Jerald Silverman, DVM, Column Coordinator

Wire Mesh Flooring—Boon or Bedevilment?

The Great Eastern University IACUC was justifiably proud that it was current with new findings in laboratory animal science, but Dr. Rod Messing presented a problem that tested the Committee. The IACUC was aware of research papers suggesting that rats generally preferred solid flooring to wire mesh flooring. It was also aware that damage to the feet of rats from wire flooring would likely take many months to develop. Armed with that knowledge, the Committee had previously formulated a policy stating that permission to house rats on wire mesh flooring would require scientific justification and the concurrence of the IACUC. There were no problems with this policy for the usual short-term metabolism studies, but for his young adult F-344 rats, Messing requested long-term housing that could be as long as six months for some of them. Messing's justification for using wire flooring was twofold. First, he said that his NIH-approved grant required that the rats not eat their feces. Second, he wanted to be able to collect and weigh any spilled food.

The IACUC discussed the Messing protocol at the regular monthly meeting. The Attending Veterinarian (AV) made two points, both of which had already been made to Messing during the 'pre-review' of the protocol. First, he could not assure the IACUC that housing rats on wire floors for six months would or would not cause damage to their feet; however, he assumed from his review of the literature that any damage would likely be minor at that point in time. Second, because rats often take fecal pellets directly from the anus, he doubted if wire floor housing would be effective in preventing cecotrophy. The Committee decided to defer any action on the protocol until Messing was given the

opportunity to respond to the concerns raised. Messing responded that he appreciated the AV's initial comments, but he respectfully disagreed. He presented the Committee with a long list of peer-reviewed publications from other institutions, all of which clearly stated that rats were housed on wire floors to prevent them from ingesting fecal material and to permit the collection of spilled food. None of those animals had been housed on wire for more than 90 days, but Messing challenged the IACUC to provide evidence that six-month housing on wire would be detrimental to the animals. "Do you really think that the study sections would have approved all these grants, including mine, if the science was bad or the animals were mistreated?" he asked.

The IACUC had an interesting problem in that, even if there was no published proof that physical damage to a rat's foot could occur within six months, it still had to consider the potential for psychological distress to the rats. Furthermore, if the AV was correct and housing animals on wire mesh was not the solution to the prevention of cecotrophy, then was there an alternative that could be effective for six months? Should all the published literature be disregarded? How do you think the Great Eastern IACUC should approach this problem?

Will It Really Prevent Cecotrophy?

Walter I. Horne, DVM, DACLAM

The Great Eastern IACUC has several interrelated issues to face. The most obvi-

ous is the disagreement over whether or not wire floors prevent cecotrophy. Another is the adequacy of Messing's justification for housing rats on wire floors for an extended period of time. Furthermore, if the IACUC determines that the justification is adequate, then what conditions, if any, should the Committee place on the approval? In its deliberations, the IACUC must certainly consider the potential for physical harm (e.g., foot lesions) from the wire floors and psychological stress associated with the lack of bedding. We can assume that Messing's proposal includes the single housing of rats, which may also lead to psychological stress.

The case description suggests that there has been a collegial interaction between the IACUC and Messing thus far. The IACUC should strive to continue that dialogue to reach a satisfactory resolution to the conflict. Either Messing could be invited to an IACUC meeting or representatives of the IACUC, such as the AV and the Chairperson or a member knowledgeable in rodent research, could meet with him to discuss the issues. The history of the IACUC's deliberations and interactions with Principal Investigators (PIs) would determine the approach most likely to facilitate a productive discussion.

The IACUC should cite available laboratory animal literature to educate Messing about the possibility of cecotrophy associated with wire floors. The Committee should delve further into the reasons why cecotrophy is undesirable and why waste food must be measured (*i.e.*, ask for a more detailed justification for housing on wire floors). If the prevention of cecotrophy is a priority, then Messing may wish to consider additional methods such as anal cups or restrictive collars.