



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) 402-7065

May 1, 2019

Re: Animal Welfare Assurance
#A3111-01 (OLAW Case H)

Eric Nestler, M.D., Ph.D.
Dean for Academic Affairs
Icahn School of Medicine at Mount Sinai
Icahn Building Room (b) (4)
1425 Madison Avenue
New York, NY 10029-6574

Dear Dr. Nestler,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your April 22, 2019 letter reporting an adverse event within the animal care and use program at the Icahn School of Medicine at Mount Sinai. Your letter supplements the prompt preliminary email report to OLAW sent February 4, 2019. According to the information provided it is understood that on January 30, 2019 six guinea pigs died when a cooling compressor failed that serviced an environmental chamber housing the animals. Ambient temperature within the chamber rose to 41.7 degrees Celsius resulting in hyperthermia and the death of the animals. The PI self-reported the incident and was instructed to not use the chamber until the IACUC considered the incident and made recommendations regarding future use of the repaired chamber. The animals were assigned to a PHS-funded activity.

The corrective and preventive actions consisted of the following:

- The chamber must be retrofitted with a remote alarm system capable of detecting temperature changes within an appropriately restricted safety range.
- When triggered, the alarm system must have the capability to immediately send sequential alert notifications to a list of persons, including PIs and their laboratory staff, as well as supervisors of the animal facilities.
- The proper function of the alarm system must be tested before its first use, and periodically thereafter. Records of such testing must be maintained and provided in a timely fashion to Supervisors of the animal facilities.
- PIs must establish Standard Operating Procedures for training of personnel on the use of the chambers, monitoring of the animals and for responding to alarms.
- CCMS personnel will also monitor the chambers.
- The environmental chambers must to be subjected to regular preventive maintenance. Copies of the service records must be promptly provided to the CCMS Director and to Supervisors of the animal facilities.
- During semiannual inspections of the animal facilities the IACUC will conduct interviews with the chamber users and inspect all the relevant maintenance documents.

It is understood, and noteworthy, that the investigators were very cooperative with the IACUC and had preemptively started the retrofitting process for the remote alarm before being formally requested to do so by the IACUC. It is further understood that the USDA APHIS VMO has been notified of the incident.

OLAW believes that the corrective and preventive measures put in place by the Icahn School of Medicine at Mount Sinai are consistent with the provisions of the PHS Policy on Humane Care and Use of Laboratory Animals. We appreciate being informed of this matter and find no cause for further action by this office.

Sincerely,

(b) (6)

Brent C. Morse, DVM
Director
Division of Compliance Oversight
Office of Laboratory Animal Welfare

cc: IACUC Chair
Robert Gibbens, D.V.M., USDA-APHIS-AC

Eric J. Nestler, M.D., Ph.D.
Institutional Official
Dean for Academic and Scientific Affairs
Icahn School of Medicine at Mount Sinai
Icahn Building, Room (b) (4)
1425 Madison Avenue
New York, NY 10029
Email: eric.nestler@mssm.edu
Telephone: (b) (6)

Re: Final Report on Adverse Event

Date: April 22, 2019

To: **Office of Laboratory Animal Welfare (OLAW)**
National Institutes of Health
Venita B. Thornton, DVM, MPH
CAPT - USPHS Commissioned Corps.
Senior Assurance Officer
&
United States Department of Agriculture
Dr. John F. Lopinto, DVM
Veterinary Medical Officer
USDA-APHIS- REAC

This is a final report regarding an adverse event that resulted in the death of six guinea pigs. Dr. Janice Gates-Porter, Director of the IACUC office of the Icahn School of Medicine at Mount Sinai, provided a preliminary notice of such event to your office by phone on February 4, 2019.

Timetable of events:

- 1) On January 30, 2019, (b) (6) notified by phone and e-mail the IACUC Chair, Dr. Giorgio Martinelli, and the Director of CCMS, Dr. Jonathan Cohen, that an adverse event resulting in the death of six guinea pigs had occurred that day. The animals were housed in an environmental chamber used to study the effects of temperature and humidity on the transmission of Influenza viruses. The preliminary assessment by Dr. Nicole Bouvier, the Principal Investigator responsible for the study, was that the adverse event was caused by the failure of the cooling unit of the chamber, resulting in a rise of temperature in the enclosure that went undetected and eventually resulted in the death of the animal. The protocol related to this incident is:
Principal Investigator: Nicole M. Bouvier, MD
Protocol #: IACUC-2014-0178, GCO # 13-0870 CONT

Title: "Quantifying Environmental Variables Affecting Airborne Influenza Transmission"

Funding Source: NIH

- 2) The PI suspended immediately the use of the chamber, and filed a written Adverse Event report with the IACUC on February 1, 2019.
- 3) On February 5, 2019, Dr. Bouvier notified via email the IACUC Chair and the Director of CCMS that a service technician from the Cryostar Company had inspected the chamber and confirmed that the compressor of the refrigeration unit of the chamber had indeed seized and failed due to a loss of lubrication. The loss of the cooling component of the chamber resulted in a temperature rise in to 41.7 °C and death of the animals due to hyperthermia.
- 4) On the same day, Drs. Martinelli and Cohen formally notified Dr. Bouvier that she or other users could not resume the use of the repaired chamber until the IACUC had considered the incident at a convened meeting and made recommendation as to conditions for the future use of the chamber. Dr. Bouvier was also informed that she could continue other studies not requiring the use of the environmental chamber.

IACUC review of the incident and corrective plans:

On February 14, 2019 the IACUC reviewed the incident at a convened meeting and determined that the following conditions and requirements had to be met before the repaired chamber could be used again:

- i) The chamber must be retrofitted with a remote alarm system capable of detecting temperature changes within an appropriately restricted safety range.
- ii) When triggered, the alarm system must have the capability to immediately send sequential alert notifications to a list of persons, including PIs and their laboratory staff, as well as supervisors of the animal facilities.
- iii) The proper function of the alarm system must be tested before its first use, and periodically thereafter. Records of such testing must be maintained and provided in a timely fashion to Supervisors of the animal facilities.
- iv) PIs must establish Standard Operating Procedures for training of personnel on the use of the chambers, monitoring of the animals and for responding to alarms.
- v) CCMS personnel will also monitor the chambers.
- vi) The environmental chambers must to be subjected to regular preventive maintenance. Copies of the service records must be promptly provided to the CCMS Director and to Supervisors of the animal facilities.
- vii) During semiannual inspections of the animal facilities the IACUC will conduct interviews with the chamber users and inspect all the relevant maintenance documents.

At meetings attended by the IACUC Chair, the Director of the animal facilities and Dr. Bouvier noted that she and her staff had been emotionally impacted by the event, and were profoundly sorry for the loss of the animals. Drs. Bouvier and ^{(b) (6)} (a second user of the

chamber not involved in this incident) were also very cooperative with the IACUC and CCMS, and agreed to implement measures to avoid any future repetition of this incident. In this context, the IACUC was pleased that Investigators anticipated the IACUC's requests and started the remote alarm retrofitting process even before being formally requested to do so by the IACUC.

Since the chambers had functioned flawlessly for years and had been regularly serviced, this was a truly unfortunate event due to unexpected equipment failure. We are confident that the installation of the remote alarm system and new SOPs will prevent the repetition of future accidents.

Please do not hesitate to contact me if you require additional information.

Sincerely,

Eric Nestler

Digitally signed by Eric Nestler
DN: cn=Eric Nestler, o=Icahn School
of Medicine at Mount Sinai, ou,
email=eric.nestler@mssm.edu, c=US
Date: 2019.04.22 11:51:35 -05'00'

Eric J. Nestler, M.D., Ph.D.
Institutional Official
Dean for Academic and Scientific Affairs

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Wednesday, April 24, 2019 11:35 AM
To: Janice.Gates-Porter@mssm.edu
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW: Final Report of ISMMS IACUC Review of Adverse Event -Bouvier - (Assurance #A3111-01)

Thank you for providing this final report. We will send an official response soon.

Best regards, Brent Morse

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

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: Gates-Porter, Janice [<mailto:Janice.Gates-Porter@mssm.edu>]
Sent: Monday, April 22, 2019 2:12 PM
To: Thornton, Venita (NIH/OD) [E] <thorntov@od.nih.gov>; Laboratory Animal Welfare, Office of (NIH/OD) <OLAW@OD.NIH.GOV>
Cc: Cohen, Jonathan <jonathan.cohen@mssm.edu>; Martinelli, Giorgio <giorgio.martinelli@mssm.edu>; (b) (6)

(b) (6)

(b) (6)

Subject: Fwd: OLAW: Final Report of ISMMS IACUC Review of Adverse Event -Bouvier

Dear Dr. Thornton,

The attached letter constitutes the final report of the Icahn School of Medicine at Mount Sinai (ISMMS) IACUC review of the adverse event initially reported on February 4, 2019 regarding the environment chambers belonging to Dr. Nicole Bouvier. The letter has also been forwarded to the USDA.

Regards,

Janice

Janice Gates-Porter, PhD, MOAM, MBA, CM®
Notary
BLS Certified

Director
IACUC Operations
Icahn School of Medicine at Mt. Sinai
1 Gustave L. Levy Place
PO Box 1155
New York, NY 10029
Phone: (b) (6)
Facsimile: (b) (6)
Email: janice.gates@mssm.edu
IACUC Office email: iacuc@mssm.edu

Confidentiality Notice: This e-mail and its attachments may contain Mount Sinai Health System proprietary information that is privileged, confidential or subject to copyright belonging to Mount Sinai Health System. This e-mail is intended solely for the use of the individual or entity to which it is addressed. If you are not the intended recipient of this e-mail, or the employee or agent responsible for delivering this e-mail to the intended recipient, you are hereby notified that any dissemination, distribution, copying or action taken in relation to the contents of and attachments to this e-mail is strictly prohibited and may be unlawful. If you have received this e-mail in error, please notify the sender immediately and permanently delete the original and any copy of this e-mail and any printout.

A3111-H

Ward, Joan (NIH/OD) [E]

From: Ward, Joan (NIH/OD) [E] on behalf of Laboratory Animal Welfare, Office of (NIH/OD)
Sent: Monday, February 4, 2019 12:02 PM
To: 'Gates-Porter, Janice'; Thornton, Venita (NIH/OD) [E]; Laboratory Animal Welfare, Office of (NIH/OD)
Cc: Martinelli, Giorgio
Subject: RE: Initial report of an Adverse Event

Thank you for this prompt report Ms. Gates-Porter. We will open a compliance case file and await further information.

Regards,
Joan

*Joan Ward
Program Specialist
Office of Laboratory Animal Welfare
National Institutes of Health
6700B Rockledge Dr., Suite 2500
Bethesda, MD 20892
301-496-7163
wardjoa@od.nih.gov*

From: Gates-Porter, Janice <Janice.Gates-Porter@mssm.edu>
Sent: Monday, February 4, 2019 11:01 AM
To: Thornton, Venita (NIH/OD) [E] <thorntov@od.nih.gov>; Laboratory Animal Welfare, Office of (NIH/OD) <OLAW@OD.NIH.GOV>
Cc: Martinelli, Giorgio <giorgio.martinelli@mssm.edu>
Subject: Initial report of an Adverse Event
Importance: High

To: Venita B. Thornton, DVM, MPH
CAPT - USPHS Commissioned Corps.
Senior Assurance Officer
Office of Laboratory Animal Welfare (OLAW)
National Institutes of Health

Dear Dr. Thornton,
On behalf of Institutional Animal Care and Use Committee, this email constitutes a preliminary report of an adverse event involving the death of six guinea pigs possibly due to a malfunction in an environmental chamber in which they were housed.
The protocol related to this incident is:
Principal Investigator: Nicole M. Bouvier, MD
Protocol #: IACUC-2014-0178, GCO # 13-0870 CONT
Title: "Quantifying Environmental Variables Affecting Airborne Influenza Transmission"
Funding Source: NIH

The IACUC is currently investigating the matter and will provide a final report at the conclusion of its investigation.

Regards,

Janice Gates-Porter, PhD, MOAM, MBA, CM®

Notary

BLS Certified

Director

IACUC Operations

Icahn School of Medicine at Mt. Sinai

1 Gustave L. Levy Place

PO Box 1155

New York, NY 10029

Phone: (b) (6)

Facsimile: (b) (6)

Email: janice.gates@mssm.edu

IACUC Office email: iacuc@mssm.edu

Institutional Assurance # D16-00069 (A3111-01)

NEXT PTO:



Confidentiality Notice: This e-mail and its attachments may contain Mount Sinai Health System proprietary information that is privileged, confidential or subject to copyright belonging to Mount Sinai Health System. This e-mail is intended solely for the use of the individual or entity to which it is addressed. If you are not the intended recipient of this e-mail, or the employee or agent responsible for delivering this e-mail to the intended recipient, you are hereby notified that any dissemination, distribution, copying or action taken in relation to the contents of and attachments to this e-mail is strictly prohibited and may be unlawful. If you have received this e-mail in error, please notify the sender immediately and permanently delete the original and any copy of this e-mail and any printout.