

University of Washington
March 19, 2020 IACUC Meeting Minutes

Members Present:	AW (Remote)	GS (Remote)	KS
	JA (Remote)	JM (Remote)	MB (Remote)
	CM (Remote)	JPVH (Remote)	MK (Remote)
	DM (Remote)	JS	ML (Remote)
	FRR (Remote)	KG (Remote)	SL (Remote)

Members Present, Non-Voting: CH (Remote)

Members Absent: AB SRH

Opening Business

- The IACUC Chair called the meeting to order at 2:30 pm.

Confirmation of a Quorum and Announcement

- Quorum was confirmed by LI.

Protocol Review

- TR202000006 (4370-01) – EWC
 - Protocol Aim: The protocol focuses on neural and neurovascular regeneration in mouse models of traumatic injury and disease. The injury models on this protocol include laminectomy followed by spinal cord contusion injury, as well as craniotomy followed by cortical contusion injury. Cell engineering strategies, novel drug and drug delivery methods, and electrical nerve stimulation are tested for post-injury efficacy.
 - Reason for FCR: The protocol has been called for FCR due to the use of Avertin (or tribromoethanol) as an anesthetic agent for survival surgical procedures, and in some experiments, for multiple survival surgeries. Avertin is not available as a pharmaceutical grade agent, which runs contrary to NIH expectations and UW IACUC policy that investigators use pharmaceutical-grade substances for both investigational and clinical purposes unless there is a reason to use non-pharmaceutical-grade substances. Use of non-pharmaceutical grade agents must be justified and that justification must be reviewed and approved by the IACUC.

Furthermore, Avertin use in rodents remains controversial due to contradictory reports regarding the compound's efficacy and associated pathology and mortality. Morbidities reported with tribromoethanol use in mice include intestinal ileus, peritonitis, muscle necrosis, and serositis of abdominal organs.

- Justification: “We continue to use Avertin for all of our central nervous system (CNS) injury survival surgeries. For CNS injury modeling and pathology, we cannot use isoflurane due to its effects as a vasodilator and a neuronal suppressive, which dramatically alters injury dynamics and responses that lead to clinically relevant CNS pathologies--isoflurane administration would invalidate our injury model and make any subsequent results non-pertinent to the pathologies that we are funded to research. While Avertin is not available from a pharmaceutical source, we prepare our stocks with high-grade components ($\leq 98\%$ purity), under sterile condition, and we sterile filter the final solution. We continue to use Avertin (in mice) for survival surgeries because animals that are given a CNS injury respond and recover

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from Avertin better (with fewer complication) than Ketamine/Xylazine, which has allowed us to refine our anesthesia protocol and reduce animal numbers (by avoiding unnecessary deaths or subject-exclusion due to issues from repeated K/X administration and inconsistent anesthetic plane during surgeries).”

2:39PM Member Entered

The IACUC discussed the usage of isoflurane instead of Avertin in this protocol. The PI confirmed isoflurane is used in instances of direct delivery that are not injury based.

The IACUC asked what symptoms result from Avertin and how chronic effects of Avertin are monitored. Clinical signs of an adverse event related to use of Avertin would be the same as seen with general health decline of an animal. The literature suggests most symptoms are acute and display in 24-48 hours. The PI confirmed animals that undergo surgeries are followed extensively throughout the experiment and are monitored multiple times a week. The PI confirmed they have not seen any adverse outcomes or behaviors from using Avertin.

The IACUC discussed the PI’s preparation and storage protocol of Avertin.

The IACUC discussed why Avertin needs special justification.

**2:48PM Member Left
2:49PM Member Returned**

Motion was made and seconded: to approve the triennial as written.

Further Discussion: None.

Vote: Approved with 14 members voting in favor, 0 against, 1 abstention.

- Standard Procedure Reviews – AS

Procedures with Changes

Procedure Name	Species	Changes Made
CO2 followed by Secondary Method (>10 days of age)	Gerbils	Based on new guidance from the AVMA, the flow rate for CO2 was changed from 10-30% chamber volume/min to 30-70% chamber volume/min.
CO2 followed by Secondary Method (>10 days of age)	Hamsters	Based on new guidance from the AVMA, the flow rate for CO2 was changed from 10-30% chamber volume/min to 30-70% chamber volume/min.
CO2 followed by Cervical Dislocation (>10 days of age)	Mice	Based on new guidance from the AVMA, the flow rate for CO2 was changed from 10-30% chamber volume/min to 30-70% chamber volume/min.
CO2 followed by Secondary Method (>10 days of age)		
Decapitation, Under CO2 Anesthesia (<14 days of age)		

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CO2 followed by Cervical Dislocation (>10 days of age)	Rats	Based on new guidance from the AVMA, the flow rate for CO2 was changed from 10-30% chamber volume/min to 30-70% chamber volume/min.
CO2 followed by Secondary Method (>10 days of age)		
Decapitation, Under CO2 Anesthesia (<14 days of age)		

Motion was made and seconded: to approve the standard procedures as written.

Discussion: *None.*

Vote: Approved with 15 members voting in favor, 0 against, 0 abstentions.

Approval of the IACUC Meeting Minutes

- The IACUC Chair called for the approval of the February 20, 2020 meeting minutes.

Motion was made and seconded: to approve the minutes as written.

Discussion: *None.*

Vote: Approved with 12 members voting in favor, 0 against and 3 abstentions.

Attending Veterinarian's/OAW Director's Report – KS

- Adoptions - One ferret adopted out this past month.
- IACUC metrics - see meeting documents
- Facility issues:
 - Lights: On the night of 3/11/20, the lights in one NHP room did not go off as scheduled and the problem was fixed the next day. The light was noted on in the same room on 3/18/20 and a work order has been submitted to fix it.
 - Humidity: Low humidity has been noted in I-wing and RR-wing, and minor, sporadic nose bleeds have been seen in some NHPs. Facilities has been working on the RR-wing humidifier, and the vendor has adjust the programming resulting in some improvements in humidity levels. There is no humidification in I-wing, so use a portable humidifier is being tried, but may not be very effective due to the high air change rate.
- Protocol Monitoring:
 - Twenty-two total protocols. Of the protocols, 13 involve surgery, two restraint (and sx), one conscious restraint, 1 tumor modeling, 4 miscellaneous (tape skirt, infection, water quality). Seven are inactive right now. Many of the labs have suspended new experiments so activity has been minimal in the last month.
- Adverse Events: No new adverse events to report

2:59PM Member Left

- Follow up on adverse event on protocol 4417-01: Mortality due to valve-less cage being used to house mice. PI response: The researcher has been retrained on how to toggle/activate the water valve whenever a new cage is used. The lab will ensure that in the future all new

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cages are toggled according to the standard procedure. DCM has not uncovered how a valve-less cage was available to the researcher.

3:00PM Member Left
3:01PM Member Returned

- Follow up on adverse event on protocol 4328-01: Mortality in mice following one hour of experimental exposure to cigarette smoke. PI responded that there was a reduction in the flow of air throughout the smoke chamber due to an obstruction in a narrowed section of tubing. The manufacturer assessed the machine, replaced a broken negative pressure meter, and assessed that all aspects of the machine were functioning properly. Given this incident and unexpected clog in an area that was not included in the routine maintenance nor the manufacturers' instructions, they plan to remove and clean the metal tubing leading to the pressure meter after 3 months of operation or sooner if they experience an unexplained drop in pressure. If there is an extended period of non-use, they will run the machine to ensure proper pressures and total suspended particulates before any mouse exposure. The PI also indicated that moving forward they will self-report these types of adverse events to OAW.
- Non-compliance with UW SOP:

3:03PM Member Returned

- DCM management reported that some rabbit racks were not sanitized within 14 day interval as prescribed in the DCM rabbit husbandry SOP. However, the racks were sanitized within the 30 days specified in the Animal Welfare Act (AWA). Thus, there was a non-compliance with regard to the DCM SOP but not the AWA. This SOP non-compliance was due to the regular animal technician being out and the rooms then being covered by multiple animal technicians accompanied by a miscommunication around when the racks should have been sanitized. Animal technicians have been re-trained to ensure the appropriate sanitization frequency as well as reminded that facility management must be notified when they are unable to complete these types of husbandry tasks according to the SOP.
- From Arizona
 - Facilities items:
 - During heavy rain on a weekend afternoon, one of the HVAC units went offline. Facilities staff responded to the alarms but they were unable to restart the unit until the next morning. In the overnight hours, another unit on the same building failed and the units on the new building shut down. Facilities responded, started working on the units, and called the after-hours HVAC tech. Different issues were diagnosed on the units and the some were able to come back online that morning and all of them were back on by that afternoon. The temperatures in some of the animal rooms were lower than usual and there were no animal health issues noted.
 - Adverse events: No adverse events to report.

Standard Operation Procedures / Policies / Guidelines

- Euthanasia of Research and Teaching Animals – KS
 - *Minor revisions made to reflect the new AVMA guidelines, and clarify guillotine maintenance.*

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- *An IACUC member suggested that for euthanasia involving Avertin (tribromoethanol), an approved secondary physical method should also be applied.*

Motion was made and seconded: to approve the policy with modification suggested.

Further Discussion: *None.*

Vote: Approved with 15 members voting in favor, 0 against, 0 abstentions.

Other Business

- AIDS-related Monitoring Protocol – CH
 - *Minor changes including clarifying body condition definitions for monitoring and euthanasia and adding consideration for a low platelet count condition.*

Motion was made and seconded: to approve the monitoring protocol as written.

Discussion: *None.*

Vote: Approved with 15 members voting in favor, 0 against, 0 abstentions.

- Potential COVID-19 Impacts – KS

The Annual Health Assessment of DCM and WaNPRC employees will be delayed due the Employee Health Center (EHC) nurses having competing priorities, and increased face-to-face contact during these in-person screenings is probably not a good idea right now. Skype interviews are a possibility in the future but not feasible in the short term. They are continuing to get new animal care staff cleared for work though. EHC has been asked to identify and prioritize those employees with respiratory conditions/issues, so they get a timely assessment and reduce their risk, especially given that COVID-19 is a respiratory condition.

Semi-annual IACUC site visits are continuing for now. We've moved up the dates on some site visits especially to housing spaces in case we are unable to do these visits in the near future. For non-USDA covered species areas we only need 1 IACUC member to visit and USDA covered species areas are required to have 2 members. The AZ site visit will be done with the 2 IACUC members who work there along with a local ad hoc consultant with primate experience. OLAW has indicated in a notice sent this week that the "timing of facility inspections may extend 30 days beyond the six-month interval from the last review if there is no forward drift of the date from year to year." OLAW also has indicated in this notice that "Assured institutions that are unable to inspect, at least once every six months, all of the institution's animal facilities (including satellite facilities) may request a waiver from OLAW." That would have to come from the IO and include justification that would be reviewed and granted by OLAW.

Husbandry and veterinary staffing has been at near normal levels so far. WaNPRC and DCM have been updating emergency response plans including potential responses should staffing and supply chain issues occur. Initially the response would include some changes such as decreasing frequency of tasks in facility areas that have no impact on animal husbandry and care such as mopping of hallways and cleaning of procedure rooms. If staffing becomes more of an issue, then incremental changes would be made to husbandry tasks that would not compromise animal health. These incremental steps are outlined in the Emergency Response Plans.

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Requesting that the IACUC delegate authority to the Attending Veterinarian to implement the emergency response plans as necessary with the provision that the AV will keep the IACUC informed on steps that are being taken.

The IACUC discussed including an alternate for the AV and if various stakeholders will be consulted in the delegate's decision making. It was decided the Institutional Official will also be a delegated authority to implement response plans, and confirmed that various stakeholders will be consulted.

Motion was made and seconded: to approve the delegation of authority to both the Attending Veterinarian and Institutional Official, acting independently or together, to implement the emergency response plans as necessary with the provision that they will keep the IACUC informed on steps that are being taken.

Further Discussion: *None.*

Vote: Approved with 14 members voting in favor, 0 against, 1 abstention.

Closing Business:

The Meeting was brought to a close at 3:26 pm. The floor was opened to public comment.