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Authority to establish housing requirements

From his first lecture at Great Eastern University, Dr. Sam Roth quickly became a favorite teacher and student advisor. Now, as a full professor and director of the herpetology teaching laboratory, he was beloved by the entire university community—except for the IACUC. Roth, who was past the age when most people have retired, had no grant funding and minimal financial support from the university. To compensate, he placed as many animals as he could into the least amount of space that he felt was appropriate for the species being kept. In the opinion of the school's veterinarians, however, Roth's animals seemed to have more health problems compared with reptiles and amphibians in laboratories at other universities. They believed the problems were largely caused by overcrowding.

For a while, Roth was able to sidestep the IACUC's request to provide more space for his animals by citing his own experience as a herpetologist and noting that the *Guide for the Care and Use of Laboratory Animals* (the *Guide*)¹ had no space recommendations for the species he used for teaching and that

the Animal Welfare Act regulations² were not applicable to his animals. But now, with a new version of the *Guide*³ that put more emphasis on performance standards, and with the Association for Assessment and Accreditation of Laboratory Animal Care International suggesting that current European space recommendations for reptiles and amphibians could be helpful guides for American IACUCs^{4,5}, the Great Eastern IACUC became emboldened and demanded that Roth follow the European requirements for housing space when such requirements existed for species at Great Eastern. Roth countered that the IACUC was a federally mandated committee that was required to operate under US regulations and it had no authority to impose European requirements on Great Eastern University. He also challenged the veterinarians to provide documentation that the space he provided for his animals was contributing to health problems and to prove that the animals had any more problems than were seen in other schools. The veterinarians were understandably

reluctant to drag other academic institutions and colleagues into a local dispute.

Under existing federal regulations and policies, does the Great Eastern IACUC or the Attending Veterinarian have the authority to establish minimum space standards for Roth's animals? How would you resolve this problem?

1. Institute of Laboratory Animal Resources. *Guide for the Care and Use of Laboratory Animals* 7th edn. (National Academies Press, Washington, DC, 1996).
2. Code of Federal Regulations. Title 9, Chapter 1, Subchapter A.
3. Institute for Laboratory Animal Research. *Guide for the Care and Use of Laboratory Animals* 8th edn. (National Academies Press, Washington, DC, 2010).
4. Association for Assessment and Accreditation of Laboratory Animal Care International. *Frequently Asked Questions* (Association for Assessment and Accreditation of Laboratory Animal Care International, 2011) [online] <http://www.aaalac.org/accreditation/faq_landing.cfm#STANDARD1>
5. Directive 2010/63/EU of the European Parliament and of the Council. *Official J. European Union* L276, 33–79 (2010). <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:276:0033:0079:EN:PDF>>

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RESPONSE

IACUC recommends, IO approves

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The *US Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training* state, “normally, the housing, feeding, and care of all animals used for biomedical purposes must be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied”¹. The Attending Veterinarian therefore has the authority to set the minimum housing requirements for any

animals used by the institution for research, training or teaching. In practice, informed veterinary recommendations are typically supported by the IACUC.

According to OLAW, “institutions have discretion to subject animal activities to IACUC oversight regardless of the source of funding. This practice ensures uniform standards, appropriate oversight and accountability, and therefore is often in the best interest of the institution.”² In addition, the use of animals in scientific teaching falls under the category of research training and is therefore included in activities covered in the institution's Animal Welfare Assurance. The IACUC has the authority to require that all investigators meet the recommendations of the *Guide for the Care and Use of Laboratory Animals*³ in order

to protect animal welfare and the research interests of the institution as a whole.

Although Roth proposes that his expertise supersedes the judgment of the veterinarians, Principle IX of the *US Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training* indicates that “the decisions should not rest with the investigators directly concerned but should be made, with due regard to Principle II, by an appropriate review group such as an institutional animal care and use committee. Such exceptions should not be made solely for the purposes of teaching or demonstration.”¹ Because the standards of the Association for Assessment and Accreditation of Laboratory Animal Care International are the product of an appropriate review group for the species

RESPONSE

Performance standards for housing

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specifically included in the document, adaptation of these standards by the IACUC is a reasonable approach. This change to the animal care program should be agreed to in a timely manner by the Institutional Official (IO) before it is implemented. Roth's challenge to the veterinarians to provide proof of minimum space requirements is relevant in the context of research but not that of his current activities (teaching). The IACUC must investigate the concerns raised by the veterinarians by timely inspection to determine whether immediate suspension is indicated. It would also be appropriate to include in the investigation an outside expert opinion provided by a scientist independent of Roth but in the same field (and carrying out research in an institution with a current Animal Welfare Assurance), a curator of herpetology of a regionally recognized and accredited zoological collection or a veterinarian specializing in exotics.

Once space requirements have been recommended by the IACUC and approved by the IO, unambiguous compliance with these institutional standards must be documented by Roth via an animal use protocol amendment. Compliance must be confirmed by inspection of the animals and enclosures by a representative of the IACUC, preferably on a regular basis over an extended period. Continued housing of Roth's teaching animals under unsatisfactory conditions would trigger IACUC suspension of the protocol and formal reporting of the violation to the IO⁴. The animals would be transferred to appropriate housing and held by the institution until appropriate use or disposition was determined and carried out.

We believe that the IACUC and the Attending Veterinarian (AV) have the authority to establish minimum space standards for Roth's animals. Both the *Guide for the Care and Use of Laboratory Animals* (the *Guide*)¹ and the *PHS Policy on Humane Care and Use of Laboratory Animals* (PHS *Policy*)² hold the AV responsible for animal health and wellbeing and give him or her the authority to oversee aspects of animal care and use, including husbandry and housing¹. Furthermore, the *PHS Policy* states that animal housing should be comfortable and should contribute to the overall wellbeing of the animals². Increased mortality or health problems in a particular species or program should be addressed by the IACUC. The *PHS Policy* mandates that the IACUC review any animal health or wellbeing concerns as raised². The *Guide*¹ states that institutions, investigators and IACUC members should evaluate the needs of each species during program evaluations and facility inspections and should continue to review ongoing research in these areas.

The role of the IACUC is to ensure humane use and care of animals at the institution. The IACUC, on the advice of the veterinarians, can vote to require that the animals be given more space. Roth's concern about the IACUC imposing European standards at a US institution may seem genuine, but the IACUC can make recommendations based on internal defined performance standards, European standards or other scientifically based space and housing recommendations as may develop over time, such as future updates from the American Society of Herpetologists.

We recommend a collaborative approach to solving this problem. Roth does bring considerable knowledge with his years of experience. The AV and the IACUC have the dual obligation of ensuring animal wellbeing and furthering research; hence,

a collaborative effort with Roth to find an amicable resolution should be made.

According to the *Guidelines for Use of Live Amphibians and Reptiles in Field and Laboratory Research*³, reptiles and amphibians are ectotherms with relatively low energy systems and can therefore be housed at higher densities. These guidelines also emphasize that the physical, social and physiological needs of the animals must be met³. The duration of housing must also be considered: if animals are housed for only a short time, then housing at higher densities may be acceptable. But if animals are kept for longer periods of time, care and attention must be paid to the animal's health and wellbeing throughout the study. The program at Great Eastern needs to establish performance standards related to housing and cage density for this species based on parameters such as tank microenvironmental conditions, access to food, waste removal, ease of visualization and health assessment.

Although the literature is not clear on space requirements for reptiles, the views and recommendations of other investigators at the institution using similar species or of *ad hoc* experts or consultants, along with the data regarding the performance standards, can be communicated to Roth and the committee. The AV, the IACUC and Roth should try to work together to further research and establish an acceptable housing density standard. The IACUC is also responsible for making sure that the animals do not undergo unnecessary distress. The committee should make an informed decision in this regard, enforced by both committee deliberation and vote.

1. Institute for Laboratory Animal Research. *Guide for the Care and Use of Laboratory Animals* 8th edn. (National Academies Press, Washington, DC, 2010).
2. Public Health Service. *Policy on Humane Care and Use of Laboratory Animals* (US Department of Health and Human Services, Washington, DC, 1986; amended 2002).
3. American Society of Ichthyologists and Herpetologists. *Guidelines for Use of Live Amphibians and Reptiles in Field and Laboratory Research* 2nd edn. (American Society of Ichthyologists and Herpetologists, 2004). [online] <<http://www.asih.org/files/hacc-final.pdf>>

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