

## The Importance of Animals in Biomedical Research

### American Association for Laboratory Animal Science

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### The Importance of Animals in Biomedical Research



Throughout history, scientists have been solving medical problems, developing new techniques and treatments, and curing diseases – all by using animals in biomedical research.

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Most of our children have not even heard of, much less know anything about, many of the diseases our ancestors experienced first-hand. Why? They have either been eradicated or can be controlled due to findings from research using animals.

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Because of biomedical research both humans *and* animals now have:

- Life-saving surgical procedures;
- Cancer therapies;
- Organ transplantation;
- Vaccines;
- Safe consumer products; and
- Treatments and cures for countless other medical disorders and diseases.



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"Virtually every major medical advance for both humans and animals has been achieved through biomedical research using animal models to study and find a cure for a disease and through animal testing to prove the safety and efficacy of a new treatment."

C. Everett Koop, M.D.  
Former U.S. Surgeon General

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#### Why are animals used in research?

- organs and body systems similar to humans and other animals;
- susceptible to the same diseases that affect humans;
- short life span allows animals to be studied throughout their entire life;
- environment easily controllable to keep experimental variables to a minimum.

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#### What animals are used in research?

- Laboratory mice are used in research more often than any other animal species.
- These mice, *plus* other rodents such as rats and hamsters, make up more than 90% of the total number of animals used.
- Other animal species, *including* dogs, cats, rabbits, farm animals, fish, frogs, birds, nonhuman primates, and many others, make up the remaining 10% of animals used in research.

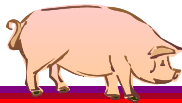
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#### When are animals used in research?

- following literature searches and comparison of data to previous research;
- following computer model simulations and cell and/or tissue culture research;
- following an IACUC-approved animal use protocol;
- following extensive training and education on the handling, care, and use of animals;
- but, *before* HUMAN clinical testing.

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#### Who cares about the research animals?

- Research institutions;
- Scientists and their research staff;
- Veterinarians, laboratory animal technicians, cagewashers, and other animal care personnel;
- Federal and local government agencies;
- Scientific organizations; and most of all,
- Patients.

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Some of the many health problems affecting *both* humans and animals include:

- |                 |                  |              |
|-----------------|------------------|--------------|
| • allergies     | • heart disease  | • glaucoma   |
| • arthritis     | • kidney disease | • diabetes   |
| • birth defects | • Lyme disease   | • bronchitis |
| • cancer        | • ulcers         | • leukemia   |
| • tuberculosis  | • measles        | • deafness   |
| • asthma        | • influenza      |              |
| • epilepsy      | • hypertension   |              |

### The Importance of Animals in Biomedical Research

#### Frequently Asked Questions (FAQs) about the use of animals in medical research:

- How can we learn from medical research using animals and help humans?
- How can we be sure that lost or stolen pets are not used in research?



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#### More FAQs:

- Why do veterinarians, who are supposed to take care of sick animals, work with researchers who do experiments on them?
- Aren't the animals in laboratories suffering and in pain?

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#### More FAQs:

- Why is it important to conduct product safety tests on animals when “cruelty-free” products are available?
- What happens to animals once an experiment is completed?

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#### More FAQs:

- Why are increasing numbers of animals sacrificed for research, especially for repetitive experiments?
- Why can't alternatives such as computer models and cell and tissue cultures replace animals in medical research?

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#### More FAQs:

- Do we really have the right to experiment on animals? What about *their* rights?
- Don't people choose careers in medical research using animals because it is an easy way to receive funding dollars and make high salaries?



### The Importance of Animals in Biomedical Research

With the knowledge gained through research on animals, we can continue improving the lives of not only humans, but our pets, wildlife, and other animals.

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#### AALAS Mission Statement

AALAS advances responsible laboratory animal care and use to benefit people and animals.



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