



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

July 12, 2021

Re: Animal Welfare Assurance  
A3413-01 [OLAW Case 3C]

Michael R. Blackburn, Ph.D.  
Executive Vice President and  
Chief Academic Officer  
University of Texas Health Science Center-Houston  
7000 Fannin St., UCT-1732  
Houston, TX 77030

Dear Dr. Blackburn,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your July 1, 2021 letter providing additional requested information regarding an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals within the animal care and use program at the University of Texas Health Science Center at Houston. According to the additional information provided, OLAW understands that the conductivity of the re-dosed system water will be measured and confirmed to be within the target range using both the life-support system's built-in conductivity meter and a hand-held conductivity meter prior to exposing the sentinel and wild-type strains to the re-dosed water.

OLAW thanks you for providing this additional information. We appreciate your program's transparency and of being informed of this matter and find no cause for further action by this office.

Sincerely,

**Brent C. Morse -S**

Digitally signed by Brent C. Morse

-S

Date: 2021.07.12 15:54:45 -04'00'

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

cc: IACUC contact



**Office of the Executive Vice President  
and Chief Academic Officer**

Michael R. Blackburn, Ph.D.  
*Executive Vice President, Chief Academic Officer*

July 1, 2021

Brent Morse, D.V.M., DACLAM  
Director, Division of Compliance Oversight  
Office of Laboratory Animal Welfare  
Rockledge One, Suite 360, MSC 7982  
6705 Rockledge Drive  
Bethesda, MD 20892-7982

**Re: OLAW Case A3413-3C**

Dear Dr. Morse,

The Animal Welfare Committee (AWC), the Institutional Animal Care and Use Committee for The University of Texas Health Science Center at Houston (UTHealth), acknowledges receipt of your June 24, 2021, letter requesting further information associated with OLAW Case A3413-3C.

I can confirm that yes, the conductivity of the re-dosed system water will be measured and confirmed to be within the target range using both the life-support system's built-in conductivity meter and a hand-held conductivity meter prior to exposing the sentinel and wild-type strains to the re-dosed water.

If you have any further questions, please do not hesitate to let me know.

Sincerely,

(b) (6)

Michael R. Blackburn, Ph.D.  
Executive Vice President and Chief Academic Officer

MRB/tsl

cc: Dr. Christophe Ribelayga, IACUC Chair

(b) (6)

AWC Office

713.500.3544 phone 713.500.3059 fax  
7000 Fannin St., UCT-1732  
Houston, TX 77030

## Walker, Keri (NIH/OD) [E]

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**From:** OLAW Division of Compliance Oversight (NIH/OD)  
**Sent:** Thursday, July 8, 2021 9:41 AM  
**To:** Walker, Keri (NIH/OD) [E]  
**Cc:** OLAW Division of Compliance Oversight (NIH/OD); Morse, Brent (NIH/OD) [E]  
**Subject:** FW: OLAW Response to Final Report - Case A3413-3C  
**Attachments:** 2021\_0701\_RCR-21-009 OLAW Final Report Response OLAW CASE A3413-3C\_MRB.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Keri,

I should have this report in my file drawer. You can send it to me tomorrow. Thanks.

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

**From:** OLAW Division of Compliance Oversight (NIH/OD)  
**Sent:** Thursday, July 8, 2021 9:36 AM  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: OLAW Response to Final Report - Case A3413-3C

Thank you for following-through with sending this report. We will send an official response soon.

Best regards, Brent Morse

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

**From:** (b) (6)  
**Sent:** Tuesday, July 6, 2021 3:56 PM  
**To:** OLAW Division of Compliance Oversight (NIH/OD) <[olawdco@od.nih.gov](mailto:olawdco@od.nih.gov)>  
**Cc:** (b) (6)  
**Subject:** FW: OLAW Response to Final Report - Case A3413-3C  
**Importance:** High

Apologies – The email provided below had an incorrect email address, and the message bounced back. Please find the details attached.

Many thanks,

(b) (6)

(b) (6)

**From** (b) (6)

**Sent:** Tuesday, July 06, 2021 2:42 PM

**To:** [olawco@mail.nih.gov](mailto:olawco@mail.nih.gov); [olawdco@od.nih.gov](mailto:olawdco@od.nih.gov)

**Cc:** Blackburn, Michael R <[Michael.R.Blackburn@uth.tmc.edu](mailto:Michael.R.Blackburn@uth.tmc.edu)>; Ribelayga, Christophe P

<[Christophe.P.Ribelayga@uth.tmc.edu](mailto:Christophe.P.Ribelayga@uth.tmc.edu)>; (b) (6) Animal Welfare Committee,

GM <[awc@uth.tmc.edu](mailto:awc@uth.tmc.edu)>

**Subject:** OLAW Response to Final Report - Case A3413-3C

**Importance:** High

***Sent on behalf of Michael R. Blackburn, Ph.D.,  
EVP & Chief Academic Officer / Institutional Official, UTHealth—***

Good Afternoon, Dr. Morse,

I have attached one PDF concerning the above-referenced.  
Please advise if you have any issues with receiving the attachments.

Thanks and regards,

(b) (6)



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Bethesda, Maryland 20817  
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Facsimile: (301) 480-3387

June 24, 2021

Re: Animal Welfare Assurance  
A3413-01 [OLAW Case 3C]

Michael R. Blackburn, Ph.D.  
Executive Vice President and  
Chief Academic Officer  
University of Texas Health Science Center-Houston  
7000 Fannin St., UCT-1732  
Houston, TX 77030

Dear Dr. Blackburn,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your June 15, 2021 letter reporting an instance of noncompliance with the PHS Policy on Humane Care and Use of Laboratory Animals within the animal care and use program at the University of Texas Health Science Center at Houston. Your letter supplemented the information contained in an initial telephone report to this office on June 2, 2021. According to the information provided, OLAW understands that on May 3, 2021, during routine maintenance, a leak in the drainpipe of the clean sump of the recirculating zebrafish system was noted. The drainpipe and leak repairs were completed on May 3. However, during the refilling of the sump system, and subsequent automated and manual re-dosing to return the system parameters to target range, the conductivity increased above the target range. High salinity water reached some of the tanks following the reestablishment of system water flow to the racks. Between May 3 and May 5, 2021, approximately 1,380 dead adult fish and fry were removed from the system. No further deaths were noted after May 5<sup>th</sup>, and the drainpipe continues to function properly, with all water chemistry values remaining within target ranges. Eighty of the zebrafish involved in this incident were supported by NIH funding.

Corrective and preventive measures included the development of operating procedures and plans which have been reviewed with care staff. A stepwise restoration of system water flow to the aquatics racks will occur such that flow will first be established to tanks housing sentinel and wild-type strains. Flow to tanks housing sensitive lines will then be established following confirmation that animal health has not been impacted by the restoration of flow of re-dosed water. The re-dosing of refilled reverse osmosis water to the clean sump will occur using only the automated dosing system. It is understood that no significant costs associated with this event were identified but that funds will be returned if associated costs are identified.

OLAW appreciates the consideration of this matter by the University of Texas Health Science Center at Houston, which was consistent with the philosophy of institutional self-regulation. Based on the information provided, OLAW agrees that appropriate corrective and preventive actions were taken, but we have one question. Will the conductivity of re-dosed water be tested, and confirmed appropriate, before tanks housing sentinel and wild-type stains are exposed to the re-dosed water? Thank you for this report.

**Please provide the requested information to OLAW by July 16, 2021.**

Sincerely,

**Brent C. Morse -S**

Digitally signed by Brent C. Morse -S  
Date: 2021.06.24 09:51:23 -04'00'

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

cc: IACUC contact

June 15, 2021

Brent Morse, D.V.M., DACLAM  
Director, Division of Compliance Oversight  
Office of Laboratory Animal Welfare  
Rockledge One, Suite 360, MSC 7982  
6705 Rockledge Drive  
Bethesda, MD 20892-7982

**Re: Assurance A3413-01**

Dear Dr. Morse,

The Animal Welfare Committee (AWC), the Institutional Animal Care and Use Committee for the University of Texas Health Science Center at Houston (UTHealth) provides this report of a mechanical failure resulting in death to animals. In accordance with Assurance A3413-01 and PHS Policy IV.F.3.a., a preliminary report was made by the [REDACTED] (b) (6), to you on June 2, 2021.

On May 3, 2021, a mechanical failure in the zebrafish system resulting in animal deaths was reported to the AWC. During routine maintenance on May 3, 2021, a leak in the drain pipe of the clean sump of the recirculating zebrafish system was noted. System water flow to the aquatic racks was turned off to allow for the repair of the drainpipe. The drainpipe and leak repairs were completed on May 3. However, during the refilling of the sump system to increase the water level and subsequent automated and manual re-dosing to return the system parameters to target range, the conductivity increased above the target range. Unfortunately, high salinity water reached some of the tanks following the reestablishment of system water flow to the racks. Between May 3 and May 5, 2021, approximately 1,380 dead adult fish and fry were removed from the system. No further deaths were noted after May 5, and the drainpipe continues to function properly, with all water chemistry values remaining within target ranges.

Operating procedures and plans have been developed and reviewed with Center for Laboratory Animal Medicine and Care staff that perform repairs requiring the shutting off of system flow to the aquatics racks and redosing of added reverse osmosis water to the system. A stepwise restoration of system water flow to the aquatics racks will occur such that flow will first be established to tanks housing sentinel and wild-type strains. Flow to tanks housing sensitive lines will then be established following confirmation that animal health has not been impacted by the restoration of flow of re-dosed water. The re-dosing of refilled reverse osmosis water to the clean sump will occur using only the automated dosing system.

Brent Morse, D.V.M., DAACLAM  
Re: Assurance A3413-01  
June 15, 2021  
Page 2 of 2.

Eighty of the zebrafish involved in this incident were supported by NIH funding (1R21NS108310-01A1). No significant costs associated with this event were identified. Funds will be returned if associated costs are identified.

The AWC Protocol Deviation Subcommittee has investigated the incident, evaluated the corrective action plan, and feels that the incident has been successfully resolved.

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

Sincerely,

(b) (6)

Michael R. Blackburn, Ph.D.  
Executive Vice President and Chief Academic Officer

MRB/tsl

cc: Dr. Christophe Ribelayga, IACUC Chair

(b) (6)

AWC Office



**Wolff, Axel (NIH/OD) [E]**

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**From:** OLAW Division of Compliance Oversight (NIH/OD)  
**Sent:** Monday, June 21, 2021 6:52 AM  
**To:** (b) (6)  
**Cc:** OLAW Division of Compliance Oversight (NIH/OD)  
**Subject:** RE: OLAW Final Reports - Assurance A3413-01

Thank you for these reports. We will send responses soon.

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

**From:** (b) (6)  
**Sent:** Wednesday, June 16, 2021 10:50 AM  
**To:** OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>; OLAW Division of Compliance Oversight (NIH/OD) <olawdco@od.nih.gov>  
**Cc:** Blackburn, Michael R <Michael.R.Blackburn@uth.tmc.edu>; Ribelayga, Christophe P <Christophe.P.Ribelayga@uth.tmc.edu>; (b) (6) Animal Welfare Committee, GM <awc@uth.tmc.edu>  
**Subject:** OLAW Final Reports - Assurance A3413-01  
**Importance:** High

**Sent on behalf of Michael R. Blackburn, Ph.D.,  
EVP & Chief Academic Officer / Institutional Official, UTHealth—**

Good Morning, Dr. Morse,

I have attached two PDFs concerning the above-referenced.  
Please advise if you have any issues with receiving the attachments.

Thanks and regards,

(b) (6)





## Initial Report of Noncompliance

By: BCM

Date: 6/2/2021

Time: Voicemail

Name of Person reporting: (b) (6)  
 Telephone #: (b) (6)  
 Fax #:  
 Email:

Name of Institution: Univ. of Texas Health (Houston)  
 Assurance number: A3413

Did incident involve PHS funded activity? yes  
 Funding component:  
 Was funding component contacted (if necessary):

Leak in a drain line resulted in conductivity increase when water replenished automatically.  
 1,380 fish died, 80 were NIH funded.

Species involved: zebrafish  
 Personnel involved: ?  
 Dates and times: ?  
 Animal deaths: yes

Projected plan and schedule for correction/prevention (if known):

Projected submission to OLAW of final report from Institutional Official:

< 60 days

OFFICE USE ONLY  
 Case #