University of Washington
July 19, 2018 IACUC Meeting Minutes

Members Present:	AS	JE	LJE	TB
	CG	JFI	ML	TH
	CH	JM	MS	
	FRR	JPVH (left at 4:10pm)	SH	
	JB	JS	SL	
Members Absent:	AB	JLS	KL	

Opening Business

- The IACUC Chair called the meeting to order at 2:32 pm.

Confirmation of a Quorum and Announcement

- Quorum was confirmed by KC.

IACUC Training

- **Positive Reinforcement Training – KM**
  - KM from the Primate Center gave a presentation on the work they have been doing to train primates using positive reinforcement. The goal of this program is to give people the necessary tools to train animals to achieve the desired behaviors and overall decrease the stress the animal experiences. All personnel handling animals will go through this program to learn how to train the animals using positive reinforcement.

Protocol Review

- PROTO201800043 (4436-01) – **JFI**
  - This is a new protocol, and the first IACUC protocol for this investigator. Full Committee Review was requested for this protocol due to the unique nature of the work and to make sure the IACUC is aware of and has an opportunity to discuss any questions or concerns surrounding the equipment they propose to mount on the dog.

    This investigative group is based in the department of computer science and engineering. The goal of this group's research is to model dog behavior using machine learning and artificial intelligence such that by observing what the dog sees they can predict how the dog would move and respond to the environment.

    To accomplish this, they will use dogs that are either currently assigned to another IACUC protocol, or privately-owned dogs. Dogs will be geared up with a doggy backpack containing necessary electronics, sensors in tic-tac boxes attached above their joints with Velcro straps, and a camera mounted on their head. There are images and a description of the habituation process in the protocol. The group will then record what the dog is looking at and the dog's limb movements as it partakes in normal activities such as walking, playing, and fetching.

- *The habituation process will involve putting on one piece of equipment at a time and see how the animal responds. The habituation period for each item (joint straps, backpack, and head camera) will vary from a couple hours to multiple days. Positive reinforcement will be used during the habituation process. The sensors will be cleaned between each animal.*
- *Privately owned animals that are used require a consent form by the owner.*
- *If any animal shows signs of discomfort, the items will be removed and any animal that starts the project but is then counted out, will be counted against the protocol animal numbers.*
- *The largest concern is with the head camera.*
- *The group is designing their own head harness for the camera, but there is a commercial product available that they are basing their harness off.*
- *They are using animals that are currently on other UW protocols, but this is not currently clarified in the protocol, but will be updated and clarified before approval.*
- *Any animals used from a current UW protocol, will go through vet services for screening before beginning work.*

Motion was made and seconded: to send this protocol to DMR.
Further discussion: *None*
Vote: Approved with 17 members voting in favor.

Approval of the IACUC Meeting Minutes

- The IACUC Chair called for the approval of the June 21, 2018 meeting minutes.
  Motion was made and seconded: to approve the minutes as written.
  Discussion: *None*
  Vote: Approved with 9 members voting in favor and 8 abstentions.

- The IACUC Chair called for the approval of the June 29, 2018 Special IACUC meeting minutes.
  Motion was made and seconded: to approve the minutes as written.
  Discussion: *None*
  Vote: Approved with 11 members voting in favor and 6 abstentions.

Benefit Story – JS

- This month's benefit story is on the use of a cannabis-based treatment for epilepsy, and it comes from a collaboration between three UW researchers: Ruth Westenbroek, Bill Catterall and Nephi Stella (Kaplan, Stella, Catterall, & Westenbroek 'Cannabidiol attenuates seizures and social deficits in a mouse model of Dravet syndrome' Proc Natl Acad Sci U S A 14: 11229-11234, 2017).

  Dravet syndrome is a form of childhood epilepsy that is caused by genetic mutations in sodium channels that are critical for healthy brain function. When mutant sodium channels don't work properly, it leads to increasingly severe and frequent seizures, starting at just a few months of age. Some Dravet syndrome patients experience multiple seizures daily and many require full-time care. Standard epilepsy treatments have not proven to be very effective, but recently some parents of Dravet syndrome patients have been reporting success in reducing their children's seizures with cannabidiol, a component of marijuana that does NOT have psychoactive properties.

Westenbroek, Catterall and Stella tested the effects of cannabidiol on a mouse model of Dravet syndrome that harbors the same mutant sodium channels as human patients. First they showed that cannabidiol was effective at suppressing seizures in the Dravet mice, validating the model. They went on to determine that cannabidiol was having its beneficial effects by boosting inhibitory neurotransmission in the brain, effectively applying the brakes to the runaway train of excitatory activity that underlies seizures. Consistent with the lack of psychoactive effects, cannabidiol was NOT acting through typical cannabinoid receptors that are activated by THC. It was instead found to be acting through a different receptor called GPR55.

Very recently, the FDA approved the first cannabidiol-based treatment for seizures in Dravet syndrome patients. The UW study suggests that treatment could be further improved with the development of drugs that selectively target GPR55, to avoid possible side-effects of cannabidiol. Translational studies using animal models such as this one are an important component in the discovery of treatments for Dravet syndrome patients, among many others.

Attending Veterinarian's Report - TB

Facility issues:

Humidity: No low humidity reports

Temperature and lights:

- 6/15/18: The lights in this dog room did not go off as they should have at 8 pm, but rather stayed on until 2:47 am. The issue was then corrected.
- 6/29/18: The lights in this mouse room were turned on during the dark cycle in one room containing mice by contractors working to balance the airflow, then turned back off in such a way that the relays were affected and then the lights did not turn on in the morning as they should have. The manager turned in a work request to have it corrected, but it was not properly corrected until 7/2/18.

- ARCF airflow: The airflow in this facility has continued problems with differential pressures in some areas. This was noted on a recent site visit and is still an ongoing issue. HVAC technicians are in the facility now and working to solve the problem. They are estimating it will be completed by the end of July.

Protocol Monitoring:

- Twenty-two total protocols on vet monitoring. Of the protocols, 13 involve surgery, two restraints (and sx), one conscious restraint, 2 tumor modeling, 4 miscellaneous (tape skirt, infection, sleep apnea, water quality). Seven are inactive right now.

  Protocol 4417-01: This protocol was added to protocol monitoring at the request of an IACUC member due to conscious restraint being included in the protocol for an echocardiograph procedure in mice. This procedure takes 5 minutes. Our veterinarian has watched this procedure several times, and certain strains of mice appear to tolerate the procedure well (no struggling), however, other strains (FVB) do not. The struggle, urinate, and bite at the restraint for the entire 5 minutes. We are in discussions with the group regarding some potential drugs that could be given that will not greatly affect the heart but reduce the anxiety

that this procedure is producing. If the group decides not to pursue changes, then I will ask that it be re-reviewed by the full IACUC.

Adverse event:

- Protocol 4216-01: Two adult C57BL6 female mice received bilateral intraplantar injections of DMSO (20 ul/foot) on 5/9/18. The mice were being used for footpad injection training and received ketoprofen for post-procedural analgesia. On 5/10/18, both mice were reported for swelling in the hindpaws and facial region. The group elected to euthanize, and the carcasses were submitted for necropsy. On necropsy there was subcutaneous edema, erythema and tissue necrosis of the face and hind feet. Training was not on the protocol and the volume of injection was higher than typically used. The individual involved received additional training from Vet Services and AUTS.

  This will be reported to OLAW.

Motion was made and seconded: send a letter of counsel
Discussion: *None*
Vote on motion: approved with 17 members voting in favor.

- On 5/5/18, a 3 month old mouse was found dead in the cage with its right forelimb caught in the metal wire top of the cage. The mouse was submitted for necropsy, but due to severe amount of autolysis on gross necropsy, a definitive cause of death could not be determined and the carcass was not submitted for histology.

HBA Subcommittee:

- The HBA committee met this month and discussed incidents of morbidity and mortality in USDA species as well as concerns raised by individual IACUC members. I would urge you to look at the minutes for further insight.

- **WaNPRC ABC Supervisory Veterinarian's Report – TH**
  - Facilities items: On Tuesday, July 3rd, Facilities was alerted that the AC unit (window unit) for the feed storage shed would not start. Facilities responded immediately and the unit was replaced with a functional one the same day.

  - Adverse events: No adverse events to report at this time.

Update on HW – CH

- CH gave an update on the HW stock infant. HW was introduced to a group and then transferred to the Western facility and incorporated with the colony. So far, everything is going well.

OAW Director's Report – STI

- **No adverse events to report.**
- **Finalizing of Semi-Annual Report to the IO – LI**

- The group reviewed the draft Semi-Annual report and identified one item to analyze for future reports and two issues that need to be revised before the current report is finalized.
    - The item for future is to ensure all prolonged restraint is properly recorded in HoverBoard and reported on the semi-annual report.
    - There was concern raised around the intent of the suggestion to encourage diversity among reviewers as much as possible (i.e. the person who does the pre-review should be different from who does the DMR).

Motion was made and seconded: remove or reword Section II.2.d to address the concerns raised. New wording to be: d. The Chair be encouraged to appoint as DMR someone who did not lead pre-review of the item.

Discussion: *JS has already begun the discussion with some members from OAW, and has been encouraging the assignment of non-liaisons as DMR's.*
The suggested changes will put more strain on OAW because someone who is not as familiar will be reviewing the protocol as DMR.
The goal is to have as many eyes on every protocol item as possible. Suggested wording changes: The chair be encouraged to assign as DMR someone who did not lead pre-review of the item.
Consider looking at the metrics for how many times items have been assigned to IACUC members outside of OAW and then get reverted back since the suggested DMR didn't do their review.

Member left at 4:10pm.

Consider recruiting more faculty members to join the IACUC. Discussion about the pros and cons of volunteers vs those members who are told to join the IACUC by their chair/dean.

Vote on the motion: Approved with 17 members voting in favor.

- The other concern raised was a column noting the responsible parties in the table of facility deficiencies.
    - It can be helpful in pointing out patterns that may require additional work.
    - The names currently in the report seem irrational.

Motion made and seconded: to remove the list of responsible parties column.
Discussion: *If the responsible parties are removed, there should be another column or two added to show the protocol/PI involved, to track repeats. It was noted that repeat deficiencies are both noted by the site visitors and coded in HoverBoard. Consider asking the IO if this information is useful to him on the report.*
Vote on the Motion: approved with 11 members voting in favor, and 5 opposed.

The final report, revised to reflect the directions above, will be posted for IACUC members to review and submit their concurrence or non-concurrence.

Standard Operation Procedures / Policies / Guidelines

- Post-operative Monitoring and Wound Closures in Research Animals – **JFI**

  Motion was made and seconded: A motion to approve the policy as written.
  Discussion: *None*
  Vote: Approved with 16 members voting in favor.

Other Business

- **Discuss interim assessment of protocols**
  - Regulations allow IACUC's to discuss protocols without going through a re-review period. To avoid any misconceptions about protocols chosen to be looked at that are not up for approval/disapproval via FCR but rather just for further discussion on the work being done, a different term should be used. *Interim assessment* is a term that would imply that a vote is not required (though of course a vote to suspend could happen) and can apply to pilot projects, specific procedures, protocols, etc.
  - This new term could be blurred with FCR since the IACUC currently uses the term FCR both for items that are under review and for items that are already approved.
  - Consensus: No new term officially adopted now, but members can call items for discussion; they will be put under 'Other Business' in the monthly agenda.

Closing Business:

The Meeting was brought to a close at 4:46 pm. The floor was opened to public comment.