

**UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

Minutes from Monday, January 24, 2022

Present: MG (Chair), GD (Member-AV), NH (Member), OK (Member), LL (Member), GM (Member), GP (Member), DH (Member, Non-affiliate), CP (Member), RR (Member, Non-scientist), MR (Member), LS (Member – vet), RZ (Member), JC (Associate Director-Animal Medicine, Alternate)

Non-Members Present: CM (IACUC/IBC Director), VCP (IACUC Coordinator), EN (Sr. Protocol Specialist), DS (Research Compliance Specialist), SC (IACUC Admin), GC (Guest)

Absent: HK (Member), CT (Member), EL (Member), JM (Alternate Member), LS (Alternate Member), AS (Alternate- Non-scientist), YW (Alternate Member), YXW (Alternate Member)

This meeting was called to order by the Chair at 3:00 PM

The meeting was adjourned at 4:21 PM

1. Protocols for Review

- a. PROTO202000175 (AR1)- The annual review form for this DoD-funded protocol was distributed prior to the meeting for IACUC review. There were no adverse events reported and there were no questions or concerns raised during the meeting.

*A motion was made to approve the first annual renewal of PROTO202000175.
Moved, seconded, and voted unanimously to approve the first annual renewal of PROTO202000175.*

- b. PROTO202000123 (AR1)
The annual review was distributed prior to the meeting for IACUC review. No animals have been used on this protocol yet and the IACUC had no comments.

*A motion was made to approve the first annual renewal of PROTO202000123.
Moved, seconded, and voted unanimously to approve the first annual renewal of PROTO202000123.*

- c. PROTO202000129 (AR1)
The annual review was distributed prior to the meeting for IACUC review. Seven non-human primates were used in the first year of this protocol. There were no adverse events reported and there were no questions or concerns raised during the meeting.

*A motion was made to approve the first annual renewal of PROTO202000129.
Moved, seconded, and voted unanimously to approve the first annual renewal of PROTO202000129.*

2. Department of Animal Medicine Operations Update

- a. Cage Change Departure
The IACUC evaluated cage change requirements described in the Guide for the Care and Use of Animals in response to a proposed departure in cage change frequency. The IACUC acknowledged that this would represent a departure in from following “In general, enclosures and accessories, such as tops, should be sanitized at least once every 2 weeks.”

GD (AV) discussed a study being conducted by Department of Animal Medicine to evaluate the levels of ammonia, CO₂ and appearance and behavior of mice in ventilated cages with modified cage change schedules up to 4 weeks. Results will be presented at an upcoming meeting. GD also acknowledged that the modified cage change frequency would only occur if staffing shortages prevented the standard frequency.

No vote was taken on this, pending Animal Medicine study completion.

- b. Disaster Plan Update
GD updated the disaster plan by completing the template recommended by the USDA, as an outline for existing SOPs. The IACUC determined that a subcommittee should evaluate the outline and SOP. The subcommittee should also ensure training requirements are met, including drills.
- c. Staffing for the Department of Animal Medicine
GD reported that he is working with a contracting company for additional animal care staffing needs.

3. Announcements and Discussion

- a. Removing Requirement for USDA Annual IACUC Review
CM reported that the USDA has removed the requirement for annual IACUC review of protocols. The IACUC agreed that this change would not impact IACUC oversight of covered species and could take effect. The OLAW assurance will be revised and reviewed as part of the next spring/summer semi-annual program review.
- b. Fall/Winter 2021 Inspection Findings
EN (Sr. Protocol Specialist) announced that the semi-annual 2021 fall/winter inspections were completed except for one lab space located in the LRB animal facility. An update will be provided if findings are identified during the pending inspection. The drafted inspection report was distributed prior to the meeting for IACUC review. The IACUC discussed inspection findings, corrective action plans and proposed deficiency designations. The committee agreed to finalize the report, including inspections, deficiencies, and corrective actions and timelines.

A pdf will be distributed to the committee to collect signatures.

*A motion was made to adopt the Inspection Findings Report as described.
Moved, seconded, and voted unanimously to adopt the Inspection Findings Report as described.*

4. Protocol Violations & Adverse Events

- a. Update on PROTO202000182
Additional information was provided to the IACUC in response to a discussion at the December IACUC meeting. Specifically, the PI clarified that the same promoter was used for vectors delivered through different routes of administration. The PI also reported that there were no adverse outcomes after using a different promoter. The IACUC had no additional questions and determined that the corrective actions were appropriate to prevent reoccurrence.

A motion was made to approve the corrective actions.

Moved, seconded and voted unanimously to approved corrective actions.

b. PROTO202100134

The IACUC discussed an adverse outcome from 12/15/2021, resulting in euthanasia of one NHP prior to recovery from anesthesia after lateral ventricular and intravitreal injections of siRNA. The injection was uneventful, however, during recovery the animal experienced ventricular tachycardia and required resuscitation by Department of Animal Medicine veterinary staff. The animal was euthanized after repeated unsuccessful attempts to remove from the ventilator and due to a lack of response to stimuli. A necropsy was performed, and a spherical cavity found adjacent to the lateral ventricle was identified and believed to be consistent with a mistargeting of the injection. The PI self-reported this incident after consultation with the AV.

The IACUC and veterinarians discussed the incident, procedure, experience and training of the surgeon, and inherent risks associated with this procedure. The AV believed the more likely cause to be drug-related toxicity, not due to mistargeting, and agreed that a more robust prescreen in mice and sheep would be beneficial, as the PI described in the corrective action plan. The veterinarians and IACUC agreed that this is an inherent, anticipated risk associated with this type of experiment and procedure. The committee had several additional questions for the PI related to prescreening compounds in sheep and recommended a protocol amendment to provide more details of potential complications. An update will be provided during the next fully convened IACUC meeting.

A motion was made to approve the Corrective Action Plan and pending PI responses to IACUC questions.

Moved, seconded, and voted unanimously to approve the Corrective Action Plan, and pending PI responses to IACUC questions.

c. PROTO202100035

An anonymous whistleblower report was submitted to the IACUC on 1/4/2022 and the PI was immediately notified. There were several concerns in the report which were addressed by the PI and discussed with the IACUC chair, IACUC director and Attending Veterinarian before the meeting. The outcome of the discussion:

- Animals were transported out of the animal facility to the lab according to applicable procedures/protocol.
- The anesthesia method remained compliant with the IACUC protocol.
- The lab followed the vendor guidelines for frequency of catheter flushing, which was inconsistent with the frequency described in the IACUC protocol and therefore represented a protocol noncompliance that did not impact animal welfare. The PI will amend the protocol to follow vendor guidelines for this procedure.
- IDH2 inhibitor studies were done prior to IACUC approval. The amendment to add the procedure was in process and ultimately approved, but not prior to initiation of the study by a member of the laboratory unbeknownst to the PI. This is a protocol noncompliance that did not impact animal welfare.
- The IACUC discussed training of laboratory personnel. There were no concerns related to training during the most recent PAM audit of this lab when procedures were last observed. The IACUC discussed the extensive experience of the lab manager in this group who provides training to new animal users. The IACUC also reviewed all animal health reports generated for this lab to evaluate possible

training concerns resulting in mistreatment of animals. The AV and IACUC agreed that the number and nature of health reports from the last year were within a typical range and there was no evidence of mishandling or inhumane care. Nonetheless, a PAM audit was initiated, and the Research Compliance Specialist will report concerns related to training to the IACUC, should they arise during the audit.

- The AV and IACUC also evaluated all animal health reports to ensure food and water were provided to all animals at all times. Research staff and Animal Medicine staff verbally confirmed that mice were always provided food and water and there were no health reports to indicate otherwise.

After a thorough investigation, the IACUC acknowledged that several of the allegations related to inhumane care of animals could not be supported due to lack of documentation and/or evidence which suggested otherwise. Nonetheless, the IACUC agreed that a PAM audit would be an appropriate course of action to ensure compliance and humane care of animals. The IACUC also discussed the corrective actions implemented by the PI to address the noncompliant activities, including 1.) a more robust standardized method of recordkeeping for all animals. 2.) routine notebook checks by the PI during weekly one-on-one meetings with research staff for surveillance of all animal work. 3.) a dedicated colony maintenance evaluation conducted 2-3 times per week, and 4.) training on protocol adherence and IACUC procedures.

The IACUC agreed that the corrective action plan was sufficient to address the concerns.

A motion was made to approve the Corrective Action Plan for PROTO202100134, including continuing the PAM.

Moved, seconded, and voted unanimously to approve the Corrective Action Plan for PROTO202100134, including continuing the PAM.

- d. Subcommittee to address weaning procedures

The IACUC acknowledged the need for a guideline related to weaning procedures in mice, specifically to address cage provisions for weanlings, including food, water and possibly hydrogel. All IACUC members were invited to participate in the subcommittee, but a report will be provided to the full committee once completed.

5. Consent Agenda

- a. **Policy 3.03: Doxycycline Administration in the Drinking Water to Modulate Gene Activity for Experimental Use in Rodents**

The policy was distributed prior to the meeting for review. Two minor changes were discussed by the committee, including specifying the need to individually label water bottles with an expiration date, and the revisions were accepted.

A motion was made to approve Policy 3.03: Doxycycline Administration in the Drinking Water to Modulate Gene Activity for Experimental Use in Rodents.

Moved, seconded, and voted unanimously to approve Policy 3.03: Doxycycline Administration in the Drinking Water to Modulate Gene Activity for Experimental Use in Rodents

- b. **Policy 3.08: Oral Antibiotics in Drinking Water for Clinical Use in Rodents**

This policy was distributed to the IACUC prior to the meeting for review. The veterinary staff made several changes and the IACUC also modified the policy to include labeling requirements for bottles containing oral antibiotics.

A motion was made to approve Policy 3.08: Oral Antibiotics in Drinking Water for Clinical Use in Rodents, as revised. Moved, seconded, and voted unanimously to approve Policy 3.08: Oral Antibiotics in Drinking Water for Clinical Use in Rodents, as revised.

6. The following educational material was discussed during the meeting:

Statistics, Statistical Thinking and the IACUC

Reynolds, P. Lab Anim. (NY) 50, 266-268 (2021)

<https://doi.org/10.1038/s41684-021-00832-w>

7. The list of protocols approved by DMR from December 11, 2021 to January 20, 2022 was acknowledged by the IACUC.
8. The December meeting minutes were sent to the IACUC for review prior to the meeting. There were no concerns.

A motion was made to approve the December 13, 2021 IACUC meeting minutes.

Moved, seconded, and voted unanimously to approve the December 13, 2021 IACUC meeting minutes.

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