

March 29, 2022

Via e-mail

The Honorable Kim Ogg
Harris County District Attorney
500 Jefferson Street, Suite #600
Houston, Texas 77002
da@dao.hctx.net

Re: Request to Investigate Baylor College of Medicine for Apparent
Violations of the Texas Cruelty to Animals Law

Dear District Attorney Ogg:

I am writing on behalf of People for the Ethical Treatment of Animals (PETA) to request that you investigate and pursue enforcement action against Baylor College of Medicine (BCM) for its apparent violations of Texas's prohibitions against cruelty to animals. Documented evidence from the past three years identifies numerous instances of BCM subjecting animals to unjustifiable pain or suffering and agonizing deaths in apparent violation of Tex. Penal Code section 42.092.

PETA has obtained federal reports from the National Institutes of Health's (NIH's) Office of Laboratory Animal Welfare (OLAW) that document nearly eighty federal animal welfare violations in BCM's laboratories from February 2019 through July 2021.¹ These reports evidence that BCM engaged in experiments that deviated from protocols that had been approved by BCM's Institutional Animal Care and Use Committee (IACUC), a committee at the school that oversees and approves experimentation on animals. Experiments must be conducted in accordance with the protocol as described and approved. These deviations resulted in death, mutilation, starvation, and/or unnecessary pain to animals under its care. At other times during this period, and not as part of any experiment, properly conducted or otherwise, BCM failed to meet animals' most basic needs for food, water, and care as a result of neglect, incompetence, and even overt indifference, causing animals in its care to suffer from dehydration, starvation, and other needless pain. The following provides a sampling of incidents that BCM reported to OLAW:

- BCM drew blood from a mouse's artery behind her eye and then removed her eye—all without anesthesia—even though these activities had not been approved in the experimental protocol; after

¹ Only those reports related to the incidents described in this letter are attached as exhibits. The other reports, which relate to incidents not described in this letter, will be provided upon request.

PEOPLE FOR
THE ETHICAL
TREATMENT
OF ANIMALS
FOUNDATION

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

PETA FOUNDATION IS AN OPERATING
NAME OF THE FOUNDATION TO
SUPPORT ANIMAL PROTECTION.

ENTITIES:

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

experiencing unjustifiable pain, the mouse died following the procedure—prior to the planned euthanasia. Ex. 1 (Case 9T, July 26, 2021).

- BCM gave nine mice injections of the chemical tamoxifen even though the drug had not been described in the protocol; four of the animals died. Ex. 2 (Case 9R, Apr. 26, 2021).
- BCM failed to provide food, as required by the protocol, to six confined mice who had undergone cranial electrode implants; four of the mice died and two mice were found hunched with ruffled fur, signs of pain and illness. Ex. 3 (Case 9O, Dec. 9, 2020).
- After thirty-five mice underwent tumor transplants, one mouse was found dead and another was found moribund and was euthanized. Ex. 4 (Case 9N, Dec. 9, 2020). BCM caused the mice to endure unjustified pain and suffering by administering only one dose of post-operative pain relief even though the protocol stipulated that pain relief should be provided for six days following the procedure. *Id.*
- BCM caused eight mice in seven cages unjustifiable suffering by depriving them of food or water. Ex. 5 (Case 8W, Jan. 16, 2020).
- BCM caused 6,425 zebrafish to suffer unjustifiable agonizing deaths by failing to monitor water quality parameters adequately. Ex. 6 (Case 8V, Jan. 16, 2020).
- For three days, BCM caused mice in seventy cages unjustifiable suffering by depriving them of water after a rack holding the cages “had been disconnected from the water supply and an alarm had been sent.” Ex. 7 (Case 8T, Jan. 15, 2020). The husbandry logs indicated that the standard daily water checks were conducted during that three-day period. *Id.*
- BCM caused twenty neonatal mice unjustifiable pain and suffering by amputating their toes without administering anesthesia or analgesia; the procedure was not described in the protocol. Ex. 8 (Case 8S, Jan. 15, 2020).
- BCM caused twelve castrated mice unjustifiable pain and suffering by not giving the mice the full three-day regimen of analgesics as described in the protocol. Ex. 9 (Case 8N, Dec. 17, 2019). BCM failed to adequately monitor the mice, and two mice died and two others became sick and required immediate monitoring by the veterinary staff. *Id.*
- BCM subjected mice to tumor-removal surgery without administering the pre-surgical analgesic described in the protocol or the post-surgical analgesics—which were supposed to be administered for three consecutive days after surgery. Ex. 10 (Case 7X, Aug. 26, 2019). BCM failed to monitor the mice for three days following the surgery, and one mouse died. *Id.*
- BCM caused fifteen mice unjustifiable pain and suffering when it failed to administer post-operative analgesics, as indicated in the protocol, for two out of five days; three of these mice had partially gaping incisions. Ex. 11 (Case 7T, Aug. 7, 2019).

- BCM failed to monitor seven mice for two consecutive days post-surgery. Ex. 12 (Case 70, May 2, 2019). BCM caused these mice unjustifiable pain and suffering by failing to give the mice the required analgesia, and there was insufficient documentation of pre-operative analgesia. *Id.* One mouse was in poor condition and had to be euthanized. *Id.*

Texas deems it unlawful if a person² intentionally, knowingly, or recklessly “tortures an animal or in a cruel manner kills or causes serious bodily injury to an animal . . . [or] fails unreasonably to provide necessary food, water, care or shelter for an animal in the person’s custody.” Tex. Penal Code § 42.092(b)(1), (3). Torture” includes “any act that causes unjustifiable pain or suffering.” *Id.* § 42.092(a)(8). “Cruel manner” means “a manner that causes or permits unjustified or unwarranted pain or suffering.” *Id.* § 42.092(a)(3). A person must at least be aware of, but consciously disregard, “a substantial and unjustifiable risk that the circumstances exist or the result will occur” to trigger a violation. *Id.* § 6.03(c) (defining reckless).³ Disregarding the risk “constitutes a gross deviation from the standard of care that an ordinary person would exercise under all the circumstances as viewed from the actor’s standpoint.” *Id.*

An act otherwise subject to these provisions is defensible if the actor was engaged in “bona fide experimentation for scientific research.” *Id.* 42.092(d)(2). Texas courts have accepted the term “bona fide” to mean “in or with good faith; . . . without deceit or fraud.”⁴ Experimentation that deviates from approved, binding protocols or that is not done for scientific research should not meet the definition of “bona fide” experimentation. Likewise, conduct that is not part of an experiment would not be defensible under this carve-out.

BCM is aware that experiments must be conducted in accordance with the protocols as described and approved by BCM’s IACUC. Nonetheless, numerous times, BCM disregarded those protocols and caused unjustifiable pain and suffering to animals. BCM’s conduct is not defensible under the guise of “bona fide experimentation for scientific research.” The experiments implicated in the above incidents were not “bona fide” because the conduct at issue was outside the bounds of the approved protocols. *See, e.g.*, Ex. 1 (Case 9T, July 26, 2021) (drawing blood and removing a mouse’s eye—all without anesthesia—were not approved activities in the protocol). Moreover, some of the conditions and suffering experienced by animals at BCM were not part of any experiment; instead, they resulted from an abject failure to provide animals with basic sustenance and care. *See, e.g.*, Ex. 7 (Case 8T, Jan. 15, 2020) (failing to provide water to seventy mouse cages for three days).

² “Person” means “an individual or a corporation, association, limited liability company, or other entity or organization governed by the Business Organizations Code.” Tex. Penal Code § 1.07(a)(38).

³ “A person acts intentionally, or with intent, with respect to the nature of his conduct or to a result of his conduct when it is his conscious objective or desire to engage in the conduct or cause the result.” Tex. Penal Code § 6.03(a). “A person acts knowingly, or with knowledge, with respect to the nature of his conduct or to circumstances surrounding his conduct when he is aware of the nature of his conduct or that the circumstances exist. A person acts knowingly, or with knowledge, with respect to a result of his conduct when he is aware that his conduct is reasonably certain to cause the result.” *Id.* § 6.03(b).

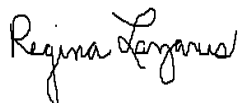
⁴ *See, e.g.*, *MBank Grand Prairie v. State*, 737 S.W. 2d 424, 427 (Tex. Ct. App. 1987) (citing BLACK’S LAW DICTIONARY, 160 (5th ed. 1979)).

The federal Animal Welfare Act (AWA) does not insulate BCM from liability under state law because it expressly does not preempt the field.⁵ Moreover, all of the animals who died or otherwise suffered as a result of apparently unlawful conduct at BCM in the above incidents—mice, rats, and zebrafish—receive no protection under the AWA.⁶

Enforcement of state law is neither unnecessary nor superfluous. Similar to the USDA’s limitations, OLAW lacks the ability to effect real change in the everyday care of animals at BCM and does not enforce state law. The NIH can only suspend or revoke federal funds in limited circumstances, and considerable discretion is granted first to the research facility in how to correct noncompliance and then to the NIH in whether to take such action.⁷ In PETA’s experience, the NIH almost never suspends or revokes grants, and it does not appear to have done so in connection with any of the incidents listed in this letter. Additionally, BCM apparently lacks stringent internal safeguards, as is demonstrated by a sheaf of documents describing year-over-year repeated incidents of deadly deprivation of animals’ basic needs and other ultra vires acts that deviated from approved protocols at the cost of animals’ lives.

The enforcement of state law for the protection of animals is crucial, and BCM’s conduct appears to fall squarely within the prohibitions of Texas’s law. Texas’s public policy favoring the humane treatment of animals is strengthening and the state does not provide an exemption for the conduct described herein. PETA respectfully requests that you fully investigate BCM’s conduct as detailed above and pursue all appropriate charges. Thank you for your attention to this important matter. Please do not hesitate to contact me with any questions at reginal@petaf.org or 862-283-1517. I look forward to hearing from you.

Very truly yours,



Regina Lazarus
Legal Fellow

⁵ 7 U.S.C. §§ 2143(a)(8), 2145(b); *see also* USDA OIG, CONTROLS OVER APHIS LICENSING OF ANIMAL EXHIBITORS, AUDIT REP. 33601-10-Ch, at 4 (June 2010), <https://www.usda.gov/sites/default/files/33601-10-CH.pdf> (stating that “[t]he AWA does not supersede State and local authorities or restrict them in any way when their laws are more stringent than the AWA”).

⁶ *Id.* § 2132(g). Even animals who are included within the scope of the AWA and are thus subject to the U.S. Department of Agriculture’s (USDA’s) jurisdiction do not have robust protection under the law, which sets forth only minimal standards of care and allows for no more than the imposition of a civil penalty when violations occur at a “research facility,” such as BCM. *See id.* § 2149. Furthermore, the USDA’s Office of the Inspector General has found the USDA’s enforcement of even the minimal standards of the AWA to be lax. *See, e.g.,* USDA OIG, ANIMAL AND PLANT HEALTH INSPECTION SERVICE OVERSIGHT OF RESEARCH FACILITIES, AUDIT REP. 33601-0001-41, at 18 (Dec. 2014), <https://www.usda.gov/sites/default/files/33601-0001-41.pdf> (finding that the USDA closed cases even when animals died and stating that USDA’s “too lenient” enforcement may not sufficiently deter violations, especially “egregious violations”). Enforcement has only declined in the past few years. *See ASPCA Sues USDA for Its Non-Enforcement Policy on the Animal Welfare Act*, ASPCA (June 14, 2021), <https://www.aspc.org/about-us/press-releases/aspc-sues-usda-its-non-enforcement-policy-animal-welfare-act>; Karin Brulliard & William Wan, *Caged Raccoons Drooled in 100- Degree Heat. But Federal Enforcement Has Faded*, WASH. POST (Aug. 22, 2019), https://www.washingtonpost.com/science/caged-raccoons-drooled-in-100-degree-heat-but-federal-enforcement-has-faded/2019/08/21/9abf80ec-8793-11e9-a491-25df61c78dc4_story.html.

⁷ *See* 42 U.S.C. § 289d(d).



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

July 26, 2021

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 9T]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your July 20, 2021 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that a mouse was subjected to retro-orbital blood collection and eye enucleation without anesthesia although these activities had not been approved in the protocol. The mouse died after the procedure and prior to the planned euthanasia.

The corrective actions consisted of revoking the animal use privileges for the investigator responsible, requiring the other animal users on the protocol to undertake hands-on retraining for all protocol procedures, and placing the laboratory under enhanced post-approval monitoring.

Based on the information provided, OLAW is satisfied that appropriate actions have been taken to investigate, correct, and prevent recurrence of the noncompliance. We appreciate having been informed about this matter and find no cause for further action by this Office.

Sincerely,

(b) (6)

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

cc: IACUC Chair



A3823-9T

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

July 20, 2021

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee’s (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-7001: Novel Pancreatic Cancer Therapies in Preclinical Mouse PDX Models

Species: Mice

Funding Source: National Cancer Institute (NCI): U54-CA224076, R01-CA183984, Non-PHS Funding

For this investigator’s first incident of this nature, the IACUC determined that the following findings constituted *serious noncompliance*ⁱ with the federal regulations:

Anesthesia Use and Unapproved Procedureⁱⁱ

5/14/2021 – Unapproved Procedure Performed

The IACUC received a self-report from the Principal Investigator on June 9, 2021, describing an incident involving a researcher who performed retro-orbital blood collection without anesthesia and eye enucleation prior to planned euthanasia in one mouse. The use of anesthesia for blood collection is required as described in the IACUC approved protocol, and enucleation is not described or approved. The mouse died shortly after the procedure prior to planned euthanasia .

7/13/2021 – Determination at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

1. The researcher responsible is no longer approved to participate in animal research at Baylor College of Medicine.
2. All animal users on this protocol must complete hands-on training with central animal facility training personnel, for all procedures described in the protocol.

ⁱ PHS Policy IV.F.3.a: “The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;”

ⁱⁱ PHS Policy IV.B.7: “An agent of the institution, the IACUC shall with respect to PHS-conducted or supported activities review and approve, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities”

3. Two Post-Approval Monitoring (PAM) sessions will be conducted within the next six months.

This finding of non-compliance does not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, the National Cancer Institute, and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Sr. Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Wolff, Axel (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Friday, July 23, 2021 7:39 AM
To: (b) (6)
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW Report- Assurance D16-00475

Thank you for this report, (b) (6) We will send a response soon.

Axel Wolff, M.S., D.V.M.
Deputy Director, OLAW

From: (b) (6)
Sent: Thursday, July 22, 2021 5:00 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report- Assurance D16-00475

Dear Dr. Morse,

Please find the attached notification of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)

A large rectangular area of the document is completely redacted with a solid grey fill. The redaction covers the majority of the lower half of the page, obscuring any text or images that might have been present.



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

April 26, 2021

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 9R]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your April 19, 2021 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that nine mice were given intraperitoneal injections of tamoxifen and four animals died. The drug had not been described in the approved protocol.

The corrective actions consisted of counseling the laboratory staff on only conducting approved animal activities, retraining the staff, and amending the protocol. Central animal facility staff must observe performance of the injections to ensure that proper technique is used.

Based on its assessment of this explanation, OLAW understands that measures have been implemented to 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



A3823-9R

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

April 19, 2021

Brent Morse, DVM, DAACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-6188: Chronic Kidney Disease on Vascular Remodeling Chronic Kidney Disease on Vascular Calcification and Remodeling

Species: Mice

Funding Sources: National Institutes of Health (NIH) R01-DK124259 and non-PHS Funding sources

For this investigator's first incident of this nature, the IACUC determined that the following finding constituted *serious noncompliance*ⁱ with the federal regulations:

Unapproved Substanceⁱⁱ

2/8/2021 – Unapproved substance used for research purposes in animals

During a routine health check by central animal facility personnel, one cage with four dead mice was found. A total of nine mice received intraperitoneal injections of tamoxifen, which was not described in the approved IACUC protocol. The other five mice were evaluated by a clinical veterinarian and were in good health. An amendment to add this drug was subsequently submitted and approved by the IACUC.

4/13/2021 – Determination at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required the following corrective actions:

1. The PI held a meeting with all research personnel to review and discuss all approved protocol procedures and the importance of their responsibility for knowing the protocol and conducting approved procedures.
2. All research personnel are required to complete the interactive "Top 10 Pitfalls in Animal Research and how to Avoid Them" training.

ⁱ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy IV.B.7: "As an agent of the institution, the IACUC shall with respect to PHS-conducted or supported activities review and approve, require modifications (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities."

3. Any researchers performing intraperitoneal tamoxifen injections must be observed by central animal facility training staff.

This finding of non-compliance does not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, the National Institutes of Health and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Sr. Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Wolff, Axel (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Wednesday, April 21, 2021 8:13 AM
To: (b) (6)
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW Report- Assurance D16-00475

Thank you for this report, (b) (6) We will send a response soon.

Axel Wolff, M.S., D.V.M.
Deputy Director, OLAW

From: (b) (6)
Sent: Tuesday, April 20, 2021 2:04 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report- Assurance D16-00475

Dear Dr. Morse,

Please find the attached notification of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)





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

December 9, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 90]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your December 3, 2020 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at the Baylor College of Medicine (BCM). This letter had not been preceded by a preliminary report to OLAW.

According to the information provided, this Office understands that the BCM Animal Care and Use Committee (ACUC) determined that instances of noncompliance occurred with respect to: failure to adhere to institutional policies/procedures. The final report states during routine health evaluations in a satellite area, 4 of 6 mice in special housing were found dead. The mice underwent an approved procedure and food was to be present on the cage floor. The report states food was not present in the cages, and the remaining two mice were given moist food and recovered without additional complications. The IACUC reviewed and approved the corrective action plan at the IACUC meeting on November 17, 2020. The committee required the following corrective actions:

- The principal investigator (PI) provided a comprehensive oversight plan for each cage that currently resides in the satellite area. The plan includes a process of animal welfare checks, adequate food and water verification, and a verification process that such activities were performed by a laboratory member.
- The PI and every member of the laboratory completed a training on daily health verification and cage checks.
- The PI is required to designate another faculty member to physically oversee the daily health observations and husbandry procedures for the satellite when he is not present.
- The PI must maintain a log with information related to the duration and need for each cage to be housed in the satellite facility.
- All health observation times must be documented on the satellite husbandry log.
- There will be a monthly unannounced IACUC inspection of the satellite facility over the next 6 months.

Page 2 – Dr. Dickinson
December 9, 2020
OLAW Case A3823-90

It is noted that this research is supported by PHS and non-PHS funds. Based on its assessment of this explanation, OLAW understands that the Baylor College of Medicine has implemented appropriate measures to correct and prevent recurrences 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
Tubbs -S

Digitally signed by
Jacquelyn T. Tubbs -S
Date: 2020.12.09 09:16:09
-05'00'

Jacquelyn T. Tubbs, DVM
Animal Welfare Program Specialist
Division of Compliance Oversight
Office of Laboratory Animal Welfare

cc: IACUC Contact



A3823-90

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 1060
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

December 3, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-5068: Models for Learning and Memory

Species: Mice and Rats

Funding Sources: National Institute of Mental Health (NIMH) R01-MH112356; National Institute of Neurological Disorders and Stroke (NINDS) R01-NS076708 and Non-PHS Funding Sources

For this investigator's first incident of this nature, the IACUC determined that the following finding constituted *serious noncompliance*¹ with the federal regulations:

Inadequate health observations and husbandry procedures¹¹

10/8/20 – Cages found without feed

During a routine health evaluation in an IACUC approved satellite area, four of six mice in special housing were found expired. The mice had undergone cranial electrode implants and were in special housing where food was to be placed on the cage floor. No feed was present in the cages, however, the mice were hunched with ruffled fur, but did not exhibit emaciated body conditions, indicating that food was not lacking for a prolonged period. These remaining two mice were provided with moist food and recovered without additional complications.

10/13/20 – Immediate IACUC Action communicated in a notice from the IACUC Chair sent to PI

11/17/20 – Determination, review and approval of the corrective action plan at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

¹¹ PHS Policy IV.B.7: "As an agent of the institution, the IACUC shall with respect to PHS-conducted or supported activities review and approve, require modifications in (to secure approval or withhold approval) of proposed significant changes regarding the use of animals in ongoing activities"

1. The Principal Investigator (PI) provided a comprehensive oversight plan for each cage that currently resides in the satellite area. The plan included a process of animal welfare checks, adequate food and water verification, and a verification process that such activities were performed by a laboratory member. The activities must be signed off by the PI, a laboratory manager, or another trained laboratory member (i.e. "buddy system") on a weekly basis.
2. The PI and every member of the laboratory completed a training on daily health verification and cage checks.
3. The PI is required to designate another faculty member to physically oversee the daily health observations and husbandry procedures for the satellite when he is not present.
4. The PI must maintain a log with information related to the duration and need for each cage to be housed in the satellite facility.
5. All health observation times must be documented on the satellite husbandry log.
6. There will be a monthly unannounced IACUC inspection of the satellite facility over the next 6 months.

This finding of non-compliance does not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, National Institute of Mental Health, National Institute of Neurological Disorders and Stroke and non-PHS funding sources according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Sr. Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Wolff, Axel (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Friday, December 4, 2020 7:30 AM
To: (b) (6)
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW Report- Assurance D16-00475

Thank you for these reports, (b) (6) We will send responses soon.

Axel Wolff, M.S., D.V.M.
Deputy Director, OLAW

From: (b) (6)
Sent: Thursday, December 3, 2020 3:02 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: Hobbs, Vance P. <hobbs@bcm.edu>
Subject: OLAW Report- Assurance D16-00475

Dear Dr. Morse,

Please find the attached incident notifications as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

December 9, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 9N]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your December 3, 2020 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at the Baylor College of Medicine (BCM). This letter had not been preceded by a preliminary report to OLAW.

According to the information provided, this Office understands that the BCM Animal Care and Use Committee (ACUC) determined that instances of noncompliance occurred with respect to: failure to adhere to the IACUC-approved protocol. The final report states 35 mice underwent a protocol approved surgical procedure. It was discovered that post-operative monitoring cards were incomplete on the cages, with post-op monitoring performed, but not documented on the surgery cards for post-op day 2. The report states one mouse was found dead and another was found moribund and euthanized appropriately. Additional post-op monitoring was conducted, and the remaining mice recovered uneventfully per the report. All mice received appropriate pre-operative analgesics, but mice only received one dose of meloxicam post-operatively. The protocol describes a dose of meloxicam for 6d following the procedure. As a corrective action, the principal investigator (PI) plans to submit an amendment to adjust the post-operative analgesics to a one-day regimen. On November 17, 2020 the IACUC reviewed and approved the corrective action plan and required the following corrective actions:

- Attending Veterinarian required that surgery be stopped until further investigation could be performed.
- The IACUC recognized and accepted the PI's corrective actions and surgical oversight plan to ensure compliance and appropriate oversight.
- The IACUC Chair will conduct a mandatory meeting with the PI and laboratory personnel to discuss this determination, the required corrective actions, and plans for ensuring compliance.
- The PI will confirm in writing, monthly compliance through oversight and review of records for procedures for the next six months, and that documentation will be reviewed when the records are reviewed.
- Two comprehensive Post-Approval Monitoring (PAM) reviews focused on surgery, will be conducted within the next six months.

- A monthly review of all surgery and analgesia records will be conducted for the next 6 months. Escalating corrective actions will occur if noncompliance with the IACUC-approved plan is evident or compliance is not achieved moving forward.
- The post-operative analgesia plan will be reviewed and refined to ensure compliance.

It is noted that this research is supported by PHS and non-PHS funds. Based on its assessment of this explanation, OLAW understands that the Baylor College of Medicine has implemented appropriate measures to correct and prevent recurrences of these problems and is now compliant with provisions of the PHS Policy.

Sincerely,

**Jacquelyn
T. Tubbs -S**

Digitally signed by
Jacquelyn T. Tubbs -S
Date: 2020.12.09
09:12:18 -05'00'

Jacquelyn T. Tubbs, DVM
Animal Welfare Program Specialist
Division of Compliance Oversight
Office of Laboratory Animal Welfare

cc: IACUC Contact



3823-9N

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 1060
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

December 3, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-4016: Pancreatic Cancer Animal Model to Study Molecular Pathogenesis
Species: Mice
Funding Sources: National Cancer Institute (NCI) R01-CA183984 and non-PHS funding sources

For this investigator's first incident of this nature, the IACUC determined that the following findings constituted *serious noncompliance*ⁱ with the federal regulations:

Postoperative Monitoringⁱⁱ and Analgesicsⁱⁱⁱ

10/4/20 – Postoperative surgery cards incomplete

During a routine health evaluation in the vivarium, thirty-five mice that had undergone orthotopic tumor transplants were found to have incomplete postoperative monitoring cards on the cages, with post-operative monitoring performed, but not documented on the surgery cards, for the second post-operative day. One mouse was found expired and one was found moribund and euthanized appropriately. Further postoperative monitoring was performed and the remaining thirty-three mice recovered without incident.

All mice received appropriate pre-operative analgesics including Buprenorphine SR and Meloxicam, however, the mice only received one dose of Meloxicam postoperatively. The current IACUC-approved protocol requires a dose of Meloxicam for six days following the procedure; the PI plans to submit an amendment to adjust the post-operative analgesics to a one-day regimen but this is not yet approved.

ⁱ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ The *Guide for the Care and Use of Laboratory Animals* p.119, "An important component of postsurgical care is observation of the animal and intervention as necessary during recovery from anesthesia and surgery..."

ⁱⁱⁱ PHS Policy IV.C.1.b: "Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator."

11/17/20 – Determination, review and approval of the corrective action plan at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

1. The Attending Veterinarian required that surgery be stopped until further investigation could be performed.
2. The IACUC recognized and accepted the PI's corrective actions and surgical oversight plan to ensure compliance and appropriate oversight.
 - o This plan includes a description of the process of oversight of surgeries, description of monitoring of substances including analgesia that will be provided at each surgery and a verification process that such activities were performed by the surgeon, e.g. review and sign-off by you as the PI, lab manager, or another trained lab surgeon (i.e. "buddy system") on a weekly basis.
3. The IACUC Chair will conduct a mandatory meeting with the PI and laboratory personnel to discuss this determination, the required corrective actions, and future plans for ensuring compliance.
4. The PI will confirm in writing monthly compliance (checklist, lab meeting summary, or description of material reviewed) through oversight and review of records for procedures for the next six months, and that documentation will be reviewed when the records are reviewed.
5. Two comprehensive Post-Approval Monitoring (PAM) reviews focused on surgery, will be conducted within the next six months.
6. For the next six months, a monthly review of all surgery and analgesia records will be conducted.
7. Escalating required corrective actions including, but not limited to suspension of surgical privileges will occur if non-compliance with the IACUC approved plan is evident or compliance is not achieved moving forward.
8. The post-operative analgesia plan will be reviewed and refined to ensure compliance.

These findings of non-compliance do not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, National Cancer Institute and the non-PHS funding sources according to the terms and conditions of the awards.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Sr. Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Wolff, Axel (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Friday, December 4, 2020 7:30 AM
To: (b) (6)
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW Report- Assurance D16-00475

Thank you for these reports, (b) (6) We will send responses soon.

Axel Wolff, M.S., D.V.M.
Deputy Director, OLAW

From: (b) (6)
Sent: Thursday, December 3, 2020 3:02 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: Hobbs, Vance P. <hobbs@bcm.edu>
Subject: OLAW Report- Assurance D16-00475

Dear Dr. Morse,

Please find the attached incident notifications as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

January 16, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 8W]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your January 13, 2019 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that several cages of mice were housed in a laboratory that had not been approved as a satellite facility. Some cages did not have food/water, one cage was overcrowded, and the cages were inappropriately stacked on each other. Some of the mice were in the laboratory to be euthanized.

The immediate action taken upon discovery consisted of separating the cages and providing food/water. The mice were evaluated by a veterinarian and found to be in good condition. The laboratory staff was retrained on euthanasia procedures, on avoiding noncompliance, and on institutional animal policies. The laboratory was subjected to enhanced Institutional Animal Care and Use Committee (IACUC) oversight and enhanced post-approval monitoring.

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 IACUC to comply with the PHS Policy. Please ensure that noncompliant findings are promptly reported to this Office. The reported incidents were discovered in June 2019 but no preliminary report was made at the time and the final was not submitted until January 2020. This is not considered prompt reporting in accordance with <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-034.html>. You or your staff are always welcome to consult with OLAW staff regarding reportable incidents and to make verbal preliminary reports. Thank you for informing OLAW about this matter.

Sincerely,

(b) (6)

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

cc: IACUC Chair



A 3823-8W
OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798-2104
(713) 798-2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

January 13, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-6813: The Role of the Unfolded Protein Response in Cancer

Species: Mice

Funding Sources: National Institutes of Health (NIH) R01-CA228140; NIH 5R37-CA228304; NIH R01-HL146642, and Non-PHS Funding

For this investigator's first incident of this nature, the IACUC determined that the following findings constituted *serious noncompliance*ⁱ with the federal regulations:

Animal Housing,ⁱⁱ Animal Husbandry,^{iv} Animal Maintenance^v and Cage Conditions with Animals^{vi}

ⁱ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy IV.B.7: "As an agent of the institution, the IACUC shall with respect to PHS-conducted or supported activities review and approve, require modifications (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities.."

ⁱⁱⁱ The Guide for the Care and Use of Laboratory Animals 8th ed.p.47: "Static isolation caging such as that used in some types of rodent housing, restricts ventilation. To compensate, it may be necessary to adjust husbandry practice, including sanitation and cage change frequency, selection of contact bedding, placement of cages in a secondary enclosure, animal densities in cages, and/or decrease in macroenvironmental relative humidity to improve the microenvironment and heat dissipation."

^{iv} *The Guide for the Care and Use of Laboratory Animals*, 8th Ed. P30-31: "Regulations of food or fluid intake may be required for the conduct of some physiological, neuroscience, and behavioral research protocols. The regulation process may entail scheduled access to food or fluid sources, so an animals consumes as much as desired at regular intervals, or restriction, in which the total volume of food or fluid consumed is strictly monitored and controlled (NRC 2003b). The objective when these studies are being planned and executed should be to use the least restriction necessary to achieve the scientific objective while maintaining animal well-being. The animals should be closely monitored to ensure that food and fluid intake meets their nutritional needs (Toth and Gardiner 2000). Written records should be maintained for each animal to document daily food and fluid consumption, hydration status, and any behavioral or clinical changes used as criteria for temporary or permanent removal of an animal from a protocol (Morton 2000; NRC 2003b)."

^v BCM Animal Care and Use Policies and Procedures, Guidelines for Food and Water Restriction: Animals must be carefully monitored on a daily basis to ensure that they are healthy, adapting normally and consume sufficient food/water to maintain their health status. In all situations, the details of the training paradigm used and accountability of the individuals involved must be clearly outlined in the approved IACUC protocol.

^{vi} The Guide for the Care and Use of Laboratory Animals 8th ed.p.47: "Static isolation caging such as that used in some types of rodent housing, restricts ventilation. To compensate, it may be necessary to adjust husbandry practice, including sanitation and cage change frequency, selection of contact bedding, placement of cages in a secondary enclosure, animal densities in cages, and/or decrease in macroenvironmental relative humidity to improve the microenvironment and heat dissipation."

On 6/20/19 during a semi-annual laboratory inspection, it was discovered that mice were inappropriately housed in a space not described in the IACUC approved protocol. Seven cages containing eight animals total were due to be euthanized, and were left overnight in the laboratory; seven additional cages containing eight animals total, were found without food or water; one overcrowded cage containing eight animals that were to be euthanized the morning of the inspection was found; and the cages were stacked inappropriately within the laboratory.

A clinical veterinarian immediately evaluated the animals and research personnel separated the cages and provided food and water. All animals were in good condition and did not show signs of distress or injury.

12/10/19 – Review and approval of the corrective actions at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

1. All research personnel are required to complete hands-on euthanasia training with central animal facility training staff.
2. Two Post-Approval Monitoring (PAM) reviews will be conducted the next 6 months.
3. Monthly unannounced IACUC inspections of the laboratory will occur for the next 6 months.
4. All research personnel are required to attend the IACUC training workshop on common compliance problems and how to avoid them.
5. All research personnel are required to complete the online training "Animal Work at BCM."

These findings of non-compliance do not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, the National Institutes of Health and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Tuesday, January 14, 2020 8:43 AM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for submitting these reports (b) (6) We will send official responses soon.

Best regards, Brent Morse

Brent C. Morse, DVM, DAACLAM
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: (b) (6)
Sent: Monday, January 13, 2020 3:08 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

January 16, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 8V]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your January 13, 2020 letter reporting serious deviations from the provisions of the *Guide for the Care and Use of Laboratory Animals* at Baylor College of Medicine. According to the information provided, OLAW understands that 6425 zebrafish died due to failure of the reverse osmosis (RO) system, failure of pumps pressuring the tank washer, failure to adequately monitor water quality parameters, and failures of communication and training.

The corrective actions consisted of:

- Having central animal facility staff work with vendors, consultants, and facility engineering staff to address the problems
- Hiring an experienced zebrafish veterinarian and facility manager
- Implementing preventive maintenance of the RO system
- Testing RO supply water in all reserve and active tanks
- Monitoring the pressure of the RO water system membrane
- Creating standard operating procedures for the RO system
- Developing a zebrafish care and management training program for animal care staff
- Implementing a zebrafish sentinel program

Based on its assessment of these explanations, OLAW understands that measures have been implemented to correct the problems and that there have been no significant fish losses. While OLAW agrees with the actions taken by the institution to comply with the PHS Policy on Humane Care and Use of Laboratory Animals, we strongly recommend (if not already in place) that a remotely alarmed system be implemented to notify appropriate staff about any excursions from established environmental parameters. Please promptly inform OLAW if any additional incidents, either positive or negative, occur with the zebrafish.

Sincerely,

(b) (6)

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

cc: IACUC Chair



A3823-8V

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

January 13, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent determination that the following finding, involving unexpected deaths of zebrafish, which constituted *serious noncompliance*¹ with the federal regulations:

Water System Monitoring^{ii, iii}

During the period of August 2018 through December 2018, approximately 6,425 zebrafish died unexpectedly. After intensive investigation, it was determined that these deaths were due to a complex series of events including a reverse osmosis (RO) system failure, failure of secondary pump systems to ensure adequate pressure in the tank washer, and internal communication and education issues related to establishing a new zebrafish colony. Central animal facility staff worked very closely with multiple vendors, consultants, and facility engineering staff to solve the problems encountered. As of January 2019, no further significant fish losses occurred. On December 10, 2019, the fully convened IACUC determined that this incident, while complex, represented serious noncompliance with federal regulations because of failure to monitor water quality parameters adequately.

To protect the welfare of animals and prevent future recurrence, the following corrective actions were implemented:

1. An experienced and well qualified zebrafish veterinarian was hired.
2. Hiring of a facility manager with extensive zebrafish experience.
3. Creation of a robust water management plan, which includes:
 - a. Scheduled preventative maintenance on the RO water system
 - b. Regular testing of RO supply water in all reserve and active tanks; and
 - c. Regular pressure monitoring of the RO water system membrane.
4. Creation of procedures to cover oversight and maintenance of the RO water system.
5. Development of a zebrafish care and management training program for central animal facility staff.

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy C.1.F: Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures."

ⁱⁱⁱ The Guide 8th ed. p.78: "Routine measurement of various water characteristics (water quality testing) is essential for stable husbandry. Standards for acceptable water quality, appropriate parameters to test, and testing frequency should be identified at the institutional level and/or in individual animal use protocols... Staff managing aquatic systems need to be trained in biologically relevant aspects of water chemistry, how water quality parameters may affect animal health and well-being, how to monitor water quality results, and how water quality may affect life support system functions"

6. Implementation of a sentinel monitoring program for zebrafish rack systems to ensure water supply systems are functioning as expected.

This notification will also be sent to AAALAC International.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Research Compliance Services files

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Tuesday, January 14, 2020 8:43 AM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for submitting these reports (b) (6) We will send official responses 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: (b) (6)
Sent: Monday, January 13, 2020 3:08 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

January 15, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 8T]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your January 13, 2020 letter reporting a serious deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals* at Baylor College of Medicine. According to the information provided, OLAW understands that a rack had been disconnected from the water supply and that an alarm had been sent. The problem was not identified for three days, but no mice died.

The corrective actions consisted of reconnecting the supply hose and checking all mice on the rack, which were found to be in good condition. All vivarium staff was retrained on verifying water supply at the rack and cage level and on conducting daily health checks. The caretakers responsible will be under enhanced supervision and the alarm system will be evaluated.

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 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



A 3823-8T

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

January 13, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent determination that the following finding, involving a rack of mice connected to an automatic watering system, which constituted *serious noncompliance*ⁱ with the federal regulations:

Animal Husbandry^{ii, iii, iv}

9/17/19 – The central animal facility manager was notified that a rack containing 70 cages of mice was disconnected from the water supply hose. The manager identified that some rows had water in the system and others did not. The manager immediately reconnected the water supply hose and evaluated all the animals, which appeared healthy with no clinical symptoms of dehydration.

During the assessment, it was noted that an alarm indicating that the rack was not receiving water went out on 9/14/19. The husbandry logs indicated the standard daily health/food/water checks were conducted from 9/14/19-9/16/19.

12/10/19 – Review and approval of the corrective actions at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

1. Central animal facility husbandry staff associated with this finding must:
 - Receive re-training on water supply verification at the rack and cage level.
 - Receive re-training on daily health monitoring.
2. For the staff responsible, the central animal facility manager will verify the duties completed, and review the daily husbandry logs.
3. Central animal facility management is currently evaluating the current warning system that generates emergency and non-emergency alerts, including water system alerts.

ⁱ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy C.1.F: Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures."

ⁱⁱⁱ PHS Policy IV.C.1.a: "Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design."

^{iv} The Guide 8th ed. pg 23: "Safeguarding animal welfare is the responsibility of every individual associated with the Program...In the United States, responsibility for review and investigation of these concerns rests with the IO and the IACUC."

This notification will also be sent to AAALAC International.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Research Compliance Services files

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Tuesday, January 14, 2020 8:43 AM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for submitting these reports (b) (6) We will send official responses soon.

Best regards, Brent Morse

Brent C. Morse, DVM, DAACLAM
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: (b) (6)
Sent: Monday, January 13, 2020 3:08 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

January 15, 2020

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 8S]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your January 13, 2020 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that 20 mice were subjected to toe clipping although this procedure had not been described in the approved protocol. Anesthesia/analgesia had not been provided.

The corrective actions consisted of the veterinarian directing the laboratory staff to stop conducting the procedure and examining the mice, which were found to be in good condition. The laboratory member responsible was retrained by the Principal Investigator, took online training, and reviewed the institutional policy on collecting rodent tissue. All laboratory staff completed a workshop on avoiding noncompliance.

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



OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

January 13, 2020

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-4672: Molecular Basis of Aneuploidy in Carcinogenesis

Species: Mice

Funding Source: Non-PHS Funding

For this investigator's first incident of this nature, the IACUC determined that the following findings constituted *serious noncompliance*¹ with the federal regulations:

Unapproved procedure² and IACUC Policy anesthetics and analgesia³

10/2/19 – Animal concerns observed

While conducting routine health checks, twenty mice were observed with clipped toes by a clinical veterinarian. The animals were evaluated and there were no health concerns. The toe clipping procedure was not described in the IACUC approved protocol as a genotyping or identification method; and the research associate responsible did not adhere to the IACUC approved policy that requires appropriate anesthesia and analgesia for neonates.

The facility Veterinarian instructed the laboratory to immediately discontinue this procedure.

12/10/2019 – Review and approval of the corrective action plan at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC required following corrective actions:

1. The Principal Investigator (PI) retrained the research associate on standard laboratory practices and reviewed the IACUC approved protocol.

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

² PHS Policy IV.B.7: " An agent of the institution, the IACUC shall with respect to PHS-conducted or supported activities review and approve, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities"

³ PHS Policy IV.C.1.b: Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator."

2. The researcher responsible must complete the online training module "Animal Work at BCM."
3. The researcher responsible must review the IACUC approved policy on collection of rodent tissue, which includes refined alternative methods and appropriate use of tail tissue collection for genotyping.
4. All research personnel are required to complete a workshop on common non-compliance problems and how to avoid them.

This notification will also be sent to AAALAC International and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Monday, January 13, 2020 4:10 PM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for providing these reports (b) (6) We will send official responses 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: (b) (6)
Sent: Monday, January 13, 2020 12:21 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)





DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

December 17, 2019

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 8N]

Dr. Mary Dickinson
Vice President and Dean of Research
Baylor College of Medicine
One Baylor Plaza, BCM335
Houston, TX 77030

Dear Dr. Dickinson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your December 16, 2019 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that following castration two mice died and two had health concerns. Eight additional mice had been castrated but were not given the full three day regimen of analgesics as described in the protocol and were not adequately monitored. These incidents constitute a repeat noncompliance for this investigator.

The immediate action taken upon discovery consisted of the Attending Veterinarian stopping the surgeries and treating the two sick mice who subsequently recovered. The corrective actions consisted of:

- The Institutional Animal Care and Use Committee (IACUC) requiring the investigator to conduct surgery only in the vivarium surgical suite which is overseen by central animal facility staff.
- The IACUC requiring that surgical procedures be conducted in areas where post-operative monitoring and care occur during the work week.
- The IACUC requiring the Principal Investigator (PI) to provide a plan accounting for all surgeries, substances given, and verification of all actions; counseling the PI; reviewing checklists and procedures at laboratory meetings; verifying review of surgical records
- Placing the laboratory under enhanced post-approval monitoring, having several surgeries conducted under veterinary and IACUC oversight
- Implementing escalating punitive actions if noncompliance continues

Based on the information provided, OLAW is satisfied that appropriate actions have been taken to investigate, correct and prevent recurrence of the noncompliance. Please continue to carefully monitor the surgical procedures throughout the program in coordination with the overall surgery training and enhancement plan. Thank you for informing OLAW about this matter.

Sincerely,



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

cc: IACUC Chair



A 3823-8N

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 2104
(713) 798 – 2721 FAX
mdickins@bcm.edu

CONFIDENTIAL

December 16, 2019

Brent Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-6054: Impact of Testosterone Levels on Prostate Cancer Growth

Species: Mice

Funding Source: Non-PHS Funding

For this investigator's second incident of this nature, the IACUC determined that the following findings constituted *serious and continuing noncompliance*¹ with the federal regulations:

Post-operative analgesicsⁱⁱ and Post-operative monitoringⁱⁱⁱ

6/10/19 – Health and morbidity concerns observed

While conducting routine health checks, two mice were found expired and two mice were observed with health concerns that required immediate monitoring by the veterinary staff following a castration surgery. These two mice recovered without further complications.

6/10/19 – The Attending Veterinarian halted all surgical procedures for the protocol

During the assessment, it was also discovered that eight mice had undergone a castration surgery, but

- did not receive the entire three days of postoperative analgesics as described in the IACUC approved protocol; and
- were not adequately monitored by research staff for the required postoperative period as described in the IACUC approved protocol.

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy IV.C.1.b: "Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator.

ⁱⁱⁱ The *Guide for the Care and Use of Laboratory Animals* p.119, "An important component of postsurgical care is observation of the animal and intervention as necessary during recovery from anesthesia and surgery (Haskin and Eisele 1997)..."

12/10/19 – Review and approval of the corrective action plan at a fully convened IACUC meeting

To protect the welfare of animals and prevent future recurrence, the IACUC also required following corrective actions:

1. The IACUC permanently restricted all surgical procedures being conducted in the laboratory, requiring that all surgical procedures must only be conducted in the dedicated surgical areas of the assigned vivarium which are overseen by central animal facility personnel.
2. The IACUC permanently requires all surgical procedures to be conducted where postoperative care and monitoring will occur during the regular work week to ensure appropriate and adequate observation of animals.
3. A comprehensive plan from the Principal Investigator (PI) to ensure appropriate oversight of compliance by all personnel involved in surgery.
 - The oversight plan includes a process of accounting of all surgeries conducted, substances delivered to an animal during the perioperative periods, including anesthetic and analgesic drugs (pre- & post-surgery), and a verification process that such activities were performed by the surgeon, e.g. review and sign-off by a lab manager or another lab surgeon (i.e. a "buddy system").
 - The IACUC Chair will convene a mandatory meeting with the PI and laboratory personnel to review and discuss the determination, the required corrective actions, and the plans for ensuring compliance.
 - The PI will review records, procedures, and compliance (e.g. any checklists, discussion at lab meetings, and description of material reviewed).
 - The PI will document in writing their review of the surgical records and notify the IACUC of any deviations from approved procedures.
4. There will be increased oversight of the surgeries performed under supervision of the PI by the IACUC for six months after approval of the plan.
 - There will be two Post-Approval Monitoring (PAM) reviews focused on surgery within 6 months of the IACUC determination.
 - A monthly review of all surgery, anesthesia, and analgesia records and adherence to the plan will be conducted.
 - Five survival surgeries will be observed by a clinical veterinarian and an IACUC member.
5. If compliance with the IACUC approved plan or the increased oversight is not maintained, there will be escalating punitive corrective actions including, but not limited to suspension of all surgical privileges.

This notification will also be sent to AAALAC International and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

Mary Dickinson, PhD
Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Wolff, Axel (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Tuesday, December 17, 2019 8:10 AM
To: (b) (6)
Cc: OLAW Division of Compliance Oversight (NIH/OD)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for these reports. We will send replies soon.
Axel Wolff

From: (b) (6)
Sent: Monday, December 16, 2019 4:09 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Mary Dickinson, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)

(b) (6)



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

August 26, 2019

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 7X]

Dr. Adam Kuspa
Senior Vice President for Research
Baylor College of Medicine
One Baylor Plaza, BCM310
Houston, TX 77030

Dear Dr. Kuspa,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your August 16, 2019 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that five mice received a different pre-operative analgesic than described in the protocol and failed to receive the required post-operative analgesics for three days following surgery. The mice were also not monitored for three days following surgery and one mouse died. One investigator had not completed all of the required training modules.

The corrective actions consisted of requiring a surgery oversight plan from the Principal Investigator (PI) and placing the laboratory under enhanced oversight by the Institutional Animal Care and Use Committee (IACUC). The PI's plan is to account for all surgeries and drugs and must be signed off by another laboratory surgeon, the plan will be reviewed by the IACUC, the PI and staff will be counseled by the IACUC chair, the PI will review records and checklists with staff, and the PI will document review of surgical records. The investigator involved subsequently completed the modules and was named the Training Ambassador for the laboratory. The research associate is no longer working with research animals. The surgical trainer will maintain direct contact with the PI for all animal care and use issues.

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



A3823-7X

OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 - 6983
(713) 798 - 2721 FAX
akuspa@bcm.edu

CONFIDENTIAL

August 16, 2019

Brent Morse, DVM
Acting Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-1875: Project 2 of Translational Research In Breast Cancer: Heat Shock Proteins and Drug Resistance

Species: Mice

Funding Source: Non-PHS Funding

For this investigator's first incident of this nature, the IACUC determined that the following findings constituted a *serious noncompliance*¹ with the federal regulations:

Pre-operative and Post-operative Analgesiaⁱⁱ

Five mice that underwent tumor removal surgery received a pre-operative analgesic that was not described in the IACUC approved protocol on the day of surgery. These mice did not receive the required post-operative analgesics for the three day period following the tumor removal surgery.

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ PHS Policy IV.C.1.b: "Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator."

"The *Guide for the Care and Use of Laboratory Animals* p.119, "An important component of postsurgical care is observation of the animal and intervention as necessary during recovery from anesthesia and surgery (Haskin and Elsele 1997). The intensity of monitoring will vary with the species and the procedure and may be greater during the intermediate anesthetic recovery period...Particular attention should be given to the thermoregulation, cardiovascular and respiratory function, electrolyte and fluid balance, and management of postoperative pain or discomfort...Appropriate medical records should also be maintained..."

iv The *Guide for the Care and Use of Laboratory Animals*. p115: "Researchers conducting surgical procedures must have appropriate training to ensure that good surgical technique is practiced - that is, asepsis, gentle tissue handling, minimal dissection of tissue, appropriate use of instruments, effective hemostasis, and correct use of suture materials and patterns."

Post-operative Monitoringⁱⁱⁱ

The same five mice did not receive post-operative monitoring by research personnel for the same three day period as described in the IACUC approved protocol. One mouse was found expired post-operatively and the remaining four mice had no health concerns when observed by veterinary staff.

Required Training^{iv}

During a review of required surgical training records it was discovered that one of the researchers did not complete all modules of the institutional training prior to conducting surgical procedures. This researcher had only successfully completed the on-line portion of the required training. As of this letter, this researcher has successfully completed all modules, meeting all requirements of the required institutional surgical training, and has been named as the new Training Ambassador for the laboratory.

Corrective Actions:

1. The IACUC requires a comprehensive plan from the PI to ensure appropriate oversight of compliance by all personnel involved in surgery.
 - o The oversight plan must include a process of accounting of all surgeries conducted, substances delivered to an animal during the perioperative periods, including anesthetic and analgesic drugs (pre- & post-surgery), and a verification process that such activities were performed by the surgeon, e.g. review and sign-off by a lab manager or another lab surgeon (i.e. a "buddy system").
 - o The plan will be reviewed at the next convened IACUC meeting for approval. If the plan is not approved, all surgeries will be suspended until a satisfactory plan is approved by the IACUC.
 - o Once the plan is approved, the IACUC Chair will convene a mandatory meeting with the PI and laboratory personnel to review and discuss the determination, the required corrective actions, and the plans for ensuring compliance.
 - o The Principal Investigator (PI) will review records, procedures, and compliance (e.g. any checklists, discussion at lab meetings, and description of material reviewed).
 - o The PI will document in writing their review of the surgical records and notify the IACUC of any deviations from approved procedures.
2. There will be increased oversight of the surgeries performed under supervision of the PI by the IACUC for six months after approval of the plan.
 - o There will be two Post-Approval Monitoring (PAM) reviews focused on surgery within 6 months of the IACUC determination.
 - o A monthly review of all surgery, anesthesia, and analgesia records and adherence to the plan will be conducted.
3. If compliance with the IACUC approved plan or the increased oversight is not maintained, there will be escalating punitive corrective actions including, but not limited to suspension of all surgical privileges.
4. The original research associate responsible is no longer working with research animals at Baylor College of Medicine.
5. The new Training Ambassador has completed the required training and completed a surgical proficiency assessment with veterinary staff.
6. The surgical trainer will maintain direct contact with the PI for all issues including protocol adherence, exogenous substances, analgesics, training, animal illness/death, and welfare of the animals.

This notification will also be sent to AAALAC International and the non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)

A rectangular grey box redacting the signature of Adam Kuspa.

Adam Kuspa, PhD
Senior Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Wednesday, August 21, 2019 11:56 AM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report – Assurance D16-00475

Thank you for providing these reports (b) (6) We will send official responses 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: (b) (6)
Sent: Wednesday, August 21, 2019 9:48 AM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report – Assurance D16-00475

Dear Dr. Morse,

Please find attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Adam Kuspa, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)

(b) (6)



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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

August 7, 2019

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 7T]

Dr. Adam Kuspa
Senior Vice President for Research
Baylor College of Medicine
One Baylor Plaza, BCM310
Houston, TX 77030

Dear Dr. Kuspa,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your August 1, 2019 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals at Baylor College of Medicine. According to the information provided, OLAW understands that fifteen mice failed to receive post-operative analgesics for two of five days. Three mice in this group had small partially dehisced incisions that were healing. No adverse effects were reported with the mice due to missing the doses or with the healing incisions.

The corrective actions consisted of the Institutional Animal Care and Use Committee (IACUC) requiring an oversight plan for surgery from the Principal Investigator (PI). The plan is to require sign-off by another laboratory member that all procedures were conducted in accordance with the protocol, the plan will be reviewed by the IACUC, if accepted the IACUC chair will discuss corrective actions with the PI and staff, the PI will hold laboratory meetings to discuss procedures and compliance, and the PI will review surgical records and maintain documentation and notify the IACUC of any deviations. The laboratory will be placed under enhanced IACUC oversight and if compliance is not maintained, escalating sanctions will be applied. The investigator who performed the surgery was retrained in incision closure, the laboratory staff was retrained on analgesia administration and record keeping, and all laboratory staff was retrained on rodent procedures.

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 IACUC to comply with the PHS Policy and commends the potential use of punitive actions for further infractions especially during a time of enhanced institutional awareness and intense training in appropriate conduct of surgery. Thank you for informing OLAW about this matter.

Sincerely,

(b) (6)

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

cc: IACUC Chair

A3823-7T



OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 - 6983
(713) 798 - 2721 FAX
akuspa@bcm.edu

CONFIDENTIAL

August 1, 2019

Brent Morse, DVM
Acting Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent finding in animal research after an assessment of the following protocol:

Protocol: AN-7068: Developmental and Regenerative Analysis of Glial Regulators in the CNS

Species: Mice & Rats

Funding Sources: National Institute of Neurological Disorders and Stroke (NINDS) 1R01NS110859-01 and Non-PHS Funding

For this investigator's first incident of this nature, the IACUC determined that the following findings constitutes *serious noncompliance*¹ with the federal regulations:

Post-Operative Drugsⁱⁱ

During a veterinary review of surgical cards, it was discovered that post-operative analgesics were not provided to 15 mice for two days out of the five day recovery period as described in the IACUC approved protocol. The mice received the last three days of analgesics as described in the IACUC approved protocol. There were no health concerns observed with the mice during and after the recovery period.

¹ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy"

ⁱⁱ PHS Policy IV.C.1.b: "Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator."

ⁱⁱⁱ The *Guide for the Care and Use of Laboratory Animals* p.119, "An important component of postsurgical care is observation of the animal and intervention as necessary during recovery from anesthesia and surgery (Haskin and Eisele 1997). The intensity of monitoring will vary with the species and the procedure and may be greater during the intermediate anesthetic recovery period...Particular attention should be given to the thermoregulation, cardiovascular and respiratory function, electrolyte and fluid balance, and management of postoperative pain or discomfort...Appropriate medical records should also be maintained..."

Post-Operative Care¹⁸

Within this same group of mice, it was discovered that 3 mice had small, partially dehisced incisions that were healing before the reassessment. A Clinical Veterinarian recommended continued monitoring of the 3 mice until the incisions completely healed. These mice recovered without incident.

Corrective Actions:

1. The IACUC requires a comprehensive plan from the PI to ensure appropriate oversight of compliance by all personnel involved in surgery.
 - o The oversight plan must include a process of accounting of all surgeries conducted, substances delivered to an animal during the perioperative periods, including anesthetic and analgesic drugs (pre- & post-surgery), and a verification process that such activities were performed by the surgeon, e.g. review and sign-off by a lab manager or another lab surgeon (i.e. a "buddy system").
 - o The plan will be reviewed at the next convened IACUC meeting for approval. If the plan is not approved, all surgeries will be suspended until a satisfactory plan is approved by the IACUC.
 - o Once the plan is approved, the IACUC Chair will convene a mandatory meeting with the PI and laboratory personnel to review and discuss the determination, the required corrective actions, and the plans for ensuring compliance.
 - o The Principal Investigator (PI) will review records, procedures, and compliance (e.g. any checklists, discussion at lab meetings, and description of material reviewed).
 - o The PI will document in writing their review of the surgical records and notify the IACUC of any deviations from approved procedures.
2. There will be increased oversight of the surgeries performed under supervision of the PI by the IACUC for six months after approval of the plan.
 - o There will be two Post-Approval Monitoring (PAM) reviews focused on surgery within 6 months of the IACUC determination.
 - o A monthly review of all surgery, anesthesia, and analgesia records and adherence to the plan will be conducted.
3. If compliance with the IACUC approved plan or the Increased oversight is not maintained, there will be escalating punitive corrective actions including, but not limited to suspension of all surgical privileges.
4. The researcher responsible completed a re-training on appropriate wound closure with a Clinical Veterinarian.
5. The Training Ambassador for the laboratory reviewed the proper use of the post-operative surgery cards and the importance of administering all doses of analgesics as described in the IACUC approved protocol. During the training session, the entire surgery section of the protocol was also reviewed.
6. All research personnel are required to complete the "Animal Work at BCM: Mice & Rat" training.

These findings of non-compliance does not appear to pose any potential or actual effect on cost related to this PHS supported research.

This notification will also be sent to AAALAC International, National Institute of Neurological Disorders and Stroke (NINDS) and non-PHS funding source according to the terms and conditions of the award.

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

Sincerely,

(b) (6)



Adam Kuspa, PhD
Senior Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

Ward, Joan (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Monday, August 5, 2019 3:07 PM
To: (b) (6)
Subject: RE: OLAW Report- Assurance D16-00475

Thank you (b) (6) for this report. Dr. Morse will respond soon.

Regards,
Joan

From: (b) (6)
Sent: Monday, August 5, 2019 11:36 AM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report- Assurance D16-00475

Dear Dr. Morse,

Please find the attached notifications of research non-compliance as determined by our IACUC, and sent on behalf of Dr. Adam Kuspa, Institutional Official.

Please feel free to contact me if you have any questions.

Thank you,

(b) (6)

(b) (6)

A large rectangular area of the document is completely redacted with a solid grey fill, obscuring all text and graphics that would otherwise be present in this section.



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTHFOR 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 2, 2019

Re: Animal Welfare Assurance
A3823-01 [OLAW Case 70]

Dr. Adam Kuspa
Senior Vice President for Research
Baylor College of Medicine
One Baylor Plaza, BCM310
Houston, TX 77030

Dear Dr. Kuspa,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your April 24, 2019 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animal Welfare at Baylor College of Medicine. According to the information provided, OLAW understands that seven mice undergoing survival surgery were not monitored for two days postoperatively and did not receive the required analgesia. Also, there was insufficient documentation of the controlled analgesic drug given preoperatively.

The corrective actions consisted of having a veterinary technician assess the mice. One mouse required euthanasia and the others appeared to be in good health. The Attending Veterinarian stopped the surgeries until retraining was completed and proficiency assessed. The laboratory staff was retrained on post-operative care, monitoring, documentation, and controlled substance use. The laboratory will ensure that there is adequate staff coverage to conduct appropriate postoperative monitoring.

Based on its assessment of this explanation, OLAW understands that measures have been implemented to correct recurrence of this problem. While OLAW concurs with the actions taken by the institution to comply with the PHS Policy, we find it disappointing that under the current enhanced reporting of efforts taken to prevent surgical problems, another problem such as this has occurred. In addition to pre-retraining and retraining, it is necessary to initiate escalating sanctions such as personnel actions, suspending animal use privileges, or revoking animal use privileges in order to successfully prevent recurrence. Because these perioperative failures have the potential for causing pain, distress, or death in laboratory animals, an institutional culture of compliance must be initiated with zero tolerance for repeated surgical failures throughout the animal care and use program. OLAW expects any future reports of surgical/surgery related failures to include more stringent corrective actions. These expectations should be communicated to all animal users conducting surgery. Thank you for informing OLAW about this matter.

Sincerely,

(b) (6)

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

cc: IACUC Chair



OFFICE OF RESEARCH

One Baylor Plaza, BCM310
Houston, Texas 77030-3411

(713) 798 – 6983
(713) 798 – 2721 FAX
akuspa@bcm.edu

CONFIDENTIAL

April 24, 2019

Brent Morse, DVM
Acting Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
olawdco@mail.nih.gov

RE: Assurance #D16-00475

Dear Dr. Morse,

As Institutional Official for Baylor College of Medicine (BCM), I have the duty to inform you of our Institutional Animal Care and Use Committee's (IACUC) recent findings in animal research after an assessment of the following protocol:

Protocol: AN-6100: Regulation of Remyelination in the Central Nervous System

Species: Mice

Funding Sources: National Cancer Institute (NCI) R01-CA217105; National Institutes of Health (NIH) 1F32-CA221015; 5F32-CA221015; and the following Non-PHS funding: National Multiple Sclerosis Society 1RG-1501-02756; American Cancer Society and Cancer Prevention & Research Institute of Texas (CPRIT) RP160192; RP150334

The IACUC determined that the following findings constituted *serious noncompliance*ⁱ with the federal regulations:

Postoperative Care and Monitoring^{ii, iii, iv}

Seven mice underwent surgery and did not receive appropriate postoperative monitoring for a two day period, as described in the IACUC approved protocol. During this period the mice were not monitored and did not receive the approved post-operative analgesic meloxicam, as required. Upon assessment by a veterinary technician, one mouse was euthanized and the six other mice were in good health and had no health issues.

ⁱ PHS Policy IV.F.3.a: "The IACUC, through the Institutional Official, shall promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to: a. any serious or continuing noncompliance with this Policy;"

ⁱⁱ The Guide for the Care and Use of Laboratory Animals p.119, "An important component of postsurgical care is observation of the animal and intervention as necessary during recovery from anesthesia and surgery (Haskin and Eisele 1997). The intensity of monitoring will vary with the species and the procedure and may be greater during the intermediate anesthetic recovery period. During this period, animals should be in a clean, dry, comfortable area where they can be observed frequently by trained personnel. Particular attention should be given to the thermoregulation, cardiovascular and respiratory function, electrolyte and fluid balance, and management of postoperative pain or discomfort. Additional care may be warranted, including long-term administration of parental fluids, analgesics, and other drugs, as well as care of surgical incisions. Appropriate medical records should also be maintained. After recovery from the anesthesia, monitoring is often less intense but should include attention to basic biological functions of the intake and elimination and to the behavioral signs of postoperative pain, monitoring for postsurgical infections, monitoring for the surgical incision site dehiscence as appropriate, and timely removal of skin sutures, clips or staples (UFAW 1989)."

ⁱⁱⁱ The GUIDE, 8th Ed. p115: "Successful surgical outcomes require appropriate attention to presurgical planning, personnel training, anesthesia, aseptic and surgical technique, assessment of animal well-being, appropriate use of analgesics, and animal physiologic status during all phases of a protocol involving surgery and postoperative care."

^{iv} The GUIDE, 8th Ed. p115: "Researchers conducting surgical procedures must have appropriate training to ensure that good surgical technique is practiced – that is, asepsis, gentle tissue handling, minimal dissection of tissue, appropriate use of instruments, effective hemostasis, and correct use of suture materials and patterns."

Drug Log^{v,vi}

During the assessment, it was discovered that there was not appropriate documentation required for the use of the pre-operative analgesic buprenorphine that was administered to all seven mice.

Corrective Actions:

1. The Attending Veterinarian halted surgeries until the research associate responsible could be re-trained and demonstrated proficiency to veterinary staff in the approved surgical procedures.
2. The PI held a laboratory meeting where the Training Ambassador (TA) reviewed appropriate postoperative care and monitoring and use of institutional surgical cards to document surgery, post-operative care and monitoring.
3. All researchers completed a hands-on training with veterinary staff to review controlled substance use, including appropriate documentation.
4. All future surgeries conducted by the laboratory will include appropriate postoperative monitoring and the schedule will be communicated throughout the entire laboratory for additional coverage, as needed.

These findings of non-compliance do not appear to pose any potential or actual effect on costs related to this PHS-supported research.

This notification will also be sent to AAALAC International, the National Cancer Institute, the National Institutes of Health, and the non-PHS funding sources according to the terms and conditions of the awards.

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

Sincerely,

(b) (6)

Adam Kuspa, PhD
Senior Vice President and Dean of Research
Institutional Official
Baylor College of Medicine

cc: Principal Investigator
Department Chair
Research Compliance Services files

^v 21 CFR 1304.22(c): Records for dispensers and researchers. Each person registered or authorized to dispense or conduct research with controlled substances shall maintain records with the same information required of manufacturers pursuant to paragraph (a)(2)(i), (ii), (iv), (vii), and (ix) of this section. In addition, records shall be maintained of the number of units or volume of such finished form dispensed, including the name and address of the person to whom it was dispensed, the date of dispensing, the number of units or volume dispensed, and the written or typewritten name or initials of the individual who dispensed or administered the substance on behalf of the dispenser.

^{vi} BCM Controlled Substance Policy p. 9: "Log books are required for each individual controlled substance dispensed."

Morse, Brent (NIH/OD) [E]

From: OLAW Division of Compliance Oversight (NIH/OD)
Sent: Monday, April 29, 2019 4:25 PM
To: (b) (6) OLAW Division of Compliance Oversight (NIH/OD)
Cc: (b) (6)
Subject: RE: OLAW Report - Assurance D16-0475

Thank you for these four reports (b) (6) We will send official responses 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: (b) (6)
Sent: Friday, April 26, 2019 2:33 PM
To: OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>
Cc: (b) (6)
Subject: OLAW Report - Assurance D16-0475

Dear Dr. Morse,
Please find attached notifications of research non-compliance and adverse event as determined by our IACUC, and sent on behalf of Dr. Adam Kuspa, Institutional Official. Please feel free to contact me if you have any questions.

Thank you,
(b) (6)

(b) (6)

