How common are fraudulent animal studies and how do they impact us?

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More than a million biomedical papers are published each year – every minute of every day sees two to three new papers being uploaded to a database like PubMed. This is too much information for any one person to handle. As a result, we have become more and more reliant on methods for aggregating information – methods like systematic reviews. But these methods rely on all of the information they gather being truthful. What happens when we mix in reports of studies that never actually took place? In a systematic review on laboratory rat studies of depression, we found that approximately one-in-five papers (in an investigation looking into more than a thousand papers) had serious issues. Of these, a majority of the problems were suggestive of outright fraud. These are staggering numbers – numbers that cannot be ignored. These fraudulent reports touch all of us, as laboratory professionals, by potentially misleading our research, and by misinforming policies and best practices. What do these studies look like? Who writes them? How do we avoid them? Whereas we cannot present a simple solution for addressing the problem, we can start by highlighting the problem. In this talk, I will present what we found in our investigation, and give some suggestions of what the future may hold.