

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, January 11, 2022**  
**11:30am**

Present: S. Allison, L. Arseneau, R. Dilger, J. Fraley, L. Goodly, C. Hayes, N. Herndon, J. Hoover, E. Nelson, J. Novakofski, M. Ridgway, M. Vitoux, J. Whitson, J. Xu, and J. Gulley presiding.  
Absent: H. Chen, D. French, S. Gutierrez, C. Ko, D. Llano, and C. Suski.  
Guests: K. Branson, R. Chafel, B. Hayek, S. Myers, S. Pearson, and J. Van Cleeff.  
A legal quorum was met.  
Minutes authored by Ben Hayek.

**I. Continuing Education**

- a. NABR webinar

The committee participated in the NABR webinar *2021 USDA Oversight Process*.

**II. Announcements**

- a. Spring 2022 Semiannual Inspections

Committee members were reminded that the Spring 2022 semiannual inspection process would be beginning soon, and to respond to requests for availability if they have not already done so.

- b. AWA update (annual review requirement)

The committee discussed the amendment to the Animal Welfare Act that took effect on December 27, 2021, including the removal of the “redundant requirement for the Institutional Animal Care and Use Committee at each facility to conduct a continuing review of research activities involving animals and instead requiring a complete resubmission and review of such activities at least every 3 years”. Since this change would reduce regulatory burden, the committee agreed that the Assurance should be updated to remove the annual review requirement. It was noted that other Big 10 universities would be doing likewise.

**III. Approval of Minutes**

A motion was made to approve the minutes from the December 2021 meeting with the suggested edits. The motion was seconded and approved unanimously.

**IV. Response to Annual Review of Protocols**

- a. No unresolved questions or concerns arose during the November Annual Reviews.

**V. New Business**

- a. Updated IACUC policies

The following policies were updated and approved via unanimous vote: Acceptable Methods of Euthanasia; Environmental Enrichment; Exercising Dogs.

**VI. Old Business**

- a. Cephalopod research on campus

The committee confirmed that it would not require IACUC approval for cephalopod research on campus, but also discussed methods for general tracking. Instead of attempting to maintain

a database, departments will be contacted on a regular basis, such as prior to an AAALAC site visit.

b. 19068 [REDACTED] follow-up

The PI reported that he spoke about the new internal transfer system in a weekly laboratory meeting in November: each student is required to retrieve their mice from the colony for their experimentation; no mice will be left out on carts. However, the new plan has not been implemented due to the holiday break, so no documentation could be provided yet. The PI will continue to stress the importance of the new system during future planning of experiments. The Chair asked the PI to provide the documentation of the new system by the first Monday of the following month. The committee looks forward to reviewing the documentation.

c. 19196 [REDACTED] follow-up

As requested by the IACUC following the previous meeting, the PI provided weight sheets for rats on food restriction. The committee was satisfied with the records, and asked the Chair to forward a few recommendations to the PI to help improve clarity.

d. 20182 [REDACTED] VMO requests

Following the December 2020 IACUC meeting, the Chair discussed the event with the USDA VMO. Shortly after, several suggestions from the IACUC office for protocol clarification were sent to PI; an amendment submitted and approved shortly thereafter, and the revised protocol was shared with the VMO. In January, the VMO asked for further clarification, specifically: did the IACUC find that all the aspects of the protocol were followed during the sheep lab. Questions were sent to the PI, and responses were received and shared with the committee. A thorough discussion of the protocol and event took place, and several key issues were raised: during venipuncture labs, when does marking occur, who is responsible for marking, and were the sheep appropriately marked on the day of this event? The Chair will contact the PI for clarification, and will keep the VMO and committee informed as more details arise.

## VII. Full Committee Review of Animal Use Protocols

**20155** [REDACTED] Epilepsy and the HPG Axis

**Committee Discussion:** The PI added AAV injection to the protocol. Mice will be monitored daily, but seizures may occur spontaneously. The lab is very experienced with the model and proposed procedures.

**Action:** A motion was made to approve the amendment to the protocol as written. The motion was seconded and approved unanimously.

**21242** [REDACTED] Mechanisms underlying Homeostatic Plasticity, and Development of Super-Resolution Microscopy of Neuronal Synapses with Small Quantum Dots and Advanced Imaging Tools

**Committee Discussion:** This is a renewal of a previously approved protocol, which includes epilepsy-related seizures, as well as a controlled cortical impact model. Animals experiencing seizures will be treated. Monitoring and endpoints are appropriate. The lab is experienced.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

## VII. Protocol Deviations

a. 20100 [REDACTED] expired drugs

The PI reported an event related to a group of 18 pigs that were scheduled to be challenged with swine influenza virus administered intratracheally. The procedure required the sedation of

these pigs to place an endotracheal tube to accurately deliver the virus inoculum deep into the lung. Unfortunately, the drugs needed to sedate the pigs did not arrive on time for the lab to perform the procedure on that day. The personnel needed to carry out the procedure, as well as personnel needed to perform the euthanasia and processing of the pigs to collect tissue samples five days later, had been arranged and could not be easily changed. A licensed veterinarian with a DEA license was involved in the study and offered to provide the drugs necessary to sedate the animals. The drugs consisted of a mixture of Tiletamine/zolazepam, Ketamine and Xylazine. Although the tiletamine/zolazepam had expired 11 days earlier, the PI felt that they had no choice but to use that drug. The PI deeply regretted this incident, and is in the process of applying for his own DEA license. Additionally, the PI plans to institute a thorough drug control record that will include very prominently the date of expiration of the drug, and its proper disposal upon such event.

Members of the committee expressed significant concern about the decision to use drugs that were known to be expired, and therefore recommended that the PI voluntarily suspend his active protocols, and request for reinstatement after a controlled substance license has been obtained from the State of Illinois and Drug Enforcement Agency (DEA). In the formal request for reinstatement, the PI should indicate that he understands the role as a Principal Investigator to ensure all protocols and relevant campus policies are followed.

The committee voted to administratively suspend the active protocols on January 21, 2022 if the PI had not voluntarily suspended them before that time.

b. 20162 [REDACTED] feeding/observation of fish

The PI submitted a report regarding missed feeding and observation of fish. A PhD student usually fed the fish because they were collected for their experiment. They were away for Thanksgiving break, so the PI fed the fish during that time. The breakdown came during the transition from the Thanksgiving break back into the 'normal' routine. The student returned late on 11/28, but did not come into lab the next day. The PI fed on 11/29, but failed to initial the log. The fish went unfed on 11/30; the PI assumed that the student was feeding the fish once again, but this did not happen. The fish were fed on 12/1, but the logs were not initialed. Additionally, on 12/16, the student did not make it into the lab to feed and check on the fish, possibly due to out-of-town visitors.

Going forward, the PI will check on the feeding and observation logs each day in the afternoon. The PI is also going to set up a daily email to the PhD student to ask whether they have fed the fish or whether the PI needs to do this. The PI has stressed to the student the consequences of failing to feed the fish, and will remove the student's animal use rights in the lab if the situation is not resolved.

The committee felt that the PI is taking the appropriate steps.

c. 20252 [REDACTED] ket-xyl mixture (unexpected rat losses)

Two rats were accidentally given a lethal overdose of ketamine/xylazine during routine ABR readings, resulting in their unexpected loss. The lab's stock ketamine/xylazine stock mixture is 100 mg/ml, but was mistaken as 10mg/ml at the time, resulting in a lethal overdose.

In addition to updating the SOP found in the lab, the standard dilution will be posted inside the controlled substance locker. All personnel with access to the ketamine/xylazine mixture have been made aware of this issue and the correct dosing. The lab will continue to carefully document any usage of anesthetics, including the desired dosage and, if different, the given dosage. The PI shared the updated SOP with the IACUC office.

The committee felt that this relatively new PI has taken the appropriate steps to prevent a reoccurrence.

d. 21214 [REDACTED] mouse CO2 (unexpected animal loss)

The PI received notice from one of his students that a mouse died after being accidently exposed to CO2 vapor. An experienced student was preparing to anesthetize a mouse prior to perfusion, and placed the cage in a sink that had some dry ice blocks on the opposite side

from the cage. The student noticed that the mouse very quickly stopped breathing and died. The mouse was not cold, so likely died due to exposure to CO2 vapor. The PI spoke to the student, and gave them clear instructions to never have animals near dry ice or CO2 vapor under any circumstances. The student expressed an understanding of the policy to the PI. The PI also sent an email to the whole group to remind them of the same.

**VIII. Report of Unexpected Event or Animal Loss**

none

**IX. AACUP/DAR/OHS Report**

AACUP had nothing to report.

DAR had nothing to report

OHS had nothing to report.

**X. Other – Items from the Floor**

An animal welfare concern was recently reported about cows out in the cold at the [REDACTED] Committee members were encouraged to forward any reported concerns to the appropriate administrative office(s).

The meeting was adjourned at 2:26 p.m.

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, February 1, 2022**  
**12:00pm**

Present: S. Allison, L. Arseneau, R. Dilger, D. French, L. Goodly, C. Hayes, J. Hoover, C. Ko, E. Nelson, J. Novakofski, M. Ridgway, C. Suski, M. Vitoux, J. Whitson, J. Xu, and J. Gulley presiding.

Absent: H. Chen, S. Gutierrez, N. Herndon, and D. Llano.

Guests: K. Branson, R. Chafel, [REDACTED], [REDACTED], [REDACTED], B. Hayek, S. Myers, S. Pearson, [REDACTED], [REDACTED], and J. Van Cleeff.

A legal quorum was met.

Minutes authored by Ben Hayek.

**I. Announcements**

a. Vet students

Several 4<sup>th</sup> year vet students are attending the meeting as guests.

b. NAS Free Webinar – Feb 9/10

Committee members were encouraged to attend a free online webinar: Discussing and Understanding Animal Welfare Challenges in Research and Education on Wildlife, Non-Model Species and Biodiversity.

**II. Approval of Minutes**

A motion was made to approve the minutes from the January 2022 meeting. The motion was seconded and approved unanimously.

**III. Response to Annual Review of Protocols**

a. No unresolved questions or concerns arose during the December 2021 Annual Reviews.

**IV. New Business**

a. Updated IACUC policies

The following policies were updated and approved via unanimous vote: Reporting Adverse Events; Survival Surgery on Animals.

**V. Old Business**

a. [REDACTED] follow-up

The PI shared documentation of animal transfer training that was performed by members of the lab, and will continue to provide updates on training status. The committee felt that the PI has properly set the proposed plan in place.

b. Tracking horse usage

The AACUP Director shared the method and documentation of tracking horse usage. The software was borrowed from another unit on campus, and the committee had a few clarifying questions about a few of the data headings.

c. VTH ruminant pasture – quarterly update of automatic watering

The AACUP Director reported to the committee that F&S is waiting for appropriate weather to be able to complete the fencing and watering system in the southwest corner. Funding has already been secured, and work will hopefully be completed in early Spring.

d. Teaching sheep update

Following the previous meeting, the committee's concerns regarding the marking of the sheep were sent to the PI. The PI responded that the marking occurs after the two students have interacted with the sheep. There are only two students per sheep, and they are instructed that they have three attempts from which to obtain the blood sample before asking for assistance, and the students would be responsible for marking the sheep that was used and putting it back with the rest of the animals that either were not used or were already done with their experience. When asked to verify that each sheep was marked after each student pair finished their venipuncture procedures on the day of this incident, the instructor responded that since the event happened several months ago, they recall only the events surrounding the sheep who died, but they were certainly not aware that the marking procedure was violated. They could verify that the lab's administrative controls were adhered to (two students per sheep, limited attempts, extra animals for use if needed), and that these restrictions would have also prevented exceeding the venipuncture limit on an animal and maintained the intent of the protocol.

After discussing these events, the committee could not make a determination as to whether the other sheep were marked (as indicated in the protocol), but agreed that a lack of marking would not have caused this adverse event. The Chair will ask the PI if it would be possible to include further efforts to minimize the risk of a reoccurrence, such as: a checklist for protocol personnel to complete that would document that each aspect of the protocol (students per sheep, venipuncture attempts, marking, etc.) were followed; or a handout given to each student that outlines all of the steps that need to be followed (as described in the protocol).

**VI. Continuing Education**

- a. none

**VII. Full Committee Review of Animal Use Protocols**

**21260** [REDACTED] Dissection of hippocampal circuits mediating anxiety and fear

**Committee Discussion:** The PI justifies the use of water restriction as part of the Vogel conflict test. Monitoring and endpoints are appropriate.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**22004** [REDACTED] Neural circuitry defending against weight gain

**Committee Discussion:** The PI justifies the use of food restriction. Mice will undergo two major survival surgeries: intragastric cannula and intracranial injection, with a minimum of 2 weeks between surgeries.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**VII. Protocol Deviations**

- a. 19265 [REDACTED] mouse without food

Animal care staff discovered a cage without food. Project personnel reported that after separating the mouse into a new cage, they went out of the room for extra supplies for weaning and forgot to add diet to the cage. The committee would like the PI to submit a more detailed plan to prevent this from occurring in the future. DAR will also check to see how animal care staff can help prevent these types of events.

- b. 21139 [REDACTED] work before amendment approval

The PI self-reported a deviation from the protocol. Prior to starting work, collaborators at the site indicated that they would have fathead minnows available for use. Upon arriving at the site, project personnel realized that the fathead minnows that were present were too small for the proposed studies. However, the facility had an abundance of golden shiners that were a more appropriate size, and the PI therefore submitted an amendment to switch the study so that golden shiners could be used. The deviation from protocol occurred when the grad student mistakenly ran a preliminary behavioral trial before the amendment had been approved. Upon realizing their error, the student contacted the PI, who assumes responsibility for the deviation for failing to let the student know how the amendment process worked (i.e., it can take some time for the amendment to be processed). The PI does not anticipate this happening again in the future, and the amendment has since been approved, so the lab is now set to use shiners moving forward.

#### **VIII. Report of Unexpected Event or Animal Loss**

- a. 19182 [REDACTED] [REDACTED] steer

The PI reported a steer dying unexpectedly while in a stanchion in the beef metabolism barn for training for future research. The stanchion facilitates keeping the steer's head in the REMS system in order to collect calorimetry data. Many cattle (60+ head) have been locked in the stanchion previously without any negative incidents. This steer laid down in the stall but appeared to get his head twisted as he was perhaps struggling to stand up. Based on this occurrence, the PI has modified their training and monitoring procedures. The IACUC office staff had a few clarifying questions about the training protocol, and the PI made appropriate clarifications/updates.

After discussing the incident, the committee members expressed significant concern about the delay in reporting – the event happened on 11/18/21, but the report was not received until 1/13/22. The committee requests that the PI submit a written explanation for this delay in reporting, acknowledge that he has read and understand the requirements for reporting of adverse events, and provide a plan for preventing delays in reporting of future adverse events if they occur. Additionally, the committee would like the PI to clarify the time and date that the steer was last observed, and when the steer was found dead, as well as verifying that in the future, the farm manager will be notified whenever steers will begin the stanchion acclimation and housing process that is described in the SOP.

- b. 20021 [REDACTED] post surgical mice morbidity

The PI received a medical report email regarding mice infected by surgical intratracheal inoculation, and indicated to the IACUC office that it is normal to see mice dull, but not hunched back, following surgical inoculation infection during the initial phases. The medical report included a comment that the incisions were open but dry at the surgery site. The PI reported that the lab takes precautions to seal the wound using Vetbond properly, and has not previously had an issue with surgical wound opening in past experiences (~8 years and more than 1000 surgeries). Mice are observed for their recovery and every day after inoculation surgery, including any signs of infection at the surgery site. According to lab personnel, there were no signs of infection at the surgery site, and they observed incomplete closure of incisions in 13 out of 48 mice. All mice reached their expected endpoints post-operatively as per protocol description, and no mice needed to be removed from the study early due to the condition of the surgical site. In order to address the concerns raised by the medical report, the lab will take care to close the incision site properly, and take necessary precautions to avoid such incidences in future, including any required training to new personnel as overseen by the PI. After discussing the event, the committee would like the PI to submit all surgical records for the 48 mice that underwent surgical intratracheal inoculation. Additionally, a PAM will be placed on the protocol to contact DAR/IACUC at least 7 days before performing the next surgical intratracheal inoculations so that the surgeries may be observed.

c. Rabbit injury (DAR facility)

The DAR Director reported a rabbit injury that ultimately resulted in the animal being euthanized. The on-call vet was called to campus to examine the rabbit with the lab member who called the rabbit in, and it was determined that the rabbit had a large bruise with swelling on the medial Tibia; it was non-weight bearing, and the foot was angled to the right. The rabbit was taken to the vet teaching hospital for radiographs and further assessment. It was determined that the rabbit had a fracture, and since it was a research animal, the decision was made to euthanize the animal. The rabbit was sent for necropsy at the Diagnostic Lab at the Vet School.

DAR can only speculate as to the cause of the injury, with some possibilities being: a foot may have gotten stuck in caging (the lab has ordered similar sized rabbits in the past without issue); other non-caging injury, such as something spooked the rabbit somehow, resulting in self-inflicted trauma/fracture; or handling (this seems unlikely given the minimal procedures, and experience of staff, and handling traumas in rabbits would be more likely to be back-related). DAR will continue to investigate whether the injury was related to housing or handling, and will take the appropriate steps to mitigate possibilities of a reoccurrence.

**IX. AACUP/DAR/OHS Report**

AACUP reported that the [REDACTED] currently has 115 milking cows, and the most recent SCC level was 182k. There have been no unexpected losses or incidences of morbidity.

DAR reported that a lab contingency plan has been established regarding the feeding of animals. Additionally, a post doc residency has been created for specialty in lab animal medicine.

OHS had nothing to report.

**X. Other – Items from the Floor**

none

The meeting was adjourned at 2:06 p.m.



**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, March 1, 2022**  
**12:00pm**

Present: S. Allison, L. Arseneau, H. Chen, B. Conrady, R. Dilger, D. French, L. Goodly, C. Hayes, N. Herndon, J. Hoover, C. Ko, E. Nelson, J. Novakofski, M. Ridgway, C. Suski, J. Whitson, J. Xu, and J. Gulley presiding.

Absent: S. Gutierrez, D. Llano, and M. Vitoux.

Guests: K. Branson, R. Chafel, [REDACTED], [REDACTED], [REDACTED], J. Fraley, B. Hayek, S. Myers, J. Van Cleeff, and [REDACTED].

A legal quorum was met.

Minutes authored by Ben Hayek.

**I. Announcements**

a. Public Member

J. Fraley is leaving the committee after a long tenure as one of the public members. B. Conrady has joined the committee as one of the public members.

b. Student guests

Four fourth-year vet students are attending the meeting as guests.

**II. Approval of Minutes**

A motion was made to approve the minutes from the February 2022 meeting. The motion was seconded and approved unanimously.

**III. New Business**

a. Updated IACUC policies

The following policies were updated and approved via unanimous vote: Animal Housing; Wire Bottom Caging for Rodents; Reporting Adverse Events.

b. Highly Pathogenic Avian Influenza

Recent outbreaks of highly pathogenic avian influenza have been found in wild and domestic poultry in contiguous states and have also been detected in wild birds throughout the United States. The Illinois Department of Agriculture is encouraging review of biosecurity plans and implementation of the highest level of security possible, as well as reporting any increase in mortality or abnormal clinical signs to their office or the USDA.

It was noted that all banding permit holders have already been notified by the state, but the committee would like the IACUC staff to alert all investigators who are using wild birds that are brought into animal facilities; additional PPE should be used, and any birds affected by mortality should be sent to the diagnostic lab for testing when possible.

c. Oversight of GMO pigs (DRS)

A committee member shared recent communications between the Division of Research Safety and the NIH/FDA regarding efforts needed to complete necessary steps that investigators must take before sending transgenic food animals to slaughter or incineration.

d. USDA inspection – Feb 11

Following a focused inspection by the USDA VMO on February 8, 2022, the university received an inspection report on February 11 that contained a critical noncompliance citation. The noncompliance was related to handling of a teaching sheep and a research rabbit. Following further discussion between the attending veterinarians and VMO, a revised report was filed by the USDA VMO on February 25. An appeal of the citation is under consideration.

#### IV. Old Business

a. [REDACTED] follow-up

The committee discussed the additional details provided by the PI and was satisfied with the updated REMS training SOP.

b. 20221 [REDACTED] surgery records follow-up

As requested by the IACUC at the previous meeting, the PI provided the last two months of surgery records for his lab. The committee was satisfied with the records and suggested the IACUC office staff offer suggestions for additional methods of marking animals.

c. [REDACTED] update

The committee reviewed the PI-submitted plan for addressing concerns raised by the IACUC in the past, as well as the updates to the plan since it was put in place. The committee was satisfied with the PI's efforts to maintain oversight over the lab and would like the IACUC office staff to remind the PI that reports of adverse events must be submitted within 24 hours.

#### V. Continuing Education

a. none

#### VI. Full Committee Review of Animal Use Protocols

**21224** [REDACTED] Development and Evaluation of Near-Infrared Fluorescent and Bioluminescent Probes for In Vivo Imaging

**Committee Discussion:** The committee discussed the addition of a pilot study to the currently approved protocol and agreed that the PI should instead submit an entirely new protocol for the pilot study and revert this protocol to its previously approved state. The pilot study protocol will have a PAM (observation by DAR/IACUC staff) and can go to the weekly list after primary review has been satisfactorily completed.

**Action:** The protocol was tabled.

**21226** [REDACTED] Investigating the Chemical Biology of Inflammation

**Committee Discussion:** The protocol proposes the use of LPS to study inflammatory response; animals will experience unrelieved pain/distress. The committee would like the PI to provide further clarification for the proposed dosage of LPS.

**Action:** A motion was made to send the protocol to DMR after the clarification has been added. The motion was seconded and approved unanimously.

**21229** [REDACTED] Investigating the Chemical Biology of Cancer

**Committee Discussion:** The protocol will utilize a tumor imaging model. Monitoring and endpoints are appropriate.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**20129** [REDACTED] Molecular imaging of peripheral arterial disease (PAD) in preclinical models

**Committee Discussion:** The committee discussed the amendment to this protocol studying wound healing in a diabetic model. The committee would like the PI to provide further clarification about the reason and number of animals that will experience multiple wounding.

**Action:** A motion was made to send the protocol to DMR after the clarification has been added. The motion was seconded and approved unanimously.

**22023** [REDACTED] The effect of maternal inflammation on offspring muscle development and immune function in mice

**Committee Discussion:** The proposed protocol will use LPS to study inflammation, which may cause unrelieved pain/distress. Monitoring and endpoints are appropriate.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**22017** [REDACTED] Role of hematopoietic stem cell lipid rafts in sepsis

**Committee Discussion:** This is a renewal of a previously approved protocol. Mice that receive LPS injections may experience unrelieved pain/distress. Monitoring and endpoints are appropriate.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**22019** [REDACTED]

**Committee Discussion:** The committee expressed concern about the appropriateness of the [REDACTED] for bovine caesarian section surgery. It was requested that the PI remove the use of cows for the caesarian section procedure and clarify that caesarian surgery on ewes and does will be performed only within the [REDACTED] of the [REDACTED].

**Action:** The protocol was tabled.

**22029** [REDACTED] Cellular mechanisms for age-related cognitive dysfunction and its pharmacological reversal: a strategy towards prevention and treatment of postoperative cognitive dysfunction in elderly patients

**Committee Discussion:** This is a renewal of a previously approved protocol. In some experiments, mice will be subjected to intermittent fasting for three months while always having access to water. Animals will be monitored appropriately with intervention and endpoints in place.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**22032** [REDACTED] Pathogenesis of exacerbated pneumonia in PRRSV-bacterial co-infections

**Committee Discussion:** Animals that are inoculated with a wild-type or highly inflammatory PRRS virus may experience unrelieved pain/distress. Appropriate monitoring and criteria for intervention are in place. Before the committee votes to approve the protocol, the PI must obtain a controlled substance license and a request for reinstatement.

**Action:** The protocol was tabled.

## **VII. Protocol Deviations**

### **a. 19144 [REDACTED] sentinel feeding**

Two sentinel mice were found without food in their cage. DAR has addressed the issue with staff and continue to monitor for any performance issues.

### **b. 19171 [REDACTED] surgery**

Upon review of surgical records, several protocol deviations were discovered including: unspecified lymph nodes being removed, unspecified room locations, and uncompleted post-surgical monitoring. A committee member volunteered to speak directly with the PI to ensure that the issues are addressed with a plan to prevent a reoccurrence submitted to the committee..

- c. 19179/21179 [REDACTED] MS-222

During a facility inspection, it was discovered that the lab was using chemical-grade MS222 instead of FDA-approved MS222 (as indicated in the protocol). The PI promptly addressed the discrepancy.

- d. 20032 [REDACTED] off protocol work

Protocol participants who are from a collaborator's lab conducted work that was not described in the protocol: after cell grafting and an observed response, treatment was stopped and mice were monitored with the goal of retreatment if tumors reoccurred. The PI thought that the collaborator had already completed the study, and upon being alerted by DAR staff immediately contacted the collaborator and terminated the study. The PI now has a plan in place to prevent a similar reoccurrence.

- e. 20106 [REDACTED] pigs

Two oncopigs were shipped to another institution as described in protocol 20105, but they were in fact assigned to protocol 20106, which was not approved for exporting animals. The event was reported to the FDA, and the respective IACUC protocol and IBC registration will be amended to ensure compliance.

- f. 21146 [REDACTED] opossum,

The ambassador Virginia opossum, Patty, was not fed by the scheduled volunteer on two days, but had access to water during that time and was behaving normally upon examination by a veterinarian. The PI provided a plan to ensure that a similar occurrence does not happen again.

#### **VIII. Report of Unexpected Event or Animal Loss**

- a. 20106 [REDACTED] pigs

An AACUP veterinarian reported the euthanasia of a pig after a venipuncture procedure. While the other pigs in the group recovered uneventfully, it was noted that this group of pigs appeared to be more easily stressed than other pigs in the same cohort. This could have contributed to an excessive stress response and the adverse event.

- b. 20147 [REDACTED] facility fan failure; frog fatalities

DAR reported three frog deaths caused by a fan malfunction in the facility. The belt in the fan is being replaced, and the lab is looking into a room-level humidifier to help address any low humidity issues.

- c. 20221 [REDACTED] mice

After mice were infected with *Candida albicans* and monitored daily, the PI received a report from DAR indicating a higher level of mortality than expected. The experiment was immediately terminated, and the lab plans to use lower infection doses in the future and monitor animals at least twice daily.

#### **IX. AACUP/DAR/OHS Report**

AACUP had nothing to report.

DAR reported that the Program Description will be sent to AAALAC very soon. Additionally, DAR will be able to offer a veterinary residency specializing in lab animal medicine once funding is secured.

OHS had nothing to report.

**X. Other – Items from the Floor**

none

The meeting was adjourned at 3:15 p.m.

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, April 5, 2022**  
**12:00pm**

Present: S. Allison, L. Arseneau, B. Conrady, R. Dilger, D. French, L. Goodly, S. Gutierrez, C. Hayes, NJ. Hoover, C. Ko, E. Nelson, J. Novakofski, C. Suski, M. Vitoux, J. Whitson, J. Xu, and J. Gulley presiding.  
Absent: H. Chen, . Herndon, D. Llano, and M. Ridgway.  
Guests: K. Branson, R. Chafel, B. Hayek, S. Myers, S. Pearson, and J. Van Cleeff.  
A legal quorum was met.  
Minutes authored by Ben Hayek.

**I. Announcements**

a. Semiannual Program Review

Committee members were encouraged to attend the Semiannual Program Review and Spring Semiannual Inspection Report meeting that will be scheduled near the end of April.

**II. Approval of Minutes**

A motion was made to approve the minutes from the March 2022 meeting. The motion was seconded and approved unanimously.

**III. New Business**

a. Updated IACUC policies

The following policies were updated and approved via unanimous vote: Oversight of Investigator-Maintained Colonies; Stabilization of Newly Arrived Research and Teaching Animals.

b. Protocol issues at Vet Med – USDA-covered animals

After an extensive discussion of USDA-covered species used in Vet Med facilities, the committee decided to form a subcommittee that will identify the relevant issues and present strategies for improvement.

**IV. Old Business**

a. Old Annual Review process update

With the discontinuation of the old Annual Review process, committee members were encouraged to carefully review protocols on the weekly review lists and submit any questions or concerns at that time.

**V. Continuing Education**

a. AAALAC Clarification to the Ag Guide

The committee reviewed the recent AAALAC clarifications to the Guide for the Care and Use of Agricultural Animals in Research and Teaching, and the American Dairy Science Association, American Society of Animal Science, and Poultry Science Association standards.

**VI. Full Committee Review of Animal Use Protocols**

19253 [REDACTED] Mechanisms of diet choice and obesity

**Committee Discussion:** The PI justifies the housing of animals in larger groups. Weight will be monitored regularly.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

22019 [REDACTED]

**Committee Discussion:** The committee would like the protocol to state that all surgeries will take place in the dedicated surgical room and not the anteroom or prep room.

**Action:** A motion was made to approve the protocol after the clarification has been added. The motion was seconded and approved unanimously.

22039 [REDACTED]

A broadly protective vaccine against porcine post-weaning diarrhea (PWD) - a piglet challenge study

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress. Endpoints and monitoring are appropriate.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

22051 [REDACTED]

Efficacy analysis of antibacterial peptides

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress. Endpoints are appropriate, and the lab has experience with similar studies.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

22058 [REDACTED]

An infant rabbit passive protection model to test immunogenicity and preclinical efficacy of a Shigella multivalent vaccine

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress. Monitoring and endpoints are appropriate, and the lab is experienced with the use of rabbits.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

22062 [REDACTED]

Development of Novel Therapeutic Approaches for the Prevention and Treatment of Age-Related Disabilities

**Committee Discussion:** The PI justifies the use of food restriction and individual housing. The lab has experience with the proposed procedures.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

22056 [REDACTED]

Neurobiology of socially controlled sex change in clownfish

**Committee Discussion:** The committee would like to receive clarification from the FDA/NIH regarding the classification of transgenic fish as proposed in the protocol.

**Action:** A motion was made to send the protocol to DMR once clarification from the FDA/NIH has been received and the respective updates have been made to the protocol. The motion was seconded and approved unanimously.

22057 [REDACTED]

Origins of Exercise-brain interactions

**Committee Discussion:** No guide exceptions are included in this relatively simple and straightforward protocol. The PI's suspension will end after May 18, 2022.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

## VII. **Protocol Deviations**

- a. 19122 [REDACTED] unfed mouse

The PI reported a protocol deviation involving an unfed mouse. The committee would like the PI to create a plan to prevent a future occurrence that includes documentation. DAR animal care staff should also be able to assist the lab in their endeavors.

- b. 20175 [REDACTED] unapproved room

The PI reported a protocol deviation involving a room that was used for a test procedure but was not listed on the protocol. An amendment was immediately submitted.

- c. 21030/21242 [REDACTED] post-op monitoring

The PI reported a protocol deviation involving the failure to document post-operative monitoring in post-op record sheets. A plan has been put into place to reduce the potential of a future occurrence.

- d. 21031 [REDACTED] unapproved surgical practice

The PI reported a protocol deviation involving the use of live fish for surgical practice. An amendment to the protocol was immediately submitted, and a plan has been put into place to reduce the potential of a future occurrence.

- e. 21216 [REDACTED] notification of arrival of tadpoles

The lab reported that DAR was not notified when animals were brought into the facility. A request to terminate the protocol was submitted, and staff members responsible for the oversight have had their privileges suspended.

- f. 20113 [REDACTED] post-op buprenorphine

The lab reported that two pigs did not receive buprenorphine post-operatively as described in the protocol. An amendment was submitted and approved. The committee would like the PI to acknowledge that they are responsible for providing the appropriate care and monitoring of animals, not facility animal care staff or animal clinic technicians. Also, a plan needs to be provided to reduce the potential of a future occurrence.

#### **VIII. Report of Unexpected Event or Animal Loss**

- a. 20032 [REDACTED] mice WC583

The PI reported an unexpected event involving mouse mortality following the injection of an experimental compound. In the future, the lab will test experimental compounds in one mouse to access acute toxicity prior to injecting multiple mice. The committee would like the PI to add the potential clinical outcomes to the appropriate sections of the protocol.

- b. 21125 [REDACTED] warbler

The lab reported an unexpected event involving the death of a bird. A plan is in place to reduce the potential of a future occurrence.

- c. 22016 [REDACTED] trout

The lab reported an unexpected event involving the death of fish that had jumped out of their tank. Alterations to the tank has been made to reduce the potential of a future occurrence.

- d. 21170 [REDACTED] horses – gentamicin?



The PI reported an unexpected event involving the death of 3 client-owned horses following castration. After a thorough investigation, the PI found that the most likely cause was the administration of gentamicin from one particular bottle. A plan is in place to reduce the potential of a future occurrence.

**IX. AACUP/DAR/OHS Report**

AACUP had nothing to report.

DAR had nothing to report.

OHS had nothing to report.

**X. Other – Items from the Floor**

none

The meeting was adjourned at 2:20 p.m.

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, May 3, 2022**  
**12:00pm**

Present: S. Allison, H. Chen, B. Conrady, R. Dilger, D. French, L. Goodly, C. Hayes, C. Ko, E. Nelson, J. Novakofski, C. Suski, M. Vitoux, J. Whitson, and J. Gulley presiding.  
Absent: L. Arseneau, S. Gutierrez, N. Herndon, J. Hoover, D. Llano, M. Ridgway, and J. Xu.  
Guests: K. Branson, R. Chafel, B. Hayek, S. Myers, S. Pearson, and J. Van Cleeff.  
A legal quorum was met.  
Minutes authored by Ben Hayek.

**I. Announcements**

- a. Semiannual Inspection Report to IO – electronic signatures

Immediately following the meeting, an email will be sent to committee members with instructions to electronically record their signature for the Semiannual Inspection Report to the IO.

**II. Approval of Minutes**

A motion was made to approve the minutes from the April 2022 meeting. The motion was seconded and approved unanimously.

**III. New Business**

- a. Controlled substance licenses (especially swine researchers)

The committee discussed the difficulties faced by protocol personnel and animal care staff when a PI has not obtained their own controlled drug license. The University is currently conducting a campus-wide drug audit, which will include the creation of a long-term solution. In the meantime, all staff will continue to receive appropriate training, and IACUC staff will assist DAR staff in their endeavors to identify and assist investigators that do not currently have their licenses.

- b. [REDACTED] reinstatement

The committee voted to send the PI's protocol to DMR once a captive bolt has arrived and is ready for use, or once the PI has obtained a controlled drug license. One committee member abstained from voting.

**IV. Old Business**

- a. AAALAC site visit – possible dates

Committee members were told that the AAALAC site visit will most likely occur during the week of July 11. An opportunity for site visitors to meet with IACUC members usually takes place during an informal luncheon.

- b. USDA response to inspection appeal

Committee members discussed the USDA's response to the appeal of citations from the February 2022 report.

- c. 19122 [REDACTED] deviation follow-up

The committee felt that the PI's plan for lab members to record daily checks was adequate.

- d. [REDACTED] – respiratory system observation update

The committee was satisfied with the lab's efforts to utilize a respiratory observation system with one of their imaging units to ensure animal welfare. The IACUC office will ask the PI to submit amendments to his protocols, which should include clarification of the units being measured as well as specific thresholds that will be used to determine if an imaging experiment needs to be stopped.

## V. Continuing Education

- a. Request for future topics

Committee members were encouraged to contact the IACUC office with any useful topics for future continuing education.

## VI. Full Committee Review of Animal Use Protocols

### 20147 [REDACTED] Mechanisms of Behavioral Evolution

**Committee Discussion:** An amendment was submitted to include a citizen science project whereby private landowners will observe frogs attracted to brooding lures. That project also involves a non-AVMA approved method of euthanasia (kill by freezing), as recommended by the Hawaiian department of natural resources.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

### 22072 [REDACTED] Surveys and investigations for sportfish management in lakes and rivers in Illinois

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress: feeding of live fathead minnows to piscivorous fish.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

### 22032 [REDACTED] Pathogenesis of exacerbated pneumonia in PRRSV-bacterial co-infections

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress. Endpoints and monitoring are appropriate, and the lab is experienced.

**Action:** A motion was made to send the protocol to DMR once a captive bolt has arrived and is ready for use, or once the PI has obtained a controlled drug license. The motion was seconded and approved unanimously with one committee member abstaining.

### 22075 [REDACTED] Increasing the breath of protection afforded by Influenza A virus vaccine for swine by targeting the matrix 2 protein

**Committee Discussion:** The PI justifies the use of unrelieved pain/distress. Endpoints and monitoring are appropriate, and the lab is experienced.

**Action:** A motion was made to send the protocol to DMR once a captive bolt has arrived and is ready for use, or once the PI has obtained a controlled drug license. The motion was seconded and approved unanimously with one committee member abstaining.

## VII. Protocol Deviations

- a. 19073 [REDACTED] surgery

The PI reported a protocol deviation involving documentation and provision of post-surgical analgesia. The committee would like the PI to affirm their responsibility to report any protocol

deviations or adverse events related to his protocol, and to submit amendments to the protocol when revisions to protocol procedures would like to be made.

b. 20113 [REDACTED] deviation follow-up

The committee discussed the response to the deviation from the protocol, and requested that the PI affirm their understanding that research staff listed on approved protocols are required to provide the appropriate care and monitoring of the animals, and it is the PI's responsibility to report any protocol deviations or adverse events related to her protocol. The committee would also like the PI to create a plan to reduce the potential for a future occurrence.

c. 20179 [REDACTED] horse surgery

A protocol deviation was reported involving an unapproved surgery on a horse assigned to the general teaching protocol. The committee voted to place the investigator on probation for 6 months, require retraining, and ask for clarification regarding the plan to reduce the potential of a future occurrence.

d. 20119 [REDACTED] cage feeding

The PI reported a protocol deviation involving one of the breeding cages left with no food. The committee would like the PI to create a plan involving documentation to reduce the potential of a future occurrence.

e. 21013 [REDACTED] dragon care

The PI reported a protocol deviation involving a missed shift of bearded dragon care. A plan has been put into place to reduce the potential of a future occurrence.

f. 22023 [REDACTED] mistaken dosage

The PI reported a protocol deviation involving an incorrect dosage of LPS resulting in the death of a mouse. A plan has been put into place to reduce the potential of a future occurrence.

**VIII. Report of Unexpected Event or Animal Loss**

a. 21086 [REDACTED] mice mortality

The lab reported an unexpected event involving the death and euthanasia of several mice. A plan is in place to reduce the potential of a future occurrence.

**IX. AACUP/DAR/OHS Report**

AACUP had nothing to report.

DAR had nothing to report.

OHS had nothing to report.

**X. Other – Items from the Floor**

none

The meeting was adjourned at 2:29 p.m.

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEETING**  
**Tuesday, June 7, 2022**  
**12:00pm**

Present: S. Allison, L. Arseneau, H. Chen, B. Conrady, R. Dilger, L. Goodly, C. Hayes, J. Hoover, C. Ko, J. Novakofski, M. Ridgway, M. Vitoux, J. Whitson, J. Xu, and J. Gulley presiding.  
Absent: D. French, S. Gutierrez, N. Herndon, D. Llano, E. Nelson, and C. Suski.  
Guests: K. Branson, R. Chafel, B. Hayek, S. Myers, S. Pearson, and J. Van Cleeff.  
A legal quorum was met.  
Minutes authored by Ben Hayek.

**I. Announcements**

a. AAALAC visit – July 11

AAALAC's site visit dates (July 11-15) were confirmed.

b. In-person IACUC meetings – August 9

In-person IACUC meetings will recommence in August.

**II. Approval of Minutes**

A motion was made to approve the minutes from the May 2022 meeting. The motion was seconded and approved unanimously.

**III. New Business**

a. USDA Official Warning

The committee reviewed and discussed the Official Warning sent by the USDA on May 12.

**IV. Old Business**

a. [REDACTED] updates

The Chair confirmed that both PI's have completed the requests from the May IACUC meeting.

**V. Continuing Education**

a. AAALAC site visit expectations

An IACUC Specialist provided an overview of what to expect during an AAALAC site visit, as well as helpful strategies for a successful reaccreditation process.

**VI. Full Committee Review of Animal Use Protocols**

**19112** [REDACTED] Role of MOV10 in brain

**Committee Discussion:** The PI justifies the use of food restriction, which falls within the parameters of the IACUC policy.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

**22078** [REDACTED] Contribution of induced hindgut acidosis to gut permeability, ruminal acidosis, and liver abscess formation in sheep

**Committee Discussion:** The PI justifies the use of multiple major survival surgeries, as well as the use of metabolism crates.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously. The metabolism crates will be inspected prior to use.

**22083** [REDACTED] Upper-respiratory infection and disease exacerbation in animal models of MS, an extension

**Committee Discussion:** This is a renewal of a previously approved protocol. The PI justifies the use of unrelieved pain, as well as 30% weight loss criterium. Monitoring and endpoints are appropriate. The lab is experienced with the proposed models and procedures.

**Action:** A motion was made to approve the protocol as written. The motion was seconded and approved unanimously.

## **VII. Protocol Deviations**

- a. [REDACTED] cage cards

The PI reported a protocol deviation involving cages cards with an expired protocol. The animals were not used for any experiments, and a plan is in place to reduce the potential for a future occurrence.

- b. 21225 [REDACTED] forgot to transfer

The PI reported a protocol deviation involving animals not being transferred from the breeding protocol to an experimental protocol. A plan is in place to reduce the potential for a future occurrence.

## **VIII. Report of Unexpected Event or Animal Loss**

- a. 21122 [REDACTED] pig

An AACUP veterinarian reported the unexpected death of a pig due to some type of cardiovascular dysfunction during post-anesthetic recovery. No problems occurred with any of the other animals on the study, and it is unlikely that the surgical team could have done anything differently to prevent or intervene in this instance.

## **IX. AACUP/DAR/OHS Report**

AACUP had nothing to report.

DAR reported its preparations for the AAALAC site visit, the return of one of the veterinarians that has been away, and the job listing for a post-doctoral position in lab animal medicine.

OHS had nothing to report.

## **X. Other – Items from the Floor**

It was announced that the subcommittee report regarding the Vet Med teaching/research animals would be discussed at the July IACUC meeting.

The meeting was adjourned at 12:51 p.m.