

Longwood University

Digital Commons @ Longwood University

Fall Showcase for Research and Creative Inquiry

Office of Student Research

Fall 11-18-2020

Comparative Analysis: Animal Research versus Animal Testing

Hannah VanHoose
Longwood University

Follow this and additional works at: https://digitalcommons.longwood.edu/rci_fall



Part of the [English Language and Literature Commons](#)

Recommended Citation

VanHoose, Hannah, "Comparative Analysis: Animal Research versus Animal Testing" (2020). *Fall Showcase for Research and Creative Inquiry*. 50.
https://digitalcommons.longwood.edu/rci_fall/50

This Poster is brought to you for free and open access by the Office of Student Research at Digital Commons @ Longwood University. It has been accepted for inclusion in Fall Showcase for Research and Creative Inquiry by an authorized administrator of Digital Commons @ Longwood University. For more information, please contact hamiltonma@longwood.edu, alwinehd@longwood.edu.

Comparative Analysis: Animal Research versus Animal Testing

Author: Hannah VanHoose

English 400 Active Citizenship and Writing

Abstract

Currently, there is a push to eliminate the use of animals in all experimental settings. Animal rights organizations like PETA and the Animal Welfare Institute consistently advocate for the well-being of animals in many aspects, including in the laboratory setting. While it is necessary to eradicate the maltreatment of animals found in unregulated testing centers, it is important to distinguish the differences between testing and research involving animals. The focus of this research is to demonstrate that while it is essential to cut down on harmful testing, the use of animals in medical research is crucial.

What is Animal Testing?

While testing and research sound the same, there are several factors that distinguish between the two. Animal testing can be defined as experimental procedures done using animals to evaluate the effectiveness of a product. According to Cruelty Free International, the following are companies located in the United States that continue to test their products using animals in 2020.

- Estee Lauder – Beauty, Skin Care, and Makeup
- Glam Glow – Skin Care and Beauty
- Maybelline – Beauty and Makeup
- Clinique – Beauty, Skin Care, and Makeup
- Victoria's Secret – Fragrance and Skin Care



In the cosmetic industry, there are several ways to safely test new products that exclude the use of animals. The following are Food and Drug Administration (FDA) approved options.

- Human volunteers or donated human tissue
- Use of raw materials and organic ingredients
- Research additives and ingredients that have been already been proven safe

The use of animals in testing cosmetics is harmful and unnecessary, especially with modern technology. Avoid supporting companies that continue to test using animals by searching for the Cruelty Free stamp on packaging.



What is Animal Research?

Animal research in the medical field cannot be defined in one, all inclusive sentence. Rather, animals are used in many facets including, but not limited to:

- Pharmaceutical therapies
- Surgical procedures and treatments
- Behavioral studies
- Preventative treatment – vaccinations

Did you know?

The knowledge gained from #animalresearch has dramatically extended the human life span from 47 years in the 1900s to 78.8 years today!



What really sets animal research in the medical field apart from animal testing in the cosmetic industry are the ethical guidelines set in place. Medical laboratories rely on grants to fund their research, which mainly come from the National Institute of Health. In order to receive these grants, laboratories must follow the specific guidelines set in place including the following:

- Use of animals must be supervised by a veterinarian or trained specialist
- Animals' environment and care are appropriate for species and contribute to the animals' well-being
- Animals are used only when it is scientifically and ethically justified
- Surgical or painful procedures are not to be performed on unanesthetized animals

There are many more specifications regarding animal care and procedures listed on the National Institute of Health website.

Animal Research Continued

While there are various options for testing products like fragrances and cosmetics, the use of animals for medical experimentation is not only necessary but required. According to Dr. Bryda at the Rat Resource and Research Center located at the University of Missouri, evaluating the effectiveness of medications and surgical procedures must be done on a living organism.



Aside from animals, the only other living organisms that qualify for research would be humans, which is an ethical and legal infringement of human rights. Other reasons for using animals include but are not limited to:

- Animals have a faster regeneration rate, allowing for quick and effective results
- The use of animals is cost effective and accessible
- Rabbits and mice have comparatively similar anatomy to humans



There have been countless major medical advancements that would not be possible without the use of animals. The following is just a small list of groundbreaking discoveries

- Pancreatic Islet Transplant for Type I Diabetes - University of Virginia. Marcie McDuffie, MD
- Introduction of the Polio Vaccine using Monkeys, Dogs, and Mice - Dr. Jonas Salk
- Aortic Valve Replacement using Pig Valves - multiple contributing institutions
- Identification of Genes Responsible for Deafness using Mice – multiple contributing institutions
- Introduction of Antibiotics using Cattle, Sheep, and Pigs - Alexander Fleming
- Post-Exposure Prevention of HIV using Mice - multiple contributing institutions

Conclusion

While advocating for the welfare of animals important, it is vital to know the difference between the use of animals in testing and research. Animal rights organizations do not distinguish between the two, which threatens medical research. These advocates lump all forms of experimentation together and claim that the use of animals provides no true human benefit. However, as stated in this research there are clear and definite differences. By totally eradicating the use of animals, basic research investigating how living organisms behave and function would cease. Medical advancements like new medications, surgical procedures, and life-saving treatment would not be possible. Although no one wants to use animals for research, it is a necessary reality.

References

Cruelty Free International
Food and Drug Administration
National Institute of Health
Foundation for Biomedical Research

Bryda, Elizabeth C. "The Mighty Mouse: The Impact of Rodents on Advances in Biomedical Research." *The Journal of Missouri State Medical Association*, vol. 110, no. 3, 2013, pp. 207–11, www.ncbi.nlm.nih.gov/pmc/articles/PMC3987984/#:~:text=Mice%20and%20rats%20have%20long,cycle%2C%20and%20abundant%20genetic%20resources.

Grant, Seth. "Cognitive Components in Mice and Humans: Combining Genetics and Touchscreens for Medical Translation." *ScienceDirect*, vol. 105, 2013, pp. 13–19, www.sciencedirect.com/science/article/abs/pii/S1074742713000981.

Smith, Wesley J. "The Grim Good of Animal Research." *Scientific Research*, edited by Sylvia Engdahl, Greenhaven Press, 2015. *Opposing Viewpoints*. *Opposing Viewpoints in Context*, 2019, www.gale.com. Originally published in www.firstthings.com, 18 Oct. 2013.

Acknowledgments

My biggest source and inspiration for this research is my mother, Sheri VanHoose. As a research histologist and core lab manager at the University of Virginia, she has firsthand experience in research using mice and other animals. As animal rights activists continuously advocate against medical research, she and many others continue to do their part in order to further medical advancements.