

# Should animals be used in lab? essay

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Should Animals be used in Laboratory Research? Every year millions of animals are used as human food, in human sports for fun, to make clothing and to make test cosmetics, drugs, new-found treatments, and chemicals on humans. Among all these, the most contentious issue in the twenty-first century is the usage of animals in laboratories. Science is the most powerful field from which all new knowledge comes, and being the prime source of new technologies, more judgment, and science, the United States has a big responsibility to accomplish one or more of what the American Humane Society calls the “ Three Rs”- reduce, replace, and refines: “ They replace the use of animals in a scientific procedure; they reduce the number of animals used in a procedure: and/or they refine a procedure so the animals experience less pain, suffering or discomfort” (HSUS 2007). In modern times, the most industrialized county, the United States, and also others countries, like United Kingdom, are having a hard time reaching a conclusion concerning the problem of animal usage in laboratories; the reason is that this issue has many curses and blessings. All the species of animals have their own importance in the ecosystem.

Many species of animals can become extinct because of animal research. As a result, an unholy mess in ecology would emerge, which would be a curse not any less dangerous that global warming, pollution, and overpopulation. Human lives are worthier than animal lives because humans experience things like love, sympathy, hate, caring, justice, and pain based on relationships among them. Animals like rats, hamsters, baboons, monkeys, chimpanzees, and dogs are widely used in the laboratory because they are mammals.

If animal testing is stopped, then all the medical research will be curtailed. As a result, scientists may come to faulty conclusions, which would take the lives of many humans who use the results of this research. Thus, this is the most challenging issue faced by mankind for the survival of mankind for the survivals of mankind and animals and therefore needs to be properly solved. Currently, difficulties involved in solving this problem are pointing society in the direction of regulations rather than eliminating or encouraging the use of animals in laboratories. The ultimate aim of the NC3Rs is to substitute a significant proportion of animal research by investigating the development of alternative techniques, such as human studies. “ RDS supports this aim, but believes that it is unrealistic to expect this to be possible in every area of scientific esearch in the immediate future. After all, if the technology to develop these alternatives is not available or does not yet exist, progress is likely to be slow.

The main obstacle is still the difficulty of accurately mimicking the complex physiological systems of whole living organisms—a challenge that will be hard to meet. ”(ABPI). There has been some progress recently imitating single organs such as the liver, but these need further refinement to make them suitable models for an entire organ and, even if validated, they cannot represent a whole-body system. New and promising techniques such as microdosing also have the potential to reduce the number of animals used in research, but again cannot replace them entirely. Anti-vivisectionist groups do not accept this reality and are campaigning vigorously for the adoption of other methods without reference to validation or acceptance of their limitations, or the consequences for human health. Animal-rights groups also

disagree with the 3Rs, since these principles still allow for the use of animals in research; they are only interested in replacement. Such an approach would ignore the recommendations of the House of Lords Select Committee report, and would not deal with public concerns about animal welfare.

Notwithstanding this, the development of alternatives—which invariably come from the scientific community, rather than anti-vivisection groups—will necessitate the continued use of animals during the research, development and validation stages. All the species of animals have their own importance in the ecosystem. Many species of animals can become extinct because of animal research. As a result, an unholy mess in ecology would emerge, which would be a curse not any less dangerous than global warming, pollution, and overpopulation. Human lives are worthier than animal lives because humans experience things like love, sympathy, hate, caring, justice, and pain based on relationships among them. Animals like rats, hamsters, baboons, monkeys, chimpanzees, and dogs are widely used in the laboratory because they are mammals.

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Animals aren't merely used to determine what chemicals cause cancer. Mostly they are used to understand how the body works. Animals of choice include drosophila (fruit flies), nematodes (roundworms) and mice because they make for efficient studies. Flies and worms live only a couple dozen days, and many generations can be studied in the course of a few months. Mice, more so than rats, can be genetically modified to contain or lack certain bits of DNA to understand how genes affect susceptibility and resistance to disease. Every year billions of animals from all over the world are used for scientific research. The science is based on the assumption that animals do not have any feelings; on the other hand, many people believe that animals do have feelings. This is the most widely discussed issue currently in the world.

Many scientists, philosophers, and religious people have various considered opinions on this problem. Philosophers argue based on moral judgment while religion's followers argue based on their own religious beliefs. As this is a scientific issue, this paper will chiefly study the moral arguments rather than religious opinions about the topic (Animal Testing). Should animals be used in medical research? " Animal experiments have increased scientific knowledge and also increased the life expectance of mankind from 30-40 years in the eighteenth century to 70-80 years today" (Brune, 50). Overall, science has proved beneficial to mankind, and even in the future, it will prove helpful to cure fatal disease like cancer and HIV. As long as science uses animals for mankind's good, there should not any ban on using animals in laboratories.

While discussing animal testing, the immediate and most common opposition states that animals have feelings, desires, and preferences. Deaths from research are just like murders of the animals. Sometimes deliberately exposed to disease, and sometimes they are not given water and food for a couple of days. As Thomas Dixon, a research fellow of Churchill College at Cambridge says, “ To infect monkeys with the AIDS virus or to expose rodents to toxic chemicals and radiation is simply not acceptable, whatever the supposed benefits”(Brune 18). But not to give food and water to animals is just part of specific experiments, and distress is minimized as they are also kept in a proper clean environment. To oppose the idea of animal feelings, Barbara Orlans Research Associate of Kennedy Institute of Ethics at Georgetown University says, “ If I give a horse a hard slap across its rump with my open hand, the horse may starts, but it presumably feels little pain. Its skin is thick enough to protect it against a mere slap.

If I slap a baby in the same way, however, the baby will cry and presumably does feel pain, for its skin is more sensitive...” (25). Thus, animals have different preferences and feelings than humans, so they can tolerate more pain than humans. Most animals are killed before they have to go through suffering or pain. Moreover, animal testing has helped to find the cures for many diseases, like TB, polio, whooping cough, measles, diphtheria, and rabies. For example, “ Vaccines based on primate research have reduced the number of cases of polio in the United States from 58, 000 to one or two per year” (SFBR). Thus, animal testing has proved to be a crucial method to alleviate human pain and illness. In modern times, AIDS and cancer are still

uncured and deadly. AVERT (Averting HIV and AIDS) points out that “ it is estimated that 40, 000 new HIV infections occur in the US each year”.

If this disease can be cured, we can save thousands of people each year. Just a few animal lives can save millions of human lives each year. The second argument – made by people who have strong emotional bonds to animals, and by animal welfare institutions, like Animal and Plant Health Inspection Service, Institutional Animal Care and Use Committee, PETA, and Office of Laboratory Animal Welfare – is that animals have rights of freedom from confinement and ownership. Some people also say that instead of animals, scientists can use criminals or volunteer patients who want to be tested upon.

PETA argues that “ a rat is a pig is a dog is a boy” (Linker, 32). He means when it comes to feeling pain or having rights, a rat has same rights as a pig, so a boy has same rights as any other animals. Base on-the great thinker and a Professor of Philosophy at the University of Michigan-Carl Cohen’s arguments, Thomas Willetts, the writer and observer of Philosopher Peter Singer’s writings says, “ all the member of a particular species may be entitled to the same sort of consideration due to the fact they are of a ‘ certain kind’ and display a certain set of characteristics as a whole, but that different species do no equally posses the same qualities...”. All humans are the same, so they can have certain rights. As a result, even criminals have right to live and cannot be sued in laboratories.

Alternatively, all animals are not the same. Animals are different: a cow is not similar to any other animal, like an ant, a dog, or a rat. It is not easy to

assign legal rights among animals. Thus, the animals' rights of freedom from confinement and ownership do not have any logical or legal support. A third argument against the laboratory research is that every year almost twenty million animals are used in teaching and research in the United States. Due to the significant use of animal, the ecosystem will become unbalanced, which will reduce the animals available for human food. Animals like rats and mice have short life spans and rapid growth rates. The scientists, with the help of a breeding system, can stimulate the supply of the animals they use in laboratories.

Thus, there will not be any effect on either the ecosystem or the human food supply. Moreover, only twenty million animals are used in laboratories, but every year ten billion animals are consumed as food in the United States alone. Animals testing help to cure diseases, like bird-flue and diphtheria, which kill not only humans but also animals, and aids in the development of new breeding systems. The basic intention behind animal testing is good. In addition, some animals, like rats, monkeys, and baboons, have identical physiology to that of humans, so their dissection in laboratories helps medical students to gain practical knowledge" (Animal Testing).

But every year, thousands of animals are also killed in the wild, from the sport hunting, and from human sports, like bullfighting, cockfighting, and camel fighting. These activities have no purpose other than fun. In these kinds of sports, animals have to endure a lot of pain because of fatal injuries. Thus, a more profitable use of animals for the sake of mankind is to use them in the laboratories rather than eating to using them for entertainment.



A fourth argument is that animals are completely unlike humans. Humans have two legs, not four.

Each species' organisms have the same qualities, and they react to the same things equally, so the conclusions based on animal testing cannot be applied to the humans. Proponents of this argument point to the different effects that therapies can have on members of different species and note that strychnine is fatal to people but not monkeys, while elladonna, which likewise kills people, is harmless to rabbits (Tatchell, 11). Another example is widely used antibiotic penicillin kills guinea pigs, but for the humans penicillin is used as medicine. But science teaches that the similarities among living organisms are predicated on their genetic structures, not just their external appearances. For example, “rats and mice look very similar to the human eye, [but] there are significant genomic differences,” says the Nationals Genome Research Institute. The animals of certain species carry the same genetic structure.

Rats, mice, hamsters, and monkeys are somewhat like humans. In fact, chimpanzees and humans share over 98% of their DNA (Taylor, 15). Moreover, scientists have found and successfully treated many diseases in animals and then used similar methods to cure human diseases, like tetanus and diabetes. Diabetes and its cure by insulin were also found from experiments on rats. In addition, HIV and Rh factor were first found in monkeys and not in humans. The fifth and strongest argument that opposition has made is based on the “third R-Replacement,” which holds that science in the twenty-first century has been very advanced. Scientists

can develop and use faster, more accurate computer models instead of animals in laboratories.

The opposition also questions whether scientists use animals just because they are relatively cheap compared to using computer models. If the computer models replace the animals, then why would we still want to be cruel to animals? Scientists accept the computer model to be a good alternative to animal testing, but they also object that computer models cannot be very accurate. Animals are living organism, so their interactive systems respond to applied change. Moreover, animals provide dynamic living systems to manipulate the experiments.

The sufferers are minimal and help to increase knowledge and lessen pain and illness. It is impossible to make a model in the laboratory that is exactly analogous to an animal. “ Unfortunately there is no substitute to testing on live animals,” says Glenn Rice, chief executive of Bridge Pharmaceuticals (qtd. In Pocha). He also says, “ The test tube is just not as dynamic as the physiology in the body” (qtd.

In Poch). If we stopped animal testing, drug development would stop. Even if science develops the computer models, the new drugs and treatments should be verified on animals prior to coming out in the market. In fact, in some countries, like the U. S. and the U. K. , there are rules that before the drugs come out in the market, they have to be tested on animals.

This issue is strongly contentious. Since society is well aware of it, many meetings are held in countries, cities, and regions among experts in the

affected fields. For example, one meeting among Dr. Bruce Fowler, director of the University of Maryland System-wide Program in Toxicology and Professor of Pathology at the University of Maryland School of Medicine, Dr. Gilles Klopman, president and CEO of Multicase Inc. , and Dr.

Mark Dewhurst, at Duke University Medical Center, was held on Market Place radio to evaluate the computer models' accuracy in animal testing. As Dr Fowler said, one chemical requires 500-1000 animals to predict its carcinogenicity, and it takes two years. Dr. Klopman defended the computer method, saying his company, Multicase, charges anywhere from \$500 to \$100, 000 for computer modeling – far less than animal experiments. At the end, Dr.

Klopman had to concede that nothing can replace animal testing, and he said, “ if data are needed on new illnesses, animal tests will be necessary. ” They only conclusion that can be drawn is that there are some alternatives to animal testing, but either they are not very accurate or they have limited applicability. Thus, unless anything else can be found, animals must be used to predict the mechanism of drugs, and new-found treatments. In the meantime, the use of laboratory animals continues to provide new benefits. One recent development is the new technology of organ transplant called ‘ xenotransplants,” which involves inter-species transplants. According to one monitoring organization, on the evening of June 24, 2007, there were 96, 849 people waiting for organ transplants in the only US (OPTN).

One way of meeting such a demand is to develop xenotransplant technology. Scientists are trying to replace human organs with pig organs. In order to use

pig organs, scientists need to reprogram them. If that becomes possible, thousands of people will be saved every year.

Scientists hope that by developing the use of cell and tissue cultures, computer modeling, cell and molecular biology, epidemiology and other methods, they will one day be able to completely remove animals from medical research — while still maintaining crucial work to defeat diseases that affect millions of people. Immediate abolition of all animal experiments is not possible, because vital medical research must continue to find treatments for diseases which lessen the quality of human and animal life. New consumer products, medicines, and industrial and agricultural chemicals must be adequately tested in order to identify potential hazards to human and animal health, and to the environment. (University of Nottingham) Thus, in the twenty-first century, the animals used in laboratory research have opened many doors of opportunity to increase human life expectancy, so after considering the arguments of both sides, people must agree with the scientists. They should be allowed to use animals in laboratories, with regulations, in order to enable them to provide countless lives freedom from pain, disease, and illness.

Furthermore, because treatments are pioneered using animals, they are applicable to animals, so the benefits accrue to them as well. Works Cited  
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