Meeting Date: July 19, 2007

Members Present:	L. Hajjar	D. Fitts	I. Washington
	M. Slosberg	T. Brabb	G. McLean
	S. Cunningham	M. Tarabochia	V. Batterson
	J. Kauffman	S. Kelley	
	S. Skerrett	N. Phillips	
Members Absent:	C. Baker	P. Fink	D. Lee
	W. Dickhoff	R. Murnane	K. Waddell

Opening Business:

Dr. Cunningham called the meeting to order at 2:39pm.

Dr. Cunningham announced that Mr. Tarabochia is resigning from the committee after completion of his term and thanked him for his service.

Dr. Cunningham called for the approval of the June 14, 2007 IACUC meeting minutes. Dr. Batterson moved to approve the minutes and Dr. Washington seconded the motion. The minutes were approved with 9 members voting in favor and 3 abstentions.

Dr. Cunningham proposed to the Committee that all voting be conduct by anonymous ballot.

Motion: Dr. Brabb moved that all business with the exception of approval of meeting minutes be conducted by anonymous ballot. Ms. Kauffman seconded the motion.

Discussion Regarding the Motion: Mr. McLean asked if this was a requirement of AAALAC. Dr. Cunningham confirmed that is was not a requirement and Dr. Phillips explained that the intent of the anonymous ballot was to make sure that people felt comfortable voting their conscience without having to feel self-conscious about their vote.

Vote on the Motion: This motion was approved unanimously with 13 in favor.

Attending Veterinarian's Report

Attending veterinarian report, July 19, 2007:

Chiller failure in Foege vivarium:
On July 11, 2007 the rodent rooms in the Foege vivarium began to reach higher than normal temperatures at about 1pm. Facility Services was notified and they corrected the problem. The rooms started cooling off between 8pm and 9pm and the highest temperature noted was 84° F.

The cause of the chiller failure was the accumulation of dust and debris on the coils as a result of construction. A maintenance schedule for cleaning will be established. Dr. Phillips explained that she and Mr. Melean had performed a semi-annual facility inspection of the Foege vivarium on July 17, 2007. She indicated that she would request a copy of the maintenance schedule as a part of the facility inspection report.

Dr. Cunningham asked if records are being maintained for all the other chillers. Dr. Brabb commented that not all the vivaria have the same type of situation and so they would not all need exactly the same sort of maintenance. Dr. Phillips replied that she would have to look into this issue because a determination as to what should be required would have to be made for each building.

Veterinary monitoring:
Protocols active this last month are as follows:

IACUC #4156-01 "Mitogen Activated Protein Kinases: Role of Signal Transduction in Wound Healing and Infection."– Dr. Arbabi
This group examines the efficacy of various therapies in modulating local and systemic responses to burn. They started this work several months ago and the complications that they have had appear to be related to anesthetics. Their last experiment had no anesthetic-related issues.

Executive Secretary's Report:

Report on packets sent:

Dr. Phillips reported that 3 packets were mailed since the meeting on June 14, 2007. The packets included 9 new protocols, 27 renewals, of which 20 were three-year renewals requiring a complete Project Review Form. The other 7 renewals were annual renewals with morbidity or mortality reported. There were also 96 Significant and 6 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.

Non-compliance issues:

- **IACUC # 2048-02 "Development, Function and Regeneration of the Auditory System" – Dr. Rubel**

  Dr. Brabb notified the Committee of conduct of procedures prior to IACUC approval. On 5/18/07, C57Bl/6 mice received surgery to implant subcutaneous osmotic minipumps to deliver tetrodotoxin. The protocol was approved to use osmotic minipumps in rats to administer other ototoxic substances, but not for mice or for this compound. This compound was supposed to be administered via an impregnated disc placed in the inner ear. The investigator was attempting to get more consistent dosing of the compound to the inner ear by using a minipump. Eight of eleven mice in this cohort either died or were euthanized 24 hours after implantation. It is not clear what caused the deaths.

  Dr. Cunningham asked the Committee to make a determination regarding consequences of the non-compliance. Dr. Phillips commented that this is an excellent lab with no past non-compliances. Additionally, they have recently assigned someone to review each protocol to ensure inclusion of all planed procedures in order to assure oversight and compliance. Mr. McLean asked how the situation happened. Dr. Phillips explained that the group is collaborating with another PI and a new staff member combined two individually approved methods which were not approved for use together. Dr. Phillips further commented that the PI takes full responsibility for the incident.

  Motion: Dr. Batterson moved that the Committee send a letter of counsel requesting documentation of the processes that has been put into place to prevent this type of situation from happening again. Dr. Phillips seconded the motion.

Vote on the Motion: The motion was approved unanimously with 12 in favor. Dr. Skerrett was not present for the vote.

- **IACUC # 2155-12 "Heterogeneity of Medullary Thymic Epithelium" – Dr. Farr**

Dr. Phillips notified the Committee of conduct of colony maintenance procedures described in IACUC protocol 2155-12 after the expiration of the 3 years of approval.

Dr. Phillips reported that Dr. Farr conducts studies aimed at understanding autoimmune disease and prevention. The IACUC protocol includes maintenance of a mouse colony. There was a family medical emergency which prevented Dr. Farr from completing his 3-year renewal on time. He was aware that his protocol was expiring and so did not conduct any research during the lapse. However, during this time of stress he did not consider that maintenance of his mouse colony includes tailing mice for genotyping. As a result, this procedure was conducted during the lapse. Dr. Phillips reported that when she contacted him he already had his 3-year renewal nearly ready for submission. It was submitted almost immediately and is currently being prepared to be sent to the IACUC in the next set of materials. Tailing of mice was stopped immediately upon Dr. Phillips call to him to discuss this issue. Dr. Farr has indicated that his studies are supported by NIH and he has provided the necessary information for reporting it to his institute. The non-compliance has already been reported to OLAW by phone and that report will be followed by a letter as well.

Discussion: Dr. Washington asked if the protocol has provision for tailing older animals. Dr. Phillips replied that she does not know but will review the protocol to make sure. Dr. Cunningham asked the Committee to make a determination regarding the non-compliance. Mr. McLean asked if the research group had a history of non-compliance. Drs. Brabb and Phillips confirmed that they do not.

Motion: Mr. McLean moved that a letter of counsel be sent to the PI re-stating the submission and approval policy and asking how they will prevent a lapse in the future. Ms. Kauffman seconded the motion.

Discussion Regarding the Motion: None

Continued Discussion Regarding the Event: Dr. Brabb asked what the process was for notifying researchers regarding the expiration of their protocol. Dr. Phillips explained that an initial notice is sent and a second notice is sent as a reminder if a renewal has not been submitted.

Mr. Slosberg asked if the cages should be labeled with a "pre" impound notice at some time-point prior to expiration of the protocol. Dr. Brabb explained that this would be difficult due to the number of cages that would require this type of label. Mr. Slosberg felt that if a process for prevention of this type of situation was not put in place then it would continue to happen.

Dr. Phillips explained that while it is possible to run a report to determine which protocols are due to expire, there is not currently an expedient way of verifying that the renewal form has been submitted. Dr. Phillips further commented that three positions for post-approval monitors and one program assistant for support of the program have been approved and will be posted very soon. Dr. Phillips explained that these individuals will be responsible for monitoring the approval status of the projects of the PIs for which they are assigned.

General discussion followed regarding the use of the database to track projects due to expire and subsequent reminder notices regarding expiration. It was determined that a notice regarding animal

impound be added to the final reminder notification as well as specifically indicating that maintenance procedures such as tailing be included in the notification. Dr. Phillips said that she would make this change. Dr. Washington asked who puts up the impound signs on the cages. Dr. Phillips replied that the facility manger does this.

Vote on the Motion: The motion was approved unanimously with 12 in favor. Dr. Skerrett was not present for the vote.

- **IACUC #3230-01 "The Impact of Reactive Glia on Neuronal Excitability and Function" – Dr. D'Ambrosio**

Dr. Phillips notified the Committee of conduct of procedures requiring a Significant Change without prior IACUC approval.

Dr. Phillips reported that Dr. D'Ambrosio has approval to study treatments for brain injury. These studies use rats and require an injury by fluid percussion and then implantation of epidural electrodes for EEG monitoring. Both procedures require surgery. The protocol is approved to perform these two procedures in separate surgeries for young, growing rats. This is justified by the fact that the animals are recorded over a period of time such that the electrodes might fail as the skull grows. The interval between surgeries is a minimum of 2 weeks. Older animals are to have both procedures performed in one surgery session. The PI found that the initial surgery required for the fluid percussion injury was sometimes long enough that it was better for the rat to end the session rather than keep it under anesthesia for such a long time. In some animals, he therefore performed the epidural electrode implants in a second surgery. He judged that the rats are sufficiently recovered from the first surgery and injury to have the second surgery 3 days later, so this is what was done. Dr. D'Ambrosio is working on a Significant Change to seek approval for performing 2 surgeries, instead of 1, in his older animals and for reducing the interval between surgeries as well. Dr. Phillips reported that she had called OLAW and made an initial verbal report. She further reported that the work is not funded by any federal agency. The initial report to OLAW will be followed by a letter as well.

Discussion: Mr. Slosberg asked if it was under the Committee's purview to determine use of data associated with a non-compliance. Dr. Phillips explained that it's up to OLAW to determine the use of the data. Dr. Washington asked how many animals were used. Dr. Phillips replied that approximately 30 animals have been used over a period of 3 months. Mr. Slosberg asked if the PI would have had the non-compliance if he had been less specific when describing the procedure in the Project Review Form. That is, he wanted to know if the PI had written the protocol differently to address the 2 surgeries, would the Committee have been likely to approve it? Dr. Brabb agreed that this would likely have been the case, but that serious consideration would have been given as to whether an inter-surgery interval of 3 days was long enough. That would have needed veterinary review.

Ms. Kauffman asked for the PI's rational in performing 2 surgical procedures instead of one. Dr. Phillips explained that he thought he was doing what was best for the rats. Dr. Brabb commented that she was concerned that the PI performed a surgical procedure because he thought that it was better for the animals without consulting with a veterinarian.

Ms. Kauffman asked about the health of the animals during the 3 day period prior to the next surgery. Dr. Phillips replied that she did not know about the condition of the animals but explained that

mortality of some of the animals is not uncommon because of the fluid injury. However, the mortality of this group was actually slightly less than expected.

Dr. Phillips commented that the PI is very compliant and just made a mistake.

Motion: Dr. Kelley moved that a letter of counsel be sent to PI indicating that he must consult with the IACUC prior to implementing a Change in procedure and requiring that he meet with the Attending Veterinarian to discuss the need for veterinary consultation prior to implementing changes for animal welfare, and to review the role of the veterinarians and how he should be utilizing that resource. Ms. Kauffman seconded the motion.

Continued Discussion: Mr. Slosberg concurred that when the PIs are considering the clinical effect on an animal to determine a course of action they should not be doing so without veterinary input. Dr. Washington asked if the decision was made by the PI or by the technician. Dr. Phillips replied that she thought that the decision had been made by both.

Dr. Washington recommended that the PI revise the protocol because as written, it states that the younger animals will have surgery at 2 weeks and 2 months which does not allow for much flexibility should the surgery date fall on a weekend or holiday.

Vote on the Motion: The motion was approved unanimously with 12 in favor. Dr. Skerrett was not present for the vote.

- **IACUC #2153-08 "Chavkin Mice" – Dr. Chavkin and IACUC #2074-01 "Distribution and Ultrastructure of Dental Innervation"– Dr. Byers**

Dr. Fitts reported that during a review of a grant entitled, "Partial infraorbital nerve ligation as a new model of trigeminal nerve", by Dr. Mei Xu, a reviewer in the UW Office of Animal Welfare noticed that the procedure being proposed for use with mice in the grant was not included in the associated IACUC protocol (i.e., #2153-08, Dr. Chavkin). The grant mentioned that Dr. Byers had helped develop the procedure, but the procedure did not appear in her protocol (#2074-01) either. When questioned about the omission, the PIs of the two protocols each thought that the other had obtained approval from the IACUC, and the PI of the grant said that Dr. Chavkin had told her that the procedure was approved. The PIs of both protocols have written letters to the IACUC expressing regret over the incident and providing details of what happened.

Background: Both laboratories study pain. Dr. Chavkin studies the pharmacology of pain in mice, and his protocol is approved for a variety of pain-inducing procedures. One of these is a partial ligation of the sciatic nerve in the leg of the mouse, which is intended to induce a phenomenon called allodynia, or "other pain". After the procedure, stimuli that ordinarily are not painful become painful. For example, probing the skin of the leg with a flexible hair does not elicit a pain response in a normal mouse, but it does elicit a pain response in a mouse with a partial ligation of the sciatic nerve. Dr. Chavkin investigates various properties of the opiate system in the study of allodynia. However, his protocol was not approved for a similar procedure in the region of the face (i.e., the trigeminal nerve).

Dr. Byers studies dental pain in rats and mice, and her protocol is approved for different models of dental pain in mice and for a partial ligation of a different branch of the trigeminal nerve, the inferior alveolar nerve, in rats (not mice).

Drs. Chavkin and Byers are both mentors of Dr. Xu, who wrote the grant application to combine Dr. Chavkin's interest in opiates and pain with Dr. Byers' interest in facial pain. This would require a new model of facial allodynia in the mouse. To this end, Dr. Byers used two mice that were part of a control group of an approved dental pain study to attempt new trigeminal manipulations when the mice were profoundly anesthetized for perfusion at the end of the study. In one mouse she tried a partial ligation of the inferior alveolar nerve as she is approved to do in rats. In the other, she explored the anatomy and the feasibility of either a loose ligature or a partial ligation of the infraorbital nerve. Neither procedure was completed and neither mouse was allowed to wake up. However, based on this exploration, they decided that they would use Dr. Xu's experience with partial ligation of the sciatic nerve on Dr. Chavkin's protocol directed at the infraorbital branch of the trigeminal to develop a new model of trigeminal allodynia. At this point, Drs. Chavkin and Byers each thought the other had received approval from the IACUC, and Dr. Xu successfully completed survival surgeries using 19 of Dr. Chavkin's mice, and performed in Dr. Byers' laboratory. Dr. Xu is listed on Dr. Chavkin's protocol. Data that were collected from the 19 mice were used in the preliminary results for the grant.

Concurrent with the discovery of the non-compliance, Dr. Chavkin submitted a 3-yr renewal of his protocol that includes all of the surgical procedures under discussion, and that protocol has now been approved by the Committee.

Analysis: All three investigators signed a statement on their IACUC protocols confirming that they would not initiate a Significant Change from the protocol without first having it approved by the IACUC, in writing. They all knew that this procedure had never been done before. Each thought that another had received approval from the IACUC, but they did not confirm that the procedure had been approved by the IACUC in writing before proceeding.

The IACUC occasionally distinguishes between "minor" and "significant" changes based on a policy established by this Committee in 1999, and investigators know that they can make minor changes to procedures without prior IACUC approval. For example, if Dr. Byers had wanted to do this new procedure on her own protocol using rats, she might have made an argument for this being a minor change because the only new feature would have been the selection of a different branch of the trigeminal for ligation. The IACUC might or might not have agreed with her. In doing a totally new procedure that is likely to cause some pain to the animal, it is poor and risky judgment to initiate the procedure without first contacting the IACUC. In actuality, the procedure was done by Dr. Xu instead of by Dr. Byers, in mice instead of in rats, and on Dr. Chavkin's protocol where the most closely related procedure was a partial ligation of a nerve in the leg instead of in the face. Nevertheless, the perception that this procedure was a "minor" alteration of the sciatic nerve ligation procedure may have contributed to the oversight in having the procedure approved before proceeding.

In their letters to the IACUC, Drs. Chavkin and Byers have admitted the errors, have been forthcoming with details of the incident, and have each outlined a series of steps that should prevent a reoccurrence of a similar non-compliance. Dr. Chavkin has consolidated all of his protocols into one protocol to prevent confusion, and has appointed a lab technician to attend all lab meetings in order to ensure that everything that is planned during a meeting is included in the protocol before the investigator begins work on the project. This technician controls the breeding and ordering of animals and understands what investigators intend to do with the animals, and he will not distribute mice except for studies that he knows are approved. Dr. Byers' laboratory is smaller, but she has talked with all members of the lab about the difficulty. She will personally double-check all procedures ahead of time in order to assure compliance with her IACUC approvals.

Motion: Dr. Fitts moved that the IACUC send a letter of counsel to each of the three investigators, and that the letters should make the following points:

1. It is the responsibility of each investigator to confirm that all procedures are approved before initiating them. A failure to do this is a serious breach of IACUC policy, and the circumstance is aggravated by the fact that the procedure had the potential to inflict pain on the animal. Investigators who study pain should be especially diligent about obtaining approval for small changes in procedure that might cause pain in the animal.

2. If the investigators thought that the procedure was a minor change, they should have contacted the IACUC for concurrence. IACUC reviewers can approve a minor change administratively in a few minutes, and the PI is then assured that the procedure is approved before proceeding. If the reviewers do not agree that the change is minor, it will go to the full committee for approval. Either way, the PI is protected from charges of non-compliance.

3. The IACUC considers it a Significant Change to a protocol to attempt a new surgical procedure even if the procedure is done as a terminal surgery. It would have been possible for Dr. Byers to submit a Significant Change form to allow her to accomplish her exploratory surgery during a terminal procedure on an animal that was being euthanized for another purpose in order to conserve animals. If the IACUC had approved such a change, her non-compliance would have been avoided.

4. The IACUC acknowledges first that all three investigators were forthcoming with the details of this non-compliance once it was discovered, and second that they have instituted measures in each laboratory to correct the problems and ensure that similar non-compliances do not occur in the future. The Committee thanks them for their cooperation.

5. Future non-compliance by any of the investigators could be cause for more serious action, possibly including a suspension of the privilege to do research with live vertebrate animals at the University of Washington.

6. A copy of the letter should be sent to each department chair (Pharmacology, Anesthesiology and Biological Structure).

Motion Continued: Mr. McLean seconded the motion.

Discussion Regarding the Motion: Dr. Brabb asked if these PIs had had other non-compliances. Dr. Fitts explained that they had not. Dr. Washington asked how the non-compliance was discovered. Dr. Fitts replied that the data were used in a grant submission. Dr. Cunningham asked if they were aware that they could not use the data collected for grant submission. Dr. Phillips explained that it is not certain that they will not be able to use the data and that determination of use will be made by NIH.

Remaining Issues: Dr. Kelley commented that the dose for buprenorphine was listed as 4 mg/kg, which is too high and should be evaluated. Dr. Fitts said that he would ask for clarification of the intended dose.

Vote on the Motion: The motion was approved unanimously with 13 in favor.

Protocol Review:

- **IACUC # 4103-01 "Understanding Mechanisms of Weight Loss in Bariatric Surgery: Development of an Animal Model" – Dr. Flum**

Dr. Brabb presented the following report:

Review Issues: Dr. Brabb had some concerns regarding the method used to determine the number of animals necessary for the project and sent an email to the PI on July 18, 2007. She reported that she had not received a response yet. Dr. Brabb also indicated that she asked for clarification regarding the volume of blood to be collected and the routes of glucose delivery.

Motion: Dr. Brabb moved that she be assigned as designated reviewer and that Dr. Washington be assigned as the back up reviewer to approve the protocol under the Designated Reviewer Method once adequate responses to Dr. Brabb's questions have been received. Mr. McLean seconded the motion.

Vote on the Motion: This motion was approved with 12 in favor and 1 abstention.

WaNPRC Neuroscience Update:

Dr. Phillips summarized the history of events related to non-compliances associated with neuroscience studies in the WaNPRC. She reminded the IACUC that as part of a USDA inspection it was noted that Dr. Fuchs had had several non-compliances. They were reported to OLAW and his NIH funding institute (National Eye Institute – NEI), as required. Dr. Phillips further explained that when NEI did not respond to her first email, a subsequent email was sent. A response regarding the non-compliance was not received from NEI until May 24, 2007. Notices to NIH regarding non-compliances are sent as a high priority email and Dr. Phillips lets them know that she is seeking guidance and she specifically asks whether grant funds (associated with the non-compliance) can be used. Between the time that Dr. Phillips sent the 2 e-mails to the NEI, and their reply on May 24, 2007, a public records request was submitted to the UW Office of Public Records. The request was for all documents associated with the non-compliances. The documents were turned over, but did not include the May 24th reply e-mail because it had not yet been received. The May 24th reply indicated that grant funds could be used to pay per diem. The individual requesting the documents expected that there should have been a reply from NEI and she apparently filed a complaint directly with the institute and OLAW. On May 29, 2007 the UW received a detailed letter from OLAW and NEI regarding the use of funds. This letter directed the UW to perform an additional investigation of Dr. Fuchs studies, and other non-human primate neuroscience studies, to determine whether there were other non-compliances associated with NEI grants. That investigation has been launched and clinical and research records are being reviewed from May 29, 2002 forward. The School of Medicine will be looking into issues such as publication of data that were collected after conduct of non-compliant surgeries. Dr. Phillips reported that the May 29th letter seems to imply that all data collected following a non-compliance are likewise non-compliant. It is unclear as to what NIH will decide regarding the use of data. If nothing from those animals can be used it would imply that any ongoing animals with non-compliant surgeries should be euthanized. Dr. Phillips specifically asked this question in a phone call to OLAW and she was instructed not to move forward with any decision in that regard. However, since no decision has been made yet charges against grants continue for these animals. Dr. Phillips further commented that this is a very difficult situation. She understands that if a surgery is non-compliant, then it is a serious issue, but she is concerned about not allowing the use of the data since this is a potential waste of an animal's life.

Mr. Slosberg commented that the efforts required to resolve the situation and the potential for lost data and other ramifications should be emphasized to the PIs. Drs. Cunningham and Brabb confirmed that the PIs are aware of these issues.

Motion: Dr. Brabb moved no additional surgical procedures be allowed on any of the non-compliant animals until a response is received from NIH regarding the ability to use the data. Ms. Kaufman seconded the motion.

Discussion Regarding the Motion: Dr. Cunningham commented regarding the feasibility of letting these animals sit on-hold while a determination is being made by OLAW and NEI. Dr. Phillips commented that we cannot project how long it will take to receive a decision from OLAW/NEI. She confirmed that a decision cannot be made by OLAW/NEI until the results of the UW internal investigation have been provided to them. Dr. Phillips asked the Committee to determine whether there should be a hold on experimental surgery for the animals that have had a non-complaint surgery, as indicated in the motion. Dr. Phillips emphasized that the hold was for experimental surgery only, not clinical surgical procedures as required by a veterinarian. Mr. Slosberg asked how many animals would be affected. Dr. Phillips replied that there are 6 ongoing animals. Ms. Kaufman suggested that the effected PIs be notified regarding what constitutes an experimental surgery and wanted to know how future surgeries will be monitored. Dr. Brabb confirmed that she or Dr. Kelley would review surgical requests in order to determine clinical necessity. Dr. Washington asked about the collection of other non-surgical data. Dr. Brabb explained that surgical procedures are more invasive, that other things such as blood collection, chairing, data collection, etc. should continue. Dr. Brabb further explained that she felt that the monkeys benefit from the interaction and the treats that are given during the recording sessions. Dr. Kelley commented that these animals are highly adapted to contact and to suddenly remove the contact would be stressful to the animals. Dr. Phillips commented that she and Dr. Brabb met with the PIs and they are aware that it is possible that data collected from non-compliant animals may not be usable.

Revision of Motion: The Committee requested that the previous motion include the requirement that proposed surgical requests for neuroscience animals be reviewed by Dr. Brabb, Dr. Kelley or Dr. Washington.

Vote on the Motion: This motion was approved with 11 in favor, 1 opposed and 1 abstention.

Standard Procedures and Devices Used in Neuroscience Studies

Dr. Washington presented a summary of the use of neuroscience equipment to the Committee so that the members would have a better understanding of the procedures involved, when they are reviewing the history of the neuroscience animals.

Dr. Brabb explained that the IACUC has been reviewing surgical records for the last few months. When the surgical summaries were requested from the WaNPRC they provided them based on procedures performed in the main surgical suite. The list did not include minor surgical procedures conducted outside of the main operating room. As a result, the IACUC did not review the complete surgical history for some of the animals and so their surgical histories are being re-reviewed. In addition, there are a few animals for which Significant Changes for additional surgery have been submitted. All of these were reviewed as follows.

- IACUC #2896-01 "1) Neural Coding Vision 2) Neural Mechanism of Visual Perception 3) Howard Hughes Medical Institute" – Dr. Shadlen

Dr. Phillips presented the following surgical summary reports for two Significant Change requests to this protocol.

1) Animal #A01139
Dr. Phillips summarized that there were 2 clinical procedures that were not included on the original list reviewed by the IACUC. The PI is also seeking approval for an additional repair.

Motion: Dr. Brabb moved to approve the Significant Change request. Dr. Fitts seconded the motion.

Discussion Regarding the Motion: Dr. Washington confirmed that the surgeries are spaced out appropriately. Dr. Batterson asked if the PI was proposing to perform all the procedures in a single surgery, including the craniotomy, because some of the protocols indicate that multiple surgeries are required for these procedures. Drs. Phillips and Brabb clarified the reasons for which they would elect to perform one surgery. Dr. Cunningham asked about the health of the animal since the last surgery on May 25, 2007. Dr. Kelley replied that the animal was assessed and determined to be in good health.

Vote on the Motion: The motion was approved unanimously with 13 in favor.

2) Animal #A03074
Dr. Phillips summarized the Significant Change request for the Committee. Dr. Phillips noted that the animal is scheduled to have the left eye coil removed and re-implanted. The PI is therefore seeking approval to perform an additional repair in the future since the planned left eye coil surgery is his previously approved repair.

Motion: Dr. Phillips moved to approve the animal for an additional repair or clinical surgery if it is required. Dr. Brabb seconded the motion.

Vote on the Motion: The motion was approved unanimously with 13 in favor.

- IACUC #2896-01, "1) Neural Coding Vision 2) Neural Mechanism of Visual Perception 3) Howard Hughes Medical Institute" – Dr. Shadlen

Dr. Phillips presented the surgical summary reports to the IACUC for the following animals whose previously presented summaries were incomplete.

1) Animal #A01141

Motion: Dr. Brabb moved to re-approve the animal for an additional repair or clinical surgery if it is required. Dr. Washington seconded the motion.

Vote on the Motion: This motion was approved 12 in favor and 1 opposed.

2) Animal #A95088

Motion: Dr. Brabb moved to re-approve the animal for an additional repair or clinical surgery if it is required. Ms. Kauffman seconded the motion.

Discussion of the Motion: Dr. Cunningham asked about the current status of the animal. Dr. Kelley explained that the animal had a physical exam and routine TB test in July and other than being

overweight the animal is in good health. Dr. Brabb explained that because of the type of procedure that is being done he thinks that the PI will be able to gather sufficient data using a less invasive method for tracking eye movement. Dr. Brabb further clarified that he does not intend to perform additional surgeries to implant eye coils in this animal. Dr. Phillips explained that the PI's research does not require the precise measurement of eye movements that is required in other studies utilizing the eye coil. She further commented that it is not clear that this method will work for this study and even if successful, that this method may not work for other studies (because they require more precise measurements). Dr. Cunningham clarified that the motion would be revised to indicate that the repair is only for chamber and lugs and not eye coils. Dr. Kelley confirmed that there have been no problems with this animal's platform for many years.

Revised Motion: Dr. Brabb moved to re-approve the animal for an additional repair of chamber or lugs (but not eye coils), or clinical surgery if it is required. Ms. Kauffman seconded the motion

Vote on the Motion: The motion was approved with 11 in favor and 2 opposed.

3) Animal #A95089

Motion: Dr. Brabb moved to re-approve the animal for an additional repair or clinical surgery if it is required. Dr. Fitts seconded the motion.

Discussion of the Motion: Dr. Kelley confirmed that no surgical procedures have been performed on this animal for the last several years. He further commented that this animal had a physical exam and routine TB testing in July and is considered to be in good health.

Vote on the Motion: The motion was approved unanimously with 13 in favor.

4) Animal #A97001

Motion: Dr. Washington moved to re-approve the animal for an additional repair or clinical surgery if it is required. Dr. Brabb seconded the motion.

Discussion of the Motion: Dr. Gunderson commented that the clinical record indicated that the animal is blind in one eye. Dr. Brabb explained that the PI thought that during the placement of an eye coil some time ago there was an accidental tear in the sclera resulting in a loss of vitreous fluid which may have caused retinal detachment resulting in blindness. Dr. Kelley commented that the animal had a physical exam and routine TB testing in July and is in adequate body condition. Its blood values are within normal limits and hydration is adequate.

Vote on the Motion: The motion was approved unanimously with 13 in favor.

- IACUC #4146-01 "Electrical Stimulation for the Vestibular Nerve" – Dr. J. Phillips
  Dr. Phillips presented the surgical summary reports for two Significant Change requests to IACUC #4146-01.

  1) Animal #A05033
     This animal was assigned to the project in 2001. The animal has had one experimental surgery on January 18, 2007 to place an eye coil in the left eye and to implant a front head post. A Significant Change is requested to remove the left eye coil for veterinary health considerations and concurrent placement of a right eye coil.

Motion: Dr. Phillips moved to approve an additional repair or clinical surgery after the surgery that is already scheduled. Mr. Tarabochia seconded the motion.

Discussion of the Motion: Dr. Washington asked if the Committee should require that the animal have a veterinary exam prior to surgery. Dr. Phillips agreed to add contingent on veterinary exam to the motion.

Ms. Kauffman asked what would happen if there was an emergent situation that required clinical surgery. Dr. Phillips clarified that in the event of a clinical emergency IACUC approval is not required.

Revised Motion: Dr. Phillips moved to approve an additional repair or clinical surgery after the surgery that is already scheduled, continent on a veterinary exam prior to the next repair. Mr. Tarabochia seconded the motion.

Vote on the Motion: The motion was approved with 12 in favor and 1 abstention.

2) Animal #A06011
This animal has had 2 surgeries; one experimental surgery on 2/5/07 for an eye coil and lugs and a repair surgery on 4/17/07 to remove the left eye coil and implant a right eye coil. The Significant Change request is for an additional repair or clinical surgery if required.

Motion: Dr. Phillips moved to approve the animal for an additional repair or clinical surgery if it is required. Ms. Kauffman seconded the motion.

Vote on the Motion: The motion was approved with 12 in favor and 1 abstention.

- IACUC #3275-01 "Visual Object Perception and Learning in Extrastriate Cortex" – Dr. Jagadeesh
Dr. Phillips presented the surgical summary reports for the following animals.

1) Animal #A00126

Motion: Dr. Brabb moved to re-approve the animal for an additional repair or clinical surgery if it is required. Ms. Kauffman seconded the motion.

Discussion of the Motion: Dr. Kelley commented that the animal had a physical exam and routine TB testing in July and all lab reports were within normal limits with the exception of a decreased albumin level. The level was not a value that was considered dangerously low and the animal has been placed on a protein supplement and will be re-tested.

Vote on the Motion: The motion was approved unanimously with 12 in favor. Mr. McLean was not present for the vote.

2) Animal #A00127

Motion: Dr. Brabb moved to re-approve the animal for an additional repair or clinical surgery if it is required. Dr. Fitts seconded the motion.

Discussion of the Motion: Dr. Batterson asked why a liver biopsy had been performed on the animal. Dr. Kelley explained that during a routine physical exam it was noted that this animal had an enlarged liver. A biopsy was performed in order to determine why the liver was enlarged and the results indicated lymphatic amyloidosis, indicating amyloid in the liver. Amyloidosis does not generally cause any clinical problems. The main issue with this condition is that the liver may become so enlarged that it might interfere with other functions. Dr. Kelley further commented that during the July exam the clinical pathology also showed leukocytosis with a profound left shift indicating an underlying bacterial infection. The animal was placed on antibiotics and cannot have surgery until the case is resolved.

Vote on the Motion: The motion was approved with 10 in favor, 1 opposed and 1 abstention. Mr. McLean was not present for the vote.

The review of the remaining animals was tabled until the next meeting.

The meeting was brought to a close at 5:18pm.

The floor was opened to public comment.