

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
**CALIFORNIA STATE UNIVERSITY, BAKERSFIELD**  
9001 Stockdale Highway, Bakersfield, CA 93311-1099

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*MINUTES OF MEETING*

*Friday, 09 June 2006*

*Education 123*

**Members Present:**

**Scientific Concerns:** David Germano, Todd McBride, Steve Suter

**Non-Scientific Concerns:** Andrew Troup, Liora Gubkin

**Community Issues:** Debbie Kroeger, Chuck Simonson

**Safety and Risk Management:** David Beadle

**Veterinarian:** Mylon Filkins

**Members Absent:**

Edwin Sasaki [ex-officio]

**Visitors:**

Carol Raupp, Psychology, for renewal of Protocol 05-01

Isabel Sumaya, Psychology, for renewal of Protocols 02-02, 03-02, 04-01, 04-02

Meeting was called to order by Chair Steve Suter at 12:57 PM.

**ANNOUNCEMENTS:**

- a. Retirement of **Edwin H. Sasaki**, author of CSUB IACUC Policies and Procedures, 1<sup>st</sup> Secretary of the IACUC, Interim Dean of Graduate Studies & Research, 1<sup>st</sup> Research Ethics Review Coordinator, present Ex-Officio member of the IACUC, was announced. He was praised for developing effective policies and procedures and for his sensitive leadership of the IACUC. [He was later presented a mug containing these words; "Dr. Edwin H. Sasaki, Founder, CSUB IACUC"]
- b. New member **David S. Beadle**, CSUB Director of Safety & Risk Management, was welcomed.
- c. New member **Liora Gubkin**, Assistant Professor of Philosophy/Religious Studies was welcomed.

**PREVIOUS MINUTES:**

Kroeger moved and McBride seconded, a motion to approve the minutes for the IACUC meeting of 10 June 2005. The motion was approved 9-0.

**OLD BUSINESS:** [none]

**NEW BUSINESS: [Protocol Renewals]**

- a. **Protocol 98-07** (Todd McBride, Biology) "The Role of Stretch Activated Ion Channels in the Long -Term Adaptation of Striated Muscle to Active Muscle Lengthening"

The investigator summarized. This is a research protocol that led to two publications over the past year. A total of 12 rats were used in this protocol and 12 - 18 are anticipated for next year.

**b. Protocol 01-01 (Todd McBride, Biology) "Use of Bullfrogs for Nerve Recordings in Lab Courses"**

The investigator summarized. This is to support lab assignments; 12 bullfrogs were pithed and studied during the past year. It will be used next year. There will be about 12 to 24 frogs, at one frog per two students.

**c. Protocol 01-04 (Todd McBride, Biology) "Measurement of Rat Metabolism"**

The investigator summarized. This is to support lab assignments and was not used during the authorization period. It is not clear whether this protocol will be used during next year, but it may be used in the human physiology course. Rats could be transferred to Protocol 98-07 afterward.

**Q:** Protocol 98-07 is "generic?" **A:** Yes, it involves a basic measurement technique to study effects of exercise and drugs on muscle physiology.

**Q:** Do you know what you might be doing next year? **A:** Perhaps anabolic steroid effects -- a student is interested in that.

**Q:** Could you provide more information about what you do? **A:** The rat is anesthetized, an electrode is implanted, electrical stimulation is delivered to elicit exercise via muscle contractions. This is sometimes done in non-anesthetized humans. This is to observe how the muscle adapts to repeated exercise. The tissue is harvested under general anesthesia; finally the rat is euthanized while still under anesthesia.

**Q:** So, a new study is coming up? **A:** Yes, new work using the same data collection procedure. The big picture is "loading" a muscle and then observing effects on physiology and gene expression, which we have shown changes with muscle loading. Some of the applications are performance of skeletal muscles in microgravity and following immobilization. It's possible there could be protocol changes, in which case he would come back to the IACUC for authorization.

**Q:** Could you describe how the bullfrogs are used in teaching? **A:** They are double-pithed and then nerve activity is measured or sometimes cardiovascular activity is studied.

**Q:** About the anesthetic agents to be used -- ketamine is familiar, but what is "Rompum?"  
**A:** It's xylazine -- Rompum is the tradename.

**Q:** How are the anesthetic drugs stored? **A:** In a locked cabinet in a locked room. Only the investigator has the key.

When there were no further questions from the IACUC, the investigator was excused and questions and comments were solicited from the visitor, Dr. Raupp. She had the following questions for the investigator, which were posed by the IACUC Chair to the investigator when he had been called back to the meeting and Dr. Raupp had been excused.

**Q:** With respect to Protocol 98-07, have there been any mishaps? Will steroids require special provisions because of their drug classification? **A:** No mishaps. The most likely mishap would be an overdose of anesthesia, but this has not happened during the previous year. About steroids, this renewal does not request authorization to use steroids.

**Q:** With respect to Protocol 01-01, have there been any missed piths? Does the investigator do the pithing personally? **A:** There were no accidents. All piths are performed by the investigator personally.

McBride and Raupp were excused and the IACUC deliberated in executive session. There was a motion to renew Protocols 98-07, 01-01, and 01-04. Troup moved, Filkins seconded. Approved 8-0, with McBride abstaining. The action was explained to the investigator upon his return.

**d. Protocol 03-02 (Isabel Sumaya, Psychology) "Open Field Paradigm in the Light and Dark"**

The investigator summarized. All rats were re-cycled from other protocols during the previous year and this is expected to be true next year. This involves observing rat behaviors -- basically how active they are -- during light and dark phases of their circadian cycle. Students get an opportunity to observe circadian rhythms and become familiar with the Animal Facility.

**e. Protocol 02-02 (Isabel Sumaya, Psychology) "Psychology Course 301L: Principles Of Learning Laboratory"**

The investigator summarized. A new faculty person will be using this protocol later in the academic year. It is assumed that the same activities will be involved -- if not, modifications will be brought to the IACUC for authorization. Activities require caloric restriction, so the rats are hungry, then learning to lever-press, and experiencing several set schedules of reinforcement. Last year only 7, rather than 24 rats were used, which were transferred over from Protocol 04-02. Some of the rats presently in the Animal Facility for use in Protocol 04-02 will be transferred over to this protocol next year.

**f. Protocol 04-01 (Isabel Sumaya, Psychology) "Circadian Effects of Melatonin on Extrapramidal Side Effects in Rats Treated with Typical and Atypical Antipsychotics"**

The investigator summarized. Some antipsychotics result in inhibition of voluntary movements, know as "akinesia," which is also a symptom of Parkinson's Disease. This research uses an animal model to look at the role of melatonin in these drug effects. Melatonin was shown to reduce the akinetic effects, but this depended on circadian rhythms -- melatonin effects varied with light/dark phase. All of these rats will be from Protocol 04-02 and will start up soon.

**g. Protocol 04-02 (Isabel Sumaya, Psychology) "The Effects of Caloric Restriction in an Animal Model of Depression in Rats"**

The investigator summarized. One study has been completed. Some of the animals (N = 100) will be kept and transferred to Protocols 02-02, 03-02, 04-01 and others will be euthanized and sent to FACT to feed the raptors. The swim test used is an analog of learned helplessness, which is considered a behavioral manifestation of depression. This involves measuring how long it takes the animal to "give up" and stop swimming in a six-

minute test in a container that cannot be escaped. Last year Prozac was added to the protocol via an authorized modification. Diet X prozac interactions are of interest.

**Q:** On the teaching protocols, have there been any instances of inappropriate behaviors by the students with respect to the rats? **A:** No. They get training, including the appropriate online tutorials from Humane Care and Use of Animals. One student needed desensitization procedures because of her phobia. Occasionally a student is advised to drop and take a different course -- there are alternatives to satisfy this lab requirement in the major.

**Q:** Have there been any bites? **A:** None yet.

**Q:** There is a separate air system? **A:** Yes. [Beadle offers to take air flow measurements to make sure that enough air is circulating.]

**Q:** Protocol 04-02 will include mice? **A:** That would be submitted as a new protocol if mice were studied. The advantage with mice is that their behavior is less variable in the swim test.

**Q:** On Protocol 04-02 how long do the Parkinsonian effects last and how are the animals monitored? **A:** The effects run about 6 - 8 hours. They are monitored intermittently for the duration; the drug doesn't block respiration. There don't seem to be lingering effects afterwards.

**Q:** On Protocol 04-02, you already have these rats? **A:** Yes and they will be re-cycled over into the lab assignments for courses and into the research protocol.

**Q:** When you leave for the summer what will happen to the rats? **A:** There will be 50 kept and the rest will be euthanized. There are competent, funded research assistants to care for the rats that are kept.

**Q:** How will you choose the 50 rats to keep? **A:** It depends upon which protocol they have been in.

When there were no further questions from the IACUC, the investigator was excused and questions and comments were solicited from the visitor, Dr. Raupp. She had the following questions for the investigator, which were posed by the IACUC Chair to the investigator when she had been called back to the meeting and Dr. Raupp had been excused.

**Q:** With respect to Protocol 02-02, how are the animals brought down to 85% body weight and what is the maximum time that a rat goes without food? **A:** It's a gradual process over a two-week period. They are weighed each day and fed an amount determined by their body weight. They always get at least 10 grams of food every 24 hours. They go about 23 hours without food.

**Q:** On Protocol 04-02, were there any non-swimmers? What is the maximum time that the animal could be required to swim? **A:** All of the animals swim and the maximum swim time is six minutes, which is the standard duration of the swim test.

**Q:** On Protocol 04-01, is there psychological distress associated with having voluntary responses blocked? **A:** Don't really know, but they are not in any pain. [An IACUC member commented that the IACUC is not charged with eliminating all suffering in protocols.]

**Q:** You are studying an animal model of depression. Isn't that harmful to the rats? **A:** We don't see any visible persisting effects of the testing in the rats' behaviors.

**Q:** Also on Protocol 04-01 are their risks to the animals associated with their emergence from the drug effects? Are they monitored closely enough to prevent risks? **A:** The animals don't engage in self-injurious behaviors. The Parkinsonian effect wears off rather quickly in some rats and recovery of function is gradual. Altogether hundreds have been tested without losing an animal during this procedure. The monitoring is relatively vigilant.

Sumaya and Raupp were excused and the IACUC deliberated in executive session. There was a motion to renew Protocols 03-02, 02-02, 04-02, and 04-01. McBride moved, Simonson seconded. Approved 9-0. The action was explained to the investigator upon her return.

**h. Protocol 05-01 (Carol Raupp, Psychology) "Longitudinal Naturalistic Observation of a Trap-Neuter-Release [TNR] Feral Cat Colony"**

The investigator summarized. She continues to observe every night since the protocol was approved in April 2005, as she makes her rounds of the on-campus feeding stations she maintains for the feral cats. Among her observations are seasonal variations in fox and skunk sightings. She hopes to obtain some kind of mapping software to help organized presentation of her observations and proposes to begin doing non-flash photography.

**Q:** You mentioned a new male on campus -- will you try to trap and neuter this male cat? **A:** Yes, that will be a summer project. Right now the cat needs to get settled in enough to be trapped. A new kitten and a new male with a collar are also present.

**Q:** Do you coordinate with other people caring for cats on campus? **A:** Only very loosely. The people at Faculty Towers are only feeding one cat at present.

**Q:** You understand that this protocol only covers your behavioral observations and has nothing to do with sanctioning the trap/neuter/release activities themselves? **A:** Yes.

**C:** The investigator commented that she believes the major contribution of this research is in providing longitudinal data with respect to a trap-neuter-release feral colony.

The investigator was excused and the IACUC deliberated in executive session. There was a motion to renew the protocol, with one stipulation added. McBride moved, Troup seconded, approved 7-1-1. The stipulation was that:

Words be added to the renewal letter stating that the IACUC ". . . does not have jurisdiction or authority over, nor does it sanction in any way, the care, management, or existence of the feral cat colony on campus, including any trapping activities."

The action was explained to the investigator upon her return.

**AREAS OF CONCERN:** [none]

**NEXT MEETING:**

Friday, 06 October, 2006 – meeting room to be announced.

**ADJOURNMENT:**

There being no further business, the meeting was adjourned at 3:15 PM. (McBride moved, Granskog seconded, approved 7-0).

Respectfully Submitted,

***Steve Suter, Professor of Psychology, Secretary for the IACUC***