

Imagining an end to animal research

Reviewed by Monica Harrington, MSc



UNCAGED

By Paul McKellips

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Undercover footage from noncompliant animal studies has stemmed public support for research. Extremists demanding that nonhuman animals be given the same rights as humans have launched violent attacks on research personnel. Anti-research groups have seeded legislation limiting how many animals one person or entity can own and prohibiting their intra-state transport. And miles away, paramilitary terror cells have released a biohazard weapon. Hamstrung by a ban on experiments using animals, our once-productive research centers and institutions are unable to look for a solution. A foreign corporation swoops in with a cure, as if on cue; its stock price climbs.

In *Uncaged*, Paul McKellips depicts this worst-case scenario for biomedical research, twisting animal rights extremist attacks with international bioterrorism and a research complex gutted by an unsupportive bureaucracy. He explores fresh territory at the intersection of military and biomedical research, drawing on an uncommon combination of experience. One suspects that few people could write with both fluency and authority in this niche. But McKellips doesn't exclude non-experts either, applying his story-telling abilities to keep the narrative flowing, accessible and engaging.

The plot follows two military scientists, Commander Campbell and Lieutenant Colonel Raines, across the globe as they try to first identify and then address the emerging threat. The military industrial complex is sketched clearly, down to the acronym mania that civilians may find befuddling. Citizens that eye today's government with skepticism may find the political situation familiar: ineffectual leaders bow to lobby pressure with seemingly little assessment of the consequences, and branches of government fail to share essential information. These details help to anchor the story, giving readers a good basis for the alternate reality that McKellips proposes.

The sentiments of the American Humane Fund, the fictitious organization opposing animal experiments in *Uncaged*, may also

ring familiar: "there are far more sophisticated and modern methods of research" and "alternatives such as computer modeling should be used." Lacking any reference to specific methods or models, these vague claims do little to encourage meaningful discussion or application of realistic research alternatives. Raines addresses these claims by explaining (if a bit patronizingly) the need for animal studies. Though the detailed dialogue passage doesn't integrate seamlessly with its context in the story, one can appreciate McKellips' effort to deal with the topic straightforwardly. In Raines' words, "metabolism, blood flow, the energy of just water pushing through cells—it all has an impact on how a disease... moves through a living organism. None of that occurs inside glass."

McKellips also acknowledges the shortcomings of animal research. Raines summarizes, "if we cure cancer inside a test tube, does it really matter if it doesn't translate to a living system? Then, if we cure cancer in a mouse, does it really matter until it translates to people?" The same line of reasoning is used in an anti-research speech by the American Humane Fund: "Since President Nixon declared a 'war on cancer' in the 1970s, we have killed billions of mice and hamsters that were already poisoned and induced with cancer only to slaughter them in order to put their tissue under a microscope. For what? Do we still have cancer? Yes. The animal experience does not translate to humans." But both Raines and Campbell champion the importance of the research process, encompassing *in vitro*, animal and clinical studies.

Knowing the serious consideration given to animal welfare and the time and effort dedicated to proper animal care and regulatory compliance at most research institutions, *Lab Animal* readers may squirm while reading about the incidents at research institutions that are recorded surreptitiously and then broadcast, touching off the public outcry in *Uncaged*. They may also bristle at the description of animal researchers offered by the leader of the American Humane Fund: "old, white-guy vivisectionists who conduct animal torture experiments in the dimly lit, deep, damp and dank laboratory dungeons." One wonders what implications these descriptions may have for the public's perception of animal research. In this way, perhaps *Uncaged* underscores the need to educate people on the necessity of animal research and the responsibility with which it is carried out.

Uncaged raises provocative questions not only about the ethics of animal research, but also about the value of basic research, the risks of relying on profit-driven private research, the benefits of international cooperation and competition, the ownership of results and the financial and human costs of being ill-prepared to respond to emerging threats. McKellips chooses an acute scenario, befitting a fast-paced thriller. But many of these questions apply equally to the chronic health threats that we face and the current and future research needed to address them.

Harrington is Editor of *Lab Animal*.