

**2012 PSBR High School Essay Contest  
Finalist**

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In June 2002, the Journal of the Royal Society of medicine stated, "It would be perverse to deny that certain curative treatments and diagnostic advances owe their emergence to animal experimentation." In other words, it is unreasonable to believe that scientists alone would have unearthed the necessary breakthroughs to recognize and attend to a wide range of diseases. Animal experimentation is the most realistic and efficient way of finding how the body works and the solutions and treatments that could preserve life. We cannot disregard the knowledge we learn from animals. The American Association for Laboratory Science demonstrates this idea: "Only through the humane use of animals in research can we hope to continue to improve the lives of both animals and humans." The practice of animal testing is crucial for the continuation of healthy human existence and the improvement of animals' lives. In addition, animals aren't always employed in research and many other processes are being created. Animals are utilized in biomedical research for many reasons and the use of animal testing should proceed so as to remain saving lives around the world.

If animal testing was not used, the number of advancements made in the past century would be significantly less. Animals have encouraged scientists to do things that they could never do alone. First of all, it is difficult to observe humans so animals are brought into play because their bodies function in similar ways. For example, examining neurotoxins in cone snails and spiders has brought about the understanding of the purpose of ion channels in neurons in humans. The breakthroughs made have the capability to properly diagnose victims of dementia. The Mayo Clinic says in one article, "Researchers predicted an accurate pathological diagnosis 75 to 80 percent of the time." In addition, animal investigations help scientists uncover solutions and treatments for an expansive list of diseases. For instance, without testing on monkeys, Dr. Jonas Salk may never have created the vaccine for polio which possessed a 70 to 90% success rate. Furthermore, researchers can assess the effects of drugs and medical operations preceding their use on people. The Rhesus macaque monkey has been experimented on in order to test vaccines for HIV. Because of animal studies, scientists have been capable of so many things such as the creation of penicillin, the transmission of blood through IV's, more knowledge of cancers, medicine for tuberculosis, insulin for diabetes, asthma inhalers, the creation of vaccines for meningitis and polio, organ transplants, and implants for Parkinson's disease. Therefore, animals enable researchers to obtain knowledge of how the human body functions and promote the progression of science.

In addition, animals profit from the research conducted on them too. The discoveries generated by research are incorporated to lessen disease and discomfort for them as well. First, animals can be victims of diabetes and presently they too can be given insulin. The research is not just conducted for humans. Another case of animal benefit is in the report "Understanding Animal Research" when it states, "A vaccine developed through research on 450 calves now allows us to prevent pasteuriosis- a severe respiratory disease that used to affect 1 in 5 cattle- and

has protected over 100 million of them.” This vaccine solely treats cattle. Animals are affected by a large clump of the same ailments human beings suffer from and can also be aided. In short, animal testing should proceed so all kinds of species, humans and animals alike can be assisted.

A frequent question is “Why can’t scientists use methods that don’t involve animals?” The answer is that they do. Whenever possible, scientists analyze computer visuals and simulations as well as manmade cell colonies. In the report “Medical Advances and Animal Research” John Illman said, “Non-animal methods now account for about 90% of medical research and include mathematical and computer models, advanced tissue and cell cultures and scanning technology.” Scientists work to develop suitable and safe testing environments, maintain animal discomfort, and find alternate techniques in research besides animal testing for the future. For example, monoclonal antibodies (mAbs) originally required the use of mice, but are now constructed in vitro. However, animals are still essential for the research that cannot be accomplished through replicas and modern technology. Animal studies open up doors to solutions and treatments for Alzheimer’s disease, many different cancers, strokes, spinal cord damage, sickle cell disease, and malaria. How can society ignore the rewards from examining animals? Throughout biomedical research, scientists strive to use animals only when it’s unavoidable, but without the research carried out on animals, scientists would not have developed some of the most significant discoveries yet. Researchers rely on animals to uncover knowledge computers cannot.

The Department of Health said, “Research on animals has contributed to almost every medical advance of the last century.” Animal testing plays an important role in the biomedical field and scientists need animals for practically everything they do. Without animals, the number of new discoveries would be greatly reduced and humans could never hope to move forward. The millions of lives saved around the world due to animals in biomedical research would no longer exist, whether it be an animal or human. Almost every advancement made in the last century would be non-existent without animals. They need that research to better their lives because they benefit from the research conducted on them as well. Scientists find methods to replace animals, but a lot are inefficient and lack the success of animal testing. There are many reasons as to why animals are used in biomedical research and considering all of the accomplishments made animals should continue to be used throughout the medical field.

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