

## Annual Report to OLAW

Institution: The Children's Hospital of Philadelphia
Assurance Number: D16-00280 (A3442-01)
Reporting Period: January 1, 2018 – December 31, 2018

This institution's Institutional Animal Care and Use Committee (IACUC), through the Institutional Official, provides this annual report to the Office of Laboratory Animal Welfare (OLAW).

### I. Program Changes *[Select A or B]*

- ☐ A. There have been **no changes** in this institution's program for animal care and use as described in the Assurance. *[Skip to Item II.]*
- ☒ B. Change(s) in this institution's program for animal care and use as described in the Assurance have occurred during this reporting period. ([FAQ 6](#))

Select all that apply:

- ☐ This institution's AAALAC accreditation status has changed ([PHS Policy IV.A.2.](#)).
- ☐ [AAALAC Accredited](#) – Category 1
- ☐ Non-Accredited – Category 2
- ☒ This institution's program for animal care and use has changed ([PHS Policy IV.A.1.a-i.](#)). *[Attach a full description of the changes.]*
- ☐ The individual designated by this institution as the Institutional Official has changed. *[Provide name, title(s), address, e-mail, phone, and fax numbers in Item V.]*
- ☒ The membership of this institution's IACUC has changed. *[Provide current roster of members in Item VI.]*

### II. Semiannual Evaluations

This IACUC has conducted semiannual evaluations of the institution's program and inspections of the institution's facilities (including satellite facilities) on the dates below. Reports of the evaluations and inspections have been submitted to the Institutional Official. The reports include any IACUC-approved departures from the *Guide* with a reason for each departure, any deficiencies (significant or minor) that were identified, and a plan and schedule for correction of each deficiency. *[Do not provide semiannual reports unless they include a minority view.]*

#### A. Program Evaluations

*[Two dates (month/day/year) must be provided to satisfy the PHS Policy requirement that evaluations be done at 6 month intervals. If the IACUC conducted more than 2 evaluations of the program during the reporting period, please attach a list showing the dates.]*

Date 1: May 14, 2018	Date 2: November 12, 2018
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## B. Facility Inspections

*[Two dates (month/day/year) must be provided to satisfy the PHS Policy requirement that facility inspections be done at 6 month intervals. If the IACUC conducted more than 2 inspections of each site during the reporting period, please attach a list showing the dates.]*

Date 1: April (see below for dates)

Date 2: October (see below for dates)

Date 1: 4/3/18, 4/6/18, 4/10/18, 4/11/18, 4/13/18, 4/16/18, 4/17/18, 4/18/18, 4/19/18, 4/20/18



Date 2: 10/1/18, 10/2/18, 10/3/18, 10/4/18, 10/5/18, 10/9/18, 10/11/18 and 10/23/18

## III. Minority Views [Select A or B]

☒ A. There were **no minority** views during this reporting cycle.

☐ B. Any minority views submitted by members of the IACUC regarding reports filed under [PHS Policy IV.F.](#) for this reporting cycle are attached.

## IV. Signatures

IACUC Chairperson	Institutional Official
Name: Laurence Eisenlohr, VMD, PhD	Name: Bryan A. Wolf, MD, PhD
Signature:  (b) (6)	Signature:  (b) (6)
Date: 24 January 2019	Date: 1-24-19

## V. Change in Institutional Official

Name:	
Title:	Degree/Credential:
Name of Institution:	
Address: [street, city, state, zip code]	
E-mail:	
Phone:	Fax:

# **VI. Change in IACUC Membership** [*Current roster*]

<b>Institution:</b> The Children's Hospital of Philadelphia			
<b>IACUC Contact Information</b>			
Address: [street, city, state, zip code] Roberts Center for Pediatric Research – (b) (4) 2716 South Street Philadelphia, PA 19146			
E-mail: <a href="mailto:ancharskistutlerd@email.chop.edu">ancharskistutlerd@email.chop.edu</a>			
Phone: (b) (6)		Fax: NA	
<b>IACUC Chairperson</b>			
Name: Laurence C. Eisenlohr Chair, Scientist 1			
Title: Professor, Pathology & Laboratory Medicine		Degree/Credentials: VMD, PhD	
PHS Policy Membership Requirements***: Scientist			
<b>IACUC Roster</b> [ <i>Provide below or attach</i> ]			
Name of Member/ Code*	Degree/ Credential	Position Title/ Occupational Background**	PHS Policy Membership Requirements***
(b) (6)			Scientist
			Scientist
			Scientist
			Scientist
			Veterinarian
			Scientist
			Nonaffiliated
			Nonscientist
			Scientist

			(b) (6)
			Scientist
			Nonvoting
			Nonaffiliated
			Nonvoting
			Scientist
			Veterinarian
Laike Stewart; Veterinarian 1	DVM, DACLAM	Attending Veterinarian, Department of Veterinary Resources – CHOP	Veterinarian
			(b) (6)
			Veterinarian
			Scientist
			Scientist

\* Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this report 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 (for example, 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.]*

## Summary of Changes Annual Report to OLAW for January 1, 2018 through December 31, 2018

### I. B. Program Changes:

#### Program Management Responsibility

- Husbandry and operations for the vivara was previously outsourced to (b) (4) these services were brought in-house and are now managed and supported by CHOP personnel.
- The Associate Director of Husbandry and Operations, resigned from her position effective 11/17/17. The new Assistant Director of Husbandry and Operations was hired effective 3/2018.
- A new position, Department of Veterinary Resources (DVR) Training Specialist was created and a person hired effective 03/2018.
- A new position, DVR Behavior Specialist was created and a person was hired effective 08/2018.
- A new position, Veterinary Technician Supervisor, has been created and DVR is currently recruiting for this position.
- A DVR veterinarian transitioned to the Center for Cellular and Molecular Therapeutics group and is no longer part of DVR.

#### IACUC Constitution and Function

- Nonaffiliated member 2 was appointed as a new IACUC member effective 1/1/18.
- The Director of Research Safety (non-voting IACUC member), resigned from his position effective 11/17/17.
- Nonvoting member 2 was promoted to Director of Research Safety Programs and appointed as nonvoting member 2 effective 1/28/18.
- The Senior Director of Academic Training and Outreach Programs (ATOP) resigned her position as non-voting IACUC member, effective 8/1/18. Nonvoting member 1 was appointed representing ATOP, effective 8/1/18.
- The IACUC voted at the 10/9/18 meeting to review/reassess IACUC Guidelines, Policy and Procedure documents on a three-year cycle instead of the current annual cycle. Interim updates will be made to these documents as necessary.

#### Collaborations

- A Memorandum of Understanding (MOU) with Villanova University was executed on 4/19/18 for work performed under protocol 16-000113 "Pathophysiologic and Therapeutic Studies Using Transgenic Mice that Produce Human Hemoglobin."

#### Protocol Review

- Enhancements to the eIACUC system to allow for in-line comments by IACUC reviewers and in-line PI responses were released in 2018.
- The requirement to list all strains on the eIACUC protocols was removed and only strains with a painful or distressful phenotype will need to be described in the IACUC protocol.
- The eIACUC system was updated to incorporate the use of standardized procedures and to modify/reformat the protocol form in relation to the standardized procedures. The changes will be incorporated into initial protocols and 3yr renewals going forward as they are created.

#### Training and Education



- Animal Care and Use Training – 2018 Recertification Proposal. After completing the initial training modules in the AALAS Learning Library, all animal users are required to complete the “Common Compliance Issues” course every 3 years. It was proposed that this course be updated to include common non-compliance items encountered over the last 3 years. The OIA, DVR, and ATOP updated the content of the course and the IACUC served as the pilot group. The updated course was released to users on July 1, 2018.
- Members of DVR, IACUC staff and IACUC participated in various webinars and conferences hosted by AALAS, ACLAM, DVBAALAS, OLAW, NABR, NJABR, PASBR, PRIMR and USDA.

### **Special Considerations for IACUC Review**

- DVR provided the Committee with presentations on the current state of NHP social housing at CHOP on 4/9/18, 7/9/18, 9/10/18.
- At the 1/8/18, 4/9/18, 7/9/18, 10/8/18 meetings, a representative from the research team presented data on recent animals and their outcomes for IACUC protocol 16-000984 (“Extracorporeal Support of the Premature Infant (ESPI) in Sheep”).
- The IACUC discussed the oversight of the artificial womb (biobag) lamb project. 24/7 monitoring is performed by the research team. DVR staff performs weekly monitoring and communicates with the research team. The IACUC accepted this approach.
- A proposal is currently being considered for the expansion of the sheep artificial womb program; details were reviewed by the IACUC.
- Representatives from Occupational Health informed the Committee that the hospital is moving towards risk-based surveillance for hospital staff instead of annual surveillance for Tuberculosis screening. For research staff, annual or semiannual surveillance will continue to be provided based on risk assessment. Occupational Health will be onsite at one of the research buildings twice a year to facilitate surveillance. It was noted that anyone that enters an NHP holding room needs semiannual surveillance.

### **VETERINARY CARE**

- Due to some recent false positive test results, the DVR Q-Fever Testing Policy was updated to add additional levels of testing involving multiple assays and testing labs, for more robust and accurate reporting. If a positive result is received from two different laboratories, the animal will be euthanized.
- The process for rodent post-operative/procedure analgesia documentation transitioned from binder-based records to a cage side system, effective 5/1/18.
- DVR has calibrated and deployed five (5) new isoflurane vaporizer machines to be used within research laboratory spaces to offer research teams an alternative to bell jar usage.

### **Environment, Housing and Management**

- **Population Management**
  - As of September 2018, DVR is submitting monthly overcrowd reports to the IACUC office. These will be reviewed and discussed at the Animal Care and Use Program leadership meetings. Items that need to be escalated will be presented at an IACUC meeting.
- **Remote Video Monitoring System for NHP Pair Housing**
  - DVR is working with IS to assess the feasibility of a remote video monitoring, which would allow remote monitoring of behavior during pair housing sessions.
- **Husbandry/Housing**
  - Due to an increase in flooded rodent cages due to faulty, aged lixits, all lixits on C-level of CTRB are being replaced over a 6-12 month period.
  - New sheep caging was purchased to replace and expand existing housing capabilities. The new design will allow housing of up to 10 animals per room.
  - The Penn-CHOP lease agreement was finalized and will allocate 164 spaces for Penn NHPs to be housed within CHOP D-level vivaria.

- New racks are being added to the zebrafish holding room for expansion of the research work.

- **Hazards**

- Representatives from the IACUC, DVR, Office of Research Safety and Radiation Safety staff met to discuss radioisotope usage in animals. Modifications were made to the radiation safety section of eIACUC and changes will be made implemented to the radiation safety program including communication, signage and training.

## **PHYSICAL PLANT**

- Construction on B-Level is completed. This space will house rodent holding and procedure rooms. The certificate of occupancy was issued on 10/5/18. The IACUC inspected this space as part of the fall semi-annual inspection. The IACUC approved occupancy of the space. Sentinel mice were placed in the animal rooms and once all testing results are negative, rooms will be populated with research animals (anticipate mid-January 2019).
- Air handler unit #2 in ARC was replaced on 7/24/18.
- An external company (Intertek) was brought in to address water intrusion issues on (b) (4) in the NHP quarantine hallway. They have finished working in the ceiling space between C/D-Levels. Water intrusion alarms have been installed, and animals are housed in these rooms again.
- A proposal was submitted to Security to have badge readers installed for select holding and procedure rooms in ARC. This will allow access to be given and tracked similar to the CTRB facility.
- The Small Animal Imaging Core is working with DVR to facilitate allowing rodents from Penn and Wistar to be imaged at CTRB, and subsequently returned to the place of origin once work is completed.

## **The following departures have been reviewed and approved by the IACUC:**

### **Columbus Instruments' Comprehensive Laboratory Animal Monitoring System (CLAMS)**

Cage Height Exception was originally approved by the IACUC on 12/12/11 and each subsequent semiannual period. The exception was reviewed and approved at the most recent IACUC meeting of 11/12/18. The CLAMS for mice is 3.5 inches in height. The *Guide* requires 5 inches. The IACUC approved a cage height exception to the *Guide* with scientific justification for housing mice in the CLAMS. Mice will be housed in the CLAMS for only the minimal time required to achieve scientific objectives. Current protocols are approved for 24 hours up to 21 days. The first 1 to 2 days serve as an acclimation period. The remaining days are testing days.

- a) Animals have enough space to express postural adjustments without touching the enclosure walls or ceiling. They have the required amount of floor space and are able to turn around freely. They have ready access to food and water. There is sufficient space for animals to comfortably rest away from areas soiled by urine and feces.
- b) Because mice have enough space to make normal postural adjustments, no measures have been implemented to compensate for the reduced cage height.
- c) The CLAMS provides fully automated operation to monitor body weight, food and water intake, energy expenditure, activity, oxygen consumption, carbon dioxide production and respiratory exchange ratios. The system is used to characterize mouse models of metabolic, degenerative, and genetic pediatric disorders and to investigate potential therapeutic approaches to treat these diseases.

### **Housing of Nonhuman Primates**

The *Guide* recommends physical separation of animals by species to prevent interspecies disease transmission and to eliminate the potential for anxiety and physiologic and behavioral changes due to interspecies conflict (Arndt et al. 2010). The CTRB vivarium currently houses two different species of nonhuman primates (cynomolgus macaques and rhesus macaques). These species are housed in separate rooms. The DVR veterinary staff proposed housing both species in the same room when needed for study or behavioral requirements. The IACUC initially approved an exception to allow the housing of both species in



the same room at the 5/9/16 meeting. The exception was reviewed and approved at the most recent IACUC meeting of 11/12/18.

### **Housing of Mice and Rats**

The *Guide* recommends physical separation of animals by species to prevent interspecies disease transmission and to eliminate the potential for anxiety and physiologic and behavioral changes due to interspecies conflict (Arndt et al. 2010). The (b) (4) reorganization has allowed a room (b) (4) to be designated as a DVR training room that allows for housing of mice and rats on separate ventilated racks. This does not apply to any PI-owned animals. The IACUC approved an exception to allow the housing of both species in the same room at the 12/11/17 meeting. Mice and rats are co-housed intermittently in (b) (4) due to limited (b) (4) housing space. When co-housing is necessary in ARC, the animals are separated by species into cubicles containing ventilated racks. The cubicles provide additional separation between the species. These exceptions were reviewed and approved at the most recent IACUC meeting of 11/12/18.