DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

Office of Laboratory Animal Welfare
Bethesda, Maryland 20892

Telephone: (301) 496-7163
Home Page: https://olaw.nih.gov

April 22, 2026

Re: Animal Welfare Assurance
A3012-01 [OLAW Case 1P]

Kenneth J. Fridley, Ph.D.
Vice President for Research & Economic Development
Eastern Virginia Medical School
735 Fairfax Avenue
Waitzer Hall, (b) (4)
Norfolk, VA 23507

Dear Dr. Fridley,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your April 7, 2026, letter reporting an adverse event at Eastern Virginia Medical School (EVMS). This letter had not been preceded by a preliminary report to OLAW. It is noted that the research project is not supported by PHS funding.

According to the information provided, this Office understands that the Eastern Virginia Medical School Institutional Animal Care and Use Committee (IACUC) determined that an adverse event occurred with respect to conditions that jeopardized the health/well-being of animals resulting in harm/death to animals. The final report states on March 12, 2026, a senior research assistant was performing an approved procedure on a rat when a malfunction occurred. It is stated that a precision vaporizer using isoflurane delivered in oxygen via a nose cone to maintain anesthesia. The malfunction caused the nose cone to ignite, resulting in the animal's neck and facial hair being burned. In response, the gas supply was shut off, and the animal was immediately removed from the stereotaxic equipment and placed in an induction chamber charged with 5% isoflurane to maintain anesthetic sedation. Next, the animal was placed in the carbon dioxide induction chamber and was successfully euthanized. Per the report, the animal never regained consciousness, and death was confirmed by the Attending Veterinarian (AV).

An investigation into the incident was conducted. The root cause was determined to be a leak in the anesthesia supply tubing, and it is stated that there was no user error or negligence, nor was there a defect in the vaporizer or cautery pen used for the procedure. It is stated that there was no study design flaw present. The report notes that the IACUC acknowledged that the research model is well established by the research team, and the research staff have performed the surgical procedure numerous times for many years without incident.

In response to the incident, the IACUC approved the following corrective action plan submitted by the Principal Investigator:

- Order and install replacement parts for the precision vaporizer. The machine will be checked to confirm proper functionality prior to use. The AV will verify the equipment check and will be present for its first use following installation of the replacement parts.

- Order and install a new nose cone and supply tubing. Leak testing of the tubing will be performed routinely prior to using the vaporizer system.
- The anesthesia equipment setup will be reviewed and approved by the AV or an AV designee prior to resuming surgical procedures.
- The investigative team will consult with the AV regarding precautions related to use of the cautery pen.
- The PI will reinforce standard operating procedures and ensure that all personnel remain fully compliant with established protocols.
- Where feasible, the investigative team will transition to acid etching techniques to reduce reliance on cautery.

Based on its assessment of this explanation, OLAW understands that Eastern Virginia Medical School has implemented appropriate measures to correct and prevent recurrence of these problems and is now compliant with provisions of the PHS Policy.

We appreciate being informed of these matters and find no cause for further action by this Office.

Sincerely,

JACQUELYN T. TUBBS -S
Digitally signed by JACQUELYN T. TUBBS -S
Date: 2026.04.22 13:54:06 -04'00'

Jacquelyn Tubbs, DVM, DACLAM
Acting Director
Division of Compliance Oversight
Office of Laboratory Animal Welfare

cc: IACUC Contact

April 7, 2026

Jacquelyn T. Tubbs, D.V.M., DACLAM
Acting Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare (OLAW)
National Institutes of Health (NIH)
6705 Rockledge Drive
Suite 360, MSC 7982
Bethesda, MD 20892-7982

Dear Dr. Tubbs:

RE: Reportable Incident
Macon & Joan Brock Virginia Health Sciences at Old Dominion University (VHS), Norfolk, Virginia
Animal Welfare Assurance Number D16-00007

In accordance with PHS Policy IV.F.3 and OLAW NOT-OD-25-148 guidance on prompt reporting, we are writing to inform OLAW of an incident that was preliminarily reported to the IACUC Office on March 17, 2026. The finalized incident report was reviewed by the Institutional Animal Care and Use Committee (IACUC) on April 2, 2026. The experimental procedure was performed as outlined in the IACUC-approved protocol, entitled "Impact of flight stressors on neural network cohesion and cognition. Incorporating: "CBS Supplement Sex Difference." The project is supported by institutional funds.

INCIDENT: On March 11, 2026, a senior research assistant was using a Bovine cautery pen during a craniotomy survival surgery on a rat when a malfunction occurred approximately 30 minutes into the procedure. A precision vaporizer using isoflurane (ISO) delivered in oxygen (O_2) was connected to the nose cone to maintain anesthesia. The malfunction caused the nose cone to ignite and the animal's neck and facial hair were burned. Immediately, the gas supply to the nose cone was turned off and the animal was swiftly removed from the stereotaxic equipment and transferred into an induction chamber charged with 5% ISO to maintain anesthetic sedation. After approximately 1-2 minutes, the animal was transferred from the ISO induction chamber into a carbon dioxide (CO_2) induction chamber and exposed to CO_2 gas at 30-70% of the chamber volume/min for approximately 5-10 minutes to ensure complete asphyxiation/euthanasia. The animal was fully anesthetized during the incident and never regained consciousness. Death was confirmed by the Attending Veterinarian (AV).

The investigative team thoroughly assessed the situation and conducted a rigorous inspection of all equipment used during the procedure. They concluded that the incident was attributed to a leak in the anesthesia supply tubing and there was no user error or negligence, no defect in the vaporizer or cautery pen, and no study design flaw.

The IACUC acknowledges that the research model is well-established by this investigative team and laboratory personnel have performed the surgical procedure numerous times over many years without incident. Post-approval monitoring (PAM) observations have confirmed performance proficiency. The IACUC concluded that the incident was an isolated and most unfortunate accident.

CORRECTIVE ACTION PLAN: The IACUC has approved the following plan proposed by the Principal Investigator (PI) to mitigate future risk:

1. Order and install replacement parts for the precision vaporizer. The machine will be checked to confirm proper functionality prior to use. The AV will verify the equipment check and will be present for its first use following installation of the replacement parts.
2. Order and install a new nose cone and supply tubing. Leak testing of the tubing will be performed routinely prior to using the vaporizer system.
3. The anesthesia equipment setup will be reviewed and approved by the AV or an AV designee prior to resuming surgical procedures.
4. The investigative team will consult with the AV regarding precautions related to use of the cautery pen.
5. The PI will reinforce standard operating procedures and ensure that all personnel remain fully compliant with established protocols.
6. Where feasible, the investigative team will transition to acid etching techniques to reduce reliance on cautery.

In the report to the IACUC, the PI expressly stated that he and his team take this incident very seriously and have implemented steps to minimize the likelihood of a recurrence. They will continue to work closely with the AV and the veterinary care staff to ensure that all procedures meet institutional standards. The IACUC is committed to ensuring the humane care and use of animals involved in its animal care and use program and to maintaining compliance with PHS Policy.

Please do not hesitate to follow up should you have questions and/or concerns regarding this matter.

Sincerely,

Kenneth Fridley
Digitally signed by Kenneth Fridley
Date: 2026.04.13 17:58:47 -04'00'

Kenneth J. Fridley, Ph.D.
Vice President for Research & Economic Development
Institutional Official
Old Dominion University
kfridley@odu.edu

David Mu
Digitally signed by David Mu
Date: 2026.04.11 17:50:52 -04'00'

David Mu, Ph.D.
Associate Dean for Research Administration
OLAW Assurance Official
Macon & Joan Brock Virginia Health Sciences at Old Dominion University
mud@odu.edu

KJF/DM/ (b)

cc: Principal Investigator, VHS
Department Chair, VHS
Sr. Associate Vice President for Research, VHS
IACUC Chair, VHS
Attending Veterinarian, VHS

Ware, Teagan (NIH/OD) [E]

From: Tubbs, Jacquelyn (NIH/OD) [E]
Sent: Tuesday, April 14, 2026 12:22 PM
To: (b) (6).; OLAW Division of Compliance Oversight (NIH/OD)
Cc: Fridley, Kenneth J.; Mu, David; (b) (6), (b) (6)
Subject: RE: Reportable Incident; PHS Assurance Number D16-00007; Macon & Joan Brock VHS @ ODU

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

Thank you for the report. We will send an official response soon.

Sincerely,

Jacquelyn Tubbs, DVM, DACLAM
Acting Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
Jacquelyn.tubbs@nih.gov

From: (b) (6)
Sent: Tuesday, April 14, 2026 12:19 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: Tubbs, Jacquelyn (NIH/OD) [E] <jacquelyn.tubbs@nih.gov>; Fridley, Kenneth J. <kfridley@odu.edu>; Mu, David <mud@odu.edu>; (b) (6)
Subject: [EXTERNAL] Reportable Incident; PHS Assurance Number D16-00007; Macon & Joan Brock VHS @ ODU
Importance: High

Dear Dr. Tubbs:

RE: Reportable Incident
Macon & Joan Brock Virginia Health Sciences at Old Dominion University (VHS), Norfolk, VA
Animal Welfare Assurance Number D16-00007

The attached report is sent on behalf of the Macon & Joan Brock Virginia Health Sciences at Old Dominion University (VHS), Kenneth J. Fridley, Ph.D., ODU Institutional Official and David Mu, Ph.D., VHS OLAW Assurance Official. The

Principal Investigator is aware of the report. He and his department chair will be provided a copy of the fully executed document under separate cover.

Please feel free to contact me should you have any questions and/or concerns regarding this matter.

Kindest regards,

(b) (6)