

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.

The Institute of Animal Technology, UK

INTRODUCTION

The Institute of Animal Technology (IAT) is the foremost professional body in the field and our major objectives are illustrated by our motto *curando docemus* (through learning we care) which reflects the caring and educational role of the Institute. Just as man has a legal and moral obligation to protect his fellows, prolong life and alleviate suffering he must also be aware of his obligation to ensure that the animals used to further these aims are properly cared for and protected.

Starting life as the Animal Technicians Association in 1950, the organisation made the first significant move to attain proper recognition of the essential contribution to science of those employed to care for laboratory animals. In 1965 the ATA was granted Institute status. Twenty-one years later, to reflect its enhanced objectives and wider sphere of activities, the Institute of Animal Technicians became the Institute of Animal Technology and adopted armorial bearings.

The Association developed training courses for animal technicians, produced publications and introduced examinations, which were the forerunner of today's internationally recognised qualifications. By our activities we continue to advance and promote excellence in technology and the practice of laboratory animal care and welfare. In education we make provision for animal technicians, technologists and others professionally engaged in the field of animal science to receive appropriate training and qualifications, thus ensuring that they may contribute to advancing standards of laboratory animal welfare at home and abroad.

Members are drawn from a broad cross section of the scientific community. The Institute welcomes application for membership from animal technicians, technologists, animal scientists, veterinarians and others engaged in the field of animal technology and its supporting industries.

This response has been prepared by the Institutes' Animal Welfare Officers in consultation and with the approval of the Executive Council of the Institute of Animal Technology

QUESTION 1 - What is your view of the use of animals in research

The use of animals in research is an emotive issue. A high proportion of the population owes both health and improved quality of life to research involving animals. Information from studies involving animals provides essential information that currently cannot be obtained by any other method.

This information has aided the development of many life-saving medical and veterinary treatments. It is a fundamental requirement of the Animal (Scientific Procedures) Act 1986, the UK legislation regulating the use of animals in research, that no animal be used if there is a viable alternative to such use.

Manifold examples of research exist that illustrate how our knowledge and understanding of biological processes has been increased by the use of animals. This research has helped lead to major breakthroughs in medicine and surgery for both animals and humans and although not **all** research on animals can **always** be transferred to humans much can. However even research that does not directly lead to a breakthrough can help us to understand the key differences between animals and humans. An increase in our understanding of the behaviour and pathology of animals contributes to the development of new veterinary treatments.

In 2002, the House of Lords select Committee on Animals in Scientific Procedures reported that "there is a continued need for animal experimentation both in applied research and in research aimed purely at extending knowledge", and that "toxicological testing in animals is at present essential for medical practice and the protection of consumers and the environment". The Institute of Animal Technology wholeheartedly agrees with this statement.

It is clear from canvassing of our own members and the reports of other learned bodies e.g. The Royal Society? the purpose of the research will affect the acceptability of using animals. Research aimed at addressing trivial queries is difficult to justify, regardless of the potential application of the answer. However, major developments in medicine and surgery have often been based on fundamental understanding of biological processes. These have required 'pure' research that has no immediate or obvious application. Where research is aimed at major life threatening or debilitating diseases, whether animal or man, or at factors of great social or environmental impact, it may be easier to accept the use of animals.

Different types of research often require the use of different animals including the 'lower species' such as insects and invertebrates e.g. genetics. In contrast, developments of vaccines and new clinical therapies and our understanding of complex biological systems such as the endocrine or nervous system have relied on the use of higher species, including primates.

The extent to which animals suffer during research varies considerably depending on the animal, the nature of the research and the definition of suffering. Those opposed to the use of animals in science would argue that even housing animals in family groups in an enriched environment, where all

their needs are met, still constitutes “suffering” in the sense that they are not living in their natural habitat. However most people actively involved with the use of animals in science would not fully share this view. Nevertheless the scientific community must be aware of the full spectrum of potential suffering including the effects of keeping animals in captivity and the Institute of Animal Technology would welcome more research in this area.

It is difficult to define what is an acceptable level of suffering, outside the issue of need/benefit, but it is important to point out that all experimental animals used in the UK are housed in humane conditions, are well looked after professionally qualified animal technicians and the vast majority are killed humanely with no other suffering. It is justifiably claimed that not only are animals used in the UK probably better protected than any used elsewhere in the world but also the treatment they receive exceeds that of many animals kept for pleasure or food. The nature of some research by necessity causes pain and discomfort. However, under current UK law these require special justification and stringent conditions including humane endpoints are applied. Such restrictions are rarely if ever applied to any other aspect of mans interaction with animals either within the UK or worldwide. It is important to recognise that the UK has the strictest legislation on animal experimentation, and this is rigorously enforced. It is important therefore, in terms of animal welfare, that research using animals is not exported from the UK, to other countries where these controls are less stringent or do not exist. Whilst welcoming and accepting the aims of the current legislation the Institute is concerned that further restrictions/ legislation should not be introduced unless major benefits to animal welfare can be demonstrated.

The Institute recognises and supports the benefits of using animals in research. Its members strongly believe that excellence in animal care and welfare goes hand in hand with excellence in science.

QUESTION 2 – What are your views about the use of genetically modified animals in research?

Genetically modified animals have been shown to be an enormously valuable tool in biomedical research and have aided a reduction in the number of animals exposed to experimental intervention. In the majority of cases there are no adverse effects as a result of the genetic modification and the animals appear to all intents and purposes normal. However manipulation of genetic material in many cases is still unpredictable and this may lead to a significant number of animals being used in the strain development.

The development of GM strains may be considered ‘unnatural’ in the sense that they have not been developed by selective breeding for a particular

characteristic as with other strains of animals but are 'created' by a scientific process. There is also concern that escape of GM animals from the laboratory may result resulting in 'pollution' of wild genotypes.

The use and development of GM animals is strictly regulated and the guidance on assessing the welfare of GM animals has been reviewed recently, and ongoing discussions and recent reviews of practises, are attempting to improve the detection of subtle changes in phenotypes that may impact on animal welfare. See "The use of genetically modified animals" (The Royal Society, 2001); "Report on animals and biotechnology" (Agriculture and Environment Biotechnology Commission, 2002); "Report on biotechnology" (Animal Procedures Committee, 2001); "Genetically modified and cloned animals: all in a good cause?" (Genewatch, 2002).

The Institute believes that good knowledge and husbandry of individual GM or GA strains is essential for animal welfare and has set up the GM Database to assist the transfer of such knowledge iat.org.uk

QUESTION 3 - What is your view about use of alternatives?

Alternatives to the use of live animals should be utilized wherever possible and research into alternatives is ongoing within all areas of research. The biomedical research industry has expended considerable effort, and finance, into developing alternatives especially in the field of toxicity testing. However more research, and the funding of this area, is needed. It is vital that when new methods are developed they are speedily reviewed and validated by the regulatory bodies.

Where the use of animals is unavoidable the sharing of data should be encouraged, although this must be assessed in terms of quality for it to be effectively utilized. Scientific journals which publish results of research involving the use of animals should encourage discussion of the techniques used and also encourage the inclusion of problems encountered, any adverse effects noted and the humane endpoints employed. Statistical planning and justification should also be included in publications. It is our opinion that a wider dissemination of 'best practice' in terms of experimental design would do much to aid the use of alternatives and reduce numbers of animals used.

QUESTION 4 - What is your view about ethical issues relating to the use of animal in research?

In 1985 a Register of Animal Technicians was established to emphasise the Institute's position regarding the ethical and legal aspects of care of laboratory animals. Many members of the Register, who are bound by a code of ethics are named under the Animals (Scientific Procedures) Act 1986 as the Named Animal Care & Welfare Officer (NACWO) they are responsible for the care of all animals in designated establishments.

We consider that the introduction in 1999 of compulsory ethical review of research projects utilizing animals to be a beneficial development and that it has helped all involved to address ethical issues involved in their work. Ethical issues are also taken into account by Home Office Inspectors during their consideration of applications for project licences and there are some areas of research that are unlikely ever to be licensed in the UK.

Institutional ethical approval is dependent upon the potential benefits outweighing the likely costs to the animals. The inclusion of lay members in the ethical review process ensures that the views of the general public are considered and addressed where necessary. However, we recognize that in practice in some instances it can prove difficult to avoid subjective and emotive reaction.

QUESTION 5 - What is your view about the UK regulation in research involving animals in the UK?

We consider that the current regulations are effectively and rigorously applied and provide high degree of protection for the animals involved in research. However none of the parties concerned must become complacent and the current arrangements for the assessment of welfare of animals must be continuously revised and improved as our knowledge and understanding increases and new examples of best practice emerge. Assessments of welfare should be continue throughout the life of a project and that assessments must rely on involving experts from different backgrounds, and continued evaluation.

We also consider that the cost/benefit analysis, like the assessment of animal welfare, should be an ongoing process which is interactive and should take into account unexpected adverse effects and scientific outcomes. This, as with many other aspects of research on animals, should be a continuing dialogue rather than a snapshot assessment.

It is important however, that the application of the legislation does not result in work being exported overseas. Most in the scientific community welcome the rigour of UK legislation on animal research and object only when they see regulations that prove a major burden with no obvious benefits to animals.

The passage of animal research, researchers and companies from the UK may be in part due to legislation and bureaucracy, but also reflects the threat from minority pressure groups on safety and security of those involved in the field of animal research.

QUESTION 6 - What do you think about the information that is available to be published about research involving animals?

Open discussion on the use of animals in research is sensitive and can result in a very real threat to individuals concerned, their families and staff. However we believe a better informed public understanding is essential to this often emotive subject. The Institute of Animal Technology has recognised the lack of information on animal research and its regulation and has initiated an extensive public relations campaign funded in the main from our own resources (in excess of £45k in 2002). Several members of the Institute have been trained to act as spokesmen for our industry and they have contributed to a variety of media interviews and publications. In addition, since 2002, we have published and distributed over 22,000 copies of a booklet aimed at schoolchildren between the ages of 9-11, which explains why animals are needed in research and the role of the animal technician in their care and welfare.

[The Institute of Animal Technology also submitted to the Council documents about the Institute and its work]