21 reasons why we need animals in research

These points have been drawn up to provide an accessible resource for anybody discussing animals in research. We are happy to take for additions to this list.

General points

1. Animal research has played a vital part in nearly every medical breakthrough over the last decade.
2. Nearly every Nobel Laureate in Physiology or Medicine since 1901 has relied on animal data for their research.
3. We share 95% of our genes with a mouse, making them an effective model for the human body.
4. Animals and humans are very similar; we have the same organ systems performing the same tasks in more or less the same way.
5. Animals suffer from similar diseases to humans including cancers, TB, flu and asthma.
6. All veterinary research has relied on the use of animal research.
7. While non-animal methods play an important part in biomedical research, they cannot replace all use of animals.
8. In vitro methods and computer modelling play an important part in complementing data from animal models.
9. Many veterinary medicines are the same as those used for human patients: examples include antibiotics, pain killers and tranquillisers.
10. Modern anaesthetics, the tetanus vaccine, penicillin and insulin all relied on animal research in their development.
11. Modern surgical techniques including hip replacement surgery, kidney transplants, heart transplants and blood transfusions were all perfected in animals.
12. Scanning techniques including CT and MRI were developed using non-human animals.

Some Medical Examples

13. Thanks to animal research, primarily in mice, cancer survival rates have continued to rise.
14. Herceptin – a humanised mouse protein – has helped to increase the survival rate of those with breast cancer; it could not have been attained without animal research in mice.

15. Thanks to research on animals leading to the development of Highly Active Anti-Retroviral Therapies (HAART), AIDS is no longer the death sentence it was 30 years ago.
16. While Fleming discovered penicillin without using animals, he shared the Nobel Prize with Florey and Chain who, by testing it on mice, discovered how penicillin could be used to fight infections inside the body.
17. Animal research is responsible for the development of asthma inhalers; and the drugs that treat asthma. This common condition is still responsible for deaths every year.
18. Animal research has helped develop modern vaccines including those against Polio, TB, Meningitis and, the human papillomavirus (HPV) which causes most forms of cervical cancer.
19. The development of Tamoxifen in animals led to a 30% fall in death rates from breast cancer in the 1990s.
20. Type I diabetes sufferers rely on Insulin, which was developed through experiments in rabbits and dogs.
21. Smallpox has been eradicated from Earth thanks to research on animals.