (wire bar top, food hopper, solid cage top, filter top) are changed out for all rodent species quarterly congruent with the findings in the article entitled "Investigation of Appropriate Sanitization Frequency for Rodent Caging Accessories: Evidence Supporting Less-frequent Cleaning" as found in JAALAS, 45(6), 40-43, 2006; as well as in-house ATP testing performed between March 2019 and April 2019.

9 CFR AWA Part 3 (Subpart B) §3.33

"Animals housed in the same primary enclosure shall be maintained in compatible groups, ..."

It is essential to be able to manipulate social housing conditions to study the effects of social experience on brain and behavior, so some Syrian Hamsters are singly housed. That would include experimental animals that were ordered and only ever singly housed, the Resident Aggressor (RA) colony, breeders (that may or may not have a litter with them), and any group housed animals that were eventually singly housed to become experimental animals, RAs, or breeders. Syrian Hamsters are solitary and territorial animals in the wild.

NRC "Guide to the Care and Use of Laboratory Animals", 8th Edition, pg.70

"Cleaning and Disinfection of the Microenvironment. In general, enclosures and accessories, such as tops, should be sanitized at least once every 2 weeks."

Cage accessories (wire bar top, food hopper, solid cage top, filter top) are changed out for all rodent species quarterly congruent with the findings in the article entitled "Investigation of Appropriate Sanitization Frequency for Rodent Caging Accessories: Evidence Supporting Less-frequent Cleaning" as found in JAALAS, 45(6), 40-43, 2006; as well as in-house ATP testing performed between March 2019 and April 2019.

NRC "Guide to the Care and Use of Laboratory Animals", 8th Edition, pg.66

"Most natural-ingredient, dry laboratory animal diets stored properly can be used up to 6 months after manufacture. Nonstabilized vitamin C in manufactured feeds generally has a shelf life of only 3 months, but commonly used stabilized forms can extend the shelf life of feed. Refrigeration preserves nutritional quality and lengthens shelf life, but food storage time should be reduced to the lowest practical period and the manufacturers' recommendations considered. Purified and chemically defined diets are often less stable than natural-ingredient diets and their shelf life is usually less than 6 months (Fullerton et al. 1982); they should be stored at 4°C (39°F) or lower."

LabDiet® has proven product stability for the following items:

LabDiet® Standard Products	9 months
LabDiet® & IsoPro® Irradiated Diets	12 months
<u>Vitamin C Sensitive Standard Species Diets</u>	
LabDiet® Non-Human Primate (Stabilized Vitamin C)	9 months
LabDiet® Guinea Pig Products (Stabilized Vitamin C)	9 months

4. Program Deficiencies.

No deficiencies were identified. All aspects of the program are consistent with the *PHS Policy*, the *Guide*, and applicable Animal Welfare Regulations.

Inspection of the Animal Facilities

1. The IACUC inspected the following areas on: 3/30/2021 - PSC ABSL2, ABSL3 (HHC) WNV and TB Labs and Housing; 4/8/2021 - NSC Animal Facility and Research Labs; 4/14/2021- PSC/RSC Research labs; 4/19/2021 - PSC/RSC Animal Housing and Zebrafish housing; 4/20/2021 - LRC Animal Housing and Animal Transportation Vans; 4/22/2012 ABSL3 HCC housing SARS-CoV2; using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31.

Members of the Committee, or ad hoc Inspectors, visited all the institution's facilities where live animals are housed or used, i.e., holding areas, animal care support areas, storage areas, and procedure areas. The Committee, or ad hoc members, used the NRC Guide and other pertinent resources, e.g., the PHS Policy, the Code of Federal Regulations (Animal Welfare) as a basis for the inspection. To facilitate the evaluation, the Committee, or ad hoc members, used a checklist based on the Sample OLAW Program and Facility Review Checklist from the OLAW website. No member was involuntarily excluded from participating in any portion of the inspection.

2. Facility Deficiencies.

Attached is a list of deficiencies. As required, the Committee categorized them as significant or minor (a significant deficiency is one that is or may be a threat to the health and safety of the animals or personnel) and developed a reasonable and specific

plan and schedule for correcting each deficiency. All other aspects of the program are consistent with the PHS Policy, the Guide, and applicable Animal Welfare Regulations.

Minority Views

There were no minority view(s) expressed.

I. Semiannual Program Review and Facility Inspection Report

Date: 3/30/2021 – PSC ABSL2, ABSL3 (HHC) WNV and TB, TB Lab/housing (644B); 4/8/2021 - NSC Animal Facility and Research Labs; 4/14/2021- PSC/RSC Research labs; 4/19/2021 - PSC/RSC Animal Housing and Zebrafish housing; 4/20/2021 - LRC Animal Housing and Animal Transportation Vans; 4/22/2012 ABSL3 HCC housing SARS-CoV2

Members in Attendance: [REDACTED]

Deficiency Category*	✓	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M		[REDACTED]	No sharpening log. Establish log to document when scissors are sharpened and used for decapitations. Incorrect carcass disposal. Use black carcass bags for carcass disposal instead of gloves. Move decapitation set-up to the fumehood to prevent transporting anesthetized rat to lab bench. Area messy. Tidy area.	[REDACTED]	By 4/22/2021 At next procedure At next procedure By 4/22/2021	4/20/2021 4/20/2021
M		[REDACTED]	Debris around euthanasia station, surgery area and induction chamber. Clean area and keep tidy. Check all four paws to ensure proper anesthetic depth from induction. Two controlled substance bottles on the expired shelf but not labeled expired. Label.	[REDACTED]	By 4/22/2021 At next procedure By 4/22/2021	4/19/2021 4/29/2021
M		[REDACTED]	Used blade on the counter. Dispose appropriately.	[REDACTED]	Discarded during inspection	4/8/2021
M		[REDACTED]	10% bleach expired. Dispose.	[REDACTED]	Discarded during inspection	4/8/2021
M		[REDACTED]	Eyewash log not completed for 2021. Complete and maintain weekly checking.	[REDACTED]	By 4/22/2021	4/20/2021
M		[REDACTED]	Floors dirty with wax debris. Clean floors on a schedule to prevent wax build up.	[REDACTED]	By 4/22/2021	4/20/2021
M		[REDACTED]	No sharpening log. Establish log to document when scissors are sharpened and used for decapitations	[REDACTED]	By 4/22/2021	4/22/2021
M		[REDACTED]	Cage cards found in lab. Leave cage cards at DAR when removing animals for terminal procedures.	[REDACTED]	At next procedure	
M		[REDACTED]	Sharpening log missing documentation of sharpening. Maintain sharpening log in permanent binder.	[REDACTED]	By 4/22/2021	4/20/2021

M		No sharpening log. Establish log to document when scissors are sharpened and used for neonatal decapitations		At next procedure	
M		Equipment (phenomaster) dirty. Clean after each experiment.	DAR	By 4/22/2021	4/20/2021
M		Two doors not shutting. Place sign with directions to manually close the doors.	DAR	By 4/22/2021	4/21/2021
M		Isoflurane waste drum full preventing top from closing. Dispose canisters.	DAR	By 5/23/2021	4/23/2021
M		Tube not labelled with contents or date. Label properly.		By 4/23/2021	4/23/2021
M		No panel in ceiling hole. Covered in plastic. Replace panel.		By 5/22/2021	4/27/2021
		No date noted for when food opened or when food		By 4/28/2021	4/26/2021
M		Unlabeled bottles (X3). Label with contents and appropriate dates.		By 4/28/2021	4/27/2021
		Gas cylinders not secured to wall, stored in cart. Secure appropriately.		By 4/28/2021	4/27/2021
M		Empty sterile vials past expiration date. Several expired compounds. Discard.	Shared Space	By 4/22/2021	4/22/2021
M		Equipment soiled. Clean after each use.		By 4/22/2021	4/22/2021
		Bottle missing exp or made on date. Label appropriately.		By 4/22/2021	4/22/2021
M		Rat cage with no food (#9). DAR contacted researcher who made food available the same day. Food "fines" were in cage due to constant grinding of food.		4/20/2021	4/20/2021
M		Expired high-cal diet. Discard.		By 4/22/2021	4/22/2021
M		Expired isopropyl alcohol bottle. Discard.		By 4/22/2021	4/22/2021
		Unsecured gas cylinder. Secure.		By 4/22/2021	4/22/2021
		Expired lidocaine X2, expired NaCl, expired atropine. Discard.		By 4/22/2021	4/22/2021
M		Unsecured gas cylinder	DAR	Removed during inspection	4/19/2021
M		Isoflurane canister secured in cart, not on the wall.		By 4/28/2021	4/28/2021
M		Mini-treats missing "date opened" on package. Label.	DAR	By 4/23/2021	4/20/2021
		Ceiling light fixture (farthest from door) does not seem to fit properly. Fix.		By 5/23/2021	5/18/2021

M		Food in fridge missing "made by" or "use by". Label. Paint chipping within capuchin enclosures. Re-Paint. Drop ceiling in capuchin room needs cleaning. Clean.	DAR	By 4/23/2021 By 10/20/2021 By 5/23/2021	4/20/2021 5/18/2021
M		Pellets in frig found with old exp date. Update exp date on container.	DAR	Corrected during inspection	4/20/2021
M		Cobwebs in left corner of ceiling. Clean. Dead bugs in trashcan in left corner. Clean. Floor dirty near the drain. Clean	DAR	By 4/23/2021 By 4/23/2021 By 4/23/2021	4/23/2021 4/23/2021 4/23/2021
M		Chipping pain on the floor.	DAR	By 10/20/2021	
M		Chipping paint on the floor. Re-paint. Rust on both sides of windowsill. Clean.	DAR	By 10/20/2021 By 5/23/2021	5/18/2021
M		Chipping paint on the wall. Re-paint.	DAR	By 10/20/2021	
M		Chipping paint on the wall. Re-paint.	DAR	By 10/20/2021	
M		Microchem bottles not labeled with EXP date. Label. Ethanol bottle label very faded. Re-label. Expired empty bottle of microchem (concentrate) on cart shelf. Dispose.	HCC	By 4/28/2021	4/28/2021

* **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

✓ Check if repeat deficiency

II. Semiannual Program Review Checklist ⁱ

Institutional Policies and Responsibilities

Date: April 23, 2021

1. Animal Care and Use Program						A*	M	S	C	NA
• Responsibility for animal well-being is assumed by all members of the program (<i>Guide</i> , p 1) [must]						X				
• IO has authority to allocate needed resources (<i>Guide</i> , p 13)						X				
• Resources necessary to manage program of veterinary care are provided (<i>Guide</i> , p 14) [must]						X				
• Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> (<i>Guide</i> , pp 11, 15)						X				
• Program needs are regularly communicated to IO by AV and/or IACUC (<i>Guide</i> , p 13)						X				
• Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site (<i>Guide</i> , p 14) [must]						X				
• Inter-institutional collaborations are described in formal written agreements (<i>Guide</i> , p 15)						X				
• Written agreements address responsibilities, animal ownership, and IACUC oversight (<i>Guide</i> , p 15)						X				
2. Disaster Planning and Emergency Preparedness						A*	M	S	C	NA
• Disaster plans for each facility to include satellite locations are in place (<i>Guide</i> , p 35, p 75) [must]						X				
• Plans include provisions for euthanasia (<i>Guide</i> , p 35) [must]						X				
• Plans include triage plans to meet institutional and investigators' needs (<i>Guide</i> , p 35)						X				
• Plans define actions to prevent animal injury or death due to HVAC or other failures (<i>Guide</i> , p 35)						X				
• Plans describe preservation of critical or irreplaceable animals (<i>Guide</i> , p 35)						X				
• Plans include essential personnel and their training (<i>Guide</i> , p 35)						X				
• Animal facility plans are approved by the institution and incorporated into overall response plan (<i>Guide</i> , p 35)						X				
• Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place (<i>Guide</i> , p 35)						X				
3. IACUC						A*	M	S	C	NA
• Meets as necessary to fulfill responsibilities (<i>Guide</i> , p 25) [must]						X				
• IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions (<i>Guide</i> , p 26) [must]						X				
• Continuing IACUC oversight after initial protocol approval is in place (<i>Guide</i> , p 33)						X				
• IACUC evaluates the effectiveness of training programs (<i>Guide</i> , p 15)						X				
4. IACUC Protocol Review - Special Considerations						A*	M	S	C	NA
• Humane endpoints 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</i> , p 27)						X				
• For pilot studies, a system to communicate with the IACUC is in place (<i>Guide</i> , p 28)						X				
• For genetically modified animals, enhanced monitoring and reporting is in place (<i>Guide</i> , p 28)						X				
• Restraint devices are justified in the animal use protocols (<i>Guide</i> , p 29) [must]						X				
• Alternatives to physical restraint are considered (<i>Guide</i> , p 29)						X				
• Period of restraint is the minimum to meet scientific objectives (<i>Guide</i> , p 29)						X				
• Training of animals to adapt to restraint is provided (<i>Guide</i> , p 29)						X				
• Animals that fail to adapt are removed from study (<i>Guide</i> , p 29)						X				
• Appropriate observation intervals of restrained animals are provided (<i>Guide</i> , p 29)						X				
• Veterinary care is provided if lesions or illness result from restraint (<i>Guide</i> , p 30) [must]						X				

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

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

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

6. IACUC Training A* M S C NA

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

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

• Semiannual report to the IO (PHS Policy, IV.B.)					
o Submitted to IO every 6 months	X				

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

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

	A*	M	S	C	NA
• An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care ^{xi}	X				
• Veterinary access to all animals is provided (<i>Guide</i> , p 14) [must]	X				
• Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (<i>Guide</i> , p 14) [must]	X				
• Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (<i>Guide</i> , p 5) [must]	X				
• Veterinarian provides consultation when interventional control is not possible (<i>Guide</i> , p 5) [must]	X				
• If part time /consulting veterinarian, visits meet programmatic needs (<i>Guide</i> , p 14)					X
• Regular communication occurs between veterinarian and IACUC (<i>Guide</i> , p 14)	X				
• Veterinarian(s) have experience and training in species used (<i>Guide</i> , p 15) [must]	X				
• Veterinarian(s) have experience in facility administration/management (<i>Guide</i> , p 15)	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]					
o Veterinary/other professional staff (<i>Guide</i> , p 15-16)	X				
o IACUC members (<i>Guide</i> , p 17)	X				
o Animal care personnel (<i>Guide</i> , p 16)	X				
o Research investigators, instructors, technicians, trainees, and students (<i>Guide</i> , pp 16-17)	X				
• Continuing education for program and research staff provided to ensure high quality care and reinforce training (<i>Guide</i> , pp 16-17)	X				
• Training is available prior to starting animal activity (<i>Guide</i> , p 17)	X				
• Training is documented (<i>Guide</i> , p 15)	X				
• Training program content includes: (<i>Guide</i>, p 17)					

o Methods for reporting concerns (<i>Guide</i> , p 17)	X				
o Humane practices of animal care (e.g., housing, husbandry, handling) ^{xii}	X				
o Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (<i>Guide</i> , p 17) ^{xiii}	X				
o Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, IV.A.1.g.)	X				
o Research/testing methods that minimize animal pain or distress (PHS Policy, IV.A.1.g.)	X				
o Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (<i>Guide</i> , p 20)	X				
o Animal care and use legislation (<i>Guide</i> , p 17)	X				
o IACUC function (<i>Guide</i> , p 17)	X				
o Ethics of animal use and Three R's (<i>Guide</i> , p 17)	X				

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

11. Personnel Security		A*	M	S	C	NA
<ul style="list-style-type: none"> Preventive measures in place include pre-employment screening, and physical and IT security (<i>Guide</i>, p 23) 		X				
12. Investigating & Reporting Animal Welfare Concerns		A*	M	S	C	NA
<ul style="list-style-type: none"> Methods for investigating and reporting animal welfare concerns are established (<i>Guide</i>, p 23) [must] 		X				
<ul style="list-style-type: none"> Reported concerns and corrective actions are documented (<i>Guide</i>, p 24) 		X				
<ul style="list-style-type: none"> Mechanisms for reporting concerns are posted in facility and at applicable website with instructions (<i>Guide</i>, p 24) 		X				
<ul style="list-style-type: none"> o Includes multiple contacts (<i>Guide</i>, p 24) 		X				
<ul style="list-style-type: none"> o Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection (<i>Guide</i>, p 24) 		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: April 24, 2020

1. Clinical Care and Management		A*	M	S	C	NA
<ul style="list-style-type: none"> Veterinary program offers high quality of care and ethical standards (<i>Guide</i>, p 105) [must] 		X				
<ul style="list-style-type: none"> Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Veterinarian provides oversight to surgery and perioperative care (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Veterinary care program is appropriate for program requirements (<i>Guide</i>, pp 113-114) 		X				
<ul style="list-style-type: none"> Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records (<i>Guide</i>, p 114) 		X				
<ul style="list-style-type: none"> Procedures to triage and prioritize incident reports are in place (<i>Guide</i>, p 114) 		X				
<ul style="list-style-type: none"> Procedures are in place to address: <ul style="list-style-type: none"> Problems with experiments to determine course of treatment in consultation with investigator (<i>Guide</i>, p 114) Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes (<i>Guide</i>, p 114) Veterinary review and oversight of medical and animal use records (<i>Guide</i>, p 115) 		X				
<ul style="list-style-type: none"> Procedures established for timely reporting of animal injury, illness, or disease (<i>Guide</i>, p 114) [must] 		X				
<ul style="list-style-type: none"> Procedures established for veterinary assessment, treatment, or euthanasia (<i>Guide</i>, p 114) [must] 		X				
<ul style="list-style-type: none"> Veterinarian is authorized to treat, relieve pain, and/or euthanize (<i>Guide</i>, p 114) [must] 		X				
2. Animal Procurement and Transportation/Preventive Medicine		A*	M	S	C	NA
<ul style="list-style-type: none"> Procedures for lawful animal procurement are in place (<i>Guide</i>, p 106) [must] 		X				
<ul style="list-style-type: none"> Sufficient facilities and expertise are confirmed prior to procurement (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Procurement is linked to IACUC review and approval (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Random source dogs and cats are inspected for identification (<i>Guide</i>, p 106) 						X
<ul style="list-style-type: none"> Population status of wildlife species is considered prior to procurement (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Appropriate records are maintained on animal acquisition (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Animal vendors are evaluated to meet program needs and quality (<i>Guide</i>, p 106) 		X				
<ul style="list-style-type: none"> Breeding colonies are based on need and managed to minimize numbers (<i>Guide</i>, p 107) 		X				
<ul style="list-style-type: none"> Procedures for compliance with animal transportation regulations, including international requirements, are in place (<i>Guide</i>, p 107) [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 zoonosis 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>)	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	X				

that avoid distress and consider animal age and species (<i>Guide</i> , pp 123-124)					
• Training is provided on appropriate methods for each species and considers psychological stress to personnel (<i>Guide</i> , p 124)	X				
• Procedures and training are in place to ensure death is confirmed (<i>Guide</i> , p 124)	X				

6. Drug Storage and Control

	A*	M	S	C	NA
• Program complies with federal regulations for human and veterinary drugs(<i>Guide</i> , p 115) [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				

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NA = not applicable

April 2021 Inspection and Program Review

Minority Views

If there are minority IACUC views regarding the semiannual report, the Institutional Official must be informed and copies of the minority views attached to the report. If there are no minority views, the report should include a statement to that effect.

Signatures

At least a majority of the members of the IACUC must sign the report:

Date

4/23/2021

4/23/2021

4/23/2021

4/23/2021

4/23/2021

4/23/2021

4/23/2021

4/23/2021

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