

Animals should not be used for medical research

[Environment](#), [Animals](#)



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ESSAY NAME| :| SIFAJEE | TITLE| :| ANIMALS SHOULD NOT BE USED FOR
CLINICAL RESEARCH IN MALAYSIA| Abstract

There is no doubt that throughout the centuries, animals have played a central role in medical research in Malaysia. Many of the treatments available for serious illnesses we have today have come from animal experimentation. There has been recorded that the use of animals in research has been going on as far back as the Greek writings.

According to the history, Aristotle who lived in 384-322 BC was the first to use living animals in experiments; whereas Galen, a physician in second-century Rome, was known as the “ father of vivisection” from his experiments on living pigs. However, these experiments were not conducted in the name of clinical research; they were done to gain knowledge about the animals themselves. In that period of time, man was not set next to animals in comparison of physiology or any other way because man was seen as a creature above the animal. From century to century, new ideas were developed when Darwin came with his theory of evolution.

His theory made a path that linked human with animals; and encouraged researches to be done on different animals to learn how human physiology worked. Even though many believed animal experimentation is important for clinical study, some claimed that it is against the humanity. Many debates have been carried out to argue whether the animal testing is crucial or cruel. The writer believes though many have heard of this matter, yet people need to know about the adverse effects it plays in the toxicology field.

TABLE OF CONTENTS | | Page| | Abstract| 2| | Table of Contents| 3| Introduction| 4| |

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Argument 1| 5| | Argument 2| 7| | Counter Argument & Refutation| 9| | Conclusion & Recommendations| 13| | References| 15| Introduction

Toxicology is the scientific study of interactions between chemicals or other biohazards to living organisms and their systems; and how to prevent poisoning of such substances in application to human beings. Toxicologists often practice animal experimentations called “vivisection” in order to identify the effects of certain dose of drugs in animals; whether it is beneficial or become poisonous.

Vivisection also include procedures such as infecting animals with diseases, poisoning for toxicity testing, brain damaging, maiming, and blinding to administer the impacts those acts have on these animals, and then, the theories created later can be practiced to enhance the human well-being. Nowadays, many animals in Malaysia are being used in toxicology field for clinical experiments, which cause more animal extinction in our country. Many people have been aware of this matter and this polemic has led to many arguments on whether it is really necessary to use animals in clinical study.

Even though some people had argued that it is necessary to conduct clinical research on animals, it is believed that the act is no more applicable. The writer claims that animal testing or “vivisection” is inappropriate for clinical research in Malaysia because the results can be misleading and cause sufferings to animals. Argument 1 Firstly, an animal has a total different DNA and nervous system from a human and therefore you can't rely on the results. It is claimed that bypass surgery is conducted to save the life of human beings, but the same bypass surgery can be fatal to animals.

Similarly, paracetamol is a well-known medicine to cure headache on human, but it will kill a cat, goat or horse. Many of the animal experiments are not only horrible to the animals, but also unreliable. There are tremendous physiological variations between animal and human. According to a source (http://www.veganpeace.com/animal_cruelty/animal_testing.htm), it is stated that: “ Drugs like ‘ thalidomide’, ‘ zomax’ and DES were all tested on animals and judged safe but had devastating consequences for the humans who used them.

More than half of the prescription drugs approved by the Food and Drug Administration between 1976 and 1985 were withdrawn from the market or relabeled because of the serious side effects they had on humans. They had all been tested on animals. ” It has long been stated that animal testing can certainly be downright contradictory in the results it provides, as well as merely misleading (Dappleshade, 2012). According to the Medical Research Modernization Committee, human data has historically been interpreted in light of laboratory data derived from nonhuman beings. This had turned out to be disastrous medical consequences.

For an example, retrospective studies on human patients, in the early 60’s, had already shown a strong correlation between cigarette smoking and lung cancer. Unfortunately, almost all experimental efforts on producing lung cancer in animals had failed (Medical Research Modernization Committee). Likewise, the relationship between alcohol consumption and cirrhosis (a liver disease caused by frequent alcohol consumption) is undeniable in human. However, experimental tests conducted to produce cirrhosis by excessive alcohol ingestion have failed in all animals except baboons.

On the other hand, the case of polio research in animal models has directed to a misunderstanding of the mechanism of infection and it caused failed preventing measures and delayed the development of the vaccine. During the experimentation on monkeys, it has shown that the virus was transmitted via respiratory organs. When the vaccine tested with monkey's cell, it has shown positive results. Eventually, the vaccine did not help in producing expected changes in human, and medical researchers found out later that the viruses of polio disease were actually transmitted through the digestive route in human.

In short, it is clear that we should not rely on experimental studies in animals due to lots of misleading results and misunderstandings it catered. In Dr. Andrew Knight's "The Costs and Benefits of Animal Experiments", it is stated that in a study of twenty randomly chosen cases, only two proved useful in further developing medicines and consistent with clinical trial data. Medical historians argued that key discoveries in fatal diseases in human were achieved mostly through observation of patients and human autopsy because there are lots of misleading results obtained through animal testing. It causes health warnings to be delayed for years, while thousands of people died of various diseases (Medical Research Modernization Committee).

Argument 2 Secondly, animal testing or "vivisection" is inappropriate for clinical research because it causes horrific sufferings to animals. Masses have been debating on the issue that vivisection process is unethical because the helpless animals are harmed and it caused prolonging sufferings to them. Animals being sacrificed in the name of medical testing are not presented in objective ways by animal rights organizations in Malaysia.

Hence, the general development of animal welfare-opinions has become more engaging. The fact why animal experimentation is against by the community is because the processes is not ended just by giving an animal a pill and see what it does, this is so much ahead than that. This include the action of applying animals with drugs, infecting it with diseases, poisoning for toxicity testing, brain damaging, maiming, blinding and other painful and invasive procedures (Anti-Vivisection Society, 2012). Furthermore, many people think that only mice and rats are being used in animal testing for clinical research.

Most people don't aware that actually rabbits, hamsters, cats, dogs, pigs, horses, goats, chickens, frogs, birds, monkeys and many more are being killed redundantly each year in laboratories. We can't imagine what will happen to the animal's population if this activity continues further. In addition, the protocols in animal experimentation turned out to be extremely heart-wrenching, where it includes procedures such as long-term social isolation, full-body restraint, electric shocks, withholding of food and water, or repeatedly breeding and separating infants from mothers.

Animals suffer excessively when the medical practitioners break their legs, burn them, cut them open while they're still alive, poison them and remove half their brains, spray fluids in their eyes and so on (Lithium Queen, 2010). The Anti-Vivisection Society further claimed that essentially, it is using animals in ways that cause distress or death in attempts to test the safety of drugs and biological products or finding treatments, prevention, and cures for human diseases. The other point to be noted is that animals are being sacrificed unnecessarily in order to maintain the human wellness.

This is totally a failure of logic. Animals in laboratories live in an intimidating environment within barren cages and experience unnatural lives of daily deprivation. The highly unnatural laboratory environment constantly stresses them. Most of the animals never get the chance to inhale fresh air nor relish sunshine. They are unable to convey their will, make choices, or exert their natural behaviors and needs. The changes that come into their lives are obviously from the intrusive experiments, which range from comfortless 'zone' to excruciation.

Yet, they are helpless to defend themselves. Animals are not facing natural deaths in laboratories. The viruses that induced into their cells for testing may infect them vigorously and cause them to encounter death gradually. According to a research, it is stated that the viruses transmitted to animals affects the entire organism by altering pulse, blood pressure, hormone levels and immunological activities to their death. In short, it is totally unethical to conduct animal testing for clinical researches as the adverse effects it has on the animal itself.

Peter Singer wrote *Animal Liberation* in 1975, which has been a major formative influence on the modern animal rights movement. He wrote that "there are obviously important differences between human and other animals, and these differences must give rise to some differences in the rights that each have." This is meant in a way that justifies the needs and rights every animal have. Thus, there is no reason to necessarily give an animal what you would have given a man (Dappleshade, 2012). Counter Argument ; Refutation However, there are those who argue that animals should be used for clinical research in Malaysia.

The main reason why animals should be used is that animals are more likely resemble to human and they are more accountable to be in replace of human being for clinical studies. Animals are surrogates for humans. The basic reason for animal trials is to determine two issues before any new compound introduced to a human; safety and efficacy, whether a compound is safe for human ingestion and also whether a product works for its intended purpose (Laura Blue, June 17, 2008). In the perspective of doctors and scientists, animal testing is very important for medication and the humanity as a whole.

Advocates of animal testing say that the outcomes of testing on animals are the most credible. Millions of medical discoveries decades ago were achieved through animal experimentations. According to the published journal *Animal Testing in Medical Research*, n. d, one of the most important discoveries was the discovery of insulin in humans. Insulin is secreted from the pancreas. In 1889, a pancreas from a dog was removed to prove its role in digestion. When the pancreas was removed, the researchers discovered flies swarming around the urine of the dog. They found sugar in the urine which proved the connection between pancreas and diabetes.

For the following two decades a lot of researches were done on dogs to figure out how to keep the dog alive without its own insulin production. Similarly, a lot of medical researches involving animals have been conducted to study the correlation it applies on human, and hence, enhance the wellness of human being. Some of the successful discoveries that has helped human from last centuries are as follows:

- Kidney transplants
- Replacement heart valves
- Polio vaccine
- Hip replacement surgery
- Heart bypass operations
- Drugs to treat mental illness
- Drugs to treat stomach

ulcers, asthma and leukemia Drugs to control transplant rejection • Life-support systems for premature babies It is affirmed that animal testing is important because in the absence of human data, research with experimental animals is reliable for detecting important toxic properties of chemical substances and for estimating risks to human and environmental health. A medical student from the Oxford University, Kristina Cook, had argued that if this fundamental research is stopped, we won't find a cure for cancer, a treatment for Parkinson's disease, a vaccine for AIDS, a therapy for Alzheimer's and a cure for paralysis.

She insisted that any further advances in medicine and human health are absolutely dependent on animal research. Moreover, if to compare who is better to be used to conduct an experiment, of course people will choose animals instead of themselves, even though they realize that animals are also important creatures in our life (Daniyar, 2012). From the drugs testing on animals, now we have antibiotics and vaccines that have saved many people lives. According to Dr. Jane Goodall, n. , he said that, people got used to take all conveniences from life and forget that all those depend on medical researches on animals. In addition, the remedy that now saves thousands of women fighting with breast cancer was developed through medical testing on mice. According to Batul Nafisa Baxamusa, 2010, in DNA level, chimpanzees' body matches up with humans' in 90%. This big number facilitates successful surgeries and transplantations because of similar inner organs of chimpanzees with human's organs.

According to University of Pittsburgh Medical Center (UPMC), liver from baboon was successfully transplanted to a 35 year- old man in June 1992.

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This case was the first known transplantation from animal to human. It is the best example of how animal testing has resulted in saving human lives. In spite of opinion that using animals for people's curing is wrong, we can't deny that fact that annually millions of animals are killed for food; they are used for agriculture, hunted for pleasure of people and even euthanized (Natalie Kustcher, n.). In that case, using animals to treat and save people's lives by using their organs in surgeries, wouldn't be the worst deal. Nevertheless, this argument can be refuted because it has been proven that with the availability of modern alternatives now, animals testing can be considered as useless. With the development of technology in science, various new alternatives have been found to replace the experiment on animals. Studies can be undertaken upon human cell cultures and engineered tissues, than testing on animals.

According to a published journal, *Animals in Research: The Importance of Animals in the Science of Toxicology* (2006), one alternate way is by applying ' vitro' tests (meaning) laboratory tests using cell or organ cultures rather than whole organisms. In other cases, organisms such as worms or bacteria are used instead of mammals. In replacement of animals, computer models can also be developed to predict outcomes of the test carried out. The viable options were meant to produce more accurate results on the clinical research and to prevent more animals from being harmed.

The cloning of human organs and examining within the cell cultures are now scientifically proven to produce more reliable data to human autopsy and therefore, the need for animal testing will be no longer become an issue.

Referring to a reliable source (<http://www.newscientist.com>)

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com/article/mg15120450. 300-pioneers-cut-out-animal-experiments. html), a company by the name of Pharmagene Laboratories in the United Kingdom utilises only tissue cultures and computer modelling on its drug development and testing.

The existence of this company shows that the need for animal experimentation is now no longer the case. Medical practitioners by all means can now consider replacing vivisection on animals with cloning of organs and safely test on it. By this way, no one gets hurt, and eventually it doesn't cost as much as animal testing. Many people may believe that modern alternatives are much more expensive than animal testing because that is what the pharmaceutical industry keeps telling them.

It indeed costs quite an amount of money to switch from old techniques to new ones, but eventually it will be worth it. It is a one-time investment, whereas with animal testing; you have to keep paying for it. The cost to rear, feed and maintain animal subjects is extremely high, whereas the alternative methods are cheaper and thus less burdensome on the economy. So despite what the industry claims, animal testing is more expensive than the use of modern alternatives (LithiumQueen, 2010). Conclusion & Recommendations

To sum things up, the writer would like to uphold once again that animals should not be used for clinical research in Malaysia. Through time, the welfare of the animals has come into focus, and several legislations have been made to prevent cruelty and unnecessary acts. Even though many medical breakthroughs have been a result of animal researches, we should only be grateful to the animal tests of the past for the benefits they have

provided us, without seeing a need for animal tests in the future (Dappleshade, 2012).

Despite of the arguments that animal experimentation must be conducted because animal pathology is similar to that of humans, we should aware more on the consequences that the misleading results animal testing has played, and that using animals in laboratories cause horrific sufferings to them. There are more negative effects imposed by animal experimentation than the benefits it has provided us with. A professor of philosophy, Professor Charles R. Magel made his statement that: " Ask the experimenters why they experiment on animals, and the answer is: 'Because the animals are like us. Ask the experimenters why it is morally okay to experiment on animals, and the answer is: 'Because the animals are not like us. ' Animal experimentation rests on a logical contradiction. " In Europe, a research foundation called 3Rs is being implemented in order to find solution to the abundance number of animals sacrificed in the name of animal testing. The term 3Rs stands for Replacement, Reduction and Refinement. This implies the concept to replace animal testing, to reduce the number of animals used in testing, or to refine methods to minimise the distress for research animals.

This kind of research foundation should be implemented in Malaysia as well, to promote good science with no animal experimentation in future. In conclusion, with the new technology lead to viable alternatives and more humane methods like use of cell cultures and imaging, it is hoped that the number of animals used in medical research can be tremendously reduced.

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