

# **Frequently Asked Questions: Animals in Research**

*January 2008*

## **1. Why can't alternatives such as computer models and cell cultures replace animal research?**

Investigators who plan to do animal research are required to consider computer models and cell cultures, as well as other research method to answer their questions. As part of their proposals they must indicate what part of the research can be done on other models, and what additional answers can only be obtained from animal studies. Alternate studies like those are excellent and less expensive avenues for reducing the number of animals needed. For example such methods are used to screen and determine the toxic potential of a substance in the early stages of investigation, thereby reducing the total number of research animals needed. The final test, however, has to be done in a living animal. Even the most sophisticated technology cannot duplicate the complicated interactions among cells, tissues and organs that occur in humans and animals. Surprising results often occur in an animal model that were not anticipated in the other models, with critical implications for extending the research . Scientists must understand these interactions before introducing a new treatment for human beings. In addition research animals are expensive to acquire and care for; they are only used when no satisfactory alternatives are available.

## **2. How can research results derived from animal testing be applied to humans?**

There are remarkable genetic, anatomic and physiologic similarities between humans and some animals. For example, much of what we know about the immune system has come from studies with mice; much of what we know about the brain, nerves and muscles has come from studies with rats, mice, dogs and cats. The recent development of Myozyme through animal studies has led to a cure of a previously fatal disease in children. In addition, research results from animals also provide the information necessary to design human trials of new devices, drugs and procedures. For both scientific and ethical reasons it is important to be able to gauge how a new drug or procedure will affect a whole biological system before using it on humans. Laboratory animals are an integral part of the research process. In fact, every major medical advance in the care and treatment of neurologic diseases in past decade is due, at least in part, to research with animals.

## **3. What assurances exist that stolen or lost pets are not used in research?**

While some research requires that dogs and cats are used, the vast majority of laboratory animals are rats and mice specifically bred for research. Increasing numbers of the dogs and cats needed for research are also bred for that purpose. State laws and local policies prevent many animal pounds and shelters from providing dogs and cats to research facilities. The animal dealers (“USDA Registered Class B”) have decreased in number from over 100 to only 10 remaining in the United States. Research facilities can obtain

dogs and cats only from specified sources and must comply with detailed record-keeping and waiting-period requirements. In addition, USDA conducts unannounced inspections of research facilities for compliance to help ensure research animals are not missing pets.

#### **4. Why is it important to conduct product safety tests on animals when "cruelty-free" products are available?**

In the recent past consumers were exposed to products that were not tested in animals, resulting in reports of permanent harm, including blindness. Product safety testing ensures that products are safe when used as directed and provides scientific data for poison control centers and emergency room physicians in the event a product is misused. Adequate testing of products, including "cruelty-free" products is both a moral and legal obligation to the public. The term "cruelty-free" is often misused and misunderstood. Companies that claim they conduct no animal testing either contract testing to an outside laboratory or use compounds known to be safe through previous animal testing.

#### **5. Aren't the animals in laboratories suffering and in pain?**

Investigators need to make certain that the animals they study are not suffering or in pain. Any pain that an animal might suffer, for example in testing pain medications, is strictly controlled by Federal laws, the Animal Welfare Act and the Public Health Service Act. These laws also regulate caging, feeding, exercise of dogs and the psychological well-being of primates to assure that the animals are as close to normal as possible. Further, every organization conducting animal research must establish an animal care and use committee that includes a veterinarian and a public member not associated with the organization. This committee must approve, and monitor every animal experiment conducted by their staff to ensure optimal animal care. The highest quality of animal care and treatment is necessary for two reasons. First, the use of animals in research is a privilege, and those animals that are helping us unlock the mysteries of disease in animals and humans deserve our respect and the best possible care. Second, a well-treated animal will provide more reliable scientific results, which is a goal of all researchers.

#### **6. What happens to animals once an experiment is completed?**

The majority of animals under study must be euthanized in order to obtain tissue for further study of the effects of the experiments. Euthanasia induces a painless death. The American Veterinary Medical Association publishes the acceptable euthanasia methods. Those animals involved in experiments that do not require tissue for studies may take part in additional experiments. Federal regulations do not allow an animal to be used in more than one major surgical procedure unless it is critical to the information needed for improving the care of illness or injuries in animals and humans.

#### **7. Why are increasing numbers of animals used in research?**

The number of animals used in research has actually decreased in the past 20-25 years. Best estimates for the reduction in the overall use of animals in research range from 20%

- 50%. This reduction is more obvious when comparing species. For example, best government estimates report that the number of cats used in research has dropped 66% since 1967. Many factors, including the increase in non-animal adjunct testing and the refinement of laboratory animal medicine, have resulted in fewer animals used for many research projects.

#### **8. Do we really have the right to experiment on animals? What about their rights?**

The use of animals in research is a privilege that must be carefully guarded to assure human and animal relief from suffering. Animal research studies can reduce human and animal suffering many times over and therefore it would be irresponsible and unethical to not conduct such studies. The recent and ongoing development of preventions, treatments and cures for Alzheimer's disease, AIDS, Parkinson's disease, brain cancers, epilepsy, brain infections, spinal cord injuries, stroke, multiple sclerosis muscular dystrophy and many other neurological diseases has and will continue to require animal research. In fact, research on animals is an obligation. The Nuremberg Code, drawn up after World War II as a result of Nazi atrocities, states that any experiments on humans "should be designed and based on the results of animal experimentation." The Declaration of Helsinki, adopted in 1964 by the 18th World Medical Assembly and revised in 1975, also states that medical research on human subjects "should be based on adequately performed laboratory and animal experimentation." It is crucial to distinguish between animal rights and animal welfare. The scientific community supports animal welfare, which means guaranteeing the health and well-being of these animals.