

The use of used

OLAW's "Guidance on Significant Changes to Animal Activities" (NOT-OD-14-126)¹ indicates investigators may use fewer animals than originally approved without IACUC or administrative notification or approval. This would include, for example, not performing a duplicate experiment that was intended only if statistical significance wasn't achieved with the initial group. However, in this particular scenario, Dr. Stark's actions were not consistent with intent of the OLAW notice. Although the number of animals being used for research may be reduced by eliminating experimental groups; that action may also negatively impact the IACUC's evaluation of the scientific validity of the experiment. Consequently, eliminating a test group within an experiment may compromise the IACUC's interpretation that the experiment will result in "either significant new knowledge or leads to

improvement of human and/or animal well-being" (Guide, p. 4)².

A fundamental IACUC charge is to "... evaluate scientific elements of the protocol as they relate to the welfare and use of the animals." (Guide, pg. 26)² In Dr. Stark's protocol, he described an experiment that required a negative and vehicle control group to be scientifically valid. Since the IACUC's approval of the experiment was based on an assessment that included two scientifically justified control groups (ensuring that the requested number of animals was the "fewest needed to obtain statistically significant data" (Guide, p. 201)²; it is the responsibility of the PI to conduct the experiment as described in the protocol. In this particular example, needed changes (i.e., eliminating an experimental group from an experiment) to the overall design of the experiment should be reviewed and approved by the IACUC before they are

initiated to ensure the committee agrees the scientific elements of the study remain valid.

While the PI's decision to eliminate a test group may have potentially decreased the number of animals needed for the study, in this particular case the experiment was started and included the negative control animals. The scenario indicates the animals were euthanized because the negative control group was no longer needed, but the scenario suggests they were euthanized to reduce per diem costs. Fundamentally, the PI made two poor decisions: 1) he conducted an experiment that was not consistent with that which was described in his IACUC approved protocol; and 2) he omitted a test group to reduce per diem costs.

The PI's interpretation of OLAW's Guidance on Significant Changes was incorrect. If, for example, Dr. Stark had explained to the IACUC that the experiment was redesigned, and the untreated control group was no longer needed for various reasons, then the use of fewer animals would have been appropriate. In this scenario, the PI misinterprets the definition "to use". Overseeing the use of animal activities in research, testing and instruction is a partnership between the institution, the IACUC, and the PI and, ultimately, this scenario represents an opportunity for education and team building between the IACUC and the PI. □

A WORD FROM OLAW

In response to the issues posed in this scenario, the Office of Laboratory Animal Welfare (OLAW) provides the following clarifications:

In this scenario, the PI has misinterpreted OLAW's significant changes guidance.¹ The euthanasia of otherwise usable animals without notifying the IACUC is not responsible animal use. Although OLAW's guidance states that "The use of fewer animals than approved may be handled without IACUC policy, approval, notification, consultation, or administrative handling", these actions can be required by the IACUC to not waste animals unnecessarily.¹ By eliminating an experimental group, the PI may confound the validity of the research. As the authorized entity to oversee animal welfare, the IACUC can question any aspect of animal use. This includes, as

stated in the Guide, "scientific elements of the protocol as they relate to the welfare and use of the animals."² The IACUC should consider educating investigators concerning institutional use of unneeded animals and create opportunities for PIs to transfer usable animals to holding or training protocols for future use. □

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1. Public Health Service. Guidance on significant changes to animal activities. Notice NOT-OD-14-126. (National Institutes of Health, Washington, DC, 26 August 2014.)
2. Institute for Laboratory Animal Research. Guide for the Care and Use of Laboratory Animals 8th edn. (National Academies Press, Washington, DC, 2011).

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1. National Institutes of Health. *Guidance on Significant Changes to Animal Activities*. Notice NOT-OD-14-126. (National Institutes of Health, Washington, DC, 26 August 2014).
2. Institute for Laboratory Animal Research. *Guide for the Care and Use of Laboratory Animals* 8th edn. (National Academies Press, Washington, DC, 2011).