Last Word on Viewpoint: Gold standards for scientists who are conducting animal-based exercise studies

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TO THE EDITOR: The purpose of our Viewpoint was to stimulate discussion among investigators concerning the appropriate use and limitations of commonly used animal models and laboratory techniques to investigate scientific hypotheses that address questions directly related to exercise biology. Clearly, investigators are aware of the health benefits of exercise training, thus we are encouraged to see an increased number of experiments pursuing the cellular and molecular mechanisms activated by exercise training, but we contend that occasional misinterpretations of data sets are occurring. We echo the comments of Dr. Tipton (see Ref. 1) in that we agree that it is the responsibility of the reviewers to uphold the standards established by our predecessors and extend that responsibility to mentoring future scientists. However, the issues extend beyond that of just the Journal of Applied Physiology and its Editor, Dr. Dempsey; thus we were attempting to bring our concerns to light and to begin to discuss in an open forum what is deemed acceptable among our peers that review for many different journals. We hope that scientific standards for exercise-based studies can be established that would allow the development of rigorously controlled experiments that result in impactful data sets. We were encouraged by the received responses because they highlight a number of the issues we addressed and provide additional valuable information to the readers, thus we hope that we (as a field) can use these comments as a means to spring broad in to more detailed discussions that will result in improved experimental designs and interpretations addressing novel ideas or concepts within exercise biology.

REFERENCE