

**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD**

**MINUTES OF MEETING
09 October 1998
Stockdale Room/Runner Cafe**

Members Present

Veterinarian: Mylon Filkins, DVM
Safety/Hazardous Materials: Barbara Brenner
Scientific Concerns: David Hinds, Ted Murphy, Steve Suter
Non-Scientific Concerns: B. J. Moore
Community Issues: Debby Kroeger, Martin Murdock

Members Absent

Bruce Jones (Non-Scientific Concerns)

Visitors

Carol Raupp, Associate Professor of Psychology (arrived at 8:10)
Ray LaFever, Assistant Professor of Chemistry, for Protocol 98-08
Todd McBride, Assistant Professor of Biology, for Protocol 98-07

1. Meeting was called to order by Chairperson Steve Suter at 8:00 AM.
2. Ted Murphy moved, and Mylon Filkins seconded, a motion for the approval of the minutes for the IACUC meeting of 05 June 1998. The motion was passed unanimously, with 8 "yes," 0 "no," and 0 "abstentions."
3. Chairperson Steve Suter requested that the Committee begin reviewing the Standard Operating Procedures (SOPs) that were developed in response to a request from the IACUC at the meeting of 05 June 1998. Attention was directed to the CSUB Animal Facility SOP, developed by Jess F. Deegan, Animal Facility Director; Mylon Filkins' review comments were distributed. In addition to Dr. Filkins' comments, the Committee recommended the following changes:
 - Page 3, under "Food and Water": The "standard rule" should be that animals will have food and water. Animals participating in research may be deprived of food and water in accord with the research protocol. Therefore, paragraphs 1 and 2 should address the "standard rule," and paragraph should address the "exception."
 - Starting page 3 and continuing throughout the document: PI should be spelled out, i.e., principal investigator.
 - Page 5, under "Animal Inventory and Health":

- Paragraph 5: change wording so that it reads grammatically correct, i.e., the Animal Disposition form is to be completed by the principal investigator.
- Add Paragraph 6: The body(ies) of all animals found dead of unknown causes must be preserved for necropsy by the staff veterinarian.
- Closing paragraph of the section: Clarify "appropriate person or office" by explicitly listing (1) Animal Facility Director and (2) Chair of the IACUC.
- Page 7, under "Animal Receiving": change "Animal Directory" to "Animal Facility Director."

B. J. Moore moved, and Debbie Kroeger seconded, a motion to accept the Animal Facility SOP with Dr. Filkins' suggested changes and the changes listed above. The motion was passed unanimously, with 8 "yes," 0 "no," and 0 "abstentions."

4. **Protocol 98-08, *Evaluation of laboratory waste and identification of bioactive metabolites using an acute toxicity bioassay (ATB)***, with Roy LaFever, Assistant Professor of Chemistry. Dr. LaFever presented a brief overview of his research protocol: Enzyme buffers are used in the chemical analysis of plant natural products. It is not known whether the enzyme buffers being used for this protocol are "toxic substances." CSUB has an opportunity to make a "first pass" in testing the enzyme buffers using a standard protocol for acute toxicity bioassay (ATB), which involves the use of fathead minnows. Dr. LaFever indicated that this protocol, if approved, would save CSUB considerable money by doing this "first stage" analysis locally and, in addition, would provide an educational experience for our students. The money situation was verified by Barbara Brenner. Carol Raupp was recognized by Chairperson Steve Suter, and she asked about alternatives to the use of live minnows, specifically *in vitro* testing. Dr. LaFever responded that the only acceptable testing was at the organismic level. A question was raised about "diluting" the materials with water and disposing of them "down the drain." Dr. LaFever reported that he did not believe that was "legal," which was affirmed by Barbara Brenner, who stated "Dilution to pollution is not the solution." Other questions involved the definition of hazardous waste and the bioactivity of isolated compounds. Finally, questions were raised regarding the care and "housing" of the live minnows. Dr. LaFever indicated that Dr. Alvin Tanabe, Director for the Science Stockroom, was caring for the minnows in large aquarium kept in the Stockroom. The IACUC requested Edwin Sasaki to coordinate with Dr. Tanabe in developing a formal SOP for the care and maintenance of live minnows. Dr. LaFever and guests were excused for the IACUC executive session.

Martin Murdock moved, and Mylon Filkins seconded, a motion for approval of Protocol 98-08. The motion was passed unanimously, with 8 "yes," 0 "no," and 0 "abstentions."

5. Protocol 98-07, *The role of stretch activated ion channels in the long term adaptation of striated muscle to active muscle lengthening*, with Todd McBride, Assistant Professor of Biology. Dr. McBride provided a brief overview of his research protocol: The research being proposed is for a grant proposal. It involves the stretching of (backside) striated muscle of Sprague Dawley rats; this stretching of the muscle signals the opening of ion channels, which ultimately leads to growth of muscle tissue. The question being addressed in this protocol is whether these ionic signals change over time. [David Hinds left at 9:20 to teach his class.] Questions from the IACUC involved:

- Range of motion during stretching. The response was that the range of motion was "normal" and that there would be no hyperextension.
- Fatigue during stretching. The response was that each animal subject would have four sets of six repetitions and that previous testing has indicated that none of the animals showed any signs of muscle fatigue. such as limping or changes in motility, with this exercise protocol.
- Alteration of muscle physiology resulting from the anesthesia. The response was that some anesthetics do cause a change in muscle action, but the one being proposed for use will not.
- Stimulus level being used during this protocol. The response was that the stimulus level would be the same as that used in a previously approved protocol.
- Maintaining body temperature during the procedure. The response was that a warming pad would be used to maintain normal body temperature. It was pointed out that rats are poor regulators of body temperature even when awake, but they are worse under anesthesia. The results of the research would be compromised if the body temperature was not kept within normal ranges.
- Post-surgical care. The response was that the surgical procedure was "terminal." It is the primary means of performing the required analysis, which involves the following basic steps:
 - Implanting an electrode
 - Performing a histological evaluation
 - Removing the targeted muscle for biochemical analysis
 - Freezing the muscle
 - Euthenizing the animal

- Potential applications. The response was that the action of the ion channels in skeletal muscles may serve as a model for cardiac muscles, since they are both striated muscles and have similar ionic channels.

B. J. Moore stated that the recent media releases discussing the use of creatin products in sports helped her understand the importance of the previous protocol by Dr. McBride that was discussed and approved by the IACUC. She indicated that it was "reassuring to hear about the results [potential applications] of this research."

The IACUC excused Dr. McBride and visitors to go into Executive session. Mylon Filkins moved, and Ted Murphy seconded a motion for approval of Protocol 98-07. The motion was passed unanimously, with 7 "yes," 0 "no," and 0 "abstentions."

6. It was suggested that principal investigators submit a short summary (no more than 1 page) when they complete the research protocol approved by the IACUC. This summary would provide feedback and "affirmation" to the members of what the IACUC does. Chairperson Steve Suter stated that was a good idea and asked Edwin Sasaki to follow through with this suggestion.

7. Chairperson Steve Suter suggested that the IACUC return to the SOPs in the remaining time to discuss any "burning issues" regarding them.

a. Protocol Review Form:

- "Humane" (not Human) care
- Table II (pain perceived) should be given also to principal investigators so that they may address the issue of pain using the same scale as used by IACUC members in assessing the protocol.
- Page 2: "yes" "no" line should have space for comments.
- Redo the "costs-benefits" section.

[Ted Murphy leaves at 10:00 to teach class.]

b. Protocol submissions should have pages numbered.

c. Amend CSUB Policy and Procedures and add a section on the protocol submission document to include a statement of assurance: "Animal procurement and transportation must be with reputable licensed agencies."

d. Animal Care/Use Health and Safety

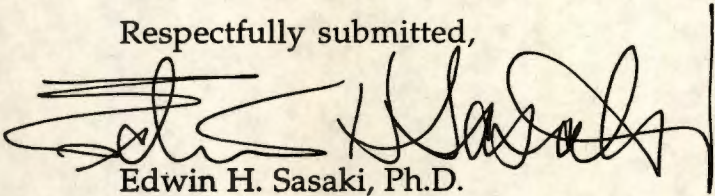
e. Emergency Preparedness

Mylon Filkins moved, and B. J. Moore seconded, a motion that the IACUC accept recommendation for the above changes to the SOPs by consensus and that the

IACUC formally vote on each SOP its next meeting. The motion was passed unanimously, with 6 "yes," 0 "no," and 0 "abstentions." Edwin Sasaki recommended that the IACUC hold a special administrative meeting on Friday, 11 December, to consider only the SOPs. There was consensus support for this recommendation.

8. The meeting was adjourned by Chairperson Steve Suter at 10:40.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edwin H. Sasaki', written over a horizontal line.

Edwin H. Sasaki, Ph.D.
Research Ethics Assurance Coordinator
and IACUC Secretary