

## QUESTIONS AND ANSWERS

Q

Wouldn't research grind to a halt without animal experiments?

A

On the contrary, directing resources away from animal research towards the study of people would bring more relevant results. Even tests that have come to rely on animals would not be stopped because scientists quickly devise new techniques to achieve their objectives. For instance, the use of animals to test the potency of vaccines is traditional, but such an approach is of no value in assessing pneumonia vaccines because the causal organisms are not virulent for laboratory animals. The lack of an animal model provided the necessary incentive to devise a successful alternative based on chemical analysis and studies with volunteers.

Q

Without animal research, wouldn't diabetes still be a death sentence?

A

The key advances in treating diabetes came from human studies and the techniques of chemical purification. Post-mortem analysis of human patients first of all established the link between diabetes and a damaged pancreas. This finding encouraged researchers to give pancreatic extracts to both laboratory animals and diabetic patients, but the extracts were so crude they caused severe toxicity. Even Banting and Best's first human trial had to be stopped, with Banting admitting that results were not as encouraging as those achieved 13 years earlier by Zuelzer. Only when the biochemist JB Collip used chemical techniques to purify the extracts did a more effective and less toxic preparation become available.

Q

AND

A

Q

Can scientists carry out AIDS research without using animals?

A

It is not only possible but preferable to investigate AIDS without using animals. The fact that no "normal" animal has developed AIDS after inoculation with HIV suggests important species differences, and a Presidential Commission concluded in 1988 that "the lack of appropriate animal models for HIV research makes the application of animal research to humans uncertain." So far, key insights into the understanding, prevention and treatment of AIDS have come from epidemiology and *in vitro* research. And although a large part of the AIDS budget is devoted to animal experiments, future advances are most likely to come from more relevant human-based clinical research.

Q

Would you rather your child die than experiment on animals?

A

With the constant risk of misleading predictions, the real choice is not between dogs and babies but between good and bad science. Vivisection is bad science because it only tells us about animals whereas in medicine we need to know about *human disease*.

Q

Are you saying that animal research has produced nothing of value?

A

Whatever has been learned, and many scientists and clinicians now contend that the value of animal research has been grossly overstated, the fundamental issue is that vivisection is a logically flawed technique because of physiological, anatomical and biochemical differences between humans and animals. Far more could be expected by concentrating resources on methods of more direct relevance to people.

Q

If vivisection is so unscientific, why does it continue?

A

There are powerful vested interests whose profits and livelihood depend on animal research. Apart from the profit-oriented drug companies and contract laboratories many scientists build their careers on animal experiments and forget it is *human* diseases which needs to be studied. Animal research is ideally suited to the "publish or perish" world of academic science; having obtained results from one species, researchers can try another, resulting in almost never-ending scope for publications. Animal research is also more "convenient" than clinical studies, again facilitating the rapid publication of research findings. Supplying the needs of university, government and industrial laboratories is also big business for the animal breeders and the cage and equipment suppliers.