

## International Journal of Medical Science and Clinical Inventions

Volume 1 issue 9 2014 page no. 431-438 ISSN: 2348-991X

Available Online At: <http://valleyinternational.net/index.php/our-jou/ijmsci>

### Argument Of Using Animal In Research

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#### Abstract:

*People depend on animals for different goals; and one of these goals is research. But, using animals in research is a very controversial issue. The purpose of this paper is discussing the controversial issue of using animals in research from different point views and clarifies the evidences that each opinion based on. The review is comprehensive rather than systematic, and is limited to literature available in online databases. It was concluded that the trends supporting using animals in research are more acceptable and convincing.*

**Keywords:** Animal, Research, Controversial, Ethics.

#### Introduction

Animals have already been used for long time in different purposes such as food, agriculture and transportation. As human's knowledge became more about the environment, he extended this dependence to gaining of information (Baumans, 2004). Animal Research

has led to many contributions in different sciences especially medical science and human health (Dario, 2011). The first documented use of animals in research was mentioned in the writings of the Greeks in the 2nd and 4th centuries (BCE) by the Greek philosophers Acemaeon of Croton, Aristotle, and Erasistratus (Watson, 2009).

It has been estimated that approximately 20-100 million vertebrates are currently used in scientific research annually, and the number of invertebrates has not been documented (Watson, 2009). Such scientific research is applied in research labs at universities, medical schools, pharmaceutical companies, farms, and commercial facilities in the field of behavior research, biomedical research, cosmetic testing, developmental biology and drug testing (Watson, 2009).

An animal experimentation has been used as a method of study, when the study of humans is considered impractical or unethical (Barnard, 2007). In the last century major important medical advances have obtained directly or indirectly from animal research. However, serious ethical issues arise regarding the use of animals calling to stop animal using in research (Watson, 2009). So, is it ethical to use animal in scientific research? And how it could justify that?

### **Aim of the paper**

Despite increasing use of animals in research, this issue still controversial issue. The purpose of this paper is to discuss the debate of

using animal in research and clarify the evidences supporting or opposing using animals

### **Literature Review**

Using animals for research purpose is still controversial issue despite of numerous benefits of animal research. With in the argument in whether animal use in research is ethical, many individuals hold different viewpoints to justify the use or non-use of animals in research (Olsson, Hansen, & Sandoe, 2007).

Animal research results in advances and benefits in understanding and treating disease that would have been impossible without animal research. In a survey performed on the psychologist's perspective on animal research, more than three-quarters of respondents said that they believe the use of animals is critical to the scientific advancement (Plous, 1996). On the other hand, critics of using animal view inhuman treatment of animal as a problem and claim that our use for animals in research based on the belief that humans are a superior and more valuable species (Wenz, 2007).

The value of animal use in research has been represented through numerous findings and

discoveries that lead to the understanding of behavioral illnesses and disorders that affect humans and their treatment (Olsson, Hansen, & Sandoe, 2007). For instance, Animal use in research has allowed for the exploration of the following: the treatment of human urinary and fecal incontinence; psychotherapy; behavior medicine and therapy; rehabilitation of neuromuscular disorders; the understanding of stress and pain; the discovery of treatments for anxiety, psychosis, and Parkinson's disease; the understanding of drug addiction, relapse, and damage; treatments that assist extreme premature babies in gaining weight and increasing survival; and understanding the loss of memory associated with old age (Festing, 2006) .

People who favor the use of animals in research displayed other benefits for using animal that helped us as individuals and as a society. Among the benefits are many antibiotics, vaccines, erythropoietin for the treatment of renal failure and certain anemias, the development of chemotherapies that have become standard treatment for fighting or in some cases eradicating cancer and many of the procedures that used for

organ transplants in human beings (Bateson, 2005). Because certain mammals have physiological systems similar to those of humans, using them in research provide the medical field with valuable knowledge resulting in the improved treatment of a number of illnesses, including “addiction, anxiety disorders, phobias, incontinence, ruminative vomiting, schizophrenia, depression, retrograde amnesia, and a range of other psychological phenomena....” (Plous, 1996).

In another study described by Miller (1985), the use of automated training devices has assisted in treating bed-wetting among children, and these devices established through research conducted on animals. Enuresis, the inability to control urination or defecation, has shown to cause several problems for children. Children that suffer from enuresis have been shown to have low self-esteem, have parent-child relationship issues, and are unable to sleepover at friends or go to camp. Through experiments carried out on animals, learning principals were applied to analyze the discrimination of bladder fullness or sphincter relaxation during deep sleep. Through

the use of an automated pad that rang when it became moist, most children were able to learn to inhibit urination and awake to use the restroom.

Usually the benefits of using animals in research that related to human is the main topic focused upon, however, animals benefit through their use in research as well. Miller (1985) describes the adaptations used to deal with animals that damage crops, which has decreased the use of lethal methods. With enhanced understanding of animal behavior, the taste-aversion effect is now used to induce a nonlethal nausea when animals consume small berries, small fruits, and lawns. Through the use of nonlethal chemicals such as methiocarb, animals are less likely to damage crops due to the bad taste that is generated upon consumption.

The ethical justification for using animals in scientific research also depends on the scientific itself (Dawkins, 2003). It is based upon the vision that increasing the knowledge base makes it possible to develop therapies that alleviate pain and suffering caused by diseases and trauma (Dawkins, 2003). In other words, It assumes that alleviation of human pain and suffering caused by

diseases and trauma could be carried out with no or minimal discomfort or distress to the used animals.

The persons who support animal experimentation also argue that "the fact that animals can suffer, although morally significant because it gives animals the status of moral patients or recipients, is not by itself a sufficient reason on which to deal them equal moral status with humans" (Fox, 1986, p.70). So, because animals are not on equal moral status with humans, "We are under no moral obligation to restrain from using them" (Fox, 1986, p.6). So that anything that is not morally mistake, then it is morally permissible to use animals in experimentation.

Most persons who support using animals in experimentations do not believe that we have the right and permission to harm or abuse animals whenever we wish or that we lack grounds for having moral concerns over animal suffering, especially when caused by humans (Carolyn, 1991). Also, they emphasis that using animals should be only permitted if there is no substitute research method and the positive outcomes of

using animals in research outweigh any possible adverse effects (Home Office, 2014). "Animals may not be moral agents or persons, but they may still be moral patients, that is, beings that may be affected for better or worse by our acts and which we should therefore treat with care" (Fox, p.7). But if either a human or animal is to suffer, then it is better for the animal to suffer, because human suffering is generally of more concern than animals suffering (Carolyn, 1991).

On the other hand, using animal in research has been subject to criticism. In general, criticism focused on the question if human has the right to use animal and if the reliability and necessity of using animal are guaranteed. Result from animal experiments may not be reliable to human as using animal to study side adverse effects of medications that may not be recognized due to a too low incidence or nondetectable effects in animals such as minor side effects of medications such as headaches and hallucinations (Baumans, 2004). Also using animal may not be necessary such as in cosmetic testing or teaching or teaching purposes (Baumans, 2004).

The persons who argue against using animals for scientific experiments depend on the human and nature relationship philosophies of Peter Singer (1991), that humans are not completely above nature, focusing primarily on animals. On the other hand, the persons who defend on experimentation do not agree with Singer's views. An issue raised by Fox in regard to this is "What if plants could suffer?"(Fox, p.86). He states that we would not be obliged to assert their moral equality, so "the capacity to suffer does not by itself establish moral equality" (Fox, p.87). Also, Fox brings up Singer's statement, "If we must inflict pain or starve, we would then have to choose the lesser evil. Presumably it would still be true that plants suffer less than animals, and therefore it would still be better to eat plants than to eat animals" (Fox, p87). This shows that the right of humans to survive is more important than that of other species.

Literature review displayed different claims against using animals in research and also it displayed defends against those claims. Generally, the two main claims against using

animals were it is inhumane to use animals in experiments and some results of animal research were not applicable for human (Robinson, 2005). On the other hand, the persons who defend animal research confronted those claims. For those claimed that it is inhumane to use animals in experiments, People who favor using animals supposed that it would be much more inhumane to use children or adults to test new products. Even if it were possible, it would also take much longer to see possible effects, because of the length of time we live compared to laboratory animals such as rats or rabbits (Bateson, 2005). For who claimed that some results are not applicable to humans despite using animals in experiment, there is no any alternative methods of testing. For instance, Computer models are not highly developed enough to be good alternative for using animals in research, and also testing on plants is much less valid to humans compared with tests on animals such as rats (Bateson, 2005). So, until we have a better system, using animals still the best alternative (Robinson, 2005).

### **Discussion and Conclusion**

People have been using animals already for a long time for food, transport and companion. As they knew more about surroundings, they extended this using of animals to be involved in scientific research. So, animal research is a method of study when the study of humans is considered impractical or unethical.

Animal research is a very controversial topic. Thus, the purpose of this paper was to discuss the controversial issue of using animal in research. This review displays the trends that support using animals in research and the trends of non using animals in research, and also clarify the evidence of each trend. The review is comprehensive rather than systematic, and is limited to literature available on online databases. A search on Medline, Science Direct and EBSCO was carried out to find articles that discussed this controversial issue.

After discussing the argument of using animals in research from different point views, it was found that it is necessary to use animals to ensure progress toward scientific, human health, and animal protection goals. And also the claims of persons who against using animal didn't based

on strong evidence. In general, we could conclude that it is more appropriate for us to agree with using animals in research as justified issue. But, at the same time, participating in animal research should recognize the moral obligations to the welfare of the animals in order to reduce the number used and the amount of suffering involved, and the need to develop alternative methods (Dario, 2011).

It is true that animals do experience pain, but in agreement with Fox's idea, this does not make it wrong to use animals in research. Also, this does not mean exploitation of animals for unnecessary purposes such as wearing animal fur, because using artificial fur give the same benefit. Despite of limitations to non-animal methods remain, recent developments demonstrate that these limitations should be viewed as galvanizing challenges rather than insuperable obstacles. (Ferdowsian & Beck, 2011).

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