The case for animal experiments

by Dr Mark Matfield

The public debate about animal experimentation has been raging - albeit with varying ferocity - for nearly 140 years.

The Society for the Protection of Animals Liable to Vivisection, the first antivivisection organisation in the world, was founded in London in 1875 by Frances Power Cobbe, a philanthropist and crusading journalist. As a result of her campaigning, Britain became the first country to have legal controls on the use of animals in the laboratory - the Cruelty to Animals Act of 1876.

Interestingly, many of the main points of the argument have not changed at all since that time. One of the major contentions of antivivisection, both in 1876 and in 1999, is that animal experimentation is scientifically invalid: that the results obtained from research on animals cannot be applied to human beings. While the argument may not have changed over the past century, medical science has. Many major medical advances - including insulin to treat diabetes, polio vaccines, antibiotics, safe anaesthetics, open heart...
surgery, organ transplantation, hip replacements and drug treatments for ulcers, asthma and high blood pressure - have happened during this time. The research papers show that every one of these advances depended on the allegedly 'invalid' scientific technique of animal experimentation.

The other argument that has remained unchanged is the assertion that animal experimentation is all barbaric torture and cruelty. There was probably a fair amount of truth in this claim at the end of the last century. Certainly, by today's standards, the experiments must have caused unacceptable levels of suffering. However, this century, and particularly over the past 30 years, British governments have responded to the public pressure generated by antivivisection campaigns by introducing the most stringent controls in the world to safeguard laboratory animal welfare. By and large, the scientists using animals have welcomed these tight controls. 'It provides a sort of protection', commented one researcher. 'You know that if you are working within the regulations, you are doing it right, no matter what the antis accuse you of.'

Another argument used against animal experiments is that many of the experiments are pointless, or are repeating research that has already been done. But research can only be done if somebody pays for it. In academic research, it is usually the government or medical charities. The competition for these funds is intense, with less than one application in 10 being funded. The selection process rigorously weeds out any second-rate, pointless or repetitive projects. It is often assumed that the pharmaceutical companies repeat a lot of research as they compete to develop new drugs. This idea falls apart when you realise that these companies patent their drugs at the first possible opportunity, to prevent other companies working on them. The side effects of drugs are often blamed on animal experimentation. 'The results of animal testing cannot be applied to humans', the argument goes. 'Just look at all the side effects of drugs which happen despite the fact that they have all been passed as safe in animal tests.' This logic
rather conveniently ignores the fact that all new drugs are tested on human volunteers as well. These days, by the time they reach the doctor's surgery, most drugs will have been tested on more people than animals. The animal testing stage comes first, and is designed to detect the very dangerous side effects that must be eliminated before the first human volunteer takes the drug.

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The animal tests are designed to detect things like cancer, birth defects, organ failure and other acute poisoning effects. Once the drug is known to be safe enough it can start being tested on humans, where the most reliable information about side effects is discovered. In those cases where a drug is approved for general prescription and is later found to cause side effects, it is because of a failure at the human testing stage, not the animal testing.

So, some might cry, what about Thalidomide? That was tested on animals but it went on to cause terrible deformities in thousands of babies. Doesn't that prove that the animal tests do not work? I am afraid not. The staggering fact, fully documented by the subsequent investigations, is that Thalidomide was never tested on pregnant animals before being given to pregnant women. By modern standards this seems almost insane, but back in the 1950s we knew so much less about the side effects of drugs. When the first report of Thalidomide being linked to deformities in babies was published, researchers tested the drug on the standard laboratory animal of the day, the New Zealand white rabbit. The offspring were born with exactly the same type of deformities. The moral of this story is that if they had done more animal testing before giving the drug to people, there would never have been any Thalidomide babies.
The latest twist in the continuing debate about animal experiments concerns the genetic manipulation of animals. Research into inherited childhood diseases like cystic fibrosis is benefiting from the fact that scientists can now reproduce in mice the precise genetic defects that cause the disease in humans. These animal models of the diseases can be used to test out new treatments quickly and easily. Doctors are now predicting the development of effective treatments for many inherited diseases in the next five to 10 years. For a teenage child with cystic fibrosis, life expectancy is between five and 10 years. Hands up everybody who wants to stop those animal experiments.

The Research Defence Society represents the scientific community in the public and political debate about the use of animals in medical research.

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