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Fact vs. Myth

About the Essential Need for Animals in Medical Research

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Animals play an amazing role in our lives. Whether they're frolicking in the wilderness, assisting in a dramatic search and rescue operation or working with police and fire investigators to solve a crime, animals make our world happier, healthier and safer.

Many Americans form deeply satisfying, joyful relationships with their pets and often consider them family members. A growing number of employers even permit cats and dogs in the workplace because the animals appear to enhance employee performance. The visually and hearing impaired, as well as those living with epilepsy, look to animals for invaluable assistance with daily living. And chronic care facilities increasingly rely on many kinds of animals to provide loving companionship for the sick and the lonely.

Animals also play a vitally important and essential role in medical research—for human and animal health.

Thanks to recent scientific breakthroughs, medical researchers are closer than ever to finding new treatments and cures for myriad diseases shared by humans and animals. The mapping of the human genome promises to unravel many medical mysteries and set the stage for an exciting new era in genetic treatment of disease. Microbiology and bioengineering also hold great promise for the future of medicine. Soon, it may be possible to implant microchips that deliver medication around the clock, as needed, to humans and animals. One day, routine surgical procedures may be able to correct kidney and liver failure, birth defects, visual impairment and learning disorders. There is also real potential for reducing infection rates, eliminating AIDS, curing cancer and re-growing damaged spinal cord nerves to reverse paralysis.

What is important to remember is the irrefutable fact that each and every breakthrough will be developed with the help of research animals—as has virtually every major medical advance of the past century.

Scientific progress, for human health and animal health, requires animal research because there is no complete replacement for a living system on which to conduct basic research. In recent years, a number of non-animal procedures have been developed and that number continues to grow. Indeed, whether they are working on human health or animal health studies, scientists place a high priority on "The Three Rs"—reduction, replacement and refinement. Here in the United States, our scientific and medical research communities are committed to supporting the development of techniques that:

- Reduce the number of higher species used
- Replace animals with other models whenever possible
- Refine tests to ensure the most humane conditions possible

Still, it isn't easy to reconcile our love and appreciation for animals and the essential need for animal research. Knowing that research animals are treated responsibly, ethically and as humanely as possible strengthens our understanding—as does separating the facts from the myths.

FACT

FACT

Physicians and scientists overwhelmingly agree that animal systems provide invaluable and irreplaceable insights into human systems because there are striking similarities between the genetic and physiological systems of animals and humans.

MYTH: Computer models and cell cultures can replace animal testing.

While medical and scientific advances achieved through animal research are frequently *supplemented* by knowledge obtained through non-animal methods—such as computer models, *in vitro* research, clinical observation, epidemiology, genetic research and post marketing drug surveillance—these alternative methods serve only as adjuncts to basic animal research.

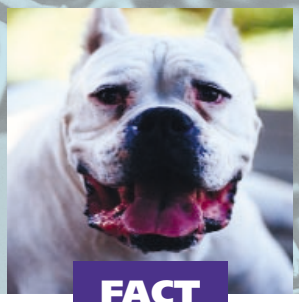
As yet, **there is no complete alternative to animal research**. There is still an essential need to test drugs, medical devices and other promising treatments on some animals before they are tested on humans since even the most sophisticated technology models cannot mimic the complex cellular interactions that occur in a living system.

Computer models as well as cell, tissue and organ cultures, significantly reduce reliance on research animals and as more is learned about them, their limitations may be overcome. Conceivably, the day may come when animal research is no longer necessary.

Practically *all* research animals are rodents—mice and rats—bred for this purpose. Dogs, cats and non-human primates *together* account for **less than one percent** of the total and their number has been declining for over 20 years. Since 1979, the number of dogs needed in animal research has declined by 66 percent and the number of cats needed has declined by 69 percent. Primate use, representing 0.3 percent, has remained relatively constant—in the 50,000 range—for the past decade.

MYTH: Dogs, cats and monkeys are used more than any other animal in medical research.

There is an essential need for canines in the study of lung and heart disease as their cardiovascular and respiratory systems closely match those of humans. Nobel Prize winning research on the immunological basis for organ rejection was done with dogs. Similarly, Nobel Prize winning research with felines has contributed enormously to our understanding of eye disorders. There is an essential need for non-human primates, mainly rhesus monkeys, in the study of arteriosclerosis, reproductive disorders, Alzheimer's, Parkinson's disease and infectious diseases such as viral hepatitis and AIDS.



FACT

FACT

Despite frequent, unsubstantiated accusations to the contrary, there is absolutely no evidence to support the claim that millions of dogs and cats are taken from homes and shelters and sold to laboratories.

MYTH:
Lost and stolen pets are sold to laboratories.

In fact, scientists neither *need* nor *want* to do research on pets.

According to United States Department of Agriculture (USDA), one of several government agencies overseeing the use of animals in medical research, 70,541 dogs and 23,238 cats were involved in biomedical research in 1999. The vast majority of these animals were bred specifically for research. The remainder was acquired directly from the "death row" of animal pounds or purchased from one of about 35 USDA-licensed and regulated dealers. In 1999, in quarterly "trace back" audits of these dealers, the USDA found **no evidence of theft**.

The Foundation for Biomedical Research recommends that all companion animals wear collars and identification tags at all times. Tags, implanted microchips and even tattoos can help to re-unite a lost cat or dog with its family.

Federal regulations governing the care and use of animals in biomedical research are more extensive than those covering human research subjects! The Animal Welfare Act sets high standards of care for research animals with regard to their housing, feeding, cleanliness, ventilation and medical needs. It also requires the use of anesthesia or analgesic drugs for potentially painful procedures and during post-operative care. Most importantly, research institutions are required—by law—to establish an Institutional Animal Care and Use Committee (IACUC) to oversee their work with animals. And IACUCs require researchers to justify their need for animals; select the most appropriate species and use the fewest number of animals possible to answer a specific question.

MYTH:
There are no laws or government regulations to protect research animals.

The U.S. Public Health Service (PHS) Act requires that all institutions receiving research funds from the National Institutes of Health, the Food and Drug Administration or the Centers for Disease Control adhere to the standards set out in the *Guide for the Care and Use of Laboratory Animals*. Under the PHS policy, institutions must follow detailed animal care recommendations and establish an IACUC to ensure that **all animals are treated responsibly and humanely**.

FACT

FACT

MYTH: Researchers are indifferent to the well being of animals.

For humane, compassionate and scientific reasons, researchers are deeply concerned about the condition of the animals they study. This is not a controversial position—there is no constituency for inhumane or irresponsible treatment. Poor care results in unreliable research data. For results to be valid, animal subjects must be in good condition and appropriately healthy.

Also, pain and distress are thought to have a negative impact on the immune system so researchers are careful to protect their animals from undue stress.

In the words of the esteemed Dr. Michael DeBakey, Chancellor Emeritus of the Baylor College of Medicine and Director of the DeBakey Heart Center: "These scientists, veterinarians, physicians, surgeons and others who do research in animal laboratories are as much concerned about the care of the animals as anyone can be. Their respect for the dignity of life and compassion for the sick and disabled, in fact, is what motivated them to search for ways of relieving the pain and suffering caused by diseases."

It is well recognized that animals have been indispensable to the cause of medical and scientific research. We have a moral duty to provide them **the best care and treatment possible**.

MYTH: Research animals are kept in pain.

The vast majority of biomedical research **does not result in significant pain or distress** to research animals.

The 1999 USDA Annual Report reveals that 55 percent of all research procedures with animals involved no more than slight or momentary pain or distress (i.e.: an injection). Thirty-six percent of the research procedures employed anesthesia and postoperative painkillers.

In nine percent of the procedures, neither anesthesia nor pain medication could be used, as they would have interfered with research results. However, when this is the case, pain is minimized as much as possible. One example of this kind of test is the study of pain itself, a major health problem for humans and animals and an area in which considerable progress has already been made.

FACT

FACT

Manufacturers of food, drugs, household goods, cosmetic products, pesticides and other chemicals have **an ethical and legal obligation to protect consumers** from hazardous consumer products. They are able to meet that obligation through animal testing, for which there is no completely valid alternative.

MYTH:
There is no need to test consumer products on animals—some companies don't.

Some companies promote their products by claiming they do not test on animals. This can mislead consumers into believing that animal testing is not necessary when in fact, **such products—or their ingredients—were previously tested on animals, probably by another company and found to be safe**. Once an ingredient or formula has been tested and proven safe, it rarely has to be tested a second time.

Household product testing not only determines a product's safety, it also evaluates the consequences of its misuse. These important data are invaluable to the **poison control centers** that dispense advice in emergency situations such as when a small child or family pet swallows a pharmaceutical or cleaning product.

The vast majority of Americans supports improving human and animal health through the responsible and humane use of animals in medical and scientific research. And most Americans love animals! The two concepts are not mutually exclusive—when you know the facts.

MYTH:
If you really love animals, you support the animal rights movement and its efforts to end animal research.

Though it isn't easy to reconcile our love and appreciation for animals and the essential need for animal research, knowing that the animals are treated responsibly, ethically and as humanely as possible strengthens our understanding and respect for animal research.

Those who seek to end animal research—either because they choose to reject its well established validity and usefulness or because they believe the life of a rat is equal in importance to the life of a child—have gone to shocking lengths to subvert medical and scientific progress. University laboratories have been broken into, animals stolen and years of research data destroyed. Though many animal rights organizations refuse to condemn such criminal behaviors, law-abiding Americans have not, do not now and will not in the future tolerate violent and radical campaigns against the biomedical research community.

The Foundation for Biomedical Research (FBR) is a nonprofit, educational organization that was established in 1981 to improve the quality of human and animal health by promoting public understanding and respect for the humane and responsible use of animals in scientific and medical research.

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