

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.

Naturewatch, UK

### **General remarks**

*Naturewatch is an animal welfare group and therefore committed to working entirely within the democratic system. We have consistently condemned all illegal activity by the more extreme elements within the animal rights movement.*

Animal experimentation is an intensely ethical subject. It is sharply polarised, so that neither extreme seems to be capable of recognising that the other side has an ethical stance. For example, there is a tendency for some to label parts of the experiment industry as being motivated solely by profit, and for others to label animal extremists as anarchists. This is not helpful to anyone. There is nothing unethical about trying to produce drugs to cure people of illness, nor of campaigning against the exploitation and torture of animals. These two positions are, however, in obvious conflict, so every effort must be made to reduce the polarity, and to reduce the opportunity for one side to demonise the other.

[Note: ASPA – Animals (Scientific Procedures) Act 1986].

**Question 1.** What is your view about the use of animals in research?

### **Information provided by research**

It cannot be disputed that some animal experiments may provide results which are unobtainable in other ways; however, the issue is whether it is ethically acceptable to do them, and whether the results can be transferred to humans. Two recent authoritative statements have cast doubt on their efficacy – even without considering their ethical acceptability:

- During the hearings for the House of Lords Select Committee, Robert Coleman of Pharmagene stated that 80 to 90% of the drugs which reach clinical trial phase fail. Given that the tests which can be done on animals are far more acute than would be acceptable at the clinical trial phase, this is an extraordinarily high failure rate.
- Allen Roses, worldwide vice-president of genetics at GlaxoSmithKline, has made the remarkable comment that “the vast majority of drugs – more than 90 per cent – only work in 30 or 50 per cent of the people.” Thus, in the world-wide medical experiment known as the commercial market-place, fewer than 10% of the drugs which pass the clinical trial phase may be transferable to more than half the rest of the human population. If

drug test results cannot be reliably transferred within the human species, there is little hope for the efficacy of animal experiments which require cross-species transference.

Since, therefore, fewer than 2% of the drugs which go to clinical trial will both reach the market-place and improve the health of more than half the people who are prescribed the medication, it is appropriate to ask whether animal experiments are actually effective even before one considers the rights and wrongs of using animals in this way. This is perhaps the major irony of animal experimentation: their success rate is so low.

The current success of microdose studies in human volunteers may mark the start of a much-needed paradigm-shift in the way drugs are tested. In time animal experiments may be regarded as a hopelessly clumsy approach to a task which is exceptionally difficult even using human subjects.

### **The acceptability of using animals**

At Naturewatch we look forward to the day when animal experiments are ended, but we recognise that this is unlikely to happen until sufficient alternatives are found. We have just launched a campaign to ban experimentation that involves brain-damaging primates (via Early Day Motion 234 in the 2003-4 session of the House of Commons) as being ethically abhorrent.

### **The suffering of an animal**

All vertebrate animals seem to have nervous systems which are similar to those in humans, so it is therefore self-evident that they perceive pain in a similar way. Psychological suffering – for example, due to handling, captivity and social deprivation – is more difficult to quantify although these are undoubtedly factors which have tended not to be given sufficient weight. Whether invertebrate animals suffer in similar ways to vertebrates seems to be uncertain (although cephalopods and decapods seem to, so that they are now included under ASPA). However, it seems intuitively obvious that pain is a rather basic response essential for survival, so it would not be too surprising if very primitive animals have identifiable pain receptors.

As a pragmatic device, the principle behind the cost-benefit analysis – where the benefits of animal experiments are balanced against the costs to the animals – is sound, but we believe that the dividing line of acceptability under ASPA permits procedures of extreme cruelty (for example the xenotransplantation research revealed by *Uncaged*, and the research into stroke and Parkinson's which damages the brains of primates, as revealed by BUAV) which should not be allowed.

**Question 2.** What are your views about the use of genetically modified animals in research?

### **The animal welfare benefits of GM**

In some cases the use of GM technology may result in a net gain for animal welfare. For example, polio vaccine may now be tested on GM mice rather than primates, and the use of bioluminescence may enable some research to be done with less cost to animal welfare and with a higher scientific yield (for example by following the growth of cancerous tumours in the living animal non-invasively).

### **The animal welfare nightmare of GM**

There do need to be sufficient regulations to prevent some of the more extreme possible uses of GM. For example, pigs or other farm animals could be bred to be insentient, squeal-free meat factories. This would be totally unacceptable, but the legislation needs to be in place before they become reality.

Cross-species chimeras would also be completely unacceptable. The resulting animal is unlikely to have any viability as a living creature other than in sating scientific curiosity. We do, however, acknowledge the difference between a chimera and a hybrid – for example, the unexpected hybridisation of native British red deer with imported sika deer is unfortunate but is a naturally occurring reality rather than an arbitrary experiment. Also we do not believe that the insertion of a jellyfish gene into a mouse (for bioluminescence) makes the resulting creature any less of a mouse.

Creating GM animals to be susceptible to lifelong neuro-degenerative diseases is very questionable. However, while the technology may be new, assessing its ethical correctness can still be done by weighing the costs and benefits.

There also needs to be awareness of commercial exploitation for novel purposes: the government needs to be pro-active rather than reactive. For example, bioluminescence may lead to glow-in-the-dark mice becoming commercially available. It should not be beyond the bounds of possibility for the Government to anticipate these issues.

### **Question 3. What is your view about the use of alternatives?**

#### **The need for the 3Rs**

The full development of the 3Rs is absolutely essential. We at Naturewatch have been lobbying parliament to enact the recent Lords' report and in particular to build the Centre for the 3Rs. We note in particular the comments of Professor Michael Balls, the recently-retired head of the European Centre for the Validation of Alternatives in Medicine, who said at one of the hearings for the report, "I think the support for alternatives is often rather shallow and there is rather little appreciation either of the scientific value of alternatives or of their ethical value". The Lords' report commented that "We are not... persuaded that enough effort is always made to avoid the use of animals. We are similarly not persuaded that where this is not possible, sufficient effort is always made to minimise the number of animals used, and to minimise the pain and suffering inflicted on each animal."

#### **The Centre for the 3Rs**

There is an important need for a Centre for the 3Rs to be pro-active in spotting trends in fundamental biology and resourcing their development. For example, bioluminescence in GM strains has the potential to lead to substantial reductions in the numbers of animals used in, for example, studies of tumour growth, by enabling the tumours to be observed non-invasively (thus potentially leading to a large reduction in the number of animals used). Also, early microdose studies in human volunteers shows that there is enormous potential in this area (and which might lead to the wholesale replacement of animal experiments with microdose studies). Both of these could legitimately be regarded as suitable for resourcing as they promise potentially large gains in the 3Rs.

#### **Funding the 3Rs**

It would be good if there were some creative thinking about the funding of alternatives. An 'alternatives tax' on animal experiments would be a way of substantially increasing the amount available for this research – the figures quoted are £280,000 by the APC, although the Government claims to have an annual budget of around £10m scattered about. Even a 1% tax on animal experimentation would lead to a substantial increase in the amount available for alternatives.

**Question 4.** What is your view about ethical issues relating to the use of animals in research?

I have to admit a set of personal beliefs which cannot be regarded as the same as those of Naturewatch. The first part of this answer will therefore be personal and not representative of Naturewatch.

#### **Moral status of animals – a personal statement**

As an evangelical Christian I believe that humans are different to animals in more than just degree of evolution. There is a spiritual dimension that sets apart humans from animals. The Bible is certainly not a vegetarian tract and there is no place for an animal rights view within it; however, it does not logically follow that humans should feel free to do whatever they like with animals. Instead a Biblical view is one which emphasises the responsible stewardship of God's creation rather than its exploitation. I suspect that other respondents with an evangelical background will expand on this theme, but I would be happy to do so myself at a later date if it would be helpful.

#### **Animal suffering**

We are not clear how anyone can argue that animals do not suffer: pain perception seems to be a primitive phenomenon (pre-vertebrate at least), as do emotions associated with, say, maternal instinct and fear. It would be interesting to know whether animals like the much-studied nematode worm *Caenorhabditis elegans* exhibit these phenomena as well. We therefore do not believe that pain and suffering is something which distinguishes humans from animals. (Language, culture and spirituality would be better starting points for that). (*See also the answer to question 1, final paragraph*).

At Naturewatch we are totally opposed to the barbarous cruelty that takes place in some animal experiment laboratories – chief among them being the procedures which involving brain-damaging primates. However, we do not promote a vegetarian lifestyle (only some of the staff here are vegetarian), and we also believe that zoos have an important educational role to play.

**Question 5.** What is your view about the UK regulations on research involving animals in the UK?

#### **ASPA and its enforcement**

ASPA has set a high standard for animal welfare in experimentation, particularly in its use of the cost-benefit analysis, but there is a real danger that the UK may become complacent in its belief that it sets the highest standards of legislation. We are neither convinced that the legislation has evolved sufficiently to take into account the

developments in biotechnology, nor that it is backed up by sufficient enforcement. For example, the exposés by organisations like Uncaged (with the Imutran papers on xenotransplantation) and BUAV (on primate research at Cambridge) show that the legislation seems to be interpreted all too loosely, with procedures classified as being of moderate severity which seem to be self-evidently of substantial severity. The new EU directive on animal experiments, which is at an early stage, looks likely to take a more carefully thought-out perspective on such aspects as genetic modification, and the UK may be required to sharpen up its own legislation in order to come into line with it.

### **Cost-Benefit Analysis**

We have made detailed comments to the APC in their consultation on the Statistics. We believe the principle behind the cost-benefit analysis to be reasonable but that its operation needs to be overhauled. For example, experimenters should be required to give retrospective assessments of suffering. This would provide a framework for reporting unexpected effects of actual procedures. For example, when Imutran classed their xenotransplantation procedures as 'moderate', they presumably did not expect the experiments to go as badly as they actually did – some of which might, in retrospect, have been classified as 'substantial'.

Retrospective reporting should also lead to scrutiny of cases like this where much more harm was done than envisaged. Obviously, though, the emphasis needs to be on the reporting of honest mistakes rather than to set up a punitive regime, which could be counter-productive.

We also believe that each of the bands needs to be sub-divided, particularly the moderate band which appears to be a rather elastic category into which procedures are fitted which should instead be given substantial ratings.

**Question 6.** What do you think about the information that is available to the public about research involving animals?

### **Availability of information**

In our response to the APC we have emphasised that the Statistics need to be made much more accessible to a much wider range of people. Rather than just being a technical record of procedures performed under ASPA, they should seek to inform and educate the general public in a way that is accessible to, say, an 'A'-level student, or to the old lady down the street debating animal experiments at the Women's Institute.

A Centre for the 3Rs could also have an educational role, in informing the public about animal experimentation – perhaps via a visitor centre and a set of publications.

The Government appears to support the idea of lay summaries of license applications being made available to the general public – this is a move which we would wholly welcome.

The experiment industry makes minimal effort to provide information about what is going in their laboratories, hiding behind the excuses of personal security and commercial confidentiality. If the general public therefore gets a distorted view of animal experimentation – for example, in believing that most experiments involve torturing dogs and primates – then that is the fault of the experiment industry in being so secretive, so that the only view that the public gets is via exposés.

### **Trusting information sources**

In researching animal experiment issues I would place particular weight on reports by organisations such as the Boyd Group and the Animal Procedures Committee, although I believe that they both have insufficient representation from animal welfare groups. I take seriously the investigations by organisations like BUAV and Uncaged and would trust their reports with regard to the suffering of the animals; however, I have found that such investigations are not always accurate in their description of the science, and have therefore relied on the medical research papers to provide that background. I also rely on material such as the Home Office annual statistics to give a sense of perspective. I probably place the least weight on material emerging from the Research Defence Society, acting as the propaganda division of the experiment industry. Thus I would not place complete trust in any one source, nor would I completely dismiss any one source, and try to derive a balanced perspective by shrewdly analysing the material that is available. (It is not for me to judge the success of the venture!).

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