



Inspection Report

UNIVERSITY OF MEMPHIS
Executive Vice President for Research & Innovation
365 Innovation Drive
MEMPHIS, TN 38152

Customer ID: **852**
Certificate: **63-R-0006**
Site: 001
UNIV. OF MEMPHIS

Type: ROUTINE INSPECTION
Date: 22-AUG-2022

2.31(c)(7)

Institutional Animal Care and Use Committee (IACUC).

Protocol #0860 states that the Principle Investigator's staff will conduct daily observations on the animals, and the Assistant Director stated that this is not being done and has not been done in a long time. Significant changes- such as the cessation of daily observations by the investigator's staff- can result in failure to identify and address animal welfare concerns in a timely manner. Correct by 10/1/22 by ensuring that significant changes to protocols are reviewed and approved by the IACUC.

2.31(e)(1)

Institutional Animal Care and Use Committee (IACUC).

Protocol "CY22-008" does not include an approximate number of animals. Species of animals are listed, but there is no corresponding number of animals. In order for the IACUC to accurately evaluate the species and number of animals to be used in a protocol, animal numbers must be provided. Correct by 10/1/22 by ensuring that protocols contain the number of animals to be used.

2.31(e)(3)

Institutional Animal Care and Use Committee (IACUC).

Protocol "CY22-008" does not include a complete description of the proposed use of animals. The protocol indicates that no euthanasia will be performed, and then lists numerous methods of euthanasia along with individuals authorized to

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perform euthanasia. The protocol states that animals will be “euthanized for veterinary care/animal welfare issued based on the opinion of the AV.” Records review and discussion with an animal husbandry employee confirm that euthanasia is performed on voles on the holding protocol on an ongoing basis by individuals listed on the approved protocol without first consulting with the Attending Veterinarian (AV) as required by the protocol. Protocol #0873 does not include a complete description of the proposed use of animals. The protocol states that euthanasia will be carried out by the PI and describes the method of euthanasia, but does not state when, why, or how many animals will be euthanized. Protocol #0860 also indicates euthanasia will be performed but does not state when, why, or how many animals will be euthanized.

Accurately describing animal usage including determining and describing humane ends points is important for animal welfare. Correct by 10/1/22 by ensuring that protocols completely describe the proposed use of animals.

2.33(b)(3) Critical

Attending veterinarian and adequate veterinary care.

Medical records show that on 5/25/22, a vole was identified by an animal care technician as having a swollen, red, hairless left front limb. The records show that the Attending Veterinarian (AV) recommended euthanasia and the animal was euthanized on 6/23/22. The timing of the AV’s recommendation of euthanasia is unclear. The facility does not know which protocol this animal was on. The facility could not locate any additional records concerning the care of this animal between 5/25/22 and 6/23/22. The Attending Veterinarian and Associate Director could not recall this animal. The Associate Director stated that the animal was not provided any medications during the monitoring period because no medications are maintained on site. Animals who have red, swollen limbs may have an infection or injury, and may experience stress, pain, or discomfort. Correct by 8/23/22 by ensuring issues regarding animal health are communicated with the attending veterinarian promptly, and that the AV’s instructions for animal care are followed.

2.36(b)(5)

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Annual report.

The facility submitted an annual report for FY21 which listed 217 “common mole rats”. The associate director stated that the facility did not have any common mole rats in FY21, instead they had approximately 270 “Damaraland mole rats” which are a different species than common mole rats. Accurate reporting on the annual report is important for transparency and public oversight of animal use in research. Correct by 9/7/22 by ensuring that accurate reporting of animal name, number, and pain category on the annual report.

2.38(f)(1) Critical

Miscellaneous.

Since July 19, 2022 there have been 15 deaths (including animals found dead and those who were euthanized for medical reasons) in the main room housing approximately 250 Damaraland mole rats (DMRs). In contrast, during the timeframe 10/9/21 to 7/18/22 there were only 4 deaths in DMRs in the same room. On 7/19/22 an employee identified a Damaraland mole rat with a “missing rear leg from a fight with other mole rats.” The animal was euthanized in consultation with the attending veterinarian. On 8/1/22 an employee identified two Damaraland mole rats with problems- the first had a back rear leg that was broken, and the other had a rear leg that was swollen and red and the animal was unable to bear weight or walk normally. The second animal also had an eye that was swollen shut. The animals were euthanized after prompt consultation with the attending veterinarian. On 8/22/22, two additional DMRs were euthanized per the instruction of the attending veterinarian due to fight wounds on the head and face.

An animal care technician stated that subjectively, the animals had recently appeared to be agitated, and there had been increase bullying and fighting between the animals. The Associate Director stated that the recent deaths were most likely attributable to fighting between animals due to some environmental source of stress, and that they had done an investigation and found that the most likely cause of stress for the animals was the addition of a dehumidifier to the room which was generating a soft noise that might be bothering the animals. The Associate Director also recently discovered

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that the light cycle for the room had been malfunctioning, resulting in 24-hours of continuous light in the room. Both of these issues have now been corrected. Continuous light without periods of dark can cause increased stress and disrupted sleep for animals, which may result in abnormal behaviors such as increased aggression. Noises and blowing air/wind can be disturbing or disruptive to animals. Animals housed socially are especially susceptible to the aggression or bullying caused by other animals as a result of stress from environmental sources. Correct by 9/1/22 by handling animals as expeditiously and carefully as possible in a manner that does not cause trauma, overheating, excessive cooling, behavioral stress, physical harm, or unnecessary discomfort.

2.38(l)

Miscellaneous.

The facility does not have a contingency response plan that addresses the events, personnel, resources, or actions needed in the event of emergencies. Planning for contingencies that can reasonably be expected to occur is important for ensuring that animals do not suffer or die needlessly in the event of an emergency or natural disaster. Correct by 10/1/22 by documenting a contingency response plan to provide for the humane handling, treatment, transportation, housing, and care of animals in the event of an emergency or disaster that could reasonably be anticipated to have a negative impact on the health and wellbeing of animals in the facility's care.

3.125(a)

Facilities, general.

One plastic hard-sided enclosure containing Damaraland mole rats has an approximately 1.5 inch diameter hole in the side, directly under an area where a hollow tube/pipe is connected to the container. A large amount of bedding has fallen out through the hole. An animal care employee who routinely works in the area stated that these animals occasionally escape from their enclosures due to poorly fitting tubes and excessively worn tubes and enclosures. Enclosures with holes or poorly fitting components may cause animals to become trapped or escape, causing the animals stress, injury, or

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death. Correct by 9/23/22 by ensuring that animal enclosures are structurally sound and in good repair, to protect the animals from injury and contain the animals.

3.126(b) Critical

Facilities, indoor.

On April 1, 2022 in the life sciences building, the HVAC unit broke down overnight, resulting in decreased ventilation, increased ambient temperatures, and the death of 12 voles. At the time of the incident, the facility did not have an alarm or monitoring system in place to alert personnel about ventilation problems. Animals without adequate ventilation may suffer from heat, stress, lack of oxygen, and death. Correct by 8/23/22 by ensuring that animals have adequate ventilation for health and to prevent discomfort. Corrected prior to time of this inspection.

This inspection was conducted with the Associate Director of Animal Care Facilities, the IACUC Chair, and the Lead Animal Care Technician. The exit interview was conducted with the Associate Director of Animal Care Facilities, the IACUC Administrator, the Senior Associate Director for Research Compliance, and the Attending Veterinarian.

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Species Inspected

Cust No	Cert No	Site	Site Name	Inspection
852	63-R-0006	001	UNIV. OF MEMPHIS	22-AUG-2022

Count	Scientific Name	Common Name
000263	<i>Fukomys damarensis</i>	DAMARA / DAMARALAND MOLE-RAT / DAMARALAND BLES MOL
000062	<i>Heterocephalus glaber</i>	NAKED MOLE-RAT
000119	<i>Microtus arvalis</i>	EUROPEAN COMMON VOLE
000031	<i>Phodopus sungorus</i>	DJUNGARIAN / RUSSIAN WINTER WHITE DWARF HAMSTER
000475	Total	