

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

MINUTES OF MEETING
Friday 02 October 2009
DDH A-108

Members Present:

Scientific Concerns: Todd McBride, Steve Suter, David Germano

Non-Scientific Concerns: Andrew Troup, Stephen Gamboa

Community Issues: Debby Kroeger

Safety and Risk Management: David Beadle

Veterinarian: Mylon Filkins

Members Absent:

Community Issues: Eugene Couture

Visitors:

Stephanie Shishido for Protocol 09-03

Meeting was called to order by Chair Steve Suter at 1:05 PM.

I. ANNOUNCEMENTS:

A. Robert Horton has resigned as Interim AVP for GRASP and has not been replaced.

II. PREVIOUS MINUTES:

Germano moved and Beadle seconded, a motion to approve the minutes for the IACUC meeting of 12 June 2009. The motion was approved 8-0.

III. OLD BUSINESS: none

IV. NEW BUSINESS:

A. Renewal of Authorized Protocols: none

B. Review of New Protocols:

1. **Protocol 09-03** (Stephanie Shishido, Student, & Todd McBride, Faculty Mentor -- Biology) "Allopurinol Inhibiting Xanthine Oxidase Prevents Skeletal Muscle Adaptation to Eccentric Exercise in Rats"

Following a round of introductions, Shishido summarized. She wants to look at mechanisms regulating skeletal muscle adaptation following exercise. Some of the rats will receive an enzyme inhibitor, allopurinol, preventing the action of an enzyme that facilitates skeletal muscle adaptation. Therefore, these rats should show less skeletal muscle adaptation as compared to untreated controls. Contractile function will be measured directly from one anterior tibialis muscle following a program of forced treadmill exercise. Rats will be euthanized while still under general anesthesia and skeletal and heart muscle will be removed for additional analyses. Questions followed:

[Q = question A = answer C = comment]

- Q:** Why are the rats getting both oral and IP injections of the allopurinol? **A:** Sometimes the one mode doesn't achieve adequate levels.
- Q:** What are the purposes of the four groups, again? **A:** There are two sedentary control groups, one with and one without allopurinol and two exercise groups, one with and one without allopurinol.
- Q:** How will you dispose of the animals? **A:** This has not been decided. Usually animals having drugs in them are re-cycled for use by the morphology course. If not, then the bodies will be discarded using the accepted methods.
- Q:** If level of allopurinol in the animal is an important concern, why don't you check plasma level? **A:** It is important, but the procedures to be used here have been used previously with known results.
- Q:** What is the injection schedule? **A:** It's every other day, with weekends off.
- Q:** What is the injection dosage? **A:** 32 mg/kg.
- Q:** Are there issues of syringe contamination or are these disposables? **A:** They will be one-use syringes.
- Q:** Describe the procedure for the IP injections. **A:** The rat is placed in a holder with an opening at the stomach, through which the needle is inserted.
- Q:** Do you vary the location of the repeated injections? **A:** There is enough variation across injections in the exact position of the rat in the holder so that there is probably reasonable random variation in location.
- Q:** The IP injections will be a mixture of allopurinol and dimethyl sulfoxide [DMSO]. Are there hazards associated with DMSO? **A:** DMSO will be used in small amounts and the researcher will wear gloves. So, the risks are very low.
- Q:** Are there risks associated with spills or holes in gloves. **A:** The procedures to be followed in the protocol minimize contact.
- Q:** Are the above scheduled drugs and how are these drugs secured? **A:** They are not scheduled drugs and they will be stored in a locked laboratory.
- Q:** Who does the euthanasia? **A:** The student researcher will do the euthanasia.
- Q:** Where is barbiturate for euthanasia stored? **A:** It is in a locked cabinet.
- Q:** Could you test the predicted effect of the allopurinol on muscle adaptation without surgery and euthanizing the rats? **A:** There isn't any way to do that without accessing the muscle directly, which requires surgery, followed by euthanasia.
- Q:** You also measure muscle recovery? **A:** Yes, post-fatigue recovery will be measured periodically up to 10 minutes after the muscle has reached the contractile criterion for fatigue.
- Q:** The student already appears to be working on some of these procedures. **A:** Yes, but these are covered in McBride's general research protocol, 98-07.
- Q:** Animal Facility personnel mentioned something about additives to some of McBride's rats' water bottles. **A:** This too is part of the procedures authorized for 09-07.
- Q:** Are there any immediate applications of the knowledge you hope to gain? **A:** Understanding mechanisms of skeletal muscle fatigue is of interest in athletics, certain diseases such as muscular dystrophy, and conditions such as failure of the heart muscle.

Q: It's not quite clear how to interpret your ratings on the second pain scale in the protocol. **A:** The ratings mean that pain would be significant, but pain relief will be given, so that the pain perceived will be none.

C: This scale, "USDA Pain Classification", should be clarified in our online materials.

Q: The treadmill exercise is not painful? **A:** The running isn't painful, but there is a shock grid on the apparatus to prompt running if the animals don't run spontaneously.

Q: How will the animals be housed? **A:** They will all be in the smaller cages, not the enriched environments.

When there were no further questions from the IACUC on Protocol 09-03, the investigators were asked to leave and the IACUC debated in executive session. There was a motion to approve Protocol 09-03 with no modifications. [Germano moved, Troup seconded, 8-0] The outcome was communicated to the investigators when they had returned.

V. AREAS OF CONCERN: none

VI. NEXT MEETING:

Friday, 29 January 2010 in DDH A-108

VII. ADJOURNMENT:

There being no further business, the meeting was adjourned at 1:40 PM. [Filkins moved, McBride seconded, 8-0]

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