Members Present:  
T. Brabb  
A. Burich  
M. Byers  
C. Carrier  
E. Clark  
J. Clark  
C. Hotchkiss  
S. Cunningham  
D. Fitts  
P. Lang  
M. Lucas  
J. Muster  
R. Murnane  
J. Sullivan  
M. Tetrack  
J. Stoloff

Members Absent:  
C. Grue  
L. Kinman  
C. Goodwin  
A. Leache  
S. Brockerhoff  
G. McLean

Opening Business:
Dr. Cunningham called the meeting to order at 2:35 pm.

Presentation by Dr. Emery
Dr. Emery gave a presentation on the Review of Biohazards in Medical Research: The Role of the IBC and Review of Animal Research.

Protocol Review:
- Dr. Quinn, IACUC 2442-34 “San Jaoquin Predator Movement”

Dr. Fitts explained that the purpose of the project is to study the movement of large mouth bass, striped bass and channel catfish in California rivers to determine the overlap of these predatory fish with their salmon smolte prey. The results will contribute to conservational efforts for the salmon.

The methods include capture of the predator fish, anesthesia and implantation of a transmitter in the abdominal region and release of the fish back into the river immediately upon recovery. All issues relating to capture, aseptic procedure, release and potential euthanasia of injured fish have been reviewed and are fairly standard for UW fish protocols. The issues for discussion in a full committee review include:

1) New anesthetic for major surgeries (for UW studies) AQUI-S 20E;  
2) Inadequate analgesia after major surgery;  
3) No monitoring of animals after major surgery.

The most common anesthetics for major surgery in fish protocols at the UW include MS-222 and benzocaine. The present study would not be possible with those anesthetics because fish cannot be safely released back into the wild where they might be caught and eaten by humans. Similarly, other commonly used analgesic drugs or local anesthetic drugs cannot be used for the same reason. AQUI-S 20E is a relatively new drug derived from clove oil, and it is safe for human consumption in the concentrations that would be found in previously anesthetized fish. Therefore, AQUI-S 20E could make studies like this one possible where they were not possible before.
The issues that the IACUC must consider are:

1) What are the anesthetic and analgesic properties of this new drug with regard to major abdominal surgery in fish?
2) Should the project be approved despite the fact that analgesic drugs will not be administered following major surgery?
3) The animals will be released and so won’t be monitored postoperatively.

Discussion: Dr. Brabb explained that there is a large body of literature on eugenol, which is the active ingredient in AQUI-S 20e. This formulation of eugenol is new. Eugenol in a variety of formulations has been used pretty extensively in different species of fish, however, trying to come up with an anesthetic for fish is difficult and varies based on species, age and size of the fish and environmental conditions. Although there is literature on this formulation of eugenol that suggest it is a fine anesthetic, there is no literature looking at its analgesic properties post operatively in any rigorous way or related to a surgical manipulation. Dr. Brabb commented that AQUI-S 20E has been used in other countries for quite some time. Dr. Brabb explained that she was very comfortable with the use of AQUI-S 20E as an anesthetic and that the UW aquatic veterinarian is working with the group to determine the appropriate dose of anesthetic. Regarding the potential postoperative analgesic properties of AQUI-S 20E, there is no data to indicate whether or not it provides analgesia but as Dr. Fitts explained, there are no other analgesics that could be legally administered to the fish since they will be released.

Dr. Hotchkiss asked how soon after the surgery the fish would to be released. Dr. Smith, who was present to address questions pertaining to the protocol responded that the fish would be released once they were fully recovered from anesthesia, approximately 20 minutes after surgery.

Dr. Hotchkiss asked if they could hold the fish a little longer for monitoring. Dr. Smith replied that in his experience, the longer you hold fish the more stressed out they become so it is better to get them back into their environment as soon as they are recovered.

Dr. Byers asked if there could be an intermediate stage, like a pool where they could be observed for awhile. Dr. Smith replied that they are actually placed in a recovery tank after surgery to make sure that they are fully recovered and ready to go.

Dr. Byers asked how long the fish were in the recovery tank. Dr. Smith replied that they are in the tank for approximately 20 minutes. Dr. Byers commented that this is a short time and asked if there is a way to observe them over-night. Dr. Smith commented that overnight monitoring is really difficult to do in the field.

Dr. Smith explained that they were interested in doing a pilot project to evaluate the analgesic properties of AQUI-S 20E in fish.

Dr. Fitts asked Dr. Smith to comment on the balance of the experience of the animal with the scientific value of the project. Dr. Smith responded that they are looking at the survival of the endangered species Chinook salmon smolts in the San Joaquín River. Over 90% are not making it from the river to the ocean. It is speculated that this is caused by the predation of the bass and other species that are not native to the area. The study will hopefully determine the cause of the low number of salmon making it to the ocean.

Dr. Fitts asked how the data that Dr. Smith collects is related to that information. Dr. Smith responded that the data he collects is going to be a part of a bigger project by NOAA.
Dr. Burich asked if there is a less invasive way to tag the fish. Dr. Smith responded that there are some options for tag attachment to the outside of the fish, however, there are more problems with infection and the tag falling off. Tag placement inside the abdominal cavity has been very effective and efficient in other studies. Fish appear healthy and active after the placement.

Dr. Carrier asked if there was any consideration to use the formulation of eugenol that was labeled as an anesthetic instead of AQUI-S 20E. Dr. Smith replied that it was his understanding that AQUI-S 20E is the drug approved by the Investigational New Animal Drug (INAD) Program, and the only thing approved in the United States. Dr. Brabb confirmed that this was true.

Mr. Muster asked about the size of the tag. Dr. Smith replied that the tag is 9mm in diameter and 20mm in length and that they keep the tag size under 2% of the fish’s weight.

Dr. Lucas commented that she thought the Committee should be open to including both AQUI-S 20E and AQUI-S in the protocol. Dr. Brabb commented that she thought either could be used; and that the important thing is the final concentration in the water and that the fish are given the proper amount of anesthetic.

After no further questions, Dr. Cunningham excused Dr. Smith.

Motion: Dr. Fitts moved to approve the protocol as written. Dr. Brabb seconded the motion.

Continued Discussion: Dr. Fitts commented that the protocol could go to the designated reviewer to change the anesthetic. Dr. Lucas replied that it’s not really changing the anesthetic. Dr. Brabb elaborated on Dr. Lucas’s commented, saying that it is the same anesthetic but the final concentration in the water would change. Dr. Fitts than suggests that they approve the protocol and advise the PI to work carefully on finding the right anesthetic solution. Dr. Brabb stated that the PI is very happy with AQUI-S 20E and after consulting with numerous aquatic veterinarians and other specialists that this is the right way to go.

Vote on the Motion: The motion to approve the protocol as written was approved unanimously with 17 members voting in favor.

Approval of the December 19, 2013 Minutes

Dr. Cunningham called for a review of the December 13, 2014 Meeting Minutes.

Motion: Dr. Sullivan moved to approve the minutes as distributed. Dr. Clark seconded the motion.

Discussion: None

Vote on the Motion: The minutes were approved with 15 members voting in favor and 2 members abstaining.

Attending Veterinarians Report:

Facilities Issues:

- On Saturday, December 7th and Sunday 8th, 2013 in the Foege animal facility (housing mice and rats) all of the rooms had high temperatures, with the highest temperature reached being 81°F (two degrees above target temperature of 79°F). The animal supply fan failed and this resulted in the high temperatures.
Maintenance worked on this problem all weekend and it was resolved on Sunday. There were no animal health effects as a result of this event.

• On Dec. 8, 2013 in the CHDD (housing mice and rats) the temperature dropped. Beginning at 3pm temperatures dropped to a low of 60°F (the target low being 68°F). The temperature returned to within range by that evening shortly after 6:30pm. The temperature drop was caused by a broken part that was fixed. There were no animal health effects as a result of this event.

• On Jan 10, 2014 in the K-wing animal facility (housing mice) high temperatures developed. The highest temperature was 85°F. The problem was caused by a series of failures, first in the system designed to cool the air and then in the steam valves. The problem first started at 3:15pm in the afternoon and was resolved by 7:15pm that night. There were no animal health effects as a result of this event.

• On Jan 15, 2014 in one of the rooms in the Guthrie building, low temperatures and wide temperature variations were reported due to a broken heat pump. Facility services temporarily fixed the pump and have a new part on order. There were no animal health effects as a result of this event.

Veterinary Monitoring:

Dr. Brabb reported that there are 17 active protocols on veterinary monitoring. Nine protocols involve surgery protocols and potential complications associated with these procedures, or the associated anesthesia. Of the remaining eight protocols, two involve tumors (one of which was just added to the program to assist with complications that have developed), one protocol involves West Nile Virus infection, one restraint of zebrafish, and two involving unusual procedures with mice (injection of a dermal filler for one and putting on tape skirts to prevent grooming in another). Finally, one protocol involves the treatment of abscesses. There are eight veterinarians actively involved in working with these investigators.

Adverse Event:

In December Dr. Brabb reported on a zebra finch death as a result of being trapped behind a cage pan. DCM has been working with the vendor that made the caging to develop a solution. The vendor is sending a prototype of a new cage pan that we will try in the cages to see if it solves the visualization problem. If it works, they will make all new cage pans.

However, a new problem with the cages was discovered on 1/5/2014. While a member of the group was cleaning out the cage pan, a Zebra finch nestling became caught between the wire grating, which is normally inaccessible beneath the cage pan, and the back of the cage. The wire grating dimensions are slightly smaller than the dimensions of the cage, allowing for a small gap between the wire grating and the back wall of the cage (this is to allow the grate to be removed for cleaning). The group member freed the bird but noted that the bird appeared in pain and decided to euthanize the bird. En route to the procedure room for euthanasia, the bird died. DCM and the investigative group are working to find a solution to this new problem. Dr. Brabb will update the Committee next month on the results.

OAW Director’s Report

Report on packets sent:

Since the last report at the December 13, 2013 meeting 2 packets and 6 e-mailed items had been sent to the IACUC. There were 3 new protocols. There were 25 renewals, of which 7 were three-year renewals requiring
a complete Project Review Form. There were 18 annual renewals. There were also 65 Significant and Minor Changes. The IACUC has completed its approval process for many of these items, though some are awaiting final approval due to holds for items such as EH&S approval, OH review or signatures, or revisions from PIs.

Post Approval Monitoring Report: Dr. Thompson-Iritani reported that 51 of 85 meetings occurred with research groups. The meetings that did occur resulted in 7 administrative corrections and 24 amendments to on-going protocols.

IACUC Review Survey: The reviewers have been assigned and assignments will be sent to the IACUC later today in an excel spreadsheet with the agenda and all of the protocols with the IACUC member assignments.

Protocol Review Continued:

• Horwitz, 4167-01, Version #61 (A12027) “Neurophysiology of Vision

Dr. Newman explained that this protocol involves studying the neurophysiology of vision. Animal A12027 has been trained to perform a color detection task and has an affinity for the tasks and is very valuable to the study. Dr. Newman summarized her clinical history for the Committee.

Dr. Newman explained that the Significant Change was to request a repair surgery to place another eye coil. Dr. Newman suggested that the Committee consider approving a second repair surgery because they would not have one available after this surgery.

Motion: Dr. Hotchkiss moved to approve one repair as requested. Dr. Brabb seconded the motion.

Discussion: Dr. J. Clark asked how common it is to have an eye coil taken out. Dr. Hotchkiss responded that it is reasonably common. This monkey is very curious and fiddles with things, so it is not that surprising that she removed the coil. She assured the Committee that the researchers were very aware of this and will work very hard to make sure that there are no leads or anything else sticking out.

Dr. Sullivan asked if there is any reason not to approve two surgeries. Dr. Newman responded that the surgery being requested would be used for the needed repair to the left eye coil and that the second one would be there in case they needed in the future. Dr. Hotchkiss commented that the policy allows for groups to request 2 surgeries at a time.

Dr. Brabb commented that she was comfortable approving two repair surgeries for the monkey.

Ms. Stoloff raised a concern with the number of surgeries the neuroscience monkeys get within a certain amount of time. She felt that this is a lot of surgeries.

Dr. Hotchkiss responded, explaining that this is actually a fairly small amount of surgeries comparatively. Dr. Hotchkiss further clarified that the first three surgeries the animal had were part of the original protocol. One minor repair and the second eye-coil were necessary additions.

Ms. Stoloff explained that she was hesitant to approve more than one more surgery. Ms. Stoloff asked if the monkey could be used for something else if it pulled the eye coil out again or if it would be euthanized. Dr. Brabb replied that the monkey would probably be euthanized. Dr. Hotchkiss commented that a new a monkey would be assigned to the project to replace it.

Dr. Sullivan suggested a friendly amendment to the motion to include two surgeries instead of one.
Dr. Hotchkiss agreed.

Vote on the Motion: The motion to approve 2 surgeries was approved with 16 members voting in favor and 1 member opposed.

Semiannual Program and Facility Inspection Review:

Dr. Brabb introduced the draft of the Semiannual Program Review and asked everyone to read through the document. Dr. Brabb requested that everyone think about if they agree with the document as is or have a “minority opinion” (for a major disagreement). Dr. Brabb stated that Ms. Petersen would send an email out regarding responses to the review.

Discussion: Dr. Istvan discussed the deficiencies found during the site visits during the last 6 months. There was an increase in deficiencies: The previous semiannual period had 230, while there were 304 during this period. These numbers are still within 1 standard deviation compared to the average in the past two years. There was only one major deficiency; and it has already been corrected. The deficiency was regarding earthquake bracing for water towers in the HSB fish housing rooms.

Dr. Burich asked for a clarification on the difference between major versus significant deficiencies. Dr. Brabb replied that significant is an immediate danger to animal safety, where as major is a UW category meaning that it is more than minor but not significant.

Dr. Istvan continued, stating that most minor deficiencies arose from the storage and handling of drugs and chemicals, sanitation, and facilities issues. The top causes were expired drugs, improper labeling, and expired supplies. Sanitation issues were due to items that cannot be sanitized within the lab (such as signs taped on the walls), and surfaces and equipment that needed to be cleaned properly. Dr. Istvan stated that there have really been no differences in the past two years in terms of what is being seen and how often they are being seen on the site visits. They will continue to try and emphasize these areas with the researchers and try and bring these numbers down.

Site Visits Extension Requests:

Dr. E. Clark informed the IACUC that there were two extension requests as follows:

- Site: Health Sciences, H225a, H227, H231 and JO83B
  Deficiency: An emergency power source is not available in case of a blackout.
  Original Citation: 4/18/13
  Original Deadline: 9/30/13
  Extension Deadline: 12/31/13
  Second Extension Deadline: 1/30/2014
  Third Extension Deadline: 3/31/14
  Reason for request: Rooms H225A, H227, H231, J083B do not have an emergency power source in case of a blackout. Facility Services is requesting an extension for the project to 12/31/13 to allow the engineers to plan and coordinate the emergency power for the labs.
Second extension request: Facility Services is requesting an extension to 1/31/14 because the electrical design for the emergency power source projects will not be completed by the original deadline. As a result, they are requesting that the deadline be extended to January 31, 2014.

Third extension request: Facility Services is requesting an extension for the H-Wing rooms (H225A, H227, H231) because the order of the power projects has been changed (first K-Wing, then J-Wing, and H-Wing). The power project in the H-Wing rooms will be completed by mid-to-late February. As a result, Facility Services is requesting that the deadline be extended to March 31, 2014.

Motion: Dr. E. Clark moved to approve the extension request for Feb 28, 2014. Dr. Brabb seconded the motion and suggested extending the deadline to March 30, 2014. Dr. E. Clark revised the motion to extend the deadline to March 30, 2014 as suggested by Dr. Brabb.

Discussion: None

Vote on the Motion: The motion was approved unanimously with 16 members voting in favor.

• Site: WaNPRC Western: Rooms: 228, 233, 235, 236 and 241/242
  Deficiency: There was chipped flooring in multiple rooms needing repair

  Original Citation: 9/7/12
  Original Deadline: 3/14/13
  Extension Deadline: 8/31/13
  Second Extension Deadline: 2/28/14
  Third Extension Deadline: 8/31/14

  Reason for request: The floors in animal rooms 228, 233, and 235 have been completely resurfaced, as of 2/20/13. There was a meeting with the architects on 2/13/13 to discuss renovation of the cage wash area (241/242), which would also involve 236 (which is currently an animal room). The Primate Center is requesting an extension for resurfacing the floors in 241/242 and 236 until the area is renovated. The renovation is expected to be an extended process, and she cannot estimate a completion date at this time. Therefore, they are requesting an extension to 8/31/13.

  Second extension request: The Primate Center is requesting an extension for re-doing the floors in 236, 241, and 242. There are no animals housed in 236, and 241, 242 are the cage wash area. Construction to completely renovate the area is scheduled to start in November 2013. Generally, construction jobs take longer than expected; therefore they are requesting an extension to 2/28/14.

  Third extension request: The Primate Center stated the renovations at Western are starting as planned, but the construction project will be completed in phases. The area on the second floor that includes 236, 241, 242 will not be taken out of service for renovation until phase II. The Primate Center anticipates phase II to start in May or June. Given construction schedules, they are requesting an extension to 8/31/14.

  Motion: Dr. E. Clark moved to approve the extension request for August 31, 2014. Dr. Sullivan seconded the motion.

  Discussion: Dr. Hotchkiss clarified that rooms 241 and 242 are the cage-wash rooms and that 236 does house some animals, but the floor is not affecting the animals at all. Dr. Fitts commented that the only reason an extension is really needed is if the room will continue to be used for animals. Otherwise the rooms can be taken out of service. Dr. Hotchkiss discussed that the process for renovation is very involved, that animals will be in 236 until May or June and that none of the rooms can be decommissioned. If the IACUC
deemed necessary, a smaller, temporary room could be used in place of 236. Mr. Muster inquired as to the type of floor tiling and if anything is exposed underneath the chipping. Dr. Hothckiss commented that the floor is epoxy and that the minor chipping in the tiling does not expose what is underneath the tile.

**Vote on the Motion:** The motion was approved unanimously with 16 members voting in favor.

**E Signatures for Annual Renewals & Significant Changes:**

Dr. Istvan explained that e-signatures are emails from the account of the PI or appropriate authorized person, and are the same as a piece of paper saying that they are submitting this to the IACUC for review. Currently, the OAW accepts e-signatures for Significant Changes. Dr. Istvan asked to extend that to Annual Renewals as OAW would like to make this process all electronic. Dr. Istvan stated that OAW would just make this happen unless there are objections. No motion is needed.

Discussion continued clarifying that the e-signature has to come from the PI or a designated person who can act in favor of the PI. Dr. Fitts comments that any member of the protocol can submit a significant change from the protocol. When we get that by email we like to see the PI is copied on the protocol so that changes not approved by the PI do not occur. Currently, all renewals must come from the PI.

Dr. Newman asked about formal certification (which requires a signature) and if that holds up in an email. Dr. Iritani commented that this could be discussed and clarified later within the OAW. Dr. Cunningham requested that the clarification for this issue be reported at the next meeting.

Dr. Lang commented that the e-signature should only come from a University of Washington email account and not a personal one. Discussion continued regarding acceptable email accounts with a general expectation that the email should come from a UW or institutional email account.

**IACUC Training, Category E Protocols**

Dr. Brabb summarized the different USDA pain/distress categories and explained how these categories are used to categorize protocols as part of the review process as well as for reporting purposes. Dr. Brabb provided some examples of things that would be painful or distressful and explained that the IACUC is responsible for reviewing the level of pain and distress the animal will experience over the life of the animal. As part of this review the IACUC should be thinking about how pain or distress can be relieved and evaluate the request if appropriate make an ethical decision to allow it or not. Dr. Brabb explained that the Reviewers in the Office of Animal Welfare assign these classifications to the protocol and asked that IACUC members put their suggestions regarding this classification in the administrative section of the review in Catalyst.

Dr. Thompson-Iritani commented that moving forward, the Committee may see more protocols that are classified as Category E, and that does not mean that the protocol has changed, it just means that our consideration of the classification of the protocol has changed.

**Subcommittee Updates:**

- **NEW PRF Form**

  Dr. Istvan reported that 22 protocols have been submitted and that the committee is proceeding with revisions based on the feedback that has been received. They are moving ahead with a parallel Significant Change form/Annual Renewal form and should have a whole packet ready by next month.
• **Site Visit Guidance Document**
  Dr. E. Clark commented that in January they began piloting a matrix of the updated site visit guidance with the intent of helping the site visitors know what to look for and what might be expected. So far it seemed to be helpful, although lengthening the time of the visits. The hope is to move towards an electronic system with the use of an iPad or tablet to organize materials. The plan is to create a profile for each facility that is visited based on the species and procedures so there will be more organization, preparedness and consistency.

• **Non-human primate Re-assignment Policy.**
  Dr. Newman stated there is a draft that will be circulated to the sub-committee and other members soon. Dr. Newman expects to have something to be presented at the next meeting.

**Closing Business**

The meeting was brought to a close at 4:33pm. The floor was opened to public comment.