

Jerald Silverman, DVM, Column Coordinator

How do you categorize an animal's natural life span?

Jim Panosky was sure that he was submitting the world's easiest-to-review IACUC protocol. All he was doing was breeding three different strains of readily available mice (BALB/c, C57BL/6, and FVB) and allowing them to live out their life span without research manipulations of any kind. Panosky planned to perform microscopic, biochemical, and genetic examinations of neural tissue from these animals. He was almost smirking as he filled out the IACUC form, knowing that he was finally submitting a foolproof protocol.

Needless to say, Panosky was wrong. To its credit, the Great Eastern University IACUC did a thorough review of the protocol and had a list of questions for Panosky, such as, "What will happen to an animal if it gets sick or injured?" and "How are you going to assure that you can find a dead animal before autolysis sets in and ruins the very tissues you have been waiting to collect for some 2 years?" There was one issue on which

the IACUC itself could not agree. Great Eastern categorizes all animals on IACUC protocols into one of four groups (B, C, D, or E), corresponding to the U.S. Department of Agriculture's 'pain and distress' categories for research animals regulated under the Animal Welfare Act (AWA). Of course, the Act does not cover the mice Panosky was using, but such a classification system is commonly used by universities around the country for a variety of IACUC purposes. Most members of the Committee believed that the mice should be placed in category C, indicating that they were to experience no pain or distress. Some believed they should be in category B, which is reserved for animals being housed, but on which no research is currently being performed. A smaller fraction believed that at least some, and perhaps most of the animals had to be in category E (pain or distress unalleviated by drugs), because they all would eventually die, and these members said it would be

ludicrous to believe that all the mice would live and die free of disease, distress, or pain. They suggested that Panosky consider a more humane endpoint other than dying a 'natural' death. A few IACUC members rolled their eyes, wondering if their colleagues had finally gone too far.

The IACUC asked Panosky to meet with them to help resolve the conflict. He said that his research demanded that the animals live out their full lifetime, rather than euthanizing them earlier (even if they were ill), and he subsequently presented solid scientific documentation for that need. He was able to work with the Committee to resolve all of its other concerns.

Whether the animals involved were mice or monkeys, the Great Eastern IACUC still had to decide the appropriate 'pain or distress category' for animals living out their natural life, without any experimental or therapeutic interventions. If this was your IACUC, how would you resolve this problem?

RESPONSE

100% E

Mary Lou James, BA, LATG

The Great Eastern IACUC is in fact a conscientious and exacting Committee, and its deliberations on the appropriate pain/distress category raise some good points. Even though the mice are not being actively manipulated for research per se, the 'lifetime' portion of their residence remains critical to the research project; thus one can hardly consider these animals as category B (*i.e.*, animals being housed, but on which no research is currently being performed).

It is probable that some if not the majority of these animals will experience a naturally occurring illness, disease, or physiological deterioration during their life span, a probability that increases as they age. These processes will likely cause some degree and duration of pain or distress. With no medical intervention or euthanasia planned to prevent or alleviate pain and distress, category C (*i.e.*, no pain or distress) can hardly be assigned to animals that become sick or deteriorate; category E (*i.e.*, pain or distress without pain-relieving agents) should be their designation.

Furthermore, what about the animal that lives a life that appears to be free of disease, illness, and injury and experiences a quick 'painless' death? Well, it would be

appropriate to assign these animals to the C category, but unless Panosky is personally observing them at the time of their death, he would have difficulty saying that the death appeared to be immediate and without pain or distress. Besides, wouldn't it be difficult for any of us to say that even an immediate death is without pain or distress, unless, of course, it occurred in conjunction with the administration of anesthetics and analgesics? We certainly have no one whom we could ask. Also, because this very real uncertainty does exist and there is no intervention planned, the benefit of the doubt goes to the animals.

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