



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:

Office of Laboratory Animal Welfare  
Rockledge One, Suite 360  
6705 Rockledge Drive – MSC 7982  
Bethesda, Maryland 20892-7982  
Home Page: <http://grants.nih.gov/grants/olaw/olaw.htm>

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare  
Rockledge One, Suite 360  
6705 Rockledge Drive  
Bethesda, Maryland 20817  
Telephone: (301) 496-7163  
Facsimile: (301) 402-7065

May 3, 2018

Re: Animal Welfare Assurance  
A3442-01 [OLAW Case 3A]

Dr. Bryan A. Wolf  
Executive Vice President and Chief Scientific Officer  
Children's Hospital of Philadelphia  
139 Abramson Research Building – (b) (4)  
3615 Civic Center Boulevard  
Philadelphia, PA 19104

Dear Dr. Wolf,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your April 30, 2018 letter reporting a deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals* at the Children's Hospital of Philadelphia. According to the information provided, OLAW understands that a mechanical failure of the heating, ventilation, and air conditioning (HVAC) system resulted in animal rooms ventilating at positive pressure to the hallway and having several animal rooms achieve temperatures up to 3 degrees F above the *Guide* parameters. The species exposed to the elevated temperatures were mice, rats, sheep, rabbits, dogs, and pigs, but no animals exhibited signs of heat stress. There was no serious deviation in humidity levels but room air exchange rates were below acceptable levels. All rodents are housed in individually ventilated cages which maintained proper air exchange rates and temperatures.

The corrective actions consisted of tying the system into another air handling unit which restored room temperatures and pressures, having animal care and veterinary staff closely monitor the animal rooms, having staff use one entrance and follow appropriate procedures, and ordering a new fan motor which should result in a full repair of the HVAC system.

Based on its assessment of this explanation, OLAW understands that measures have been implemented to correct this problem. OLAW concurs with the actions taken by the institution to comply with the PHS Policy on Humane Care and Use of Laboratory Animals.

Sincerely,

(b) (6)

Axel Wolff, M.S., D.V.M.  
Deputy Director  
Office of Laboratory Animal Welfare

cc: IACUC Chair



# Children's Hospital of Philadelphia

## RESEARCH INSTITUTE

3615 Civic Center Blvd. • Philadelphia, PA 19104 • 215-590-3800 • research.chop.edu

A3442-3A

Bryan A. Wolf, M.D. Ph.D.  
Executive Vice President & Chief Scientific Officer  
Edmond F. Notebaert Endowed Chair in Pediatric Research  
Executive Offices  
Suite 15123, The Roberts Center for Pediatric Research  
2716 South Street  
Philadelphia, PA 19146-2305  
T 215-590-2869 F 267-425-1081

April 30, 2018

Axel V. Wolff, MS, DVM  
Director, Division of Compliance Oversight  
Office of Laboratory Animal Welfare (OLAW)  
National Institutes of Health  
RKL 1, Suite 360, MSC 7982  
6705 Rockledge Drive  
Bethesda, MD 20892-7982

Dear Dr. Wolff:

Children's Hospital of Philadelphia (CHOP), in accordance with Assurance D16-00280 (A3442-01) and PHS Policy IV.F.3., submits this report of a deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals* regarding the following incident:

On 4/9/2018, the animal holding rooms in the Abramson Research Center building that were set to negative pressure (relative to the hallways) were observed running at positive pressure. This was immediately reported to the CHOP Facilities group. We were informed that a dedicated air handler unit (AHU) had a catastrophic mechanical failure, resulting in partial loss of HVAC capabilities to the vivarium. Within 72 hours, CHOP Facilities was able to successfully mitigate the situation by tying into another AHU. As of 4/12/2018, the holding rooms that required negative pressurization had been restored, albeit at a significantly lower airflow rate (<10 ACH). The Office of Research Safety worked closely with the Department of Veterinary Resources (DVR) and CHOP Facilities to re-route foot traffic to only one entrance and to ensure practices and procedures were being followed to maintain a safe work environment. A new fan motor has been ordered and is expected to arrive in 4-6 weeks.

During this incident, there were no animal deaths or illnesses. All animal holding rooms were monitored by the Animal Care Technicians, Veterinary Technicians, Facility Supervisors and Veterinarians, and notes were documented on the individual holding room door sheets.

All animal holding rooms are maintained towards the middle of the recommended dry bulb temperature ranges for a given species with minimal fluctuations (+/-2°F). From 4/9/2018 to 4/18/2018, deviations in temperatures were observed in nine animal holding rooms; these deviations were between 1°F-3°F (range from the Guide <68 or >74°F). There was one mouse room at 75°F, one sheep room at 76°F, two mice rooms at 76°F, and five mice rooms at 77°F. The dry bulb critical upper limit for small animals (mice, rats, etc.) is 79°F and this threshold was not reached in any of the holding rooms. The rabbit holding room reached a temperature of 72°F that is the upper critical temperature limit for that species.

No rabbits presented clinically with any signs of heat stress (e.g., hair loss, slobbers, etc.) and animals were monitored closely by the assigned Animal Care Technician, Facility Supervisor and Veterinarian. None of the other large animal holding rooms (dog, sheep, and swine) reached the upper critical temperature (81°F) during the incident, and there were no reported cases of animals experiencing discomfort or distress (e.g., panting, mouth breathing, excessive vocalizing, excessive water consumption) associated with the elevated room temperatures.

CHOP Facilities did provide DVR with portable fans should they be needed. However, given the time of year (spring) and the relatively mild ambient temperatures (45°-60°F) during this incident, there wasn't a need to use them or to prop open room doors to help manage heat loads in the holding rooms. There were no significant sustained deviations in humidity (<30 or >70%) observed.

During the time the HVAC system was compromised (4/9/2018) and the date the cross connect was installed (4/18/2018), the room air exchange rates for animal holding rooms in the facility were between 2.9–10.8 air changes/hour. All rodents are housed in Tecniplast individually ventilated cages, that provide up to 70-air changes/hour within the cage, ensuring the animals do not experience heat stress.

During the week of 4/16/2018, installation of a cross connect to another AHU was completed to provide more support to the animal facility. This intervention has provided the necessary static pressure to attain desired negative pressure in the animal holding rooms, and brought room temperatures to the preset ranges (68°F – 74°F).

A copy of this incident report with also be shared with AAALAC International.

CHOP is committed to quality animal care. We believe that these steps are appropriate to address the noncompliance issue that was identified. However, if you would like us to take any additional measures or require additional information, please do not hesitate to contact me, the Attending Veterinarian (Laike Stewart, DVM, DACLAM), or our IACUC Chair (Laurence C. Eisenlohr, VMD, PhD).

Sincerely,

(b) (6)

Bryan A. Wolf, M.D., Ph.D.  
Institutional Official  
Executive Vice President & Chief Scientific Officer

cc: AAALAC International

(b) (6)

Laurence C. Eisenlohr, VMD, PhD  
Laike Stewart, DVM, DACLAM

Wolff, Axel (NIH/OD) [E]

---

**From:** OLAW Division of Compliance Oversight (NIH/OD)  
**Sent:** Wednesday, May 02, 2018 7:28 AM  
**To:** (b) (6)  
**Cc:** OLAW Division of Compliance Oversight (NIH/OD)  
**Subject:** RE: Assurance #A3442-01 - Report of Deviation from the Guide

Thank you for this report. We will send a response soon.  
Axel Wolff

**From:** (b) (6)@email.chop.edu]  
**Sent:** Tuesday, May 01, 2018 6:28 PM  
**To:** OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>; Wolf, Bryan <WOLFB@email.chop.edu>; (b) (6)@email.chop.edu>; (b) (6)@email.chop.edu>; Eisenlohr, Laurence <eisenlc@pennmedicine.upenn.edu>; Stewart, Laiké S <STEWARTL3@EMAIL.CHOP.EDU>  
**Cc:** (b) (6)@email.chop.edu>  
**Subject:** Assurance #A3442-01 - Report of Deviation from the Guide

Dear OLAW,

Attached to this email please find a report of deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals*. We look forward to your review of this matter.

Thank you,

(b) (6)

(b) (6)



Report Compliance Concerns Anonymously  
To report compliance concerns anonymously,  
contact the Compliance Hotline 1-866-246-7456 or  
[www.mycompliancereport.com](http://www.mycompliancereport.com) (use "CHOP" as the access ID).