

Is animal research necessary?

Editorial

In my opinion, the answer is *yes*.

I feel it is arrogant to think that animal-research is unnecessary. No computer simulation or *in vitro* alternative to *in vivo* studies exists today. What is the specific reason I feel some animals must die for the benefit of other animals and for humans?

Because of animal rights?

Chapter 3 of the comedian, Dennis Miller's book *Ranting Again!* is titled *Animal Rights*. Here are a few-edited a bit-paragraphs:

Can I be so bold as to advance the radical notion that humans earn rights by living by a commonly accepted set of rules? All you have to do is go to the zoo and watch the monkeys... to know they just don't play by our rules... Now, I don't want to get off on a rant here, but I was viewing a nature documentary on PBS with my son the other night. I wanted to impart into young Simba a sense of awe for the harmony of the cosmos. But as we watched the lion gnawing on a still-breathing gazelle while vultures lingered stoically for their shot at the fly-riddled carrion, it occurred to me that it might be better to install the V chip after all.

Because upon witnessing footage so savage that it would have ended up on Sam Peckinpah's cutting room floor, I recognized that on our worst day humans are eminently more good-natured than animals. Ever see a cat with a mouse? It makes Charlie Manson look like Mike Farrell. And yet there are people out there, sane, rational beings who insist that humans should render unto animals all the basic rights. Rights, it would appear, ninety-nine percent of humanity doesn't even luxuriate in.

Because of human hypocrisy?

Dr. Hal Herzog, in his book *Some We Love, Some We Hate, Some We Eat: Why It's So Hard to Think Straight About Animals*² concludes that we humans have a "flagrant moral incoherence" about animals. In his book, Herzog tackles such emotionally-charged questions as:

- i. Why can a puppy be regarded as a family member in Kansas, a pariah in Kenya, and lunch in South Korea?
- ii. Who enjoyed a better quality of life-the chicken on a dinner plate or the rooster who dies in a Saturday-night cockfight?
- iii. What do we make of the fact that in 1933 the Nazi party enacted the world's most progressive animal protection legislation?

Because of history?

I encourage you to examine a list of the world's greatest medical advances since 1900.³ Of the 106 Nobel Prizes awarded for Medicine or Physiology since 1900, 94 were dependent on research using animals. Every one of the Nobel Prize in Medicine or Physiology awarded for the past 30years used animals.

Recent history is disquieting to me. The National Institutes of Health (NIH) has stopped all their research using chimps and has begun to phase out selected investigations that employ non-human

Volume 3 Issue 1 - 2016

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Received: December 23, 2015 | **Published:** January 19, 2016

primates. One of NIH's recent actions⁴ followed an aggressive yearlong campaign by People for the Ethical Treatment of Animals (PETA). PETA ran extensive ad campaigns, successfully pushed for a congressional inquiry, and-most recently-sent hundreds of letters to the neighbors of Suomi and NIH Director Francis Collins, accusing the lab of *Cruel psychological experiments* and revealing both the primary investigator's and Collins's home addresses and telephone numbers.

If an institutional animal care and use committee (IACUC) is uncomfortable allowing a particular study to be performed on a chimp (or a rhesus or a marmoset) then I feel that study should not be permitted to be performed on a rat or a mouse. To me, the higher ground is that all of life is sacred-this in accordance to all religious tradition-and it is discriminatory to favor one species over another. The source-code for all living things is DNA and we share 50 to 60% of our genes with a banana.

No. It is because of systems biology

Systems biology is the computational and mathematical modeling of complex biological systems. Systems biology...is about putting together rather than taking apart, integration rather than reduction. It requires that we develop ways of thinking about integration that are as rigorous as our reductionist programs, but different....It means changing our philosophy, in the full sense of the term.⁵

As 2015 comes to a close, we humans are capable of reverse engineering most things, i.e. we can take apart most things (reductionism) and put them back together again. However, as of yet, we are unable to bring back to life any living organism that has died or that we have killed. It is my opinion that we are decades from having accurate mathematics for the interworking of a single prokaryotic cell-even more time-removed for the inner workings of a single eukaryotic cell. Until then, well-performed humane animal research will continue to be necessary.

Acknowledgements

None.

Conflict of interest

Author declares that there is no conflict of interest.

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