

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Minutes**  
**June 28, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Michael Stafford, Brian Greene, Johnna Pedersen, Gary Webb, Harold Bengsch, Jianjie Wang, Wayne Mitchell

Absent –Lacy Sukovaty

Guests – Shayla Lupfer, Angela Goerndt, Chris Lupfer, Sara Woodman, Janene Proctor

**III. Minutes**

May 3, 2019 minutes reviewed.

Stafford: Move to approve

Greene: Second

**IV. Protocols**

**19-019 Lupfer, Anti-inflammatory function of sodium pyruvate during influenza A virus infection:**

New protocol. Lupfer: Describes protocol details. Stafford: How did you pick the dose? Lupfer: From previously published work. The doses had a large range. You could have them live off the stuff (sodium pyruvate). Stafford: Are there any other mechanisms by which you could increase sodium pyruvate production? Lupfer: Describes other mechanisms. Stafford: I have no concerns. Mitchell: I have a question about the design. When you say three replicates do you mean three groups? Lupfer: We will do this three separate times. Mitchell: Got it.

Stafford: Move to approve

Mitchell, Greene: Second

**19-018 Durham, Investigating the mechanisms of nVNS and sumatriptan:**

New protocol. Woodman: Describes protocol details. Stafford: No issues. Wang: Asks if vagus nerve stimulation has been used before. Woodman: Yes, and it works. We are now comparing that with how sumatriptan works. Wang: How are you stimulating the nerve, from the neck? Woodman: Yes.

Stafford: Move to approve

Pedersen: Second

#### **18-006 Wang, LPS-induced inflammation:**

Amendment: Wang: Describes protocol details. Pedersen: Is five hours of fasting enough? Stafford: Yes. Pedersen: In looking at other glucose studies they recommend twelve hours. Stafford: For these mice the five hours seems to be enough. Wang: Vanderbilt has used five hours and it was fine. Greene: It seems straight forward. You will need more mice. Wang: Yes. We will also need another year of time. Stafford: Did you figure what you will need for mice so we will know how to breed? Wang: Yes. We used the same strategy as before to plan. S. Lupfer: The protocol says every other week but we have been breeding them every week. Stafford: We may want to adjust that so as to not create too many animals for you to keep up. Bengsch: In one place it was 240 and in another it was 192. Wang:  $192 + 48$  is the 240. Stafford: I'm good with this amendment and the breeding amendment (to follow). We will modify our breeding strategy as we go along to make sure too many animals aren't produced. Wang: In the summer students are working 100% effort but that will change when the fall semester begins. Goerndt: But if we breed every week starting now, you aren't going to get the offspring until the semester starts so too many mice for the students. Wang: I will contact Dr. Ulbricht and discuss. Shayla and I discuss every other week what we need to do. Pedersen: Asks about the mouse number starting at 718 and going up to 1995. Stafford: That counts all mice.

Stafford: Move to approve

Bengsch: Second

#### **19-004 Wang, Change of animal numbers (breeding protocol):**

Amendment: Discussed and approved in tandem with the above protocol 18-006.

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#### **IV. Miscellaneous:**

- David Claborn waiver request. Greene: It looks clear that he is just collecting mosquitos. Stafford: How is he collecting the mosquitos? Pedersen: I went to his insectarium and he did not have ticks at the time. This may be what he's going to do because no one is doing that. He is collecting mosquitos. He doesn't let them out of the traps until they're dead. Students identify each mosquito and where they were trapped. Stafford: They aren't searching for diseases within them? Pedersen: No but they are saying this type carries this type of virus and so forth. He said he wanted to start doing ticks. All of his people are doing blood pathogens. Greene: I'm confused about why we're looking at this unless he's getting the insects from a vertebrate. Stafford: If it's just in traps we don't need to see this. Pedersen: I will talk with him. I don't think he is using vertebrates. It seems this should be more of an IBC issue. Greene: Agreed.
- Greene: Mentions list of administrative activities. Is anything new? Proctor: Nothing to report other than the list on the agenda.
- LabTracks update: Goerndt: We are waiting on licensing from the server. The university may provide something for no charge. It's in IT land. They will let us know as soon as it's available.

- SOPs for alligators. Goerndt: Passes out SOPs.
- Semi-annual review and inspections: Off campus on July 23<sup>rd</sup>. Leave at 8 a.m. and return around 4 p.m. On campus on July 29<sup>th</sup>. Stafford: Bull Shoals Field Station must be done this time as Connie (USDA) says to inspect there at least once per year.
- Fall meeting dates: Greene: We can set up those dates at our next meeting on 8/13.

Adjourn

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Semi-Annual Meeting**  
**Minutes**  
**August 13, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Michael Stafford, Brian Greene, Johnna Pedersen, Lacy Sukovaty, Harold Bengsch, Wayne Mitchell

Absent –Jianjie Wang, Gary Webb

Guests –Angela Goerndt, Janene Proctor

**III. Minutes**

June 28, 2019 minutes reviewed. Correction regarding Lacy Sukovaty's 2<sup>nd</sup> approval.

Bensch: Move to approve

Sukovaty: Second

**IV. Semi-Annual Manual Review**

No changes.

**V. OLAW Assurance Draft Report Review**

Stafford: Put lab specific training in the record keeping section. Waiver approval needs to go in the procedures section. Page 5. Greene: Has suggested wording for report. Discusses oversight for waiver requests. Stafford: Should the statement include who makes the decision? It needs to match the manual. Also, VVC should go on page 7 and match the manual. Greene: Explains the VVC administrative burden federal change where the veterinarian can approve without full committee review. Greene: In going through the last year of minutes, the lab specific training documentation is another thing we added to the manual that needs to be in the assurance. Stafford: Should that be in record keeping or lab procedures? Sukovaty: Does it need to be kept for three years? Stafford: No. What we do needs to match the assurance. Greene: Is there a federal mandate on the length of time? Mitchell: It could be the same as research protocols...two years? Stafford: It's more about the length of training. Pedersen: They do their training every two years. Stafford: I think we put it in record keeping. Sukovaty: Would it be for the duration of the student involvement? Bengsch: Would it tie back to page 7, changes in personnel. Stafford: Yes. Talks about training procedure appearance within manual. Put it under lab procedures and not worry about how long to keep it. Greene: The federal requirement is only to document. Stafford: Put it in lab procedures. Greene: Is everyone okay with that? Group: Yes.

Greene: Talks about cross over and shared membership of Occupational Health and Safety. We could document that within the assurance. Pedersen: Talks about how the forms have changed from two to one and clearing students to work on protocols. Greene: Section B should be modified. Pedersen: Yes. Pedersen: Talks about medical history questionnaire changes in form and procedure. Did we mention that they could opt out of vaccines? We haven't been letting students do that for specific areas. Stafford: I don't think that needs to be in the assurance. If it matches the manual, opting out is not included. Greene: Anyone have anything else?

Bengsch: Should JVIC be listed as a facility? Pedersen: Yes. We aren't considered main campus.

Leads vote. All in favor: Group: Aye. Those opposed: none.

## **VI. Semi-Annual Inspection Report Review**

Stafford: There's a concern about the cleanliness at Darr and the record keeping stopped at March. Sukovaty: Were they done and not printed off or maybe no medical events? Stafford: There have been medical events. Same with Journagan. Medications cannot be stored with pesticides. That is abnormal. Regarding the inspection of Bull Shoals Field Station (BSFS), the USDA inspector was here. The inspector had comments about coffee pots in the lab. Pedersen: CO2 tanks need to have flow meters. Stafford: Those should be provided. Goerndt: Regarding that in the Professional Building, is it for the third floor. There can't be one on the tank used for the flies. Stafford: That's a pressure meter. Pedersen: That would help her, and she'll have to experiment with it. Stafford and Goerndt: Would prefer we have two separate tanks. Goerndt: Could we manage a tank in the prep room? Stafford: Yes. Goerndt: It would need to be strapped.

Greene: The question with BSFS is everything that needs to be viewed should be in the lab space? Stafford: She (USDA inspector) wasn't sure where the stuffing is taking place. Pedersen: Signs can go in the classroom so if there's a question they are there. Greene: Protocols should be posted. I want to make sure the mammologist knows what to do. Pedersen: Document.

Sukovaty: Asks for clarification on feed tags and storage, and which feed, bulk or bag. Also for clarification on OTC penicillin labeling. Stafford: Bulk feed. All medicine should be labeled. Also clarifies where mouse traps should be placed. Pedersen: Traps should be where the holes are where they enter. Pest control people told him different.

Goerndt: Mentions drug control at JVIC. Stafford: They were talked to. Pedersen: That's not for you to worry about the labeling. It's for the lab people. Stafford: There is a new person inspecting that does look for that specifically.

Greene: Mentions the ADA noncompliant sink. Stafford: Originally it was ADA compliant. Pedersen: It is the eyewash that is noncompliant now. Goerndt: The eyewash needs to be moved to the other side of the sink. I have the ADA report if you want to see it. Greene: My concern is that the IACUC is not responsible for ADA as it's not animal related. Stafford: It indirectly is if someone handling animals can't wash their hands. Primarily PIs should understand they can't make changes to rooms.

Greene: Leads vote: Approve: Aye. Those opposed: None

#### IV. Miscellaneous:

- USDA Inspection: Stafford: Tomasi protocols (bats) should be suspended. He has not turned in A1s. The inspector was concerned at the death rate. She is giving the university a teachable moment. Pedersen: Did they monitoring their eating? Were they weighing them? Stafford: No. Just observation. We (Tomasi and Stafford) have a mitigation plan before he gets more animals. Doc: Move to approve. Second: Pedersen and Mitchell. (This includes protocols 2019-2, 18-017, 2019-8)
- Claiborn Waiver: Bengsch: Has this been shifted to IBC (Biosafety Committee)? Pedersen: Yes. The graduate college has a new thesis procedure including IBC approval. The IBC wasn't informed of exactly what that means. Masterson was conferred with and clarified the graduate college just wants compliance. We are following NIH procedure and working it out.
- Brooks Study 19-020 (dog): Greene: There was no concern regarding whether the study was okay with IACUC but rather MSU concerns legally and publicly. It will be discussed further for how it will be handled in the future. Mitchell: Has the protocol been submitted? Stafford: Yes. I am working with him to fine tune. Mitchell: I want to be involved with this for the timing. Stafford: We are working on that. Greene: The timing of the dogs being anesthetized came up in MSU discussions. Sukovaty: Not longer than a regular spay. Pedersen: We're talking a 10-minute surgery vs. 25 minutes. Stafford: We're also restricting it to all dogs coming from a shelter.
- Fall Schedule: Discussion of setting dates for fall meetings. Proctor will send out date possibilities.
- LabTracks: Goerndt and Proctor give implementation update.

Adjourn: Pedersen: Motion Sukovaty: Second

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Semi-Annual Meeting**  
**Minutes**  
**September 13, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Michael Stafford, Brian Greene, Johnna Pedersen, Lacy Sukovaty, Harold Bengsch, Wayne Mitchell, Jianjie Wang

Absent –Gary Webb, Chris Craig

Guests –Angela Goerndt, J. Brooks, Sara Woodman, Janene Proctor

**III. Minutes**

August minutes were not attached with the meeting documents and will be reviewed for the October 4, 2019 meeting.

**IV. Protocols**

**Brooks: 19-020 (dog)** Brook’s representative for Dr. Brooks, Jake Brooks, explains protocol. Doc: The protocol has been pre-reviewed and approved. Regarding the consent form, we had discussed getting all dogs from one owner, C.A.R.E. (a local rescue facility). That will make the consent form easier. Mitchell: We discussed the data analysis and ran some numbers. I suggest we run them again after 5 to 6 dogs. J. Brooks: Agreed. Stafford: Be sure to get copies of dog records and we will maintain them as part of this record. J. Brooks: Agreed.

Move to approve: Mitchell

Second: Stafford

**Durham: 19-022 (rat)** Woodman explains protocol. Stafford: Does the company have animal safety data? Woodman will contact the company and give the data to Stafford. Greene: What kinds of side effects are there? Woodman: Mainly cardiovascular. Stafford: Fibrous tumors with long term use. Bengsch: How long after administration did the cardiovascular issues start? Woodman: Fairly long-term usage. Mitchell: Do you expect gender differences. Woodman: Yes, there are different mechanisms at play and females are more susceptible to migraine. Mitchell: The way it’s written you’re not comparing genders. Wang: How do you measure efficiency or effects of treatment. Woodman: We’re looking for withdrawal response studying the frontal region. High pain scores or high withdrawal scores are compared before and after, you can see pain reduction. Wang: This is already established criteria then? Woodman: Yes. Stafford: Don’t start without the animal safety information. Woodman acknowledges. Pedersen: Do you know what the company has done differently to it? Woodman: They sent a powerpoint with the changes but off the top of my head no. We do have it. Stafford: They dictate the dose right? Woodman: Yes.

Move to approve: Pedersen  
Second: Sukovaty

Sukovaty: 19-021 (horse) Sukovaty explains protocol. Stafford: The technical summary and title need to be understandable by non-scientists. Add how the microbes survive. Are we looking at hay or the total diet? Sukovaty: The samples are just to get the inoculant. We aren't putting grain products in the incubator. Stafford: So how does the total diet (of hay and grain) affect the total values from the incubator? Sukovaty: It can influence the microbial population but most starch digestion happens in the small intestine. I understand but in lots of studies they've been on concentrates and inoculants were used. Stafford: You don't expect the grain to affect the digestibility of the hay? Sukovaty: Not significantly. Stafford: Does the grain change the microbial population in the hind gut? Sukovaty: The studies I've seen look at high levels of concentrates. We're talking 2 about pounds of grain, not 10. Stafford: I can't tell from reading this exactly what you're doing. Validate the digester with time or what the horse digestibility is in these horses. Sukovaty: It's using an invitro method to see how the hay is digested in the gut. No one has looked at how you handle the fecal sample to get the inoculant. Does the analysis look different if the test is immediate rather than if you freeze it before you get the inoculant. Pedersen: I didn't understand that either. Stafford: You can simplify this. What affect does time have on the results? Suggests changes for simplification. Greene: The IACUC concerns are with the horses. Pedersen and Stafford: Clarify that the horses aren't involved in experiment 2. Stafford: Add citations and unmark special diet. Stafford: Discusses other simplifications. Mitchell: Check wording and typos. Stafford: How many total samples, age of horses, health status of horses? Sukovaty: Health status is similar, 10-year age difference. There aren't young horses in the Darr herd. One is 6, one is 16, the other is in between. Stafford: Is that enough animals and samples. Sukovaty: Our significance will come from the repetitions. Pedersen: You're pooling the pulled fecal matter so there isn't a difference in samples regarding age. Sukovaty: The original intent is to separate. Bengsch: What do you do to process them for the digester? Sukovaty: There are buffer solutions. Taking them rectally is for zero hour. Bengsch: You'll hold them anaerobically? Sukovaty: Yes and no. Looking at the environment on stored samples. Stafford: How did you establish the times. Sukovaty: Times were taken from prior research. Wang: What is the importance of microbial survival? Sukovaty: They use inoculants in the digesters to determine how well horses digest food. Are you killing anaerobic microbes by doing this? The Daisy digester is for ruminant studies but there aren't protocols for non-ruminant.

Move to approve with changes: Stafford  
Second: Bengsch

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#### IV. Miscellaneous:

- LabTracks Update: We are waiting for server space.
- A1 (Protocol Annual Report) Compliance Discussion: Determination: Send notification to delinquent faculty stating that they have until the next IACUC meeting on October 4 to get the A1s up to date or their protocols will be suspended. No new protocols or amendments will be approved until A1s are up to date. This is per MSU policy that A1s are collected on all protocols regardless of animal type.



- Receipt of protocols: Protocols are coming in later and later. Policy states the IACUC should have 2 weeks to review and that's not happening. Faculty will be reminded of the deadline policy and Proctor will send the protocols to Stafford and Greene as they come in.

Motion to adjourn: Pedersen

Second: Committee

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Minutes**  
**October 4, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Brian Greene, Gary Webb, Johnna Pedersen, Lacy Sukovaty, Harold Bengsch, Jianjie Wang

Absent – Chris Craig, Michael Stafford, Wayne Mitchell

Guests – Rachel McGinnis, Angela Goerndt, Janene Proctor

**III. Minutes**

Members reviewed minutes from August 13, 2019 and September 13, 2019. Sukovaty moved to approve. Pedersen second.

**IV. Miscellaneous:**

- New policy introduced regarding dogs, cats and non-human primates in research. Committee discusses what the definition of “invasive” is in the context of the new policy. Greene states that the purpose is not to avoid procedures but rather certain species. McGinnis will clarify the policy to avoid creating problems with procedures.
- A1s discussed. McGinnis is going to suspend the out of compliance protocols.
- A1s to be reviewed per MSU policy. Goerndt is appointed to review. A deadline was set to have them reviewed before the next IACUC meeting on November 15, 2019.
- Greene introduced 2 amendments (18-010 and 18-030) to explore if full committee might be required. Both amendments will be sent to the full committee via email to determine the need for full committee review. Webb volunteered to DMR if needed.

Motion to adjourn: Pedersen

Second: Greene

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Minutes**  
**November 15, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Brian Greene, Gary Webb, Johnna Pedersen, Harold Bengsch, Jianjie Wang, Michael Stafford, Wayne Mitchell

Absent – Chris Craig, Lacy Sukovaty

Guests – Rachel McGinnis, Angela Goerndt, Janene Proctor

**III. Minutes**

Members reviewed minutes from October 2019. Clarify that Angela Goerndt was appointed to only non-USDA A1s. Move: Bengsch. Greene second.

**IV. Protocol**

**19-023** Durham (Rat): Investigation of Potential Protective Effect of Chicken Broth Against Post-Operative Pain and Constipation

Cornelison explains protocol. Stafford suggests adding morphine to the protocol to avoid having to amend later. Mitchell asked questions regarding stats and suggested changing to a mixed factor design.

Stafford: Move to approve with changes

Bensch: Second

**V. Miscellaneous**

- Zimmerman's protocol (2019-1) was discussed. It was accidentally terminated via A1. Discussed how he should reinstate. His A1 needs a lot of other edits aside from that. A new, corrected A1 will be required from Zimmerman to reinstate.
- Discussed most A1s being filled out incorrectly and/or incompletely. Stafford and Goerndt will correct what they can. Goerndt will follow up for corrections. If corrections/completions are done within a certain time frame, a notification will come directly from ORA.
- Lupfer waiver was discussed. Greene: should we require evidence of IACUC approval from another agency? Stafford explains that this could be included with an approved protocol. Keeping these fibroblasts separate from protocol fibroblasts. Approve but include fibroblasts in a new protocol and keep good and separate records.
- Discussed Tomasi's upcoming bat protocol set to appear in the next meeting.
- Discussed Tsai's progress with his alligators. He changed his feeding SOP. Growth occurred faster than anticipated. Water temperature is being decreased.

- Discussed definition of “invasive”. Stafford presents NIH’s proposed definition. The current NIH definition was used. Add “domestic” to the definition. McGinnis will move that suggestion forward to enter that into the current policy. McGinnis stated that exceptions may come up and administration is open to that as needed.

Motion to adjourn: Pedersen

Second: Greene

**Missouri State University**  
**Institutional Animal Care & Use Committee (IACUC)**  
**Minutes**  
**December 6, 2019**  
**156 Temple Hall**

**I. Call to Order**

**II. Roll**

Present – Jianjie Wang, Lacy Sukovaty, Chris Craig, Johnna Pedersen, Michael Stafford, Harold Bengsch, Wayne Mitchell, Brian Greene

Absent – Gary Webb

Guests – Rachel McGinnis, Angela Goerndt, Tom Tomasi, Chris Lupfer

**III. Minutes**

Members reviewed minutes from November 2019.

Move to approve: Stafford

Second: Pedersen

**IV. Protocol**

**19-024** Tomasi (Bat): “Bat immune function and WNS: cell and bat responses to Pd”

Tomasi gives summary of the study. Greene asked about the high rate of mortality from last year. Tomasi reminded that those were collected in the summer and not hibernating. Stafford mentioned the reference for a previous study that he and Tomasi had discussed while working on this protocol. Stafford discussed bat numbers and that the number can be modified as needed. Stafford, Tomasi and Lupfer discuss the recently submitted waiver request, working with government entities vs. private companies for sample collection. Mitchell asks for clarification on sample sizes. Sukovaty mentions using non-scientific language. Pedersen mentions testing for non-volatile chemicals. Lupfer explains reasons and procedures. Greene confirms that the biosafety level is okay. Lupfer suggests he can do a biosafety protocol. Stafford confirms that forwarding to the biosafety committee isn’t necessary at this time. Pedersen mentions using leather gloves for PPE. Mitchell asks about number of comparison groups. Clarify the numbers. Mitchell and Tomasi will discuss.

Stafford: Move to approve with changes. Stafford and Mitchell to DMR.

Greene: Second

**V. Miscellaneous**

- Clayton waiver: Needs a protocol because the behavior of the animal is being manipulated.
- OLAW assurance: Update requested by OLAW. McGinnis explains changes. Stafford explains his changes.

- LabTracks: Goerndt and Stafford are having weekly meetings with LabTracks. It's moving forward.
- Semi-annual inspection dates set. On campus 1/27/2020. Off campus 1/28/2020. Semi-annual meeting 2/14/2020. Regular meeting scheduled for 1/24/2020.

Adjourn: Greene