

Why animal experiments are not necessary

Animal experiments are supposedly necessary in order to make the products we use safe and to find new therapies for sick people. However, they are in fact not suitable for judging the effects and hazards of substances for humans. Scientists, politicians and citizens are now increasingly recognising that animal experiments don't fulfil what they promise, and that their results are not directly applicable to humans.

Animal experiments are dangerous

It is often claimed that animal testing is indispensable, because a "complete organism" is supposedly required for the development of pharmaceutical drugs. Animals may well be complete organisms, but they are the wrong ones. Animals and humans differ considerably with regard to anatomy, physiology and metabolism. Even animals of different species can react quite differently to chemicals and pharmaceutical drugs. It is not possible to predict whether a human will react identically or differently based on the results of experiments conducted on animals.

One study conducted by the pharmaceutical company Pfizer came to the conclusion that „one would be better off tossing a coin than relying on animal experiments to answer the question of carcinogenic substances. Only 5 - 25% of the substances harmful to humans also have adverse effects on the experimental animals. Tossing a coin delivers better results“.¹

The numerous pharmaceutical drugs that were considered safe based on animal experiments, but caused serious or even lethal adverse effects in humans, are proof that the results of animal experiments cannot be transferred to humans with the necessary reliability. Lipobay®, Vioxx®, Trasyolol®, Acomplia® and TGN1412 are just the tip of the iceberg. In Germany alone, as many as 58 000 deaths are estimated to be the result of drug side effects.²

On the other hand, no one knows how many beneficial pharmaceutical drugs are never released because they are prematurely abandoned on the basis of misleading animal experiments. Many drugs that are highly beneficial nowadays, such as aspirin, ibuprofen, insulin, penicillin or phenobarbital, would not be available if one had relied on animal testing in earlier days, because these substances induce grave damage in certain animal species due to differing metabolic processes. They would have failed outright if subjected to the present-day procedures applied in the development of active ingredients.

Tens of thousands of animals must die for each product. In most cases the products tested do not even advance medical science. On the contrary, in Germany approximately 2 500 new applications for pharmaceutical drug approval are filed each year, of which there is only one real innovation every two years.³ Everything else either already exists or is simply unnecessary. For example, the company Bayer redefined the completely normal condition of elderly men as a "testosterone deficiency syndrome", in order to create a new market for hormone drugs. There are some 60 000 drugs available on the German market. Many of them are identical and are only marketed under different names. According to the WHO only 325 medicines are actually essential⁴.

Animal experiments contribute nothing to the development of new therapies. The pharmaceuticals industry conducts them only to hedge their liability in case something goes wrong with one of their products.

Animal experiments are bad science

Since most human diseases do not occur in animals, their symptoms are simulated using "model organisms". For instance, in order to induce Parkinson's disease, monkeys, rats or mice are injected with a neurotoxin that destroys brain cells. Cancer is induced in

mice by means of genetic engineering or injecting cancer cells. Cerebral strokes are caused in mice by inserting a thread into a cerebral artery. Diabetes in rats is caused by injecting a toxin that destroys the insulin-producing cells in the pancreas. Heart attacks are simulated in dogs by constricting a coronary artery with a noose.

The artificially induced symptoms have nothing in common with the human disorders they are supposed to simulate. Important aspects of the origins of the disorders, such as diet, lifestyle habits, drug consumption, harmful environmental influences, stress, and psychological and social factors, are not taken into consideration. The results of studies using animals are therefore misleading and irrelevant.

In fact, research based on animal experimentation repeatedly fails all along the line. 92% of potential pharmaceutical drugs that are shown by animal testing to be effective and safe do not pass clinical trials⁵, either because of insufficient effectiveness or undesired side effects. Of the 8% of substances that are approved, half are later taken off the market because grave, often even lethal side effects in humans become evident.⁶

For instance, the “invention” of the cancer mouse was believed to be the long-sought key to combating malignant tumours. In the mid eighties, researchers at the Harvard University succeeded in inserting a human cancer gene into the genome of mice, so that the rodents prematurely developed tumours. This genetically engineered mouse was even the first mammal to be patented, in the USA in 1988 and in Europe in 1992. Since then, tens of thousands of cancer mice have been “cured”, but all the treatments that were “successful” in rodents failed in humans.

Animal experimental research regularly announces breakthroughs with all kinds of disorders. Animal testing supposedly proved this or the other method of treatment to be successful in combating Alzheimer’s disease, Parkinson’s disease, multiple sclerosis, cancer, atherosclerosis, etc..

However, the hopes of the afflicted patients are almost always disappointed, and the celebrated miracle cures are never heard of again. Humans just aren’t mice.

Scientific studies are increasingly casting doubt on the benefits of animal experiments. They prove that the results of animal tests often do not correlate to the insights gained from humans, and that animal experiments are often irrelevant to the clinical application for humans.

In an English meta-study the results of different treatment methods on experimental animals and patients based on the relevant scientific publications were compared. Only three of the six disorders investigated delivered correlations, the remaining half did not.⁷

In a further comparative study a British research team determined that the results of studies conducted on both animals and humans often differ quite considerably. According to the study, the inexact results of animal experiments can endanger patients and are also a waste of research funding.⁸

In a German study, 51 applications for animal experiments that were approved in Bavaria were analysed with regard to their clinical implementation. The research team discovered that even ten years later not one single project had been demonstrably implemented in human medicine.⁹

Animal experimentation is not only useless, it is even harmful. It implies security that does not exist, and the false results it delivers only impede medical progress.

Animal experiments are immoral

Regardless of the numerous scientific reasons, there are also ethical reasons to reject animal experiments. Each year at least 115 million animals die in the laboratories of the chemical and pharmaceutical industry, in universities and other research institutes.¹⁰ Animal experiments degrade animals as “model organisms” to disposable measuring instruments. Yet animals are sentient fellow creatures capable of suffering. Animal

experimentation is not compatible with ethically justifiable medicine and science.

Research methods without animal testing are good science

Putting an end to animal experiments does not mean the end of medical research. On the contrary – switching to studies on humans, for instance in the areas of epidemiology, clinical research, occupational safety and health, and social medicine would lead to real medical progress. Testing methods without the use of animals, using human cells and tissues combined with special computer programs, deliver exact and conclusive results, as opposed to animal experiments.

Sophisticated computer models are capable of delivering information on structure, effect and toxicity of substances, such as new drugs or chemicals. Microchips combine computer and in-vitro methods; in a system of minute ducts and chambers, microchips are colonised with human cells from different organs. Thus it is possible to test the effect of an experimental substance on the individual organs, as well as how it is metabolised and whether any toxic waste products are formed.¹¹

Animal experiments that do not need to be replaced

Those who believe that animal experiments are conducted in order to develop new therapies for sick people are profoundly mistaken. Many animal experiments conducted as pure research don't even pretend to benefit medicine.

Examples of animal experiments approved and conducted in Germany:

- At the University of Leipzig it was discovered that hibernation protects hamsters' neural tissue and can thus for instance prevent Alzheimer's disease.¹²
- In the Federal Research Institute of Nutrition and Food in Karlsruhe, carotinoids were mixed into calves' milk replacer, in order to find out why tomatoes and melons are so beneficial to humans' health.¹³
- In order to investigate the consequences of acute acoustic shock on the inner ear of

guinea pigs, the animals were subjected to the sound of rifle shots (156 +/- 4 dB), then killed.¹⁴

- At the Institute of Avian Research in Wilhelmshaven, 22 herring gulls captured on a German North Sea island were not fed for six days. The aim was to find out how long gulls can starve.¹⁵

- In Ulm, a research team has been investigating the effects of gravity on the development and bio-rhythms of different animal species for years. For instance, an apparatus was assembled, with which measurements can be conducted on living scorpions over a period of several months. The animal is affixed to and immobilised on a plate. Electrodes inserted into eyes, leg muscles, brain and body continuously measure nerve currents.¹⁶

There is no need to search for animal-free testing methods to replace such research projects. These animal experiments can be eliminated without substitution, because human data have long been available, or because their results are completely irrelevant to human health.

Why are animal experiments still conducted?

Clinging to animal experiments does not have scientific reasons, but rather is based largely on tradition. More than 150 years ago, the French physiologist Claude Bernard (1813 – 1878) elevated animal experiments to the touchstone of all medical and scientific insight. Bernard's doctrine lives on in a contemporary scientific paradigm that only accepts results that are analytically explicable, as well as measurable and reproducible. Within the framework of this scientific system, sicknesses become technical defects and animals become measuring instruments.

Thus a researcher's quality is not measured by the number of people he or she has helped, but rather by the amount of scientific publication. True to the motto "Publish or perish", it is only possible to attain profile in the world of science by means of a long list of publications in renowned scientific journals, the amount of research funding available depending on the list of publications. This funding is invested in new

animal experiments, which again result in a new publication. This absurd system is self-sustaining and devours incredible amounts of research funding, third-party funds or scholarships, without being of any benefit to sick people.

A further reason why animal testing is continued in some areas is the lack of financial support for animal-free research, as well as the protracted procedures for approving the implementation of in-vitro methods.

Finally, animal experiments serve the pharmaceutical industry as a means of hedging their liability. If something goes wrong with a drug, the manufacturer can point to the animal testing conducted without the side effects arising. Animal experiments are also very popular in the pharmaceutical industry, because they can be used to prove anything one wants. There is bound to be a species and a test setup that will deliver the desired results.

Conclusion

Animal experimentation not only stands for cruel and therefore unethical methods, but also unscientific methods that have no right to a place in modern 21st century medicine and science.

Doctors Against Animal Experiments

Germany is a charitable organisation of several hundred doctors and scientists who work in the medical field. The organization supports the abolition of all animal experiments on ethical and scientific grounds.

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