will influence the college to accept the study. Best America is not being forthcoming in its true goals and aims in this study, which could jeopardize the standing or reputation of the College.

Ideally, such a study should first be done in research dogs of similar breed and age in a standardized and controlled environment, whether or not biopsies are deemed necessary. There are many established methods for induction of CRF in laboratory dogs that would meet Best America Pharmaceuticals' needs. One could conclude that Best America is trying to save money in the short term by using client-owned animals, rather than carrying out a properly designed trial that would provide more reliable data for assessment by the Food and Drug Administration at a later date. The company's short-sightedness is disquieting.

In short, our IACUC would return this protocol to the Principal Investigator indicating that it "Requires Modification Prior to Approval". The modifications required would include removing the requirement for biopsies in client-owned animals and adding the use of diagnostic imaging techniques and blood work that would not compromise the dogs. The study, at our institution, would also require the approval of the Teaching Hospital Board before it could be carried out in client animals. The IACUC members would also recommend that the protocol be re-written to provide adequate controls, to minimize variables and to appropriately justify the invasive procedures.

Noll is IACUC Administrator at Virginia Tech, Blacksburg, VA.

RESPONSE

Modifications required

Edward T. Greenstein, DVM, DACLAM

In my opinion, the IACUC should withhold approval of the protocol until it is modified to meet the standards of USDA's animal care policy #14 on major survival surgery[1]. This policy references the Animal Welfare Act and Regulations[2] and states that "[n]o animal is to be used in more than one major survival operative procedure except in cases of scientific necessity or veterinary care."

As written, the protocol does not meet these standards for several reasons. First, each animal would be required to undergo four major survival operative procedures. Second, there is no need for these procedures that can be justified as veterinary care or for scientific necessity. Third, there are other, non-invasive, procedures that can be used to help evaluate kidney function.

Another study plan should be developed that can provide similar data. For example, the protocol could require only one biopsy from each dog at appropriate intervals: dog 1, right kidney at interval 1 (month 1); dog 2, left kidney at interval 1 (month 1); dog 3, right kidney at interval 2 (month 2); dog 4, left kidney at interval 2 (month 2); dog 5, right kidney at interval 3 (month 3); and dog 6, left kidney at interval 3 (month 3).

1. USDA, APHIS, AC. Animal Care Policy Manual. Policy #14. Major Survival Surgery—Single Vs. Multiple Procedures. April 14, 1997.
2. AWA Section 13 (a)(3)(D,E). 9 CFR §2.31 (d)(1)(x).

Greenstein is Clinical Veterinarian at Advanced Bioscience Laboratories, Inc., Kensington, MD.

RESPONSE

A dog is a dog

Larry Carbone, DVM, PhD, DACLAM

This case raises two important issues: the IACUC's role in assessing justification of pain and distress, and the differences between research using companion animals and research using laboratory animals.

The first issue is familiar to readers of this column. Even ultrasound-guided percutaneous biopsy carries risks such as hemorrhage, pain and anesthesia and should not be undertaken lightly, especially in debilitated patients. This is true whether the subject is a laboratory dog or a household pet.

The IACUC must assess the justification for pain and distress, both in general and for the specific biopsy procedures. It must evaluate the search for alternatives to painful procedures. If it lacks the expertise, it should request Best America's peer review information or find ad hoc experts. It cannot approve painful or distressing procedures if scientific justification is not presented.

Best America has responded by threatening to take its money and its medicine elsewhere. Surely the company has reasons to invest its time and money in carrying out and evaluating biopsies. It should be able to better explain these reasons to the IACUC, as well as to whichever IACUC reviews the dose-finding studies in laboratory dogs.

How should IACUC review of pet dog studies differ from that of laboratory dog studies? There is little regulatory guidance. Neither PHS Policy[1] nor the Animal Welfare Regulations[2] draws such a distinction within a species. The Food and Drug Administration's Center for Veterinary Medicine (FDA-CVM) has oversight for licensing veterinary medicinal products. The present case is unusual in that Best America's plans are to use clients' companion animals as models for human drug development, not as representatives of the target species.

When it comes to the ability to feel pleasure and pain, a dog is pretty much a dog, whether it is a loved pet or a laboratory subject. Both require the same pain management and both deserve the careful justification of risky, painful multiple procedures. Still, there are distinctions that may result in different treatment.

First, the laboratory dogs would probably be scheduled for euthanasia and tissue collection at the end of the year-long study. They would likely undergo three survival procedures and one acute. Thus, the risk evaluation for the companion dogs (expected to live for many years) differs and may require stronger justification. Conversely, if the biopsies will guide long-term patient management, they may be more justified for the companion dogs.

Second, pet dogs will be enrolled in the study only if their human guardians give their informed consent. Their protection from risk and their access to this therapy depend on their guardians' interpretation of the information presented. Just as a human subjects committee must assess risk and benefit as they will be presented to prospective volunteers, so too should this IACUC assess what will be presented to pet owners in order to gain their