

# Therioepistemology – Improving Reproducibility and Translatability.



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Google Scholar Homepage: [scholar.google.com/citations?user=JThS8LMAAAAJ](https://scholar.google.com/citations?user=JThS8LMAAAAJ)

Mouse Ethogram: [www.mousebehavior.org](http://www.mousebehavior.org)

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## Further reading:



Garner, J. P., B. N. Gaskill, E. M. Weber, J. Ahloy-Dallaire and K. R. Pritchett-Corning (2017). "Introducing Therioepistemology: the study of how knowledge is gained from animal research." *Lab Anim (NY)* **46**(4): 103-113. <http://dx.doi.org/10.1038/labana.1224>



Garner, J. P. (2014). "The Significance of Meaning: Why Do Over 90% of Behavioral Neuroscience Results Fail to Translate to Humans, and What Can We Do to Fix It?" *ILAR Journal* **55**(3): 438-456. <http://dx.doi.org/10.1093/ilar/ilu047>

## Abstract:

For the first time, the scale of the reproducibility and translatability crisis is widely understood beyond the small number of researchers who have been studying it and the pharmaceutical and biotech companies who have been living it. This talk will make the case that this is not a time for despair, but a time of intellectual excitement and hope. The emerging literature on these issues contains recurring themes which represent a paradigm shift, and thus potentially the birth of a new discipline (which we have proposed be termed “therioepistemology”). At the micro level this is a shift from asking “*what have we controlled for in this model?*” to asking “*what have we chosen to ignore in this model, and at what cost?*” At the macro level, it is a shift from viewing animals as tools or reagents, to viewing them as patients in an equivalent human medical study. Thanks to the groundwork laid over the last 15 years by a variety of authors, we not only understand many of the causes of poor reproducibility and translatability, but we also know the features of animal work that lead to reproducible work with a good chance of translation. Accordingly now is a time for action where we manifest change in the *status quo* of how animal research is done. This talk will outline six questions that serve as a heuristic for critically evaluating animal-based biomedical research for opportunities to make this shift in perspective.