



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

February 7, 2020

Re: Animal Welfare Assurance  
#A3596-01 (OLAW Case 3Q)

Dr. Harry Orf  
Senior Vice President for Research  
Massachusetts General Hospital  
(b) (4) 55 Fruit Street  
Boston, MA 02114

Dear Dr. Orf,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your February 4, 2020 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Massachusetts General Hospital. According to the information provided, OLAW understands that inadequate analgesia was provided to a pig following bowel surgery. The pig had received pre-surgical analgesia and was given analgesic patches but for one hour following the procedure the animal exhibited signs of pain.

The immediate action taken upon discovery consisted of notifying the veterinarian who directed the research fellow to administer analgesics. The pig recovered and completed the study. Discussions occurred among the Principal Investigator, laboratory staff, Attending Veterinarian, and Institutional Animal Care and Use Committee and no further surgeries were conducted until all corrective actions were put into place. These consisted of amending the protocol to clarify the post-operative analgesic regimen, retraining the laboratory staff on pain management, and enhancing communication between surgical core staff, facility veterinarian, and research staff.

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

Sincerely,

(b) (6)

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

cc: IACUC Chair



MASSACHUSETTS  
GENERAL HOSPITAL

RESEARCH INSTITUTE



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Harry W. Orf, Ph.D.  
Senior Vice President for Research  
Massachusetts General Hospital  
Principal Associate in Genetics  
Harvard Medical School

February 4, 2020

Brent Morse, DVM  
Acting Director, Division of Compliance Oversight  
Office of Laboratory Animal Welfare  
National Institutes of Health  
Rockledge 1, Room 3615, MSC 7982  
6705 Rockledge Drive  
Bethesda, MD 20892-7982

Subject: Reportable Event  
Institution: The Massachusetts General Hospital  
Animal Welfare Assurance #: D16-00361 (A3596-01)

Dear Dr. Morse:

This letter is to provide you with a full explanation of the circumstances and actions taken by the Massachusetts General Hospital (MGH) Institutional Animal Care and Use Committee (IACUC) as required by Public Health Service Policy on Humane Care and Use of Laboratory Animals (PHS Policy) Section IV.F.3 following an incident that occurred. The incident was determined by the IACUC to be inconsistent with PHS Policy and reportable.

The study involved uses a swine model of severe military trauma, specifically penetrating bowel injury, and investigates a novel method for suture-less bowel closure. On 12/4/19, a single animal underwent a bowel transection surgery and repair. The surgery was completed without complication. The animal was provided pre-surgical buprenorphine and post-surgery fentanyl patches were applied per the approved IACUC protocol. During the hand-off between the surgical core and the research team, it was noted that additional buprenorphine may need to be administered by the research team, given the length of the procedure, but it was not. The pig was closely monitored by the research fellows throughout the recovery period until the animal was fully ambulatory. Later that evening the veterinarian responded to a call that the pig was hyperventilating. The fellow immediately returned to the facility and administered analgesics at the direction of the on-call veterinarian. The animal recovered fully and completed the study. The study team met the following morning to review the case and included the facility veterinarian in the discussion.

The Principal Investigator (PI) met with the Attending Veterinarian and IACUC Office Director on 12/12/19 to discuss the incident. The Principal Investigator (PI) and the full research team met with the IACUC compliance officer and the facility veterinarian on 12/18/19 to review the details of the case. A compliance subcommittee of the IACUC reviewed the event on 1/9/2020 and the convened IACUC

reviewed the event at its monthly meeting on 1/15/2020. The IACUC determined that there was a gap in analgesia coverage post-surgery prior to the fentanyl patches becoming effective that led to the animal experiencing unrelieved pain and distress for approximately one hour.

The IACUC approved the following corrective actions that were put in place with the PI:

- No further surgeries were conducted while the incident was under investigation and until all corrective actions were put into effect.
- The protocol was amended to revise the post-operative analgesia and ensure an effective multi model full-coverage regimen is in place.
- Refresher training was conducted by the facility veterinarian on the protocol's pain management plan include onset and duration of all agents.
- A communication plan must be in place between the surgical core, facility veterinarian and the research team to ensure optimal care for the animal.

No PHS/NSF funds were implicated in this matter.

The Massachusetts General Hospital is committed to protecting the welfare of animals used in research and appreciates the guidance and assistance provided by OLAW in this regard. Should you have any questions regarding this report, please contact me at your convenience.

Sincerely,

(b) (6)

Harry W. Orr, PhD  
Senior Vice President for Research  
Institutional Official  
The Massachusetts General Hospital

cc: W. Zapol MD, Chair, Institutional Animal Care and Use Committee  
cc: A. Clancy PhD, Director, Animal Welfare Assurance  
cc: D. Jarrell DVM, Attending Veterinarian and Director, Center for Comparative Medicine  
cc: (b) (6)

**Morse, Brent (NIH/OD) [E]**

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**From:** OLAW Division of Compliance Oversight (NIH/OD)  
**Sent:** Thursday, February 06, 2020 8:10 AM  
**To:** Clancy, Anne; OLAW Division of Compliance Oversight (NIH/OD)  
**Cc:** Orf, Harry W., Ph.D.; Jarrell, Donna M.  
**Subject:** RE: Report of Serious Noncompliance with PHS Policy\_Massachusetts General Hospital\_AWA # D16-00361 (A3596-01)

Thank you for providing this report Dr. Clancy. 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

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**From:** Clancy, Anne <ACLANCY1@mgh.harvard.edu>  
**Sent:** Wednesday, February 05, 2020 4:39 PM  
**To:** OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>  
**Cc:** Orf, Harry W., Ph.D. <HORF@mgh.harvard.edu>; Jarrell, Donna M. <DJARRELL@mgh.harvard.edu>  
**Subject:** Report of Serious Noncompliance with PHS Policy\_Massachusetts General Hospital\_AWA # D16-00361 (A3596-01)

Dear Dr. Morse,  
Please find attached a report submitted on behalf of Dr. Harry Orf, Senior Vice President for Research and Institutional Official, The Massachusetts General Hospital, in accordance with PHS Policy IV.F.3.

Please let me know if you have any questions or require additional information.

Kind Regards,  
Anne Clancy

Anne Clancy, PhD | Director, Animal Welfare Assurance  
Phone: (b) (6)  
Fax: (b) (6)  
[aclancy1@mgh.harvard.edu](mailto:aclancy1@mgh.harvard.edu)

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Have an idea or a suggestion on how we can improve? Please submit a suggestion to [Isuggest](#) !  
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