

### Animal Research: is it worth it?

Today's society is in a constant race to discover how disease affects the body and how to reverse those ill effects associated with disease. To begin we must understand the etiology of the disease, then its effects, and lastly how to treat the condition. At each of these steps, an animal model is often used, stirring the controversy involving the benefits from animal research and is it necessary to save human lives? The answers to these questions are often highly variable leaving those on one side asking "is it worth it"? While the other side pushes for more research and more answers.

The Animal Welfare Act of 1966 currently strives to establish acceptable standards for the treatment of animals, including those used in research. However, the animals exempt from this act include laboratory bred mice, rats, birds, cold-blooded animals, and farm animals. Therefore, of the estimated 20-25 million animals used each year in research, only a small percentage of laboratory animals are actually protected under this act. It is important to note, however, that regardless of not being protected under this act does not mean that all of these animals are being ill-treated. On the contrary, many research institutions, in particular universities, are often strictly self-regulated.

The Humane Society of America opposes the use of all animals in research and takes a strong position especially on the use of non-human primates. They argue that despite the reduction in the use of dogs and cats in research, the numbers of rodents used are still staggering. Also despite stricter regulation policies, by amending the Animal Welfare Act, as well as the addition of other new laws, as recently as May of 2007, a medical doctor induced a brain

aneurysm in an anesthetized dog to show how a medical device could be used by a group of salespeople. The salespeople, who had no knowledge of medical training, were allowed to attempt the procedure and afterwards the dog was euthanized. While it could be argued that this dog had no knowledge of its fate and did not suffer during the procedure, the use and ending of its life in such a manner could be considered unwarranted.

Those people that feel animal model based research is necessary, are often in favor of “the three Rs”, Replacement, Reduction and Refinement, originally established by Russell and Burch in 1959. This idea while condoning the use of animals, pushes towards their eventual removal from research or at least the removal of those animals considered to be sentient. Animals considered being less-sentient such as invertebrates, early stage vertebrate embryos, and microorganisms are often those used as replacements. While this is not considered as the ultimate solution, overall the public at large views it as being more acceptable.

The public opinion of animal use in research is often based on a mix of facts and misconceptions. Often those extremist groups strongly opposed to research, act out against institutions by releasing animals and destroying property, which in turn causes labs to have to be more secretive and hidden from public view. This becomes a vicious cycle in which neither side gets to see the whole picture. In certain cases the release of laboratory animals such as Severe Combined Immunodeficiency, “SCID” animals has resulted in their death and undo suffering. While extremist groups may have good intentions, those animals released by them are often worse off outside than they were inside the laboratory.

In my research experience, at the University level, I found strict policies in place from many sectors including the federal, state, and the university itself. Funding for animal based research is often difficult to acquire, and once a lab has it, their experiments are regulated by the

Institutional Animal Care and Use Committee, (IACUC). Experimental protocols must be approved by a veterinarian, and if an alternative to an animal based model has been found to be acceptable, that direction is encouraged to be taken instead. The care and housing of a colony of thousand mice can cost thousands of dollars a month, so the “3 Rs” are often implemented to offset costs. I found the animals which included mice, rats, rabbits, and chickens, at the University I worked for to be well looked after and any undo suffering was avoided. While animals were still sacrificed on a regular basis, those that performed the experiments were always supervised initially and well trained.

When left with the dilemma of whether animal research benefits human society and if it necessary to save human lives, we must examine all of the achievements that would not have been possible without the use of animals. We have come a long way from the barbaric practices of the ancient Greeks and Romans, and while there is still suffering at some levels, we have made great strides in improving conditions. Animal based research, while often having the primary goal of human societal benefit, still can also benefit animals. For example, a chemotherapeutic drug developed in animals for use in people, may come back and be used by veterinarians. While the use of animals in research will continue to incite controversy, as long as both sides remain open, steps can be made to minimize animal suffering, until a time is reached when the service of animals is no longer required.

## Sources

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