University at Buffalo
State University of New York
Office of Research Compliance

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
MINUTES OF THE MEETING
January 18, 2022

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ATTENDANCE:

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CALL TO ORDER:

The IACUC Chair commenced the meeting at 12:31 PM.
If any member of the IACUC has submitted a protocol or amendment for review and approval, that member is not present during the discussion of and voting on their protocol or amendment. Quorum is maintained.

One committee member to leave the meeting early; this had no bearing on Quorum.

PRESENTATION OF THE MINUTES:
The minutes of the 2021 IACUC December meeting were presented. The December meeting minutes were voted on and unanimously approved.

BUSINESS:

PAM Update: The IO is looking into the possibility of making the PAM officer a salaried position. A site visit was conducted on December 15, 2021, and the report will be reviewed in January IACUC. The PAM office also has a site visit scheduled for January 21, 2022. It was noted that the checklist was not submitted with the PAM site visit. Once obtained from the PAM Officer, the checklist will be emailed to the committee for review.

Noncompliance PROTO201900198: The committee agreed that the two incidents discovered during the medical record review are noncompliant and an initial report will be sent to OLAW and USDA. It was noted that no animal welfare issues arose from the non-compliance incidents. The PI will need to

submit the following: A with the step-by-step operating procedures on pre and post-operative care. This document must include medications, dosages, and dosage frequency for each medication and a letter stating how they will provide laboratory staff with appropriate oversight to ensure the noncompliance issue does not occur again. The PI will also need to review his protocol to ensure the final version is correct and submit an amendment as needed.

Noncompliance PROTO201900078: The committee agreed that the incident was noncompliant and an initial report will be sent to OLAW. The PI will need to submit the following: the number of mice that underwent the tail snipping procedure, a description of the tail snipping procedure used, a step-by-step outline for all genotyping and identification procedures listed under PROTO201900078 and the PI must submit a letter stating how they will provide staff with appropriate oversite to ensure the issue does not occur again.

AMEND202100392: Amendment for PROTO2018001054: The DMR called for full committee review. The PI needs to reevaluate the number of mice requested and provide a more robust justification for the request. The PI also needs to remove excess information regarding their personal medical issue from the protocol.

IACUC Policy Review: The "IACUC Policy for Handling Issues of Noncompliance" new policy has been rewritten to clarify what is noncompliance, the process by which it will be handled, and possible corrective actions. The committee reviewed the policy and decided that noncompliance definitions needed to be more clearly defined. Edits will be made and the policy will be sent to the committee by email for final approval.

LAF RIA Humidity Levels: RIA has been recording low RH% below the acceptable levels required by the Guide teens and low 20s (must be BW 30-70%). The LAF added our portable humidifiers but with the high air changes per hour, they have not been able to make a meaningful change to the RH%. On warmer days the RH% is within acceptable levels, however, on cold days it drops below the acceptable levels. In the past, the LAF has requested Facilities have reduced the air changes per hour to maintain humidity levels. The building manager informed the LAF that reducing the air intake may have unintended consequences that may worsen the issue and the building manager has to meet building code requirements and ASHRAE guidelines and cannot reduce the air intake at this time. The reason for the resistance was not reported. The LAF is looking to source larger capacity humidifiers. However, a Long-term fix will not be able to take place in the near future. At this time RIA is out of compliance while a resolution is being sought.

APPROVALS:
A list of the submissions approved since the last meeting has been presented to the committee.

PROTOCOL REVIEW:

In addition to the IACUC review, Environment, Health & Safety (EHS) has also reviewed all protocols and amendments submitted this month. For protocols involving the use of hazardous agents in live animals, their use will be approved by the appropriate EHS authority and, as appropriate, laboratory SOPs will be placed as recommended by EHS prior to IACUC approval.

1. **AR202100089: Annual Review for MIC33018Y**

2. **Annual Summary:** Pain category E protocol. Over the past year, the lab has elucidated the role of extracellular adenosine A2B receptor in mitochondrial ROS production and host resistance to pneumococcal infection. No unexpected events occurred.
3. **Committee Discussion:** No issues were noted.
   Committee Action: The committee unanimously agreed to approve the annual.

4. **AR20220003: Annual Review for PROTO202000051**
   Annual Summary: Pain category E protocol. The lab has examined the effectiveness of the anti-RAGE mAb in acid induced lung injury model and found that the mAb was effective in reducing lung inflammation and lung permeability after acid-induced lung injury. About used 60 BL/6 mice for the project to date. No unexpected events occurred.
   Committee Discussion: No issues were noted.
   Committee Action: The committee unanimously agreed to approve the annual.

5. **3. PROTO202100018**
   Protocol Summary: From PI's non-scientific summary: This project will evaluate three strategies to increase the distribution of anti-cancer antibodies within solid tumors. The project will test hypotheses that (a) use of co-administered antibody fragments, designed as competitive inhibitors of binding of anti-cancer antibodies to tumor antigens, will increase anti-cancer antibody tumor distribution, selectivity, and efficacy, (b) pH-dependent antibodies, engineered for reduced affinity at acidic pH, with increase anti-cancer antibody tumor distribution, selectivity, and efficacy, and (c) co-administration of tumor-targeted matrix modulating enzymes will increase anti-cancer antibody tumor distribution, selectivity, and efficacy.
   Committee Discussion: Edits and clarification need to be made in Click. Radiation safety requirements need to be completed. The procedure "SQ Dosing Tumor Cells CA246785" needs specific tumor cell lines added to the protocol. The procedure "Blood sampling-saphenous vein" needs clarifications to frequency and volume. The substance administration "KI water administration" needs a description of how the KI water is prepared for the sterilely housed animals. Animals receiving 1251-Trastuzumb need to be labeled and LAF staff needs to be notified prior to use.
   Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

6. **PROTO202100085**
   Protocol Summary: From PI's non-scientific summary: Fifty-percent of pregnant women in the US are overweight or obese, putting not only the mother's health at risk but also placing a substantial health care burden on future generations before they are even born. In general, diet and exercise interventions (separately or combined) exhibit modest but significant improvements in maternal obesity. Although women may be motivated to improve eating patterns, research suggests a lack of improvement in diet quality before and during pregnancy for many women. Given these limitations, there is a need to identify additional strategies that may help to address the ever-growing problem of maternal obesity. A promising, yet essentially unexplored, option may be found in dietary supplementation of natural health products with established anti-obesity and metabolic health-promoting responses. α-lipoic acid (αLPA) is notable amongst nutraceuticals as it offers a wide array of metabolic benefits with purported anti-obesity, appetite-suppressing, glucose lowering, and insulin sensitizing effects. However, it has yet to be examined in the context of maternal obesity as a preventative therapy to protect against adverse programming outcomes. The proposed studies will examine the safety and efficacy of maternal αLPA

supplementation throughout pre-pregnancy, gestation, and lactation as a means to improve maternal and offspring health.
Committee Discussion: This protocol was submitted as a new protocol, but it is likely a triennial protocol submission. The committee is requesting progress made over the past three years and if there were any unanticipated results. Edits and clarification need to be made in Click. Statements regarding the light cycle, room temperature, and humidity are not necessary for the experimental description in "Fetal Studies". The procedure "Milk Collection" needs clarifications the use of anesthesia and the pain category may need to be adjusted. The procedure "Euthanasia (CO2)" needs a scientific justification for the use of CO2. The experiment "Progeny Studies" needs to clarify the use of a special diet. The alternatives section needs to be completed.
Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

7. **PROTO202100086**
Protocol Summary: From PI's non-scientific summary: Humans with SLC4A4 mutation have cataracts. It is unknown whether Slc4a4-null mice exhibit signs of this disease. We will image mouse lenses using a clinical tool modified for mice and evaluate their clarity
Committee Discussion: Edits and clarification need to be made in Click. The experiment "Breeding, Identifying, Genotyping" needs clarifications to the breeding scheme and a substance administration for the use of bupivacaine. The procedure "CO2 Inhalation" needs a secondary method of euthanasia and a scientific justification for the use of CO2. The substance administration "IP K/X Anesthesia" needs adjustments to the ketamine/xylazine dosage and the needle size needs to be included. The duplication section needs to be completed and a Scientific Merit Form needs to be uploaded.
Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

8. **PROTO202100091**
Protocol Summary: From PI's non-scientific summary: This project is a 'tissue only' project where the mouse lung macrophages and fibroblasts will be collected from mice and used to develop engineered lung tissues. Idiopathic pulmonary fibrosis (IPF), characterized by the progressive stiffening of lung tissues, is a severe disease with no cure. The understanding of the IPF pathogenesis is incomplete, but inflammation has been identified as one of the major mediators and has been proposed as a therapeutic target for the development of anti-IPF drugs. The objective of this project is to develop a co-cultured fibrotic microtissue system that can model the fibrogenesis event caused by the inflammation. Investigators propose to isolate alveolar and lung interstitial macrophages (MΦ) and lung fibroblasts from mice to develop MΦ subtype-specific models to study the effect of microenvironmental factors on the polarization of different MΦ subtypes and their differential contribution to fibrotic tissue formation.
Committee Discussion: This protocol was submitted as a new protocol, but it is likely a triennial review. The committee is requesting the progress over the last three years and if any anticipated event occurred. Edits and clarification need to be made in Click. It was recommended by the committee to keep ketamine and xylazine as two substances. The substance administration "ketamine and xylazine" needs the needle size added. The animal justification needs additional information regarding the number of animals requested. A non-vivarium location needs to be

added to the protocol for 211 Bonner Hall. The copy of the old protocol needs to be removed from the document section.
Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

9. **TR202100050 (Triennial for PROTO20190002)**
Protocol Summary: From PI's non-scientific summary: The overall goal of this research is to understand the basic mechanisms of normal hearing and hearing loss of diverse origins (e.g., aging, genetic mutations, intense noise exposure, and drugs that cause hearing impairments). To accomplish these goals, we utilized a large range of measurement techniques that include: (1) behavioral measures of hearing, (2) electrophysiological measurement of brain neural activity, (3) biochemical assessments, and (4) neuroanatomical assessments. In addition to understanding the mechanism underlying normal and impaired hearing, we seek to identify novel therapeutic approaches (e.g., neuroprotective drugs, sound therapies) to prevent, ameliorate or reverse hearing impairments.
Committee Discussion: Edits and clarification need to be made in Click. The CO2 rates need to be updated to correlate with the current AVMA guidelines and a scientific just needs to be added for the use of CO2. The procedure "Chronic Electrode Implant (Rat)" needs the craniotomy described, topical anesthetic added, and preservative-free saline needs to be sued on the dura and brain tissue, the carprofen dosage needs edits, suture removal needs edits, and SQ replacement fluids needs the volume edited. The Muscimol intracerebral infusion experiment needs clarifications. The breeding experiment needs edits. The procedure "Chronic Cannula Implant" needs clarifications to the craniotomy, topical anesthetics, carprofen dosage, suture removal, and replacement fluids. The procedure "Euthanasia Adult Mice" needs to have the flow rates correlate with current AVMA standards and a scientific justification is needed for the use of CO2. The procedure "Chronic Electrode Implant (Mice)" needs the craniotomy procedure described, topical anesthetics added, carprofen dosage edited, suture removal edited and preservative-free saline should be used on the dura and brain tissue. The procedures "Acute Neurophysiological Recording (Rat)" and "Procedure: Non-Survival Surgery: Acute Neurophysiology Recording (Mouse)" needs clarifications to how the holes are made in the skull. The procedure "Prolonged Physical Restraint: Chronic Electrophysiological Recording (Rats)" needs minor edits. The "Prolonged Physical Restraint: Chronic Electrophysiological Recording (Mice)" needs minor edits. The age of the mice needs to be clarified in the "Aim 5 Mouse Tissue Harvesting". The strains section needs clarification on the stain being used. The Alternatives and Duplication sections needs to be updated.
Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

10. **TR202100054 (Triennial for CLS01122Y)**
Protocol Summary: From PI's non-scientific summary: Our humanized antibody hJAA-F11 was found to be efficacious in decreasing the growth rate of two types of human triple breast cancer and human nonsmall cell lung cancer and human small cell lung cancer in mouse xenograft models. This data suggests that our antibody will be useful as adjunct therapy in humans. Our humanized antibody hJAA-F11 was used in imaging human breast, lung, colon and ovarian tumors. The imaging was specific for the tumor and did not accumulate in any normal organs. Thus data suggests that our antibody will be useful in identifying TF-Ag+ tumors in patients. 85% of all carcinomas are TF-Ag+ tumors.

Committee Discussion: Edits and clarification need to be made in Click. The time points don't correspond between the procedure and experimental overview edits and clarifications will need to be made. The procedure "Micro PET imaging anesthesia" needs a description regarding how the mice are monitored during the imaging and supportive care will be administered. The procedure "Non-Surgical Procedure: 4T1 tumor cell injection for imaging" needs regarding growth added to the protocol and the tumor cells need to be tested for murine pathogens. The procedure "Euthanasia with fatal plus" needs to be completed. The animal numbers need clarifications. A procedure for administering KI water needs to be added to the protocol. Protocol team member's animal research experience needs to be added.
Committee Action: The committee unanimously voted to require modifications to secure approval and to allow the revised protocol to be reviewed and approved by Designated Member Review.

The IACUC Chair adjourned the meeting at 2:07 PM.