

University of Washington  
August 17, 2017 IACUC Meeting Minutes

|                  |      |                     |     |
|------------------|------|---------------------|-----|
| Members Present: |      |                     |     |
| JM               | JB   | CH (left at 4:25PM) | KL  |
| SL               | SH   | TB                  | JS  |
| LJE              | AB   | ML                  | JFI |
| AS               | JPVH |                     |     |
|                  |      |                     |     |
|                  |      |                     |     |
| Members Absent:  | CG   | MG                  | PB  |
| JLS              |      |                     |     |
|                  |      |                     |     |

### **Opening Business:**

The IACUC Chair called the meeting to order at 2:32pm. A quorum was confirmed.

### **Approval of the IACUC Meeting Minutes**

The IACUC Chair called for the approval of the July 20, 2017 IACUC meeting minutes.

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

Discussion: None

Vote on the Motion: The meeting minutes were approved with 10 members voting in favor and 4 abstentions.

### **Benefit Story:**

This month's benefit story comes from the Elkon group, which is working to re-purpose antimalarial drugs for the treatment of autoimmune diseases, including lupus and rheumatoid arthritis [An J, Minie M, Sasaki T, Woodward JJ & Elkon KB (2017) Antimalarial Drugs as Immune Modulators: New Mechanisms for Old Drugs. Annu Rev Med 68:317-330.]. For centuries, humans have been treating malaria with compounds derived from tree bark, including quinine and artemisinin. More recently, these compounds were observed to have unexpected beneficial effects on arthritis and skin conditions related to systemic inflammation. The Elkon group has been trying to understand how common anti-malarial drugs produce their anti-inflammatory and immune-modulating actions. Working with mouse models, the Elkon lab has shown that anti-malarial drugs can block the elevation of interferon levels that are associated with autoimmune diseases such as lupus, and that are thought to trigger the pathogenic auto-antibodies that characterize these diseases, which can have mortality rates as high as 35% by 15 years of age. By identifying the intracellular signaling pathways that are modulated by anti-malarial drugs, it should be possible to quickly develop safe, new treatments for autoimmune disorders whose pathology involves interferon-mediated inflammation.

### **AV Report**

#### **Facility issues:**

**Humidity:** No issues reported.

**Temperature and lights:** No issues reported

#### **Protocol Monitoring:**

There are 15 active protocols on the veterinary monitoring program (8 surgical, 4 other, 3 tumor). I am adding two protocols to the veterinary monitoring program. The first a member of the IACUC asked that I add during their review of the protocol, protocol 4417-01 which uses physical restraint to perform ECG measurements in

University of Washington  
August 17, 2017 IACUC Meeting Minutes

conscious mice. The second protocol I will be adding this month is a non-human primate neuroscience protocol where necropsy results indicate that two animals have died with infectious processes in the brain, unrelated to surgery. How those infections have occurred is still unclear.

**Issues report:** Protocol 4379-01: On Tuesday, 5/30/17, an adult male and female mouse breeder pair were found moribund in a cage without food, and were subsequently euthanized. After speaking with the group and reviewing the room entry logs, it was determined that, while weaning the last litter from this cage on Friday, 5/26, a group member inadvertently placed the breeder pair in a new cage without food. Necropsy of both mice revealed lesions consistent with decreased food intake and stress. Husbandry supervisors were notified of this incident and husbandry staff in this facility have been retrained on the critical need to confirm food and water access for all cages. The group member involved has also been retrained.

**HBA Subcommittee:**

The HBA committee met this month. We discussed positive reinforcement training and its utility in the use of manual restraint devices for non-human primates, a continued discussion from last month. In addition, we had a discussion regarding clinical cases of morbidity and mortality in the WaNPRC and DCM.

## OAW Director's Report

| July 2017           |                 |                                      |            |
|---------------------|-----------------|--------------------------------------|------------|
|                     | Number of items | Average Work Days, submit to approve | StdDev     |
| <b>IACUC DMR</b>    |                 |                                      |            |
| Amendment           | 48              | 28                                   | 19.0       |
| Annual Review       | 9               | 17                                   | 4.5        |
| New Protocol        |                 |                                      |            |
| Application         | 7               | 63                                   | 47.3       |
| Triennial Review    | 9               | 36                                   | 22.7       |
| <b>IACUC FCR</b>    |                 |                                      |            |
| Amendment           | 1               | 19                                   |            |
| <b>VVC</b>          | <b>3</b>        | <b>1</b>                             | <b>1.0</b> |
| <b>Admin Review</b> | <b>102</b>      | <b>1</b>                             | <b>2.5</b> |

**Issues report:** Protocol 4304-02: It was reported to the OAW that, during post-necropsy analysis, tumors in the animals were found to exceed the IACUC policy and the group did not have IACUC approval to exceed the policy. There was discussion about what the group's experience was working with a tumor model and how they will monitor tumor size going forward. The group is already working with the veterinarians to address the issue and will amend the protocol when an appropriate solution is found.

Motion: A motion to send a letter of acknowledgement was made and seconded.

Discussion: None

Vote on the Motion: The motion was approved with 14 voting in favor, 0 opposed, and 0 abstaining.

University of Washington  
August 17, 2017 IACUC Meeting Minutes

Motion: A motion to send a letter of commendation to the individual who discovered and reported the non-compliance to the research group was made and seconded.

Discussion: A member emphasized that the wording of the letter be collegial.

Vote on the Motion: The motion was approved with 14 voting in favor, 0 opposed, and 0 abstaining.

**Issues report**: WaNPRC Western Facility: Animals were left in a trapping cage overnight and lacked water for >12 hours. Animals were assessed and were found to be in normal health and the person responsible has been retrained. There was a discussion regarding the size of the trapping cage and more specific description of the caging itself for members of the IACUC. Various possible solutions were discussed including instituting a buddy-system.

Motion: A motion to send a letter of counsel to the primate center director and acting associate director was made and to ask them specifically to address where the buddy-system has not yet been implemented at the primate center, and why.

Discussion: There was discussion regarding the size of the primate center and how effectively they communicate.

Vote on the Motion: The motion was approved with 14 voting in favor, 0 opposed, and 0 abstaining.

## Protocol Review

### AMEND201701290 (2340-01) - JFI

**Background**: This group studies the variability of eye movement command signals in saccade-related parts of the brain. The investigator hypothesizes that the commands to make identical saccades are different from one saccade to the next. The movements are still identical because the cerebellum measures the variability in each command and then changes its contribution to that command to make it appropriate. To do this work they select, train, and collect data from rhesus macaques to characterize eye movements and record movement-related activity in the brain.

**AMEND201701290**: In this amendment, the group is requesting one repair surgery for A16228, a 5 year old female rhesus macaque. This monkey has been on this project since last year, receiving a surgery to implant head lugs and an eye coil in November 2016. Her approved repair surgery was used this January to remove the broken eye coil and implant a new one, and another repair surgery was approved for her at the February IACUC meeting. That surgery was recently used to repair her rear head lug, which had sloughed. There is a surgery planned for August 29 to implant a recording chamber (was planned for 8/17, but recently moved). This animal currently has no approved repair surgeries and does not currently need one, so they are requesting one repair surgery to have available in the future if needed.

The group reports that she is healthy and fully trained in her eye movement tasks. She currently has an eye coil in her right eye, and three head-stabilizing lugs. I found her clinical history to be unremarkable.

**Behavior Report**: This animal has Alopecia and engages in Locomotor Stereotypy (repetitive pacing, etc). She is being monitored by BMS for both, and the frequency of her Locomotor Stereotypy is currently being assessed. This animal is currently Pair-Housed with a long-term social partner.

Motion: A motion was made and seconded to approve the amendment.

University of Washington  
August 17, 2017 IACUC Meeting Minutes

Discussion: There was discussion regarding the frequency at which animals use their allotted repair surgeries as well as the details of the UW NHP neuroscience repair surgery policy. It was acknowledged that the balance between approving another repair surgery and adding a new animal to the study is difficult.

Vote on the Motion: The amendment was approved with 12 members voting in favor and 2 against and 0 abstaining.

**AMEND201701284 (4167-01) – JFI**

**Background:** The objective of this group's research is to understand the neural mechanisms underlying trichromatic visual perception. To accomplish this, they record the electrical activity of neurons from the visual system of rhesus monkeys to study the computations that they perform with regard to their visual input.

**AMEND201701284:** In this amendment, the group is requesting two repair surgeries each for animals A14234 and A13003, which are both approximately 7 year old male rhesus macaques. The group reports that both animals are healthy and growing well. I thought the clinical histories for both of these animals were unremarkable.

A14234 has been assigned to this project since September 2015 and he has completed initial behavioral training and is ready to begin electrophysiological measurements. The group reports that there are four animals on this study and this animal is the only one at this level of training from which they can record data from the primary visual cortex, so his continued participation in this experiment is critical for the success of the study. This monkey had a head post and eye coil implanted in November 2015. An approved repair surgery was done in February of this year to remove that eye coil, which had broken, and implant a new eye coil. That eye coil has now become non-functional as well, although it has not required clinical removal. The animal currently has no approved repair surgeries, so the group is requesting two repair surgeries in this amendment – one to be used to replace the non-functional eye coil, and the other to be available in the future if need arises. This animal's current implants are a head post and a non-functional eye coil. They currently have a surgery scheduled for next Monday to implant the recording chamber – they will repair the eye coil during that same surgical session if this repair surgery is approved.

Behavior Report: This animal is not behaviorally sensitive and does not have a history of any behavioral issues. He is currently Pair-Housed with a long-term social partner.

A13003 had his first surgery on this protocol in August 2014, to implant a head post and eye coil. He subsequently, in 2015, received a titanium ring implant, followed by a surgery to implant a recording chamber (which attaches to the titanium ring). In March of this year his approved repair surgery was used to repair his eye coil, which last month had to be removed for clinical reasons. As with the other animal, this monkey currently has no approved repair surgeries, so the group is requesting two repair surgeries – one to implant a new eye coil, and the other to be available in the future if need arises. The animal's current implants are a head post and one chamber. They plan in the near future to remove that chamber and implant a second chamber, as approved in their protocol, and would like to replace the eye coil at that time as well.

Behavior Report: This animal has minor to moderate Alopecia and has engaged in minor to moderate Locomotor Stereotypy. He is currently in Grooming-Contact (G-C) with a long-term social partner. They are in G-C rather than Pair-Housed due to prior aggression but appear to be doing well now that they've been reunited in G-C.

Motion: A motion was made and seconded to approve the amendment.

University of Washington  
August 17, 2017 IACUC Meeting Minutes

Discussion: There was discussion regarding alternatives to the use of a replacement eye coil implant, but none available can provide accurate enough results for the group's research needs.

Vote on the Motion: The amendment was approved with 13 members voting in favor, 0 opposed, and 1 member abstaining.

There was a general request to have the level of stereotypy, if any, and a description of the stereotypy included in the description for any future NHP repair surgeries. It was also requested that the IACUC provide data on how long NHP neuroscience implants last.

## SOP/Policies/Guidelines

### PUB team policy proposal – JFI/KSH

The IACUC was reminded that a group in OAW was going through all existing Policies, and Guidelines to re-assess which exists as each type of item and to potentially combine them to ease re-review of the items. There are currently 41 policies and 1 guideline.

The new proposal (below) is to have 23 policies and 5 guidelines

| Key   | Policy Name  | New Policy or Guideline                                       |
|---|--|---|
| <b>Keep as a Policy</b>   | Analggesia in Research Animals   | Analggesia in Research Animals                                |
| <b>"Demote" to a Guideline</b>  | Anesthesia Certification Requirements in USDA-Covered Animals            | Anesthesia Certification Requirements in USDA-Covered Animals |
| <b>Policies would be kept as individual policies or merged as indicated in the "New Policy or Guideline" column</b> | Blood Sampling in Mice and Rats  | Blood and Bone Marrow Collection                              |
|   | Blood Withdrawal (Blood and bone marrow sampling policy?)                |   |
|   | Guillotine Maintenance   | Euthanasia  |
|   | Co2 Euthanasia in Non-Rodent Species                                     |   |
|   | Ether Use  |   |
|   | Euthanasia of Finfish Species  |   |
|   | Euthanasia of Rodents (also a CO2 delivery document in the file cabinet) |   |
|   | Water-Filled Pitfall Traps   | Food and Fluid Restriction                                    |
|   | Food and Water Restriction in Non-Rodent USDA Species                    |   |
|   | Food and Water Restriction in Mice and Rats                              |   |
|   | Guidelines for Non-Human Primate Neuroscience Studies                    | Non-Human Primate Neuroscience Studies                        |
|   | Guidelines for Rodent Survival Surgery                                   | Rodent Survival Surgery                                       |
|   | IACUC Protocol Requirement Policy  | IACUC Protocol Requirement Policy                             |
|   | Adhesion Grading Scale in Non-Human Primates                             | Adhesion Grading Scale in Non-Human Primates                  |
|   | Limitations on Tumor Size  | Limitations on Tumor Size                                     |
| Monoclonal Antibody Production  | Monoclonal Antibody Production   |   |

University of Washington  
August 17, 2017 IACUC Meeting Minutes

|  |  |
|--|--|
| Non-Pharmaceutical Grade Substances in Laboratory Animals  | Non-Pharmaceutical Grade Substances in Laboratory Animals  |
| Number of Mice Maintained in Breeding Cages  | Rodent Breeding and Genotyping   |
| Number of Mice Maintained in Breeding Cages FAQ  |  |
| Rodent Genotyping  |  |
| Permissible Weight Loss  | Permissible Weight Loss  |
| Policy on Reassignment of Non-Human Primates   | Reassignment of Non-Human Primates   |
| Polyclonal Antibody Production (this is mostly talking about CFA - rename?)  | Polyclonal Antibody Production (this is mostly talking about CFA - rename?)  |
| IACUC Policy: Prolonged Physical Restraint   | Prolonged Physical Restraint   |
| Radio or Audiovisual Use in Animal Rooms   | Routine Animal Husbandry   |
| Rodent Cage Sanitation Frequency   |  |
| Routine Husbandry Limitation Requests (Not on public site)   |  |
| Housing and Care of Vertebrate Animals   |  |
| Standard Light Cycles in Animal Housing Facilities   |  |
| Significant Changes to Approved Protocols  | Amendments to Approved Protocols   |
| Species-Specific Training Policy for Researchers Using Animals   | Species-Specific Training Policy for Researchers Using Animals   |
| Surgical Training Policy   | Surgical Training Policy   |
| Use of Expired Drugs and Biomaterials in Research Involving Animals  | Use of Expired Drugs and Biomaterials in Research Involving Animals  |
| Environmental Enrichment for Research Animals (NEW!!)  | Environmental Enrichment for Research Animals (NEW!!)  |
| IACUC Guideline on the Sterilization of Critical Items   | Sterilization of Critical Items (already a guideline)  |
| Removal of Skin Sutures, Wound Clips, and Staples  | Removal of Skin Sutures, Wound Clips, and Staples  |
| Purchasing and Use of Eggs Pre-Hatching  | Purchasing and Use of Eggs Pre-Hatching  |
| Antibiotic Use in Laboratory Animals   | Antibiotic Use in Laboratory Animals   |
| Primate Procedures, Suggested Wording and Guidelines for Protocols (Some of this might need to be in a policy (bone marrow per week). (blood and bone marrow sampling?)) | Non-human primate Procedures, Suggested Wording and Guidelines for Protocols (Some of this might need to be in a policy (bone marrow per week). (blood and bone marrow sampling?)) |
| Frog Oocyte Harvest  |  |

Motion: A motion was made and seconded to modify guidelines.

University of Washington  
August 17, 2017 IACUC Meeting Minutes

Discussion: It was proposed that the policies also be renamed to better reflect what is in the policy/guideline. There was general discussion about policies and the desire to keep skin suture policy as a policy as there is a 'must' in the guide related to the topic, and the same for the frog oocyte policy.

Vote on the Motion: The motion was approved with 14 members voting in favor, 0 opposed, and 0 abstaining.

## Protocol Review

### 2326-08 Animal Transfer

A request to allow a PI to transfer a NHP from one protocol to another due to budgetary issues was made.

#### **A member left the meeting.**

Motion: A motion was made to give the group the option to move the animal with the understanding that no surgeries can be done until all required entities give approval (IACUC, USDA if a major surgery).

Discussion: There was additional discussion regarding the consequences of the animal being moved from one protocol to another.

Vote on the Motion: The request was approved with 13 members voting in favor, 0 opposed, and 0 abstaining.

## Other Business

### Items of interest – STI

- Trans-Atlantic gap on animal experiments – mentioned that this was an interesting topic and it was recommended to the IACUC to read.
- Oxford tour – nice contextual knowledge resource for some work similar that being done at UW. There was general discussion about some of the things that you might see on the virtual tour.

### HoverBoard – SS

The upcoming upgrade to Click IACUC 8.1 was discussed, including timelines and what to expect as far as new features/functionality. There will be interface and navigational changes, standard procedure creation/promotion/review, and notifications changes.

## Closing Business

The Meeting was brought to a close at 4:39 pm. The floor was opened to public comment.