

VIII. Membership of the IACUC

Date: January 30, 2019			
Name of Institution: University of Hawaii			
Assurance Number: A3423-01			
IACUC Chairperson			
Name*: Manuel G. Himenes, Jr.			
Title*: Veterinarian (Private Practice)		Degree/Credentials*: D.V.M. (Diplomate)	
Address*: (street, city, state, zip code) Office of Research Compliance Animal Welfare Program 2425 Campus Road, (b) (4) Honolulu, HI 96822			
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IACUC Roster			
Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
(b) (6)	(b) (6)	(b) (6)	Scientist - (b) (6)
			Nonscientist - (b) (6)
			Scientist - (b) (6)
			Scientist - (b) (6)
			Veterinarian - Private Practice.
5 Manuel Himenes, Jr.	D.V.M. Diplomate	Veterinarian	(b) (6)
(b) (6)	(b) (6)	(b) (6)	Scientist - (b) (6)
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	Non-voting.
	Nonscientist - <div>(b) (6)</div>
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26 Michael Wong ^D	D.V.M	Staff Veterinarian	Veterinarian - UH System, Office of Research Compliance, Animal and Veterinary Service.
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* This information is mandatory.

** Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

*** List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not “community member” or “retired”).

**** [PHS Policy](#) Membership Requirements:

Veterinarian veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.

Scientist practicing scientist experienced in research involving animals.

Nonscientist member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).

Nonaffiliated individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.

[Note: all members must be appointed by the CEO (or individual with specific written delegation to appoint members) and must be voting members. Non-voting members and alternate members must be so identified.]

X. Facility and Species Inventory

Date: 31 December 2018			
Name of Institution: University of Hawaii			
Assurance Number: A3423-01			
Laboratory, Unit, or Building*	Gross Square Feet [<i>include service areas</i>]	Species Housed [<i>use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog</i>]	Approximate Average Daily Inventory
(b) (4)	6,949 ft ²	None - Vivarium Inactive	0
	15,555 ft ²	Dolphins	6
	240 ft ²	Fish	120
	100 ft ²	Toads	3
	60 ft ²	None House - Procedures Only	0
	162 ft ²	Fish	0
	400 ft ²	Fish	200
	39,858 ft ²	Freshwater (FW) and Saltwater (SW) Fishes and Sharks	1640 FW, 82 SW 14 sharks
	17,490 ft ²	Freshwater Fishes	2,700
	52 acres 4,224 ft ² (covered)	Swine, Beef Cattle, Goats, Horses and Sheep	45 swine, 16 cattle, 19 goats, 0 sheep, 8 horses
	1,123 ft ²	Mice	1,420
	800 ft ²	None Housed - Procedures Only	0
	700 ft ²	None Housed - Procedures Only	0
	8 ft ²	None Housed - Procedures Only	0
	100 ft ²	Mice	2
	200 ft ²	Mice	4
	320 ft ²	None Housed - Procedures Only	0
	724 ft ²	Mice	0
	18,119 ft ²	Mice, Rats, and Guinea Pigs	11,055 Mice 0 Rats 32 Guinea Pigs
	500 ft ²	None Housed - Procedures Only	0
	1,050 ft ²	Freshwater Fishes	0

(b) (4)

5,000 ft ²	Freshwater Fishes	0
194 acres pasture	Beef Cattle	180
795 ft ²	Sea Turtles	5
6011 ft ²	Hawaiian Monk Seals	2
45,270 ft ²	Saltwater Fishes	277
7,000 ft ²	None Housed - Procedures Only	0
96 ft ²	Lizards	180
300 ft ²	Fish	2,500
15 acres pasture	Sheep	30
102,366 ft ²	Freshwater (FW) and Saltwater (SW) Fishes, Marine Pinnipeds	645 SW Fish 126 FW Fish 1 Monk Seal
2,000 ft ²	Freshwater Fishes	400
7,531 ft ²	Lizards	180
10,010 ft ²	Freshwater Fishes	600
2,000 ft ²	Feline, Canine, and Rabbits (variable due to semester and labs)	2-7 cats 0-3 dogs 3-12 rabbits
3,077 ft ²	Mice and Chickens	67 Mice 259 Chickens

*Institutions may identify animal areas (buildings/rooms) by a number or symbol in this submission to OLAW. However, the name and location must be provided to OLAW upon request.

University of Hawaii

A3423-01

Assurance Renewal

SUPPLEMENT 1 - Semiannual Report Humane Care and Use
Reporting Period 1 July 2018 - 31 December 2018



29 October 2018

MEMORANDUM

TO: UH Institutional Animal Care & Use Committee

FROM: Subcommittee Review for Program of Humane Care and Use
Manuel G. Himenes, Jr., D.V.M.
(b) (6)

SUBJECT: Semiannual Review of Program of Humane Care and Use
(Reporting Period: 01 July – 31 December 2018)

On 23 October 2018, IACUC Chair, Dr. Manuel G. Himenes, Jr., along with members (b) (6) and University Veterinarian and Dr. Michael Wong, AVS Staff Veterinarian for the Semiannual Review of the Program of Humane Care and Use. In attendance and assisting with the program review were (b) (6)

The subcommittee was provided with the previous semiannual Review conducted on 02 May 2018. The subcommittee used as references, the *NIH Guide for the Care and Use of Laboratory Animals (8th Edition)*, the OLAW Semiannual Program Review Checklist and the USDA-APHIS *Animal Welfare Act (AWA)*.

The following categories were inspected pursuant to the *Guide for the Care and Use of Laboratory Animals*, 8th Edition.

I. Institutional Policies and Responsibilities:

Animal Care and Use Program

The primary oversight for the Program is the responsibility of the Institutional Official (IO), the Attending Veterinarian (AV), and the Institutional Animal Care and Use Committee (IACUC). However, animal well-being is the responsibility of all members of the Program. Resources to manage the Program and veterinary care are allocated by the IO on an annual budgeted basis, then communicated to the AV and AWBP Manager. As of 1 February 2016, the Office of Research Compliance has been reorganized under the Office of the Vice President for Research and Innovation. The Animal Welfare and Biosafety Program (AWBP) and the Animal and Veterinary Services (AVS) Managers meet with the IO monthly or as needed. As of 1 July 2012, regulations training, species specific training, and IACUC training is completed through the CITI program. As of 20 April 2017, in revised Policy 13 Requirement for Personnel Training, training completed at other institutions within the current triennium will be accepted on a case-by-case basis to satisfy CITI training requirements. Protocol specific procedures training is conducted by the UH veterinarian, designees or the investigator who has the expertise. When a full time veterinarian is not available on-site at any of the program facilities, specific managers are responsible for daily animal care and facility management, and communicate as needed with the UH veterinarians in the case of animal injuries and/or illnesses. Memorandums of Understanding (MOUs) are on file for non-UH entities (mostly private biotechnology companies) that use UH facilities. These agreements address the responsibilities for off-site animal care and use, animal ownership and IACUC review and oversight.

Disaster Planning and Emergency Preparedness

Disaster planning and emergency preparedness plans and SOPs, previously IACUC approved, are in place for the vivaria located at the Kaka'ako and Manoa campuses. Depending on the type of natural disaster and time permitting, provisions have been made to relocate valuable strains of rodents to safe areas and euthanize all other strains. Investigators are provided the option of cryopreserving valuable animal strains in advance. Building managers have been provided copies of disaster planning and emergency preparedness plans and are listed in communication "trees". The AVS Operations Supervisor met with the Director of UH Public Safety, JABSOM Facilities Director, JABSOM Director of Security, and UHCC Director of Facilities on 18 November 2015 to share and discuss emergency response plans for Kaka'ako and Manoa facilities. Copies of the plans were provided to all parties. There have been no changes to emergency plans or communication rosters. The JABSOM Emergency Response Plan has been updated.

Disaster Plans and Emergency Preparedness Plans are in place for all facilities. The Disaster Plan/Emergency Preparedness Plans are based on a template developed by the AWBP staff for facilities to use in developing their emergency preparedness plans.

Recommendation – Disaster and Emergency Preparedness Plans should be re-evaluated to ensure information and contacts are up-to-date by 30 May 2019.

IACUC

The IACUC meets once a month to review protocols and discuss other business. Emergency meetings are convened when necessary. Records of committee meetings and deliberations are maintained. IACUC members that are PIs or are project personnel on a protocol recuse themselves during committee deliberations and voting. As of August 2011, a post-approval monitor has been on staff to continue oversight after protocol approval. The IACUC evaluates the effectiveness of the training programs.

IACUC Protocol Review – Special Considerations

Special consideration for humane endpoints is given to studies that involve tumor models, infectious disease, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessing toxicological effects, organ or organ system failure, and models of cardiovascular shock. Weight loss, as well as symptoms of morbidity (emaciation, impaired ambulation, lack of physical or mental alertness, difficulty breathing, or ability to remain upright) are monitored closely. The AVS animal care staff monitors animals daily and institutes a twice a day monitoring system when possible. Veterinary technicians work closely with the AVS staff veterinarian and the researchers to communicate and resolve animal health concerns.

For pilot studies, a minimal number of animals are approved and the PI is usually required to report findings to the IACUC before being allowed to continue.

Studies that involve more than minor restraint, multiple surgical procedures, or food/fluid restriction require justification and a consideration of alternatives. If IACUC approved, these types of studies require more frequent monitoring of animal subjects. Twice a day monitoring is required for studies where animals are placed in Pain and Distress Category E.

Aseptic surgery standards are required for survival surgeries whether the species is regulated or non-regulated. In field situations, aseptic surgery standards are followed as closely as possible. Investigators and their staff are required to complete an on-line training module covering rodent aseptic surgery. This module and quizzes are available on Laulima and must be completed prior to gaining access to the vivarium, or prior to refresher orientation. Pursuant to revised Policy 13 Requirement for Personnel Training, personnel performing biomedical research techniques, including aseptic surgery must demonstrate proficiency to the University Veterinarian or designee during post-approval monitoring.

Pharmaceutical grade chemicals/drugs are used as a rule. When non-pharmaceutical grade chemicals are used they must be described in detail, be fully justified in the protocol application and are subject to IACUC approval.

A non-pharmaceutical grade chemical policy, including the use of Avertin or TBE, was initially approved on 16 May 2013. After several revisions the final version was IACUC approved on 21 January 2016.

Investigators that conduct field studies or are involved in an IACUC exempt activity that involves exposure to potential zoonoses are required to complete zoonoses training, provided by the University Veterinarian or designee, pursuant to revised Policy 13 Requirement for Personnel Training (approved 20 April 2017). A Standard Operating Procedures per Appendix 6 - Fieldwork Safety Guidelines (Departmental Health and Safety Guide) is available from the Environmental Health and Safety Office (EHSO@hawaii.edu).

Invasive animals removed from the wild are required to be euthanized humanely. Sick or injured animals removed from the wild are required to receive veterinary care or be humanely euthanized.

Toe clipping is an alternative method of identification that is only permitted when scientifically justified and ethical considerations have been discussed by the IACUC. An IACUC policy was approved on 17 November 2015, revised and approved on 17 February 2016

A policy for retro-orbital bleeding was approved by the IACUC on 15 September 2016.

IACUC Membership and Functions

The IACUC consists of 19 members [11 scientists, 5 veterinarians (four DVMs with UH program authority), 1 (UH) nonscientist, 1 nonaffiliated (non-UH) member and 1 non-voting member. All members are appointed by the Institutional Official (IO). The IACUC organizationally reports to the IO. The IACUC conducts semiannual reviews of the Program of Vertebrate Animal Humane Care and Use, semiannual inspections of animal facilities where animals are housed or used, and reviews and investigates concerns about animal care and use. Policies and guidelines are posted on line for reporting animal welfare concerns. The IACUC meets to review, approve, and/or suspend activities if warranted.

The use of the policy for specific significant changes to animal activities, referenced by NIH Notice NOT-OD-14-126, was IACUC approved on 19 February 2015, revised and approved multiple times with an amended version approved 15 February 2018. As recommended during the AAALAC pre-site visit, an amendment to clarify increases in animal numbers was reviewed and approved by the IACUC on October 15, 2015. The policy permits specific changes on previously approved IACUC protocols to be administratively resolved without full IACUC review. The UH Veterinarian's office serves as the subject matter expert to verify compliance with IACUC reviewed and approved policy. Other significant changes to approved activities are reviewed and approved by the full committee prior to the activities taking place.

Other protocol changes such as a change in PI, change or addition of a species that does not change the objectives of the study, addition of anesthesia, sedation or analgesia that improves animal well-being or addition of a procedure that does not result in greater pain, distress, or degree of invasiveness (limited to Cat. C and D) are reviewed through Designated Member Review (DMR) process. The UH IACUC Policy on Conditions for Designated Member Review was IACUC approved on 16 August 2018.

Special procedures for genetically modified animals, restraint, multiple survival surgeries, food and fluid regulation, field investigations, and agricultural animals are reviewed individually by the IACUC. Genetically modified animal use is also reviewed by the AWBP Biosafety Officer. The AVS veterinary staff has instituted a rodent phenotype monitoring system and reports health concerns related to phenotypes to the IACUC.

If a request to perform multiple major survival surgery on a covered species is received, the APHIS Administrator will be contacted.

IACUC Training

All IACUC members receive orientation. Newly appointed members are required to complete the CITI training module for IACUC members. New members observe meeting proceedings and read inspection reports for a period of 6 months before being assigned to conduct inspections or review protocols on their own. Members are provided with inspection checklists and previous reports for every facility inspections and checklists for reviewing protocols. New members are often paired with a more experienced member to assist them in learning how to conduct reviews and inspections. Continuing education is ongoing. IACUC 101/301 training was held at the University of Hawaii 3-4 September 2015.

IACUC Records and Reporting Requirements

Semiannual inspection and Program review reports are generated after each inspection. The reports are reviewed and approved by the full IACUC committee prior to being submitted to the IO. Minority views are always welcomed. Deficiencies are described and a plan and schedule for correction are included. Minor deficiencies are distinguished from significant deficiencies.

The annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views. OLAW is promptly advised of serious and/or ongoing deviations from *the Guide* or PHS Policy noncompliance. OLAW is promptly notified of any suspension of an animal activity by the IACUC.

The annual report to the USDA contains the number of regulated species used as well as any IACUC approved exceptions/exemptions to USDA requirements. Reports are filed within 15 days for failure to adhere to the timetable for correction of significant deficiencies. Suspension of activities by the IACUC is promptly reported to the USDA and any federal funding agency.

IACUC meeting minutes and semiannual reports to the IO are maintained for a minimum of 3 years. IACUC reviews of animal activities include required information such as considering alternatives to pain and distress and assurance that the animal activities do not unnecessarily duplicate previous experiments. Records of IACUC reviews are maintained for 3 years after the completion of the study.

Veterinary Care

Although not Board certified in Laboratory Animal Medicine, the AV and (b) (6) and AVS staff veterinarian, Dr. Michael Wong are experienced in laboratory animal medicine. Dr. Wong provides primary daily veterinary care. (b) (6) has direct or delegated authority over all aspects of animal care and use. Veterinary access to all animals is provided. Pursuant to IACUC policy 15.0, PIs are required to involve the AV or his/her designee in the planning of their vertebrate animal use protocols. Animal use protocol applications are not approved without confirmation that consultation has taken place. Regular communication occurs between the IACUC and the AV. (b) (6) provides the IACUC with an activities report at each monthly IACUC meeting. The veterinarians have experience and training in mostly small laboratory animals. When they do not have the training and experience needed for other species of animals, or if the animal are being used at sites not easily accessible to the UH veterinarians, consulting veterinarians are used. All animal use protocols are required to designate either the UH veterinarians or a consultant veterinarian for veterinary care. Justification is required whenever a request for veterinary care is not applicable. All facilities are required to have a program of veterinary care.

Personnel Qualifications and Training

All personnel, veterinary staff, animal care staff, research investigators, instructors, technicians, trainees, and students are required to complete the CITI training modules for the regulations for using vertebrate animals. In addition, species specific training is required. For those individuals that perform surgery, the aseptic technique training module is required. Procedures that further specify training for volunteers, students and workshop participants was approved on 16 April 2015 and 20 April 2017. The AVS animal care staff is highly motivated and many have completed or in the process of completing AALAS certification. Vivarium, researchers and their staff have the option of taking the Introductory Rodent Handling course taught by AVS veterinary staff. Researchers are required to demonstrate

proficiency of biomedical research procedures during post-approval monitoring. All training is documented.

More recently, the JABSOM Library has provided rodent on-line training videos from JOVE. This is available to Manoa campus users. A mechanism to allow non-Manoa users is being worked on.

All vertebrate animal users are required to complete the CITI recertification module every three years to refresh their understanding of the regulations.

Training to report animal concerns is covered in the CITI regulations for animal use module. Procedures to report animal concerns are described in the IACUC website Policy 7.0 Reporting Concerns of Animal Misuse or Abuse

Occupational Health and Safety of Personnel

An occupational health and safety program (OHSP) consistent with federal, state, and local regulations for the vertebrate animal program is posted at the Office of Research Compliance, Animal Resource Center Services site <http://www.hawaii.edu/researchcompliance/occupational-health-and-safety-program>. The OHSP covers personnel affiliated with JABSOM, UH Cancer Center, AVS, the JABSOM Biocontainment Facility and individuals that don't work directly with, but may be exposed to animals. To enroll in the program, individuals must complete a Health History Questionnaire (HHQ) and complete the AVS OHSP training. Protected health information of enrollees is treated in a manner consistent with UH's applicable standards of privacy and confidentiality. The AVS operations manager works closely with the Environmental Health and Safety and Biosafety staff to identify and manage hazardous waste. A medical surveillance program for individuals that work with animals is described on-line, as well as in the AVS Occupational Health and Safety Program manual. Based on AAALAC requirements, the OHSP was revised November 2015 with assistance from an OHS professional and IACUC approved on 3 December 2015. Additional revisions, including the review of HHQ for AVS staff and students by UH Straub Occupational Health Services and TB testing were IACUC approved on 21 April 2016. Since then, the OHSP process has been revised to incorporate Straub Occupational Health Services' health professional to provide reviews of HHQs.

The revised OHSP process has been completed. The next step in the process is providing informational sessions to animal users. AVS staff have all successfully completed their HHQs and been medically cleared by a HP at Straub to be exposed to animals in the vivaria. The OHSP for the JABSOM and UH CC researchers and staff exposed to animals and their by-products is in the process of being implemented.

When reviewing non-biomedical IACUC protocols, the reviewers remind PIs to have a written site-specific OHSP available upon request during IACUC semi-annual reviews and/or veterinary reviews of their facilities.

Risks associated with the use of non-human primates (NHP) are not considered because NHP have not been used for at least 10 years. There currently are no plans to use NHPs. Occupational health SOPs are required for field study projects. Any NHP tissues from outside sources that may be used, are done so under the direction of the Biosafety Program.

Personnel Security

Preventive measures such as pre-employment criminal background screening are done for new regular AVS hires. Contingency plans for deliberate acts of human destruction are described in the Emergency Operations Plan for the Kaka'ako and Manoa vivaria.

Investigating & Reporting Animal Welfare Concerns

IACUC approved Policy 7 *Reporting Concerns of Animal Misuse or Abuse* and Policy 9 *Guidelines and Procedures for Conducting Inquiries and Investigations into Non-compliances, Deviations, and Cases of Animal Misuse or Abuse* establishes the methods for reporting and investigating animal welfare concerns. These policies are posted at <https://www.hawaii.edu/researchcompliance/iacuc->

policies-and-guidelines. All reported concerns and corrective actions are documented. Policy 7 lists multiple contacts and provides for anonymity, and protection against discrimination and reprisals.

II. Veterinary Care:

Clinical Care and Management

The UH veterinarian and staff veterinarian oversee the well-being and clinical care of all animals used in research, testing, teaching and production in the Program of Animal Care and Use. The veterinary program offers a high quality of care and ethical standard. Pursuant to Policy 15.0, investigators are required to involve the AV or his/her designee in the planning of their vertebrate animal use protocols. Animal use protocol applications are not approved without confirmation that consultation has taken place. Investigators are also required to provide documentation of training and/or demonstrate proficiency in procedures such as CO₂ euthanasia, cervical dislocations, rodent anesthesia and surgery. The AVS veterinary and animal care staff monitor animals at least once a day and twice daily if possible. If problems are observed the veterinary staff (veterinarian or veterinary assistant who is in contact with a veterinarian) are notified. If multiple problems/situations occur, the veterinarian will triage the situations and provide an objective assessment to determine a course of action with the PI. The IACUC approved the Vivarium Incident Policy on 20 November 2012, which provides a mechanism for reporting incidents. A revised Vivarium Incident Policy was approved on 18 July 2013.

The UH veterinary staff conducts a veterinary review of all facilities in the Program semiannually. At the time of inspection, medical and animal health records are reviewed. During the inspections, facility personnel are reminded to report animal health concerns to the veterinary staff in a timely manner so that assessments, treatments or euthanasia recommendations can be made. During protocol review, clearly delineated scientific and humane endpoints ensure that contingency plans are in place should problems arise during a study. SOPs may be developed for recurrent health conditions to expedite treatment. Recurrent or significant problems are communicated to the IACUC during the UH Veterinarian's monthly report.

The UH Veterinarian is authorized to treat, relieve pain and/or euthanize animals.

Animal Procurement and Transportation/Preventative Medicine

All rodents housed in the vivaria are either bred in-house or procured through legitimate vendors. Ordering and use of vertebrate animals is not allowed unless a protocol has been reviewed and approved. Computer software is used in the ordering and tracking of animal usage in the vivaria. Animals received from other institutions are required to be linked to an approved protocol, have health certificates and transfer authorization by the UH Veterinarian, AWBP Compliance Officer and Biological Safety Officer. Every effort is made to accommodate investigators with space to house animals. A space committee reviews and prioritizes investigator's animal housing requests. Priority is given to investigators associated with the University over private biotechnology companies requesting use of vivarium space.

Appropriate records are maintained for all animals acquired through ordering. Animals are bred only for the minimum amounts and genotypes needed. An inventory of in-house bred animals is kept and tracked on the investigator's protocol. In addition, the investigator is required to justify animal use numbers and address the principle of reduction in the 3 R's.

Random source dogs and cats from local animal shelters are used in a cooperative effort with the Windward Community College's (WCC) Veterinary Technician Program. A small number of animals are transported to WCC for sterilization surgery and returned later in the week. The surgeries are performed by licensed veterinarians that are also veterinary technician program instructors. MOU's between WCC and the shelters are in place. In most cases of wildlife projects, procurement is not an option.

Transportation of ordered animals, usually rodents, is through airlines that follow federal regulations as well as professional ground transportation companies. Dates of arrival are always scheduled to ensure animals are not delivered during non-business hours. Upon arrival at the vivarium, the shipping crates containing animals from commercial vendors are decontaminated and recommended conditioning period of 72 hours prior to use. Rodents from other institutions are pre-screened before shipment, and upon arrival quarantined in a separate quarantine holding area until PCR negative for

Specific Pathogens excluded from the vivarium. Animals are accompanied with health certificates. Animals are kept separated by species, source, health status, and shipments. Personnel are trained in zoonoses prevention and must provide documentation. Animals transported between facilities are accompanied by animal care staff and have the proper intrastate transportation permits. An SOP for transporting animals and procedures to follow if problems develop has been IACUC approved. Transportation of other species such as birds and fish are described in the investigator's protocol.

Sentinel animal programs are in place for the surveillance, diagnosis, treatment and control of disease for facilities where laboratory animals are housed. Sentinel animals are sacrificed every 6 months and analyzed for the presence of disease and parasites. Diagnostic laboratories are used in the preventative health program.

Surgery

Pursuant to Policy 15.0, investigators are required to involve the AV or his/her designee in the planning of their vertebrate animal use protocols including presurgical plans, use of anesthetics/analgesics, and peri-operative care. Researchers are required to provide documentation of training or certify their surgical technique proficiency with the UH veterinarian. Aseptic surgery is required for survival surgeries and performed in dedicated facilities or spaces, unless an exception is justified and IACUC approved. The investigator is required to describe how asepsis will be maintained. Surgical procedures are categorized as major (entering a body cavity) or minor. Researchers are also required to describe how anesthesia will be monitored and name the individuals responsible for post-operative monitoring and care.

Pain, Distress, Anesthesia and Analgesia

Pursuant to Policy 15.0, investigators are required to involve the AV or his/her designee in the planning of their vertebrate animal use protocols. At that time, the investigator and the AV should discuss the use of anesthetics or analgesics and the many factors involved such as the species used, type and degree of pain, the nature and length of the pain-inducing procedure and the safety of the agent. Investigators are asked to describe in their protocols the symptoms of pain/distress that may be observed and what measures will be taken to alleviate pain/distress, how the animal will be monitored and who will do the monitoring. Procedures are in place to assure analgesia before surgery begins. The UH Policy on Use of Non-Pharmaceutical Grade Drugs/Agents in Research Animals was approved by the IACUC on 16 May 2013 and revised multiple times. The final version was approved on 21 January 2016. The Policy addresses the requirements of the *Guide* for the use of pharmaceutical grade chemicals and substances when available. Use of non-pharmaceutical grade agents such as Avertin or TBE, are required to be described, justified, and approved by the IACUC. Procedures that utilize paralytic agents are closely reviewed by the veterinary staff and the IACUC.

A rodent and rabbit anesthesia and analgesia policy was approved by the IACUC on 21 March 2016

Euthanasia

Methods of euthanasia are consistent with the *AVMA Guidelines on Euthanasia* unless approved by the IACUC. Standardized methods, e.g., isoflurane prior to decapitating mouse pups, are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species. In general, chemical agents are preferable to physical methods of euthanasia. Training and proficiency certification is required for certain methods of euthanasia, e.g., CO₂, cervical dislocation, and decapitation. Often times a secondary method of euthanasia, e.g., thoracotomy is used to ensure death. An amended Policy on Euthanasia to remove the section on firearms and UH community comment was IACUC approved on 18 February 2016.

Drug Storage and Control

The Animal Care and Use Program complies with federal regulations for human and veterinary drugs. Drug records, storage procedures, and expiration dates are reviewed during facility inspections. Anesthetics and analgesics are acquired, stored and their use and disposal are recorded legally and

safely. Some investigators have their own DEA license for acquiring controlled substances. The use of pharmaceutical grade drugs is required whenever possible.

III. Other Space, Facility, and Program Issues

Waialeale Livestock Research Station

According to the 19 July 2018 USDA inspection, the Waialeale Livestock Research Farm was cited for extensive disrepair of the physical structures and sanitation issues. Regulated activities (use of sheep for the Veterinary Technician Program) are prohibited until the facility is brought into compliance. The College of Tropical Agriculture has proposed moving the sheep to the old Meadow Gold Dairy site. The plan for the disposition of the animals and the facility is unknown.

Update on UH-Hilo Agricultural Farm Staff Shortage and Veterinary Consultant

During the 10 April 2018 semiannual inspection, it was learned that the Farm was in the process of hiring a Farm Manager and a full time animal technician. The UHH Farm now has a full time Farm Manager, a full time livestock technician, and a 0.25 FTE livestock technician for the horses.

The consultant veterinarian continues to do monthly visits to the farm.

A report is expected shortly after the inspection has been completed.

Animal and Veterinary Services

Two concerns regarding AVS were noted during the program review:

- Although there has not been an impact on the animals, the subcommittee was aware of a staff shortage which has required AVS management to assist the animal care staff with animal husbandry at the Kaka'ako and Manoa vivariums. Although new staff are being hired to keep up with the census growth and to replace recently vacated positions, these individuals still require a considerable amount of time to be trained by the AVS Operations Supervisor. In addition, aging staff, some with medical restrictions, have created new challenges for the vivarium operations. The current per diem/chargeback system leads to fluctuations in staffing from year-to-year that could impact animal welfare and overwork the staff. **Recommendation – Institutional support for additional resources and permanent positions would allow hiring of a more stable workforce, and for maintaining an aging facility and equipment. Begin process of inquiry. Report to the IACUC on the next semi-annual report in 6 months or by 30 May 2019.**

AVS comments: Manoa is adequately staffed for at least two years, because the Institute for Biogenesis Research is paying for two 0.5 FTE Graduate Assistants to assist AVS. Shortly, Kakaako will have adequate staffing with the replacement of one position that just became vacant when the incumbent moved laterally in AVS, and with the addition of another 0.5 FTE position. Two students at Kakaako help regular staff throughout the week and to relieve regular staff of weekend coverage so the latter can focus on the most important animal care work during the five weekdays. RCUH positions have worked well for AVS and our current staff have been with AVS for many years. AVS does need adequate funds to keep up with cost of living inflation for our staff's payroll, and to fund repair/maintenance/replacement of aging facilities infrastructure and equipment. Additional funding would ensure a stable staff during fluctuations in census. It would also help keep per diem costs competitive with other institutions, while complying with the federal rate setting requirements.

- Biometric security equipment was reported to be not working properly. It may take several months to repair or replace the equipment. **Minor Noncompliance – Provide a progress report on the repair or replacement of the biometric equipment, in 60 days (by 01 January 2019)**

AVS comments that this is not a non-compliance, since a biometric lock is not a facility requirement. The facility is still quite secure. The problem is affecting only new people who require access into the vivarium entrance door. Security guards use an approved access list to unlock the vivarium entrance for them. Once inside, individuals must use other access codes in order to enter the vivarium proper.

MH:BF:PN:dy

University of Hawaii

A3423-01

Assurance Renewal

SUPPLEMENT 2 - Semiannual Facility Evaluations (1-37)

Reporting Period: 1 July 2018 - 31 December 2018

Reporting Period: July 2018 – December 2018

#1 Facility: University of Hawaii Maui College – Aquaponics Greenhouse

Date: 05 July 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6) Dr. Michael Wong

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
II. 8	M			<p>A bag of fish feed expired November 2016. Correction schedule – discard expired feed no later than 31 July 2018. Alternatively, a variance may be requested along with the manufacturer's written assurance that nutritional quality remains intact when feed is stored in the freezer.</p> <p>Corrected - Per facility dated 18 October 2018, we investigated trying to get a variance over a period of months for the feed as it seemed wasteful to immediately dispose of it. In the meantime, the fish feed was removed from the greenhouse facility on 7/27/18 and stored in a conex container on campus. We determined that the manufacturer, Purina, would not provide a variance, so we disposed of the feed at a local compost facility 10/11/18.</p>	Corrected.	11 Oct 2018
II. 4	S			<p>Remote monitoring and notification devices for electrical/pump failures, listed in the Disaster and Emergency Preparedness Plan have not been implemented. Correction schedule – Remote monitoring notification devices are required to be in place prior to replacing fish stocks.</p> <p>Progress Report - Per facility dated 18 October 2018, we are in the process of purchasing a remote monitoring system from Nelson and Pade specifically designed for the aquaponics system we have with the capacity to monitor indoor air temperature, other air or water temperature, water temperature, air pressure (blower on or off), water pump (on or off), power (on or off), plus an automatic battery back-up, and provide phone or text alerts to staff. We plan to install it by November 30, 2018. Over the next 30 days, we need to make some electrical repairs in the greenhouse to provide more outlets in suitable locations for pumps to address the scenario where a mechanical failure of a component like a pump (which are all currently hard-wired) can be quickly remediated after receiving an alert of pump failure by plugging in a new pump. Also, in response to your inquiry earlier this week on the approximate average daily inventory of fresh water fish, we currently do not have any fish and will not have any for at least 2 months while we implement the fishless cycling process recommended in the IACUC review. Once we are in compliance, we estimate starting with a small number of fish in the range of 30-100 in the first six months, and perhaps increasing to 220 total in the next six months.</p> <p>NEW INFORMATION: (b) (6) A new PI was identified to resume the project during December 2018. A revised new Animal Use Protocol was reviewed on 6 December 2018 by the IACUC. The IACUC did not approve the new application because a revisit to the facility site needs to be conducted in 2019 to assure compliance with expectations.</p>	<p>Progress Report Provided - 18 October 2018.</p> <p>6 December 2018 - Resubmission of revised protocol from new PI withheld from approval until revisit to confirm corrections made are adequate.</p>	<p>Approval of project and teaching site to be determined by IACUC revisit in January or February 2019</p>

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

Reporting Period: July 2018 – December 2018

#2 Facility: Institute for Biogenesis Research

Date: July 26, 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Completed
III. 8	M	✓		Spilled rodent food pellets were found on the floor of (b) (4) Corrected during the inspection.	Corrected.	26 July 2018
III. 2	M		Hallway	The P-trap under the sink was covered in a bluish-green substance, possibly indicating corrosion. The floor under the P-trap was stained with the bluish-green substance and there was also water on the floor, indicating that the P-trap or sink may be leaking. <i>Correction schedule – Replace P-trap and locate possible leak within 7 working days (05 August 2018). Corrected - 14 August 2018, Facilities Management inspected and determined there was no problem with pipe. Green film was cleaned.</i>	Corrected	14 August 2018
III. 2	M		Hallway	A seam in the floor at the entrance to the animal rooms needed to be caulked. <i>Correction schedule – caulk seam within 7 working days (05 August 2018). Corrected - 16 August, Facilities Management initially caulked the seam with a transparent filler, then reapplied a white caulk on 16 August 2018.</i>	Corrected	16 August 2018

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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

(b) (4)

(b) (6)

(b) (6)

Obtained by Rise for Animals.
 Uploaded to Animal Research Laboratory*Overview (ARLO) on 10/07/2022

Check if repeat deficiency

Reporting Period: July 2018 – December 2018

Date: July 26, 2018

#4 Facility: Snyder Hall Laboratory 411

Responsible Party: (b) (6)

IACUC Members: (b) (6)

[illegible]

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

Reporting Period: July 2018 – December 2018

#5 Facility: CTAHR Mauka Facility Aquaponics Project
Responsible Party: Samir Khanal (PI)

Date: 02 August 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA				NA	

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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

Reporting Period: July 2018 – December 2018

#6a Facility: Woodlawn Small Animal Facility – Terrestrial/Lab Animal Species

Date: 02 August 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
III. 8	M		(b) (6)	Discard cassava flour labeled 2015 and for tilapia trials. Corrected. Discarded 15 August 2018. (Kitchen Storeroom) – Discard opened expired bags of chicken feed (11/17 and 1/18). Discard boxes of experimental diets or ingredients if expired and not being used. Corrected. Discarded 18 August 2018. Discard 3 unopened bags and 1 opened bag (feed container) of Mazuri Rodent feed expired 5/18. Corrected. Discarded 28 August 2018. Correction Schedule - 5 days (~24 August 2018)	Corrected	15 August 2018, 18 August 2018, and 28 August 2018
III. 11	M		(b) (6)	A gallon container of Isopropyl Alcohol expired. May be used for disinfecting. The container should be labeled "not for use in animals, for sanitation purposes only". Correction Schedule - 5 days (~24 August 2018). Corrected. Gallon relabeled on 10 August 2018.	Corrected	10 August 2018
I. 15	M		(b) (6)	Freezers in Hallway – label "No food, for Animal Samples Only". Corrected. Freezer labeled 8 August 2018 Revise washroom log to include a column for initials of individuals completing work. Corrected washroom log revised. 29 August 2018 Correction Schedule - 5 days (~24 August 2018).	Corrected	8 August 2018 and 29 August 2018
III. 14	M		(b) (6)	Update emergency contact lists. Correction Schedule - 5 days (~24 August 2018). Corrected. Contact list updated 14 August 2018	Corrected	14 August 2018
III. 2	M		(b) (6)	The floor was delaminating in one area. Pull back the tarp on the floor and check for other areas of delamination. Resurface the floor. Correction Schedule - 30 days (~16 September 2018). Corrected. Delamination repairs to flooring on 28 August 2018.	Corrected	28 August 2018
III. 2	M		(b) (6)	Outside corner of the building (across from the Aquaculture fenced pen) – water was dripping down the side of the building creating a slimy, mossy surface and sidewalk. Repair leak and clean slimy surfaces. Correction Schedule - 30 days (~16 September 2018). Corrected. Repairs to building to correct dripping water on 28 August 2018.	Corrected	28 August 2018

- * A = acceptable
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 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

#6b Facility: Woodlawn Small Animal Facility – Aquatic Animal Species

Responsible Party: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA				NA	

Uploaded to Animal Research Laboratory Overview

Obtain

Check if repeat deficiency

Obtained by Rise for Animals.
 Uploaded to Animal Research Laboratory Overview (ARLO) on 10/07/2022

#7 Facility: Windward Community College Veterinary Technician Program

Responsible Party: (b) (6)

IACUC Members: (b) (6) **Dr. Michael Wong**

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA				NA	

Uploaded to Animal Research Laboratory Overview
 Obtained

Check if repeat deficiency

Reporting Period: July 2018 – December 2018

#9 Facility: Walkiki Aquarium

Date: 21 August 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

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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

#10 Facility: Monoclonal Antibody Service Facility and Training Center (MASFTC)
Responsible Party: PI - Dr. John Berestecky

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

Uploaded to Animal Research Laboratory Overview

Obtain

Check if repeat deficiency

#11 Facility: Save Our Shearwaters (SOS) Rehabilitation Center @ Kauai Humane Society
Responsible Party: PI - Dr. Megan Porter

IACUC Members: (b) (6) **Dr. Michael Wong**

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

Uploaded to Animal Research Laboratory Overview
Obtained

Check if repeat deficiency

(b) (4)

(b) (4)

(b) (4)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (4)

IACUC Members:

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

Uploaded to Animal Research Laboratory

Check if repeat deficiency

Reporting Period: January 2018 – June 2018

#14 Facility: JABSOM Kaka'ako (b) (4) Laboratory
Responsible Party: Dr. Nichols, Dr. Bellinger

Date: 9 March 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA				NA	NA

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

Reporting Period: July 2018 – December 2018

Date: 14 September 2018

#15 Facility: JABSOM BSB Lab (b) (4)

Responsible Party: [REDACTED] (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

Uploaded to Animal Research Laboratory

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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

Reporting Period: July 2018 – December 2018

#16 Facility: JABSOM BSB (b) (4)

Date: 14 September 2018

Responsible Party: (Chiller – Facilities Management), (b) (4) – Shared facility (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

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

Reporting Period: July 2018 – December 2018

#17 Facility: Kaka'ako Bioscience Bldg. (b) (4)

Date: September 14, 2018

Responsible Party: Pls – Dr. Ralph Shohet, Dr. Takashi Matsui

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	NA

Uploaded to Animal Research Laboratory

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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

Reporting Period: July 2018 – December 2018

#18 Facility: Kaka'ako Bioscience Bldg. ABSL3 Facility

Date: September 14, 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
III. 2	M			<p>Water was observed leaking from a vent in the anteroom. There was also bubbling of the paint around the vent indicating accumulated leakage. <i>Correction schedule – Find and repair leak and repair blistered paint around the vent in 60 days (~15 November 2018).</i></p> <p><i>Correction Incomplete - Work Request to correct and effect repairs was submitted on 17 December 2018 after follow-up notification. Refer to email 17 Sept. 2018.</i></p> <p><i>Corrected. 7 January 2019 confirmed. The last time JABSOM Facilities was in ABSL3, which was last month, water wasn't dripping. Phoenix Air Valve, SAV 1-170 reheat actuator had failed in the closed position, so temperatures were not being controlled. The actuator had been replaced and room temperature is much comfortable.</i></p>	Correction complete. Confirmed by email.	7 January 2019.

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

Reporting Period: July 2018 – December 2018

#19 Facility: Kaka'ako Biosciences Bldg. Vivarium

Date: September 14, 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
III. 2.	M			(b) (4) (Feed Room) – Water was observed leaking from a ceiling vent. Bubbling of the paint around the vent indicated accumulated leakage. Correction schedule – Find and repair leak, repair paint around the vent in 60 days, (~15 November 2018). Corrected - Per email dated 12 December 2018.	Corrected	12 Dec. 2018
III. 2	M			(b) (4) – an overhead light was out. Correction schedule – repair in 7 days (24 September 2018). Corrected - Per memorandum dated 26 September 2018.	Corrected	18 Sept. 2018
I. 12	M			(b) (4) – Nutrical had dripped on the outside of the tube, potentially attracting vermin. Correction schedule – clean or discard tube as of this inspection report. Corrected - Per memorandum dated 26 September 2018.	Corrected - During inspection, retrain employee on 1 Oct 2018	14 Sept. 2018
I. 12	M			(b) (4) – Organize equipment and supplies in the back room to facilitate cleaning. Correction schedule – 7 days (24 September 2018). Corrected - Per memorandum dated 26 September 2018.	Corrected	21 Sept. 2018
I. 15	M			(b) (4) – Expired Faxitron State of Hawaii Radiation License (March 2017). Check on status of license with the JABSOM EHSO. Correction schedule – 7 days (24 September 2018). Corrected - Per memorandum dated 26 September 2018.	Corrected	18 Sept. 2018
III. 11, 13	M			Loading dock – Spilled bedding observed. Correction schedule – clean in 7 days (24 September 2018). Corrected - Per memorandum dated 26 September 2018.	Corrected	19 Sept. 2018

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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

Reporting Period: July 2018 – December 2018

#20 Facility: Edmonson Laboratory (b) (4)
Responsible Party: PI – Dr. Timothy Tricas

Date: 24 September 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
NA			NA		NA	

Uploaded to Animal Research Laboratory

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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

#21 Facility: Edmonson Hall Laboratory (b) (4)

Responsible Party: PI – Dr. Peter Marko, Education Specialist

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	

Uploaded to Animal Research Laboratory

Check if repeat deficiency

Reporting Period: July 2018 – December 2018

#22 Facility: Edmonson Hall Laboratory (b) (4)
Responsible Party: PI – Dr. Marguerite Butler

Date: September 24, 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Uploaded to Animal Research Laboratory

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

#23 Facility: Edmonson Laboratory (b) (4)
Responsible Party: PI – Dr. Amber Wright

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA	NA	

Uploaded to Animal Research Laboratory

Check if repeat deficiency

(b) (4)

(b) (6)

IACUC Members:

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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

Reporting Period: July 2018 – December 2018

#25 Facility: Biomedical Sciences Building Animal Colony

Date: September 24, 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
III. 2	M		Cagewash	Insulation on the steam pipes serving the cagewasher (dirty side of the cagewash room) was crumbling and breaking off. Correction schedule – Repair or replace within 60 days (24 November 2018). Corrected - Per e-mail corrected during October 2018	Corrected.	October 2018

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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

Reporting Period: July 2018 – December 2018

#26 Facility: UH-Hilo Agricultural Teaching Farm - Aquaculture Program

Date: 29 October 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
II.15	M			One entry was missing from the daily observation records. <i>Corrected - The missing page was forwarded via Corrected email on the 02 November 2018.</i>	Corrected.	2 NOV 2018

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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

Reporting Period: July 2018 – December 2018

#27 Facility: UH-Hilo Agricultural Teaching Farm - Livestock Program

Date: 29 October 2018

Responsible Party: (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA		NA			

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

#28 Facility: Pacific Aquaculture and Coastal Resource Center (Keaukaha)

Responsible Party: [REDACTED] (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Uploaded to Animal Research Laboratory Overview
Obtain

Check if repeat deficiency

Reporting Period: July 2018 – December 2018

#29 Facility: Mealani Research Station
Responsible Party: PI - Dr. Mark Thorne

Date: 29 October 2018

IACUC Members: (b) (6)

[illegible]

A = acceptable

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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

Reporting Period: July 2018 – December 2018

#30 Facility: Waimanalo Research Station Aquaponics Project
Responsible Party: PI - Dr. Theodore Radovich

Date: 09 November 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
II. 14	M			Protocol signage - signage with the protocol number, PI, and emergency Contact Information was not observed. Correction Schedule - Post signage with the protocol number, name of PI and emergency contact information no later than 7 days from receipt of report (~ 25 November 2018). Corrected - Per email dated 13 December 2018. The required information is posted at two locations on the study site.	Corrected.	13 December 2018

A = acceptable

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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

#31 Facility: Waimanalo Research Lizard Behavior Project
Responsible Party: PI - Dr. Amber Wright

IACUC Members:

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Uploaded to Animal Research Laboratory Overview
Obtained

Check if repeat deficiency

#32 Facility: Waialeale Livestock Research Farm
Responsible Party: PI – Dr. Raymond Uchida

IACUC Members: (b) (6) **Dr. Michael Wong**

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

Reporting Period: July 2018 – December 2018

#33 Facility: Gilmore Laboratory 107
Responsible Party: PI – Dr. Jon Paul Bingham

Date: 15 November 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA		NA			

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

Reporting Period: July 2018 – December 2018

#34 Facility: Hawaii Institute of Marine Biology

Date: 16 November 2018

Responsible Party: [REDACTED] (b) (6)

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Uploaded to Animal Research Laboratory Overview
Obtain

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

Reporting Period: July 2018 – December 2018

#35 Facility: JIMAR Turtle Stranding Facility
Responsible Party: PI – Dr. Douglas Luther

Date: 20 November 20187

IACUC Members: [REDACTED] (b) (6)

Category Inspected	Deficiency Category	✓	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Uploaded to Animal Research Laboratory Overview
Obtained

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

#36 Facility: JIMAR Monk Seal Facility Facility
Responsible Party: PI – Dr. Douglas Luther

IACUC Members: [REDACTED] (b) (6)

[illegible]

Check if repeat deficiency

Reporting Period: July 2018 – December 2018

#37 Facility: Queen's Medical Center for Biomedical Research
Responsible Party: PI – Dr. Andrea Fleig

Date: November 20, 2018

IACUC Members: (b) (6)

Category Inspected	Deficiency Category	√	Location	Deficiency and Plan/Schedule for Correction	Interim Status	Date Complete
	NA			NA		

Obtain

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

University of Hawaii

A3423-01

Assurance Renewal

SUPPLEMENT 3 - Semiannual Report to the Institutional Official

Reporting Period: 1 July 2018 - 31 December 2018



17 December 2018

MEMORANDUM

TO: Ms. Victoria Rivera
Director for Research Compliance
Office of the Vice President for Research and Innovation

FROM: [REDACTED] (b) (6)

SUBJECT: UH IACUC Semiannual Report to the Institutional Official
Reporting Period (1 July 2018 Through 31 December 2018)

Provided is the University of Hawaii's (UH) Institutional Animal Care and Use Committee (IACUC) Semiannual Report to the Institutional Official (IO).

Pursuant to the Public Health Service (PHS) *Policy on Humane Care and Use of Laboratory Animals* (Policy) section IV.B.3, requires the IACUC to prepare and submit a report of their semiannual evaluation to the IO. The U.S. Department of Agriculture (USDA) also requires the reports to be reviewed and signed by a majority of the IACUC members.

The Report to the IO includes the required information (OLAW Semiannual Report Template):

- Description of the nature and extent of the University of Hawaii's adherence to the *Guide for the Care and Use of Laboratory Animals* (Guide) and the *PHS Policy*.
- Identification of deficiencies in the program or facility. Including classification as either significant or minor and a reasonable and specific plan and schedule for correction.
- Minority views of the IACUC.
- Identification of facilities accredited by the *Association for Assessment and Accreditation of Laboratory Animal Care International* (AAALAC).
- Signature of a majority of the IACUC members.

Report received: [REDACTED] (b) (6)

Victoria Rivera, MPA
Director for Research Compliance
Institutional Official, Animal Welfare Program

12-18-2018
Date

C: [REDACTED] (b) (6)

2425 Campus Road, Sinclair 10
Honolulu, Hawai'i 96822
Telephone: (808) 956-4740 • Fax: (808) 956-9150
An Equal Opportunity/Affirmative Action Institution



Memorandum To: Ms. Victoria Rivera, Director of Research Compliance, Animal Welfare Program Institutional Official

From: Institutional Animal Care and Use Committee

Subject: Semiannual Report of the Program Review and Facility Inspection
(**Semiannual Reporting Period July 1 – December 31, 2018**)

Date: December 17, 2018

This report summarizes the IACUC's results of its most recent program review and facility inspection, as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals ([Policy](#)), Section [IV.B.1.-3.](#), the *Guide for the Care and Use of Laboratory Animals* ([Guide](#)), and the Animal Welfare Act ([AWA](#)) regulations, as applicable. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

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

Membership change in institution's program for animal care and use.
Carl Meyer - appointed 01 January 2018
Chad Walton - resigned 15 November 2018
Jun Panee - resigned 6 December 2018
Lorey Takahashi - resigned 6 December 2018
Danielle Carico - resigning 31 December 2018

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

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

Select A or B:

- ☒ A. There were no departures during this reporting period.
- ☐ B. The following departures have been reviewed and approved by the IACUC: *[include reason for each departure]*

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

Animal Care and Use Program Review Date(s):

Select A or B:

- ☒ A. There were no deficiencies in the program during this reporting period.
- ☐ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s):

Select A or B:

- ☐ A. There were no deficiencies in the animal facility during this reporting period.
- ☒ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

Refer to (#1 to #37) Semiannual Program and Facility Inspection Checklists

IV. Minority Views

Select A or B:

- ☒ A. No minority views were submitted or expressed.
- ☐ B. The following minority views were expressed: *[insert minority views here or attach]*

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

The University of Hawaii has three AAALAC accredited facilities during this reporting period:

- 1. Biomedical Sciences Vivarium - Manoa Campus**
- 2. Institute for Biogenesis Research - Manoa Campus**
- 3. JABSOM Biosciences Building Vivarium - Kakaako Campus**

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

Names of IACUC Members

Signatures

See Attached Table VI. Signatures

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

Names of IACUC Members	Signatures
(b) (6)	(b) (6)
Manuel Himenes, Jr.	
(b) (6)	