



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:

Office of Laboratory Animal Welfare
6700B Rockledge Drive, Suite 2500, MSC 6910
Bethesda, Maryland 20892-6910
Home Page: <http://grants.nih.gov/grants/olaw/olaw.htm>

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare
6700B Rockledge Drive, Suite 2500
Bethesda, Maryland 20817
Telephone: (301) 496-7163
Facsimile: (301) 480-3387

May 16, 2023

Re: Animal Welfare Assurance
A3272-01 [OLAW Case 2Z]

MEMORANDUM FOR RECORD

The Office of Laboratory Animal Welfare (OLAW) has determined that the incident described in the April 10, 2023 letter from [REDACTED] (b) (6) of People for the Ethical Treatment of Animals (PETA) regarding the NIH funded study (2R01HL091541-24A1) at Johns Hopkins University (JHU) was reported to OLAW by JHU March 8, 2023. This case is thereby administratively closed as of this date.

Sincerely,

Robyn M. Engel -S Digitally signed by Robyn M. Engel -S
Date: 2023.05.16 07:23:22 -0400

Robyn M. Engel, DVM
Animal Welfare Program Specialist
Office of Laboratory Animal Welfare



DEPARTMENT OF HEALTH & HUMAN SERVICES

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6700B Rockledge Drive, Suite 2500
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Telephone: (301) 496-7163
Facsimile: (301) 480-3387

May 16, 2023

Re: Animal Welfare Assurance
#A3272-01 [OLAW Case 2Z]

Dr. Denis Wirtz
Vice Provost for Research
Johns Hopkins University
(b) (4) Garland Hall
3400 N. Charles St.
Baltimore, MD 21218

Dear Dr. Wirtz,

Thank you for the information in your May 9, 2023 letter regarding A3272-01, OLAW case 2Z. The Office of Laboratory Animal Welfare (OLAW) requires no further correspondence about this issue. The case will be administratively closed.

Sincerely,

Robyn M. Engel -S Digitally signed by Robyn M. Engel -S
Date: 2023.05.16 07:24:56 -04'00'

Robyn M. Engel, DVM, DACLAM, DACAW
Animal Welfare Program Specialist
Office of Laboratory Animal Welfare

cc: IACUC Contact

A3272-2Z



May 9, 2023

Robyn M. Engel, DVM, DACLAM, DACAW
Animal Welfare Specialist
Office of Laboratory Animal Welfare
National Institute of Health
robyn.engel@nih.gov
6700B Rockledge Drive
Suite 2500, MSC 6910
Bethesda, Maryland 20892-6910

Re.: Animal Welfare Assurance #A3272-01, OLAW Case 2Z

Dear Dr. Engel,

I am writing in response to your letter, dated April 20, 2023, regarding a February 28, 2023 USDA APHIS Inspection Report. We previously provided OLAW with both a prompt report and a final report regarding the issue identified in the February 28, 2023 USDA APHIS Inspection Report. Please see the attached final report to Axel Wolff, M.S., D.V.M., dated March 8, 2023, to address your questions.

Please do not hesitate to contact me if you have additional questions.

Sincerely,

(b) (6)

Denis Wirtz, Ph.D.
Vice Provost for Research
Theophilus H. Smoot Professor in Engineering Science
Johns Hopkins University

Enclosure

Cc: Brendan Canning, Ph.D., Chair, Johns Hopkins University Animal Care and Use Committee
Eric Hutchinson, D.V.M., DACLAM, Attending Veterinarian and Assistant Vice Provost for Animal Research and Resources

Office of the Provost

265 Garland Hall 3400 N. Charles Street Baltimore, MD 21218 410-516-8070 <http://web.jhu.edu/administration/provost>



March 8, 2023

Axel Wolff, M.S., D.V.M.
Deputy Director
Office of Laboratory Animal Welfare
National Institutes of Health
Bethesda, Maryland 20892-6910

RE: Animal Welfare Assurance #A3272-01, OLAW Case 2V

Dear Dr. Wolff:

Please accept this letter as the final report on a finding of serious noncompliance with the Public Health Service (PHS) *Policy on Humane Care and Use of Laboratory Animals*. In accordance with federal guidelines, the circumstances in question were described to you in a prompt report from Dr. Brendan Canning, Chair of the Johns Hopkins University (JHU) Animal Care and Use Committee (ACUC) on February 13, 2023 (OLAW Case #A3272-2V).

The study in question involves dogs and is designed to assess the neurological consequences of hypothermic circulatory arrest (HCA). HCA is a life-saving procedure used in patients that permits corrective cardiovascular surgeries that is unfortunately associated with considerable morbidity and mortality. The goal of this NIH-funded research (2R01HL091541-24A1) performed by accomplished human cardiac surgeons is to develop better approaches for neurologic protection in patients. The experiments are described in a protocol that had been reviewed and approved by the JHU ACUC with several amendments to the protocol that aimed to refine the experimental approaches. This research and members of the research team have been active for many years at Johns Hopkins with no prior history of adverse events aside from the anticipated morbidity and mortality associated with the procedure.

After initial protocol approval, a total of 6 experiments were completed over the course of 5 months (August 2022-January 2023). Throughout this time, the research team worked closely with RAR veterinarians and with the ACUC to discuss case specifics and to refine their protocol narrative with specific attention to post-procedural monitoring and resuscitation. Despite these efforts, three animals failed to recover from the procedure and were euthanized after veterinary consultation and just one animal reached the planned experimental endpoint. The veterinarians alerted the ACUC and requested and received from the lab a commitment to halt further experimentation until an advisory meeting could be convened and the clinical circumstances discussed. On January 18, 2023, the PI and lab members met via zoom with veterinarians and the ACUC Chair. During the advisory meeting, unsuccessful experiments were discussed for process and possible noncompliance and compared to the process used with the animal that reached the experimental endpoint. This preliminary assessment and advisory meeting revealed no evidence of deviations from protocol narratives. The ACUC Chair in consultation with the veterinarians nevertheless concluded that the circumstances required a more formal review in the form of a compliance subcommittee meeting. The lab was informed of the need to convene a subcommittee. A prompt report was prepared and issued to OLAW based on the findings of the advisory

meeting. A compliance subcommittee was held on February 1, 2023. The fact finding completed by the subcommittee focused on the experience of lab personnel involved, the process for training new team members, the appropriateness of the animals used with a particular emphasis on body weight, an assessment of evidence for protocol deviation, post-procedural monitoring, documentation, and involvement of veterinarians.

The subcommittee voted unanimously that the research team was adequately skilled and that new members received appropriate training prior to involvement in the procedures and post-procedural monitoring. The subcommittee voted unanimously that no protocol deviations were apparent but that human error directly contributed to the death of one animal (bolus KCl administration instead of slow infusion to correct cardiac rhythm). Body weight (and more specifically low body weights/ small size) did not contribute to the poor outcomes. The weights of the 6 animals used varied minimally and the single successful experiment involved the smallest animal in the cohort. The subcommittee voted unanimously that post-procedural monitoring followed protocol narrative and that veterinary support was appropriately solicited when complications emerged. Documentation/ clinical records were thorough and complete. The subcommittee also voted unanimously that veterinary support would be most efficiently provided if veterinary staff would be present during the post-procedure/ recovery phase of the experiment.

In a follow up discussion, the ACUC Chair summarized the results of the subcommittee meeting for the PI. An amendment was solicited that would address the following:

1. Mandatory veterinary attending/ resident and/ or staff involvement during the post-procedural monitoring/ recovery phase of the experiment
2. Broadening of targeted body weights to facilitate completion of the experiments both safely and humanely and to better match with available supply
3. Refinement of the imaging plans to better accommodate monitoring

The findings of the subcommittee were presented at our next scheduled committee meeting. A quorum of committee members voted unanimously in support of the findings of the subcommittee and the corrective actions requested. A protocol amendment was submitted and approved on February 23, 2023. In parallel, the research team established a more formal chain of custody to prevent inappropriate dosing/ infusion rates of drugs and therapies. This included posting a medication chart in the surgical suite and a verification process for all administered reagents. An experiment was completed on February 28, 2023 and the animal recovered without complications. Although we will be closely monitoring outcomes in this study going forward, the ACUC considers this matter closed.

Please do not hesitate to contact me if you have additional questions.

Sincerely,

(b) (6)

Denis Wirtz, Ph.D.

Vice Provost for Research
Theophilus H. Smoot Professor in Engineering Science
Johns Hopkins University

cc:

(b) (6)

Brendan J. Canning, Ph.D., Chair, Johns Hopkins University Animal Care and Use Committee,
Eric Hutchinson, D.V.M., DACLAM, Attending Veterinarian and Assistant Vice Provost for Animal
Research and Resources, Johns Hopkins University

McCoy, Devora (NIH/OD) [E]

From: McCoy, Devora (NIH/OD) [E]
Sent: Wednesday, May 10, 2023 10:50 AM
To: OLAW Division of Compliance Oversight (NIH/OD)
Subject: FW: Response to NIH re OLAW Case 2Z

Follow Up Flag: Follow up
Flag Status: Flagged

From: Engel, Robyn (NIH/OD) [E] <robyn.engel@nih.gov>
Sent: Wednesday, May 10, 2023 7:24 AM
To: (b) (6)
Cc: Denis Wirtz <wirtz@jhu.edu>; (b) (6) Brendan Canning <bjc@jhmi.edu>; Eric Hutchinson <ehutchi8@jhmi.edu>; McCoy, Devora (NIH/OD) [E] <devora.mccoy@nih.gov>
Subject: RE: Response to NIH re OLAW Case 2Z

Dear (b) (6)

Thank you for your response. We will review it and get back to you soon.

Regards,

Robyn Engel, DVM, DACLAM, DACAW
Animal Welfare Program Specialist
Division of Assurances
Office of Laboratory Animal Welfare
National Institutes of Health
301-594-5204
robyn.engel@nih.gov

Disclaimer: Please note that this message and any of its attachments are intended for the named recipient(s) only and may contain confidential, protected or privileged information that should not be distributed to unauthorized individuals. If you have received this message in error, please contact the sender.

From: (b) (6)
Sent: Tuesday, May 9, 2023 4:20 PM
To: Engel, Robyn (NIH/OD) [E] <robyn.engel@nih.gov>
Cc: Denis Wirtz <wirtz@jhu.edu>; (b) (6) Brendan Canning <bjc@jhmi.edu>; Eric Hutchinson <ehutchi8@jhmi.edu>
Subject: [EXTERNAL] Response to NIH re OLAW Case 2Z

Good afternoon,

On behalf of Denis Wirtz, please find our response to OLAW Case 2Z.



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FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare
6700B Rockledge Drive, Suite 2500
Bethesda, Maryland 20817
Telephone: (301) 496-7163
Facsimile: (301) 480-3387

April 20, 2023

Re: Animal Welfare Assurance
#A3272-01 [OLAW Case 2Z]

Dr. Denis Wirtz
Vice Provost for Research
Johns Hopkins University
(b) (4) Garland Hall
3400 N. Charles St.
Baltimore, MD 21218

Dear Dr. Wirtz,

The Office of Laboratory Animal Welfare (OLAW) has received from People for the Ethical Treatment of Animals (PETA) allegations of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals (PHS Policy) at Johns Hopkins University regarding a USDA APHIS Inspection Report dated February 28, 2023 (see enclosed). It is possible that the incident involving potassium chloride administration to a dog should have been reported directly to our office as required by PHS Policy per your commitment to do so in your Animal Welfare Assurance.

Please instruct the IACUC, avoiding any conflict of interest, to send a report, signed by you as the Institutional Official, to the following OLAW email inbox: OLAWdco@od.nih.gov and provide a description of the occurrences and all corrective/preventive actions. Please have them consider whether any of the occurrences represented programmatic failures. Please also include information regarding any PHS/NSF/DHHS/NASA funding of activities related to the occurrences, including grant or contract numbers. If other reportable non-compliances have occurred during this period, please also include them with the report.

We appreciate your cooperation and ask that you please provide the requested information **by May 19, 2023**. Please contact me, robyn.engel@nih.gov, with any questions.

Sincerely,

Robyn M. Engel -S Digitally signed by Robyn M. Engel -S
Date: 2023.04.20 07:42:22 -0400

Robyn M. Engel, DVM, DACLAM, DACAW
Animal Welfare Program Specialist
Office of Laboratory Animal Welfare

Enclosure
cc: IACUC Contact



April 10, 2023

Brent C. Morse, D.V.M.
Director
Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health

Via e-mail: MorseB@mail.nih.gov

Dear Dr. Morse:

Thank you in advance for your time. I'm writing on behalf of People for the Ethical Treatment of Animals—PETA entities have more than 9 million members and supporters worldwide. Based on the enclosed U.S. Department of Agriculture (USDA) inspection report concerning the death of a dog at Johns Hopkins University (JHU) that led to a “critical” violation, we believe this incident may also constitute a violation of the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals. **As a result, we urge your office to investigate this disturbing matter and take all appropriate actions to hold JHU accountable for its noncompliance.**

In 1985, members of Congress from both sides of the aisle worked together to strengthen protections for animals in laboratories in order to address deep-seated ethical concerns held by the American public regarding the use of animals in experiments. Polling by the Pew Research Center found that more than 50% of U.S. adults oppose the use of animals in experiments,¹ and other surveys suggest that the support of the shrinking group that continues to accept animal experimentation is contingent on the existence and enforcement of stringent regulations aimed at protecting animals.²

In FY 2021 and FY 2022, JHU received \$824,856,274 and \$839,852,301, respectively, from the National Institutes of Health (NIH).^{3,4} According to the agency, an estimated 47% of those funds supported projects that involved experiments on animals.⁵ Institutions that receive funding from PHS agencies like NIH are required to comply with PHS Policy. Failure to do so violates not

¹Strauss M. Americans are divided over the use of animals in scientific research. Pew Research Center. August 16, 2018. Accessed April 10, 2023.

<https://www.pewresearch.org/fact-tank/2018/08/16/americans-are-divided-over-the-use-of-animals-in-scientific-research/>

²Ormandy EH, Schuppli CA. Public attitudes toward animal research: A review. *Animals (Basel)*. 2014;4(3):391-408. June 30, 2014. doi:10.3390/ani4030391

³NIH. NIH awards by location & organization. JHU. Fiscal Year 2021. Accessed April 10, 2023. <https://report.nih.gov/award/index.cfm?ot=&fy=2021&state=&ic=&fm=&orgid=4134401&distr=&rfa=&om=n&pid=&view=state>

⁴NIH. NIH awards by location & organization. JHU. Fiscal Year 2022. Accessed April 10, 2023. <https://report.nih.gov/award/index.cfm?ot=&fy=2022&state=&ic=&fm=&orgid=4134401&distr=&rfa=&om=n&pid=&view=state>

⁵National Library of Medicine. 3. Emerging legal trends impacting animal research. Accessed April 10, 2023. <https://www.ncbi.nlm.nih.gov/books/NBK100123/>

PEOPLE FOR
THE ETHICAL
TREATMENT
OF ANIMALS

Washington
1536 16th St. N.W.
Washington, DC 20036
202-483-PETA

Los Angeles
2154 W. Sunset Blvd.
Los Angeles, CA 90026
323-644-PETA

Norfolk
501 Front St.
Norfolk, VA 23510
757-622-PETA

Info@peta.org
PETA.org

Entities

- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Switzerland
- PETA Netherlands
- PETA Foundation (U.K.)

only federal animal welfare guidelines and policies but also public expectations that facilities receiving tax dollars to use animals—who are capable of experiencing pain, distress, love, and companionship and value their lives just as we value ours—should at least observe minimal animal welfare standards.

Sincerely yours,

(b) (6)



Enclosure

USDA inspection report of JHU, dated February 28, 2023



Inspection Report

Johns Hopkins University
720 Rutland Avenue
(b) (4)
Baltimore, MD 21205

Customer ID: **81**
Certificate: **51-R-0006**
Site: 003
JOHNS HOPKINS UNIVERSITY,
THE

Type: ROUTINE INSPECTION
Date: 28-FEB-2023

2.31(d)(8) Critical

Institutional Animal Care and Use Committee (IACUC).

Revised protocol A dated 12/20/21 indicated that potassium chloride (KCl) would be administered at rate of 40mEq 15 minutes into cooling to effect. However, study records indicate Dog #2 was administered an intravenous bolus of KCl and went into cardiac arrest. The laboratory staff attempted to provide care and called the RAR veterinarian on call. But, the animal expired.

The route of administration for the potassium chloride was not included in the approved protocol. Proposed activities and proposed significant changes in ongoing activities that have been approved by the IACUC may be subject to further appropriate review and approval by officials of the research facility.

This has been corrected by the IACUC through a corrective action plan and a protocol amendment.

This inspection and exit interview were conducted with facility representatives.

This inspection was conducted 02/28/2023 to 03/03/2023.

Prepared By: [Redacted] (b) (6)
Title: [Redacted]

Date:
13-MAR-2023

Received by Title: Attending Veterinarian

Date:
13-MAR-2023



Inspection Report

Additional Inspectors:

[Redacted] (b) (6)

Prepared By:

[Redacted] (b) (6)

Date:
13-MAR-2023

Title:

Received by Title: Attending Veterinarian

Date:
13-MAR-2023



Species Inspected

Cust No	Cert No	Site	Site Name	Inspection
81	51-R-0006	003	JOHNS HOPKINS UNIVERSITY, THE	28-FEB-2023

Count	Scientific Name	Common Name
000064	<i>Mesocricetus auratus</i>	SYRIAN / GOLDEN HAMSTER (COMMON PET/RESEARCH TYPE)
000007	<i>Canis lupus familiaris</i>	DOG ADULT
000042	<i>Cavia porcellus</i>	DOMESTIC GUINEA PIG
000218	<i>Callithrix jacchus</i>	COMMON MARMOSET
000083	<i>Macaca mulatta</i>	RHESUS MACAQUE
000011	<i>Macaca nemestrina</i>	PIG-TAILED MACAQUE
000042	<i>Sus scrofa domestica</i>	DOMESTIC PIG / POTBELLY PIG / MICRO PIG
000054	<i>Oryctolagus cuniculus</i>	DOMESTIC RABBIT / EUROPEAN RABBIT
000029	<i>Rousettus aegyptiacus</i>	EGYPTIAN FRUIT BAT
000072	<i>Eptesicus fuscus</i>	BIG BROWN BAT
000032	<i>Chinchilla lanigera</i>	CHINCHILLA (DOMESTICATED)
000026	<i>Mustela putorius furo</i>	DOMESTIC FERRET
000002	<i>Felis silvestris catus</i>	CAT ADULT
000035	<i>Cricetulus griseus</i>	CHINESE HAMSTER
000067	<i>Carollia perspicillata</i>	SEBA'S SHORT-TAILED BAT
000012	<i>Papio anubis</i>	OLIVE BABOON
000006	<i>Ovis aries aries</i>	SHEEP INCLUDING ALL DOMESTIC BREEDS
000012	<i>Papio hamadryas</i>	HAMADRYAS BABOON
000022	<i>Macaca fascicularis</i>	CRAB-EATING MACAQUE / CYNOMOLGUS MONKEY
000836	Total	



United States Department of Agriculture
Animal and Plant Health Inspection Service

Customer: 81
Inspection Date: 28-Feb-2023

Species Inspected

<u>Cust No</u>	<u>Cert No</u>	<u>Site</u>	<u>Site Name</u>	<u>Inspection</u>
81	51-R-0006	003	JOHNS HOPKINS UNIVERSITY, THE	28-FEB-2023

McCoy, Devora (NIH/OD) [E]

From: Morse, Brent (NIH/OD) [E]
Sent: Wednesday, April 12, 2023 8:33 AM
To: McCoy, Devora (NIH/OD) [E]
Subject: FW: For Dr. Brent Morse, from PETA – AWA violation complaint
Attachments: 2023-04-10-complaint-to-olaw-re-jhu-awa-violation-dog.pdf

Please use this email and attached letter to open a new case. You can assign it to Dr. Engel.

Brent C. Morse, DVM, DAACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health

From: Morse, Brent (NIH/OD) [E]
Sent: Wednesday, April 12, 2023 8:30 AM
To: [REDACTED] (b) (6)
Subject: RE: For Dr. Brent Morse, from PETA – AWA violation complaint

Good morning,

This email is to acknowledge receipt of your message and attached letter. OLAW will review the information and take any action required by the PHS Policy.

Sincerely, Brent Morse

Brent C. Morse, DVM, DAACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health

From: [REDACTED] (b) (6)
Sent: Monday, April 10, 2023 2:51 PM
To: Morse, Brent (NIH/OD) [E] <morseb@mail.nih.gov>
Subject: [EXTERNAL] For Dr. Brent Morse, from PETA – AWA violation complaint
Importance: High

April 10, 2023

Brent C. Morse, D.V.M.
Director
Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health

Dear Dr. Morse,

Please find enclosed a letter on behalf of People for the Ethical Treatment of Animals—PETA entities have more than 9 million members and supporters worldwide—regarding a critical violation of the Animal Welfare Act at Johns Hopkins University, which is corroborated by the enclosed inspection report issued by the United States Department of Agriculture.

Thank you for your consideration of this important issue, and we look forward to your response.

Sincerely yours,

(b) (6)

(b) (6)