

University of Washington  
October 17, 2019 IACUC Meeting Minutes

Members Present:   AW                           JM                           SJH  
                          DM                           JS                           SRH  
                          FRR                           KS                           TH (Remote)  
                          JA (entered @ 2:38)   MB  
                          JE                           MK

Members Absent:   AS                           JPVH                       ML                        CH  
                          KG                           SL                           AB

### Opening Business

- The IACUC Chair called the meeting to order at 2:31 pm.

### Confirmation of a Quorum and Announcement

- Quorum was confirmed by KC.

### Approval of the IACUC Meeting Minutes

- The IACUC Chair called for the approval of the September 19<sup>th</sup>, 2019 meeting minutes.  
Motion was made and seconded: to approve the minutes as written.  
Discussion: *None*  
Vote: Approved with 8 members voting in favor, 0 against and 4 abstentions.

### Benefit Story – JS

- What makes us itch? Understanding how itchiness is signaled is the topic of this month's benefit story and it comes from Ajay Dhaka's lab. Itch is thought to have evolved to promote scratching to remove a parasite or substance that has landed on the body, but in some cases, itch can become pathological and debilitating. Itch is related to pain, but also distinct from pain, and while most compounds that cause itch at low concentrations evoke pain at higher concentrations, some chemicals have been identified that can cause itchiness without causing pain.

Using genetically modified zebrafish, the Dhaka group found that itch-inducing chemicals directly activate the same sensory receptors that are known to encode painful stimuli. Zebrafish that are lacking these TRPA1-type sensory receptors have no behavioral response to chemicals that normally cause itchiness or pain. This was unexpected and somewhat puzzling.

How is it that certain chemicals can selectively produce an itchy sensation without ever becoming painful, even at high concentrations? It turns out that only a sub-population of pain-sensitive, TRPA1-expressing neurons respond to itch-inducing compounds. This sub-population is somehow sensitized to respond to low concentrations of itch-inducing compounds. When only the sub-population of neurons is activated, it leads to itchiness. When the larger population of neurons is activated, the signal switches pain. Some compounds can *only* activate the sub-population, even at high concentrations, explaining their ability to induce itch but not pain.

In a nice example of comparative physiology, the Dhaka lab validated their zebrafish findings in mice. Working in collaboration with the Center for the Study of Itch at Washington University, they

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showed that mice lacking the gene for the TRPA1 sensory receptor had significantly attenuated responses to a chemical that causes itch in wild-type mice.

Understanding the distinct cellular and molecular mechanisms that underlie the sensations of itch and pain will aid in the development of therapies that can selectively treat pathological itch and pain.

Esancy K, Condon L, Feng J, Kimball C, Curtright A, Dhaka A. A zebrafish and mouse model for selective pruritus via direct activation of TRPA1. *Elife* (2018)

**Attending Veterinarian's/OAW Director's Report - KS**

- AAALAC Council has approved continued full accreditation for our animal care and use program. This outcome is due to the combined efforts of the DCM, Primate Center and OAW staff, the IACUC and our researchers in ensuring our high quality animal care and use program. Thank you to everyone.
- No HBAS meeting this month
- IACUC metrics- see meeting documents
- Facility issues: Some low humidity noted in RR wing due to the first cool, dry weather of the season. 1 NHP was observed with a slight nose bleed.
- Protocol Monitoring:
  - Twenty-one 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.
- Follow-up on Letter of Counsel on protocol 3328-07:
  - PI responded: As currently agreed with the AV, the lab will meet with the AV once the data is available to discuss any further experiments that may be required to create a finalized experimental injury protocol. If that is the case, any future experiments would be designed to follow the protocol as outlined (consistent impact energies), or an amendment would be submitted before further experiments are planned. For this and all aims under the PI's IACUC approved protocols, formal planning meetings will be held with the laboratory staff prior to the initiation of experiments to ensure that planned work is fully in line with the protocols. If these experiments include aims under protocol monitoring (CHIMERA pilot), the AV and other post-approval monitoring staff will be invited to these meetings to ensure that there is agreement on the experimental design. The outcome of these meetings will be formally documented by the laboratory staff.
  - *A member of the lab explained to the IACUC why the model was chosen, what the lab has done with the pilot so far, and the plan before moving forward in order to ensure that the lab is in compliance. The IACUC then discussed with the lab member how the dosing is determined, and what information is available for the use of this model in this species.*

**Member entered at 2:38PM**

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- Adverse Events:

- 4038-01: A cage of five mice was identified without food. Three mice in the cage were found dead, and two were dehydrated and lethargic and euthanized by the lab group. These mice were weaned 5 days prior (a Friday before a weekend) and a lab member may have forgotten to put food in the hopper. The cage also lacked a gel/toggle sign but gel was provided to the mice. Two different animal technicians worked the animal housing room and inspected cages daily since the mice were weaned but there was no report submitted for cages lacking food.

**Corrective action:** Veterinary Services spoke to the PI of the lab and instructed them to speak to all members of the lab to ensure food is placed in the cage when mice are weaned or moved to a new cage. Veterinary Services also spoke to the animal technicians and it was determined that cages were checked appropriately for levels of food.

**Reported to OLAW**

Motion was made and seconded: to have the lab be required to complete the online Check Food and Water lesson and to send a letter of acknowledgement to the lab.

Discussion: *This lab does not have a pattern of having issues. A letter of acknowledgement is good for recognizing that a mistake was made and to have the lab work to be better going forward.*

Vote: Approved with 13 members voting in favor, 0 against and 0 abstentions.

- Non-compliance:

- Non-compliance found during the IACUC semi-annual site visit to FHL: Due to a boat being out of commission, a student course that normally does open water observational work was changed to include catching of fish via beach sein netting and placement of those captured fish in holding tanks at FHL. This change in plans was not covered under an approved IACUC protocol and the fish were caught without a WA State Fish and Wildlife permit. In addition, the instructor and the students involved were not enrolled in the Occupational Health Program and the students had not taken the required training for participation in vertebrate animal classes at UW FHL.

**Corrective Actions:** In the interest of preserving the fish already captured for use in this course, the instructor was added to protocol #4238-03. The class work will be restricted to only the procedures listed on this protocol; specifically observational non-invasive experiments/procedures for 4 weeks to allow completion of the vertebrate use portion of this class and then followed by appropriate disposition of these fish (release at point of capture or euthanasia). The instructor is the only person handling the fish being held in the tanks. The instructor will need to submit his own protocol to cover course work he will be teaching in the future and obtain his own Fish and Wildlife permit. The instructor and students will take the required training and enroll in the Occupational Health program. Also, the AV and assistant director in OAW spoke with the interim director at FHL to discuss how they will ensure that future course work, course instructors and researchers understand the requirements around vertebrate work occurring there. Moving forward, all courses using fish come under the existing teaching protocol and that protocol's PI will work with each instructor in terms of training and procedures. In addition, anyone applying to do vertebrate research at FHL will be directed to this PI who will communicate with them about their

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needs and add them to his field research protocol. In the future, this requirement will include cephalopod work as well.

**Reported to OLAW.**

*The IACUC discussed the best next steps forward. The AV felt that the interim director understood the gravity of the situation and a letter from the IACUC was not necessary at this time. The Committee concurred.*

- From Arizona
  - Facilities items: No items to report.
  - Adverse events: No adverse events to report.
  - Other: There is a new building in AZ that is now operational. Some animals have already been moved from New Iberia to this building.

**Standard Operation Procedures / Policies / Guidelines**

- Reassignment of Non-Human Primates – **KS**
  - *No changes made to this policy.*

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

Discussion: *None*

Vote: Approved with 13 members voting in favor, 0 against and 0 abstentions.

- B.1089: Impounding of Animals – **KS**
  - *SOP owned by the Department of Comparative Medicine. This SOP covers the procedure that occurs when a protocol lapses. Additions include separation of breeding animals, and a clarification in regards to who is notified when a protocol expires/approved after expiration. In regards to separation of breeders, if the lab does not separate them, DCM will do so, but the lab will be charged.*
  - *OAW has updated their business practice in regards to this SOP to ensure the appropriate DCM staff are notified about the placement and the removal of the impound.*

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

Discussion: *None*

Vote: Approved with 13 members voting in favor, 0 against and 0 abstentions.

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**Other Business**

- Batch approval for standard procedures? – **JS**
  - *The IACUC is required to re-approve Standard Procedures every three years. In order to increase efficiency, it has been suggested that the procedures be approved in batches at the monthly IACUC meetings, rather than individually in HoverBoard.*
  - *There was consensus among the IACUC that this would be the best practice going forward.*

**Closing Business:**

The Meeting was brought to a close at 3:19 pm. The floor was opened to public comment.