

**The response reproduced below was submitted to the consultation held by the Nuffield Council on Bioethics on the ethics of research involving animals during October-December 2003. The views expressed are solely those of the respondent(s) and not those of the Council.**

Lord Soulsby

**Q1.** The recent House of Lords Enquiry clearly stated that the use of animals in research was ethically justified. Such research provided valuable information, pertinent to human and animal health and the control and prevention of disease, that cannot be obtained by any other method and because of the physiological similarity of biological systems information obtained from animals can be transferred to humans.

Notwithstanding, the acceptability of the use of animals relates to the purpose of the research, which should be for the discovery of new physiological, pathological or psychological responses of animals and their modification induced by stimuli, including infection, ageing *and* dietary modifications and the correction of these.

Different species of animals may be justified and necessary for different types of research, recognising that some species may uniquely provide information essential for the understanding of human ill-health (e.g. the behaviour and control of HIV/AIDS and the use of primates).

It is difficult to assess how much animals suffer during research. Guidelines are produced by the Home Office to determine the severity of a proposed experiment. It is generally accepted that the majority of experiments do not lead to suffering. The induction of prolonged suffering is counter-productive to the goals of an experiment and would be avoided by a licence holder. Nevertheless it is well known that the sentience of a species increases the higher up the vertebrate and mammalian tree one goes. A point must be reached where sentience is such that any experimentation is unacceptable, though circumstances and need may arise where the use of higher primates must be considered to solve problems essential for human health and welfare.

**Q2** There has long been a need to reduce the number of animals used for experimental work. Hitherto this has been accomplished by the use of specific in-bred lines of animals (e.g. mice) with special characteristics (e.g. nude mice) or other susceptibilities (e.g. deficiency in the immune system). The ability to genetically modify animals to create a specific target disease or organ deficiency is an important advance on inbred strains of animals. But further, while animal models of human disease can be created by gene manipulation, animal models of human disease occur spontaneously (e.g. deficiency conditions of dogs and cats) and the understanding of the genetic basis of these deficiency conditions adds valuable knowledge to the human condition.

Hence GM animals do not raise different issues, rather they offer a better understanding of gene control of disease.

As with other manipulations of animals (e.g. surgical intervention) genetic manipulation should be considered with due respect to the animal and its normal physiological requirements. There are some genetic manipulations which should never be attempted especially if the "dignity" of the animal is impaired.

**Q3** The use of and search for alternatives should be given more priority than at present. To some extent an alternative procedure often occurs by serendipity though there is a minor amount of funding available through the APC of the Home Office. The House of Lords Enquiry proposed a centre for "alternatives" which would serve as a co-ordinating centre and a funding mechanism for "alternative" research in leading research centres. A centre devoted solely to "alternatives" research would not, it was thought, attract

the best research workers. There are centres for “alternatives” in Italy (e.g. ECVAM) and Germany.

Funding should come from the proposed centre but be administered by a body composed of representatives from the MRC, BBSRC, Wellcome Trust etc.

To reduce duplication, grant applications should carry an undertaking that a thorough search of the literature has been undertaken.

**Q4** In the answer to Q1 it was stated that the House of Lords Enquiry concluded it was ethically acceptable to use animals for experimental purposes. We agree.

If the “moral status” is rephrased to how valuable is the life of an animal, then there must be a range of moral values. E.g. the worm *Caenorhabditis*, with which so much genetic work has been done and which can be reared within the laboratory, is less valuable morally than a monkey and there must be a scale of moral values from invertebrates to cold-blooded vertebrates to mammals and to higher primates. Where sentience and application of quality of life begins has not yet been determined, though humans tend to adopt and accept an anthropomorphic determination of this. They are probably right!

It is certain mammals and many cold-blooded vertebrates feel pain (e.g. recent work on fish).

Whether the response of invertebrates to a painful stimulus is a reflect response is an open question. One must assume that where the physiological receptors and pathways for pain exist, then the animal is capable of feeling pain.

There is an important area of research needed on animal awareness.

**Q5** The UK regulations are some of the strictest in the world; rigorous regulation is to be welcomed but it should not be rigid and rigidity in the regulations is often complained about by experimentalists.

For the welfare conditions of animals under experiment to be appropriate; a welfare assessment should be conducted before the project, and usually is, by the Ethical Review Committee (ERC). The ERC is an important step in the provision of a project licence and the ERC should be given more authority than at present e.g. in the welfare assessments for different animal species. If necessary consultation with ad hoc specialists in the field may be necessary. However, it is important that the ERC assessment is done in a timely manner and that its decisions are attached to the licence application.

Licences should be required for the breeding of GM animals for experimental work but not necessarily for all animals. The current provisions are appropriate but obviously reassessment may be necessary as knowledge of GM animals increases. Any information on GM research should be published.

If regulation is increased for this there is the danger that research will be driven abroad. It has been stated that the large pharmaceutical companies have transferred some or much of their animal research overseas.

**Q6** Of course the majority of research is published eventually in scientific journals but this is after the work has been done. The House of Lords Enquiry recommended that a lay anonymised summary of work to be undertaken should be published following approval of a project.

Rather than label individual medicines that animals have been used in the development a concerted effort should be made to inform the public how animal research is regulated why it is regulated and what are the necessities of regulation. The press could play an important role in this and the veterinary profession could also allay the fears that animals are tortured and abused under experimental conditions.