

# DON'T BE FOOLED

Science clearly proves that animal testing does not make new drugs safe or effective and that animals cannot predict human response to disease. In light of this, people whose livelihoods are affected, directly or indirectly, by animal-based research and testing must justify the practice using what is called *fallacious reasoning*. Fallacious reasoning is the opposite of *critical thinking*, which involves thinking about a subject from all angles, using all the available data, and not being naïve.

Critical thought includes defining words very precisely, evaluating sentences and paragraphs to find out what the authors are and are not actually saying, and judging whether fallacious reasoning is used to prop up the argument.

In essence, critical thinking is a system that allows people to obtain the correct answer and evaluate claims and other people's opinions. It also includes accepting unwelcome revelations about one's own positions.

Because fallacies are used so frequently to defend animal-based research, this brochure will list some examples.

Some of the material in this brochure comes from the book *FAQs About the Use of Animals in Science: A handbook for the scientifically perplexed* by Greek and Shanks (University Press of America 2009).

# AMERICANS FOR MEDICAL ADVANCEMENT

[www.AFMA-curedisease.org](http://www.AFMA-curedisease.org)

Science is on the verge of offering *personalized medicine*. This is medical treatment tailor made for you personally. Not for your mother or father or even your twin. This is in stark contrast to medical treatments based on and tested on animals. For more information please consider reading:

## *FAQs About the Use of Animals in Science: A handbook for the scientifically perplexed*

by

Ray Greek MD and Niall Shanks PhD

AFMA realizes that the science is complex and that not everyone has the background to fully comprehend all the controversies in science. This brochure is not meant as an all-inclusive examination of the topic but rather as a limited introduction to the issue. For the more scientifically inclined, we recommend the book *Animal Models in Light of Evolution* by Shanks and Greek.

# FALLACIES AND OTHER NONSENSE

## **The appeal to popularity fallacy**

This fallacy uses an appeal to mass sentiment, rather than reason and evidence, in order to win support for a claim or argument. Consider this statement:

“The vast majority of people support animal-based research. Hence such research is justified.”

This does not address whether the vast majority of people are correct. Recall that in earlier times, large numbers of people believed all sorts of things we now know to be false, such as the once-held belief that the earth is flat.

Here is another example from the media officials at an American university:

“To use violent tactics aimed at halting animal research is to take away hope from millions of people with cancer, AIDS, heart disease and hundreds of other diseases.”

The appeal to popular sentiment is obvious; everyone agrees that violence is bad and that taking away hope is bad. But there is no proof that “halting animal research” will delay the time when we see cures for AIDS, heart disease, and other afflictions.

## **The fallacy of false dichotomy**

This fallacy is also known as the *black-and-white fallacy* because it is based on the question, “Is a zebra black or white?” It occurs when someone offers a choice between only two claims, when these claims are not the only relevant choices. Consider this statement: “Animals are either like humans or they are not.” The fact of the matter is that animals are like humans in some ways but not others. When discussing the ability of animal models to predict human outcomes, the dissimilarities outweigh the similarities.

## **The appeal to pity fallacy**

This fallacy attempts to gain the sympathy of the listener instead of addressing the issue in question, thereby misdirecting the argument from the relevant issues to irrelevant ones. In an appeal to pity fallacy, advocates of animal-based studies use descriptions of children with birth defects to argue that more money should be funneled to animal experiments involving the study of birth defects. Their argument ignores the question of whether or not animal experiments are efficacious in this context.

## **The fallacy of insufficient statistics**

The fallacy of insufficient statistics assumes that a few instances of success or failure are representative of all such instances. Examples: “I bought this one coat from the ABC store and it wore out too soon. Therefore I will not shop at the ABC store again because their products are faulty.” And: “Animal experiments helped prove that the heart pumps blood; therefore, all animal experiments are useful.”

Cherry picking data is another example of the fallacy of insufficient statistics. If you are presented with the results of 100 cases comparing animal outcomes with humans and you only include in your analysis the 10 cases where animals and humans shared the same outcome while ignoring the 90 times where they did not, you are cherry picking the data.

## **The false cause fallacy**

This fallacy suggests that a *casual* relationship is in fact a *causal* one. Examples include:

Every time I wash my car it rains. Therefore, my washing my car causes it to rain.

Every Nobel Laureate in medicine has done research on animals; therefore, the individual could not have won the Prize without using animals.

## **The straw man fallacy**

The straw man fallacy is an argument made whereby a person misquotes, misrepresents, exaggerates, or otherwise distorts his opponent’s argument so as to make it appear ridiculous and hence easy to disprove; like knocking down a straw man. Example: While animal activists say that animals are not predictive for human drug and disease response, an advocate for animal-based research will say that: “Animal activists really think that animals are far more intelligent than humans, that animals should be in charge of humans, and would rather save rats than babies. Therefore society should oppose them.” Since this not what the animal activist said, indeed is a gross misrepresentation of what the animal activist said, this a straw man fallacy.

**The above are just some of the ways the vested interest groups misrepresent the**  
*facts of animal-based research.*

**Don’t be fooled!**