New PACUC Clerk

Ms. Lori Bugher (pronounced Boo-er) was hired in July as a Clerk V for the Purdue Animal Care and Use Committee. Lori’s main responsibility in the PACUC office will be to order vertebrate animals/approve animal usage for Purdue University.

Lori may be reached at 49-47259 or lbugher@purdue.edu.

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Revised Animal Procurement (Ordering) Procedures

Effective immediately, revised procedures will be instituted regarding placing orders for live, vertebrate animals at Purdue University. All vertebrate animal orders/usage will now be centralized within the PACUC office.

The objective of this proposal is to provide a business process that can be used across campus (to include regional campuses and farms) that will ensure animals purchased/used for research, teaching, testing, or extension activities are covered under an approved and valid protocol, the number and species purchased match the approval, and that the funding source is appropriate for such purchases. In addition, we hope to streamline the procurement process, ensure timely delivery of all animals, and coordinate housing needs with expected orders.

A description of this new procurement process is provided below:

- The individual responsible for initiating an animal order completes a standard animal order form. A standard form for all animal purchases to be used across campus will be available on the PACUC website and from your animal facility manager or your departmental business office. This form has three main sections which address: 1) information needed to place the order, 2) all necessary approvals, and 3) information regarding animal housing needs.
If the individual initiating the order is not the PI, the PI approves the order and certifies the allocability of the charge to the project, unless the individual has been delegated signature authority for the express purpose of animal orders. The initiator of the order or PI forwards the form to the Animal Facility Manager.

The Facility Manager reviews the form, verifies that all order form information has been provided (Account #, PACUC #, PI, contact information, and animal specifications/requirements), verifies space availability, and indicates housing locations on the form. The Facility Manager approves the order and forwards the form to the appropriate Business Office.

The Business Office verifies account allowability, reviews allocability, and availability of funds, and verifies the PACUC Protocol # has been provided, and forwards the form to the PACUC Clerk.

The PACUC Clerk provides the restricted commodity approval review, ensuring a valid protocol is in place, the number of animals and the species being ordered are approved, and ensures that all other required approvals (PI, business office, and facility manager) have been provided on the order form. The PACUC Clerk then enters the order in SRM (with approved order form as an attachment) or orders on a P-card for time sensitive orders.

Purchasing approves order if over $10,000, otherwise, order is sent directly to the vendor.

The PACUC Clerk provides confirmation of order, PO# etc. to the business office, the individual requesting the animal procurement, and the facility manager.

For the purchase of farm/herd animals to replenish the herds, flocks, etc., at ASREC, the form 12 ordering process should continue to be used. For the transfer of farm/herd animals from ASREC to approved protocols, the Animal Requisition Form should be completed as stated above prior to the animals being used. For animals coming from other entities (e.g., other universities, NIH, auction houses, sale barns, breeding colonies, etc.), the Animal Requisition Form must be completed as stated above prior to the animals being used.

You may contact your facility/unit manager, your business office, or Lori Bugher for any questions that you may have regarding this new process.

Lisa Snider
PACUC Administrator

Adherence to protocols

In July, Purdue was the subject of an unannounced inspection by a veterinary medical officer from the United States Department of Agriculture's Animal and Plant Health Inspection Service. There were two citations for violation of the Animal Welfare Act given to the University. In both cases, the violations were the result of investigators deviating from what had been approved in their protocols. In one instance, the administration of analgesics to animals following surgery was not exactly as had been approved by PACUC. In the other case, animals were maintained in a
temporary housing facility for a longer time than had been approved. In both, the problems were identified when the inspector compared the approved protocols with the animal records.

The above instances are simply examples of failure to follow what had been considered to be fair and reasonable treatment of the animals by PACUC. They illustrate a number of points. First and foremost is that investigators must adhere to whatever procedures and practices they have been approved to do. Changes cannot be made simply because the investigator would like to do something differently. As noted in the March PACUC newsletter, that is what amendments are for. PACUC works diligently to review and approve amendments as expeditiously as possible to assist investigators in maintaining compliance. Second, while in the above two cases the changes made by the investigators were actually only slightly different from what had been approved, they were considered significant enough by the USDA to warrant the citations on the inspection report. Hence, attention to detail is absolutely necessary. Third, these violations also illustrate the need for principal investigators to make sure that all personnel - graduate students, undergraduate students, postdoctoral students, co-investigators and anyone else listed on the protocol - know what has been approved. This cannot happen if the principal investigator does not share and discuss this protocol information with all those involved in their research project. Ultimately the principal investigator is held responsible for the actions of their group.

It is incumbent upon all investigators to carry out activities using animals as approved by PACUC for the wellbeing of the animals, to maintain the reputation of Purdue as a responsible institution and to not jeopardize the ability of current and future researchers to receive federal funding for research support.

Gary P. Carlson, Ph.D.
PACUC Chair

Perspectives of a protocol reviewer:
How I would complete a protocol application

A responsibility I have enjoyed during my first two years at Purdue is reviewing the "Application to Use Vertebrate Animals in Research, Teaching or Testing," better known as "protocols," and yes, I have asked my share of dumb questions in the review process.

The following suggestions are to make the process easier, with fewer questions, and reduce the need for amendments.

3.4 Search for Alternatives.

Remember to use the species as a search term.

4.1 Briefly state the objective(s), including the rationale for using vertebrate animals. Use terminology that can be understood by someone with minimal knowledge of the specific scientific area.

Complete with no more than four sentences with the following sample format:

A compound/technique will be investigated in species for the effect. The rationale is from previous study/reference with these results. Vertebrate animals are necessary to complete this study.
5.2 Indicate the rationale for the number of animals to be used. How did you determine the number of animals required? Your explanation should include the numbers per group, number of groups, power analysis used, number of animals needed for training, etc.

Investigators do a good job of statistically determining the numbers required for the experimental design. Include a few extra to allow for animals excluded due to illness or unsuitability, to allow for the learning curve of a new technique, and potential complications of involved surgical models.

7.1 Describe the proposed non-surgical use of animals, including pilot studies, using terms that can be understood by those not familiar with your area of expertise. Please include a flow chart and/or time line for the use of the animals. Provide a step-by-step description of procedures to be performed on the animals. Surgical procedures should be described in Section 9 of the protocol application.

The detail in this section varies between protocols and produces many of the same questions. This is where the reviewer understands how the animals are used. An example would go something like this:

After seven days acclimation (see PACUC Guideline at http://www.purdue.edu/research/vpr/compliance/animals/docs/Stabilization_and_Acclimation_of_Research_Animals.pdf) animals will be assigned to # treatment groups. Treatments are ___________________ and animals will be:

Given compound/agent at __ mg/kg by route every __ hrs/days/weeks for ___ time. Provide information on compound/agent effect on animals.

Samples of ______ will be taken by _______ method __ times every ____ hr/day/week. The amount taken will be between _____ and ______. For multiple blood samples refer to NIH guidelines (http://oacu.od.nih.gov/ARAC/Bleeding.pdf) and request the maximum amount for the applicable time period. For methods of sampling not common to Purdue provide reference or description.

Imaging/testing/procedures will be done __ to ___ times at intervals of ___ hrs/days/weeks over ___ time. Describe.

Animals will be euthanized/return to colony/etc. immediately or ___ time after last procedure.

Suggestions for pilot studies

Brainstorm for alternative plans and include them up front. If taking multiple blood samples over short period of time, consider adding a vascular catheter option. If unsure of restraint method, add sedation as an option. Refer to instrumentation in general terms. Request longer study duration.

9.3, 9.11, and 10.3  These sections refer to anesthetics and analgesics.
Utilize the LAP vets/techs for suggested products and doses and list more than one anesthesia option. During the three year protocol duration, problems with product/equipment availability may develop.

9.12 and 10.9 Endpoint criteria for euthanasia

Any study where the health of the animal could be affected should have endpoint criteria. For studies where an effect on animal health is remote, complete with “on advice of veterinarian.”

11.2 Method of euthanasia


Lee Matthews, DVM
LAP Veterinarian & PACUC Member

Training

Protocols vary among researchers and departments within Purdue University. Past experiences and training opportunities also vary greatly among personnel. In order to bridge the education and experience gap, the Laboratory Animal Program has someone specifically to help you learn animal techniques required for your project.

Please contact me (42521 or dowellc@purdue.edu) if you have a training need, or if you simply want to discuss a technique. I can also serve as a collaborator; putting you in contact with other groups who are using the same techniques!

Basic training can include, but is not limited to:

1. Normal and abnormal behavior
2. Husbandry
3. Handling and restraint
4. Injections
   a. Subcutaneous (SQ)
   b. Intramuscular (IM)
   c. Intraperitoneal (IP)
   d. Intradermal (ID)
   e. Intravenous (IV)
5. Blood Collection
   a. Retro-orbital
   b. Lateral Saphenous
   c. Tail
   d. Cardiac
   e. Submandibular
   f. Jugular
   g. Cephalic
6. Oral gavage
7. Aseptic Technique
8. Surgical prep
9. Suturing techniques
10. Anesthesia
    a. Injectable
    b. Gas
11. Euthanasia
12. Necrospy

I look forward to hearing from you.
Animal Allergies

Animal allergies and animal-induced asthma is a recognized problem in people who handle and care for animals. Reports estimate that 33% of animal handlers have allergic symptoms, and approximately 10% have symptoms of animal-induced asthma [Chan-Yeung and Malo 1994]. Animals or animal products such as dander, hair, scales, fur, saliva, and body wastes contain powerful allergens that can cause both respiratory and skin disorders. Workers at risk include anyone with prolonged, close association with animals or their secretions or excretions. Also at risk are workers who handle animal products or associated materials such as bedding and feed.

Rhinitis and occupational asthma are also recognized effects of working with livestock such as cattle, hogs, sheep, and goats. Hog producers, particularly those who work in large confinement areas with inadequate ventilation, have been shown to develop wheezing and chronic coughing [Zejda et al. 1993; Zuskin et al. 1992b]. Those who work with small animals and rodents tend to exhibit a higher incidence of symptoms.

Symptoms may first appear long after beginning work with animals. Laboratory animal allergies usually develop within 36 months of starting exposure, and most cases develop after 6 to 36 months of exposure. Symptoms may begin as nasal, eye, and throat irritation as well as skin hives and/or recurrent episodes of coughing, wheezing, chest tightness, and difficult breathing [Bardana 1992].

All animal handlers should take steps to protect themselves from exposure to animals and animal products that could lead to sensitization to animal allergens:

- Always utilize a lab coat or appropriate PPE that can be removed after work is completed.
- Perform animal manipulations within ventilated hoods or safety cabinets when possible. When working in confinement buildings wear PPE such as an N95 face mask.
- Avoid wearing street clothes while working with animals. Not only do you want to leave the smells at work; but you definitely want to leave the allergens at work!
- Leave work clothes at the workplace to avoid potential exposure problems for friends and family members.
- Keep cages and animal areas clean.
- Reduce skin contact with animal products such as dander, serum, and urine by using gloves, lab coats, and approved particulate respirators with face shields.
- Inform the facility manager if a specific bedding or feed is particularly bothersome.
- Request a Hazard Assessment and review of PPE recommendations from Purdue Radiological and Environmental Management department;
http://www.purdue.edu/physicalfacilities/rem/Welcome.html


Carol Dowell
Training Coordinator

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September Brown Bag Seminar

"To Breathe or Not to Breathe - Lungs: The path to inhalation hazards"
Tuesday, September 18, 2007
11:30am -12:30pm
BMED 3041

Presented by: Lila Albin and Bob Golden, REM

Upcoming PACUC Meetings

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