

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.

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Question 1

Reliability

Research on animals may provide information not available by other means, e.g. the consequences of some surgical procedures.

However, in other cases the information may not be of any practical use, for one or more of three or more reasons:

(a) The mechanism studied is not sufficiently relevant to the disease for which a cause or cure is being sought (i.e. the experimental hypothesis is flawed).

Example: the assumption that preventing formation of, or removing, senile plaques (SPs) in the brain can prevent or cure Alzheimer's disease. Some researchers dispute this, and SPs do not correlate closely with dementia.^{1,2}

(b) It is impossible to modify the mechanism being studied without causing severe adverse effects, for example therapy-related leukaemia.³

(c) The mechanisms are different between humans and other animals. For example,

(i) Researchers have studied how to induce neuronal proliferation in day-old chicks by 'training' them, despite the fact that adult humans learn by producing or reinforcing synapses between neurons, not by producing new neurons. The research was claimed to be relevant to human dementia.⁴

(ii) An area of the brain specialising in spatial memory in humans was found to be in a different position from that in monkeys.^{5,6} This difference was discovered through fMRI studies in humans.

"Similar symptoms can have different causes in different species, so that false leads are thrown up."⁷

Animal-tested drugs usually fail to work in humans, and hundreds of thousands of humans die every year from prescribed animal-tested drugs. Conversely, some drugs which are effective and safe for humans are lethal to other animals. For example, the injectable contraceptive Depo-Provera was banned for about 20 years in the USA because it caused cancer in dogs and baboons, but 20 years of safe use in other countries led to a reversal of the ban. Penicillin would probably have been discarded if it had been tested on guinea pigs, in whom it is highly toxic.⁸

Dr Ralph Heywood, past scientific director of Huntington Research Centre (U.K.), stated at a 1989 scientific workshop held at the Ciba Foundation that: *"...the best guess for the correlation of adverse reactions in man and animal toxicity data is somewhere between 5% and 25%."*

...the General Accounting Office in the U.S. reported that between the years 1976 - 1985, of the 200 new medications introduced over that period of time, a full 51% were either withdrawn from the market completely or else re-labelled, because of severe side effects not previously noticed.⁹

"The history of cancer research has been a history of curing cancer in the mouse. We have cured mice of cancer for decades, and it simply didn't work in humans." Dr Richard Klausner, director of America's National Cancer Institute.¹⁰

"For every 30-40 drugs effective in treating mice with cancer, only one is effective in people."
D.J.Galloway.¹¹

Drugs prescribed in Britain are suspected of causing over 19,000 adverse effects annually - probably only one tenth of the true figure.¹² All of these have been 'tested' on animals.

"...adverse reactions to animal-modelled medicines are now the fourth largest cause of death in America, accounting for two million people being hospitalised every year - 100,000 of whom die."^{13,14}

There are many reasons for this non-extrapolability. For example, there are significant differences between species with regard to many proteins, including enzymes and receptors - the most common targets of drugs. An important such protein is the cysteinyl leukotriene receptor (CysLT) (leukotrienes are involved in inflammation). Human CysLT1 can be antagonised by the drugs montelukast, zafirlukast, pranlukast and BAY u9773, whereas mouse CysLT1 is antagonised by a different drug: MK-571.¹⁵ Furthermore, the receptors are expressed in different organs in different species.

Even our closest relatives have important biochemical differences from us. Tests using the protein albumin show a variety of immunological distances between humans and other primates, comparisons between primate forms of lysozyme also show significant differences, and of course there are crucial genetic differences as well.¹⁶

Another important aspect of drugs is the time they take to be metabolised and eliminated from the body - this is crucial to both efficacy and toxicity. It often varies greatly between species.⁸

The animal testing of agrochemical and industrial chemicals is a cruel and pointless exercise. There is huge variation in the susceptibility of individual *humans* to a given compound, depending on genetic predisposition, previous or contemporaneous exposure to other chemicals and general health, including stress levels. Stress increases the permeability of the blood-brain barrier, allowing some chemical compounds - such as organophosphate pesticides - to enter the central nervous system.¹⁷ Thus animal testing cannot predict the effects on humans and has led to the appalling injustice of people being made seriously ill by these chemicals but unable to obtain compensation because animal tests have 'proved' the chemicals safe. Animal testing has protected the manufacturers at the expense of the public.

It is absurd to claim, as some scientists, politicians and other commentators do, that the cessation of animal experimentation would stifle scientific progress. On the contrary, it would free up resources for more effective methods, and also staunch the efflux of able, compassionate students from the life sciences which occurs due to the focus on animal experimentation (see 'Desensitisation' in my answer to Question 4 and 'Regulatory bias and its basis' in my answer to Question 5).

Acceptability

My view is that it is unacceptable to inflict physical or psychological harm on an animal **which is not for its own benefit**, whatever the potential benefits to humans or other animals. I consider that the incarceration of animals in cages and other containers is a harm in itself, and that the keeping in isolation of social animals is cruel. I therefore oppose these practices.

Suffering

I consider that animals tend to suffer from being in captivity and from being handled in addition to the suffering caused by research itself. The amount of suffering depends mainly on:

- (a) the severity of the procedures;
- (b) the sophistication of the animal's nervous system and consequent sentience;
- (c) the degree to which the animals' natural environment is or is not replicated in its housing; *and*
- (d) how well the animal or species is adapted to being handled or kept in captivity; *and*

(e) the skill and/or compassion of handlers.

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Question 2

GM animals do raise new issues, a major one being the deliberate creation of a living creature which is doomed to suffer, which is morally unacceptable. Creating GM animals is also another step down the roads of commodification of animals and reductionist genetics. Animals should not be treated as commodities - they have intrinsic rights to be themselves and not to be specifically bred for any kind of human use, whether by 'conventional' selective breeding methods or by genetic modification. Genetic reductionism shifts the focus of research yet further away from environmental factors, thus failing to empower humans to take personal responsibility for their and society's own health.

Environmental factors include the genetic environment within an organism, and few diseases arise from mutation of a single gene: genes influence each other's expression, and illnesses, like other traits, almost always involve changes in the expression of *many* genes. Additionally, individual genes have a range of functions which often vary between species.

Xenotransplantation is morally abhorrent and has led to appalling suffering, in which the Government has colluded by various means including downgrading the official severity of kidney transplant experiments by Imutran from 'severe' to 'moderate'. This information is available from the website www.uncaged.co.uk.

Xenotransplantation also poses a serious threat to humans both individually and collectively and, in the worst-case scenario, as a species. Non-human

animals have been the source of a large proportion of the most lethal diseases in human history. Xenotransplantation would be likely to lead, sooner or later, to the transmission of pathogens from the transplanted organ to the human host. Mutation of such pathogens could lead to them becoming lethally pathogenic and/or highly infectious, and hence their spread throughout the human population.

Both genetic modification and cloning have led to the birth of terribly deformed animals and thereby to appalling suffering, both of the mutant offspring and, inevitably, of the female animals forced to carry and give birth to them. These practices are therefore unacceptable.

Question 3

Alternatives

Of the '3 Rs' I only consider replacement to be acceptable, due to my objection to the harming of animals. I support all effective research methods which do not involve harm to animals which are unable to consent, i.e. all except humans. In the case of humans, research must involve informed consent by adults of sound mind.

I consider that government funding should be diverted from animal research to non-animal research, on the grounds that the latter is not only morally preferable but also more likely to bring benefits to humans more quickly and less likely to lead to adverse effects in humans. I understand that the Government only budgets for about £250,000 for use in reducing the numbers of animal experiments and that only a fraction of this is used to develop non-animal methods. This is a pittance compared to the amount put into animal-harming medical research. The greater accuracy and speed of non-animal medical research will lead to more favourable cost-benefit ratios.

Perhaps fiscal measures could be used to encourage non-animal-harming research. The Government could also grant monetary awards for concrete gains such as savings to the NHS, perhaps establishing a competition for excellence in animal-free research with a prestigious prize like the Nobel Prize.

There may also be scope for Government to use economic instruments to favour charities which fund non-animal medical research over those which fund animal-harming medical research.

I believe that all fields of animal-harming research can be replaced with 'alternatives' and look forward to a time when non-animal-harming research is no longer regarded as 'alternative', just as energy sources previously dubbed 'alternative' are now more accurately described as 'renewable'.

The search for 'alternatives' should not be overly focused on finding exact animal-free replacements for existing/'conventional' animal methods but more on alternative **approaches**. As stated in my answer to Question 1, the

information sought from a particular animal experiment may not be of practical use for human or animal health, or the experiment may not represent the most beneficial approach.

I generally support the alternatives recommendations of Dr John McArdle, Science Advisor to the New England Anti-Vivisection Society.¹

There is a plethora of clinical and epidemiological data which is not being analysed and integrated. This is a rich resource from which meta-analyses and databases **must** be produced as a top priority. Universities and other bodies should be encouraged and supported (e.g. financially by central Government, including support for PhD students) to carry out this kind of research. The rewards reaped in the form of a healthier and empowered population (thus a reduction in NHS costs and the costs of lost working hours due to illness) will make such research highly cost-effective.

Hospitals, general practices and veterinary practices must be encouraged/supported to keep rigorous records of treatment outcomes, incidences of illness and known correlations, and to make these available for analysis.

Duplication

I believe that there is a huge amount of duplication of research - not just that involving animals - and sharing of information would reduce it. There should be free and open publication of findings on the Internet. Health is one of the global Commons and should not be treated as a source of private and corporate wealth.

Patenting is a system which militates against information-sharing and is being abused by some individuals and institutions. Patenting in medical science should only be allowed (if at all) for a final product, not for genetic sequences or other biological entities.

Reporting of research findings

Companies and scientists must be prohibited from claiming 'imminent breakthroughs'. Such claims are absurd: one cannot know what one is about to discover. The practice raises false hope in people affected by distressing illnesses, and it has to be suspected that it is often a ploy to gain funding.

One reason for unsatisfactory reporting of research into drugs is the excessively close involvement of drug manufacturers. As well as funding the research, such companies frequently pay people to 'ghostwrite' the research articles in a way which distorts the findings in favour of the drugs.² Thus there need to be scrupulous checks conducted, as a matter of routine, to

ensure that the names of researchers and authors are correctly stated and that all interests are declared.

Much published research provides inadequate data on differences between the animal species used and humans, such as degrees of enzymatic homology and interspecific variations in elimination half-lives. This weakness applies equally to *in vitro* work. Some published papers do not even specify from which species a tested molecule came.

One such *in vitro* study specifies that one tested enzyme - TACE - came from pigs but does not state from which species the MMP enzymes - with which it was being compared - came.³ It is odd - for a piece of research addressing enzyme structure and activity in such detail - to compare an enzyme from one species with a different enzyme from a different species: confounding factors are likely to distort the results; this would be avoided if exclusively human material were used. The researchers then compared the effects of candidate drugs on porcine TACE and in human whole blood, following which one compound was tested on live rats and dogs. Yet at no point does the paper address interspecific differences, as a result of which the research and/or its publication may tell us little or nothing of practical use. As it is research specifically directed towards drug development, practical relevance is of paramount importance here.

Another study provides some useful data comparing rats and humans with regard to size,⁴ and some papers provide information about molecular homology (regrettably time constraint does not permit me to locate these at present), but this is, from my experience, the exception rather than the rule. In any case, size is a crude and inadequate criterion for comparison or extrapolation: there are many other differences between species - of which I have given some examples in my answer to Question 1 - which affect experimental outcomes.

Unrecorded animal use

While discussing *in vitro* work, I must highlight a loophole in the law relating to animals, viz. that numbers and types of animals bred and killed for their tissues are not currently required to be recorded or published. This is another example of animals being regarded as disposable goods and is unacceptable. If resources were put, as a matter of urgency, into creating human tissue banks for this purpose, and into setting up effective and well-publicised systems for human tissue and body donation, results from *in vitro* research could be more applicable to living humans. At present, even when human cells are being tested *in vitro*, the growth medium is almost invariably a serum from a different species. Measures must be put in place to secure supplies of **human** blood and other materials for *in vitro* research into human

diseases, and to use serum-free cultures where appropriate, e.g. in toxicity tests. There are ethical as well as scientific reasons for this:

*"FCS (foetal calf serum) production involves conditions associated with high levels of cruelty, pain and distress including, but not limited to, puncturing the heart and draining all of the blood from unanesthetized animals."*¹

One study which I have examined used materials from **six** different species, including both adult and foetal bovines!⁵ Bearing in mind the fact that the researchers in this study and (4) were testing substances commonly found in food, this is a prime example of research which could have been conducted on humans and human tissue alone, starting from epidemiological data.

Veterinary practices should be permitted and enabled to supply domestic pets' biopsy tissue and bodies for veterinary research. Systems to supply such research material have been set up elsewhere in the world, and it is possible to ensure that they are not exploited: pet owners have to give prior, informed consent and this delicate issue is addressed sensitively through leaflets in the surgery.

Imaging is a rapidly-developing field which shows enormous promise for medical research and practice, and the Government must do everything possible to encourage its development as an alternative to harming animals. Animals must not be used in such development unless this can be done without causing harm, including distress arising from captivity and restraint.

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Question 4

Animal rights

I believe that animals have an intrinsic right not to be deliberately or negligently harmed by humans except in the case of a lesser harm to achieve a net benefit for the animals concerned, just as is the case for humans. Arguments that rights must be accompanied by duties or responsibilities are nonsensical. We do not apply this criterion to infant or disabled humans. I consider that all animals have rights, although I am less concerned about invertebrates except for those with sophisticated nervous systems, such as cephalopods. I consider that the latter should always be given the benefit of the doubt as to whether they can suffer, in contrast to invertebrates which only show reflex-type responses.

Animal emotions

I do believe that many human emotions can be experienced by many other vertebrate species, and that, as a general rule, the more sophisticated the nervous system the more similar are such emotions. Emotionality is also influenced by the habitual lifestyle of the species, especially whether it is a solitary or social species and whether or not it nurtures its young. I doubt whether invertebrates are capable of suffering to anything like such a degree but would prefer to use the precautionary principle with regard to more intelligent classes such as cephalopods. There should be no research into animal sentience which may cause animal suffering of any kind.

Desensitisation

I am uncomfortable with deliberate harm being inflicted on any animal except in self-defence. It concerns me that fostering an ability to ignore signs of distress - even in an insect - or to harm it regardless of such responses is likely to have a desensitising effect on the perpetrator, perhaps enabling him or her to progress to harming more sentient creatures. It must condition the experimenter psychologically to override the proper human quality of compassion which should compel him or her to avoid or stop the harming of living creatures. It is known that serial killers often start their criminal careers with the torture and killing of animals. Whilst I do not suggest that all scientists who harm animals have a propensity to become murderers, the practice can have a brutalising effect, which is detrimental to society. An

example of desensitisation is reported by Elena Maroueva, a former veterinary student in Moscow who observed that, whilst her first-year contemporaries could not bear to watch frogs being killed, they found such practices 'amusing' three years later.¹

The continuation of harmful animal experimentation, both in education and in research, gives a message to society that it is acceptable to commodify, hurt and kill animals with impunity, even though the harm done to experimental animals would constitute a criminal offence in almost all other situations (with the exception of farming practices, 'pest control' and also, bizarrely, the use of animals in 'sport'). I believe that the commission and acceptance of such acts diminishes our own moral standing as a species.

Suffering is the main criterion on which my objection to animal research is based; commodification and brutalisation/desensitisation come a close joint-second in my hierarchy of criteria for unacceptability.

It is spurious to try to make a prior assessment of animal suffering against potential benefits simply because it is the nature of research that one cannot know in advance whether any benefits will accrue. Animal research invariably involves a cost in terms of suffering but usually no benefit. As detailed in my answer to Question 1, animal research has a tendency to also harm humans. In contrast, research which does not harm animals is at worst neutral in terms of costs vs. benefits.

Other types of animal use

As an ethical vegan, I object to all harmful use of animals, whether it involves killing or injuring them, confining them, commodifying them or degrading them in the eyes of humans or of other animals. Thus I am opposed to the use of animals for food, clothing, sport and all other uses to which the above criteria apply. This is not because the practices are 'unnatural' but because they are *unnecessary* acts of harm against living creatures, and humans have developed sufficiently to be able to avoid committing such acts without detriment to themselves.

Companion animals

I do not oppose the keeping of certain animals as companions ('pets') unless this involves any of the kinds of harm listed above. Some transient confinement is acceptable just as it is for children and other vulnerable humans, but not habitual caging.

Our relationships with cats and dogs as companions evolved mutually. Cats were attracted by rodents to grain stores, and dogs were attracted to human settlements by food, warmth and shelter. Cats provided pest control

services and dogs were also found to be useful to humans, for example by alerting them to danger and by helping hunters. Proximity led to increasing mutual respect and affection. Thus the relationships are not 'unnatural' as some people claim but a form of symbiosis. Relationships between humans and companion animals continue to benefit both partners, with the humans gaining companionship, health benefits and a deeper understanding of another species, and the other animals gaining food, shelter, warmth, protection and pleasure from affectionate interactions. This is not an abusive relationship or an example of commodification, as it involves appreciation of the animal for its own intrinsic qualities, not the imposition of force by one party on another, except in aberrant cases which are, sadly, numerous.

Thus, as long as harm is not caused, human guardianship of companion animals does not represent 'use' unless one also accepts that the non-humans use the human guardians.

When kept for any purpose, animals should be provided with environments in which their natural behaviours can be expressed and which do not cause them any distress. To keep an animals in a cage for the whole of, or most of, its life is unacceptable, unless it is necessary due to an infirmity. If the physical and psychological needs of an infirm animal cannot be met despite maximal effort to achieve this, it must be humanely euthanased.

REFERENCES

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Question 5

Laws and regulations

It may be the case that the UK has the strictest system of regulation of animal research, but complacency is not merited. Social change involves reassessing ethical norms generally towards greater compassion and respect for animals, and scientific practice must keep pace with such change.

I do not consider that current provisions for the assessment of animal welfare are adequate. 25 inspectors cannot possibly carry out the full range or magnitude of inspections merited by the numbers of animals and procedures involved. There has been a stream of exposés of cruelty to, and neglect of, research animals over the past few years and very little change in Home Office inspector numbers. Thus even if the regulations were sufficiently stringent (which I dispute), **enforcement** of them is not.

The current legal situation requires and thus favours animal experiments for drug testing, as it protects drug companies against litigation arising from adverse effects. Thus the law must be amended to level the 'playing field' between animal-tested drugs and non-animal-tested drugs (also see 'Choice' in my response to Question 6).

While harmful animal research continues (to which I am opposed), welfare assessments must be conducted before, during and after projects. As we do not, and may never, know how much animals suffer, the precautionary principle must always inform our regulations, at least with regard to vertebrates and cephalopods, when it comes to assessing their welfare.

As stated in my answer to Question 2, I oppose the creation of GM animals and all other forms of manipulating animals' genotypes. As long as GM animals continue to be created, the processes should be subject to licensing. However, I do not consider that current regulations are adequate for assessing the welfare of currently-produced GM animals - let alone new breeds - because they have not prevented the birth of severely deformed and severely-suffering mutants and the attendant suffering of their birth-mothers.

Regulatory bias and its basis

I consider that the bodies which grant project licences are biased in favour of animal experimentation, with qualified biologists favouring the practice outnumbering qualified biologists opposing it. Thus decisions on whether research could be done without harming animals, cost-benefit analyses, numbers of animals to be used and the 'suitability' of each species are skewed to the detriment of animals and, in many cases, to humans, as animal experimentation is a wasteful use of limited funding resources and results in drugs which kill hundreds of thousands of humans every year (see 'Reliability' in my answer to Question 1 and 'Alternatives', 'Reporting of research findings' and 'Unrecorded animal use' in my answer to Question 3 for more detailed statements on this issue).

This imbalance reflects a general one found in the biological sciences, which is a consequence of more compassionate and independent-minded students being filtered out of the field by mandatory harmful animal experimentation in higher education and, in some countries, even in primary and/or secondary schools. Those who survive the filtering process have usually become desensitised to animal suffering and conditioned to the norm of commodifying animals, creating a self-perpetuating vicious cycle of scientific inertia (also see the 'Desensitisation' section of my answer to the previous question). This loss of able and thoughtful students from such an important field must be curbed by the removal of requirements to collude in the harming of animals in education.

Publication of findings/'costs' and 'benefits'

I would like to see the publication of cost-benefit analyses, but have serious reservations. Statistics can be, and routinely are, misleading, GDP being a notorious example in the way that it presents work carried out to rectify environmental damage as a gain, thus skewing the statistics against practices which do not **cause** environmental damage.

However, open publication of research findings, of illnesses and deaths caused by prescribed drugs and of comparisons between illness and survival rates of people who have undergone specific surgical procedures versus those for people who have not, would be illuminating and highly desirable. Cost-benefit ratios can only be estimated extremely roughly before drugs go to clinical trial, and should be re-assessed after such trials and on an ongoing basis to determine long-term outcomes. The findings of these re-assessments should inform decisions on subsequent research proposals and should also be able to be used to halt current research in the event of adverse findings. Survival rates should always be explicitly defined. For example, Verweij and de Jonge (2000) refer to a clinical trial finding that the cancer drug topotecan slowed cervical cancer progression 'significantly' in contrast to paclitaxel, but that the additional delay to progression of the cancer was just 9 weeks. Many people, myself included, might question whether causing illness in animals and then killing them in order to develop such a drug was justified to produce such a small benefit, especially when any adverse effects and quality of life in humans are also taken into account.

Cost-benefit ratios cannot be properly estimated at all with regard to more general medical research. Furthermore, it is hard to argue reasonably that a new washing powder or shampoo produces any benefit which can justify making animals suffer. If a nation's economy depends on the unnecessary and unsustainable development of new products of such a frivolous nature, it needs a radical overhaul.

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Question 6

Information

The public should be given detailed information about what is done to animals in the name of research and what each piece of research is intended to achieve. There are people, as was illustrated in a recent debate on the

BBC TV programme 'See Hear', who think that research scientists simply seek out sick animals and try out cures on them!

Charities should be legally required to reveal in their publicity materials whether donations may be used to fund animal experimentation, so that people who object to such practices can choose which charities to support.

Debate

Discussions on the TV and radio tend to involve tedious repetitions of stock arguments in favour of animal research, and some such programmes have seriously unbalanced panels. For example, the BBC Radio 4 programme 'The Moral Maze' on 8th December 2002 about animal experimentation featured four panellists, **none** of whom had a fundamental objection to animal experiments! Other science programmes tend to refer to animal research casually as though it were not in any way questionable or controversial.

I want to see biologically-qualified people debating the issues in a calm, civilised and open manner, covering animal and non-animal methods in detail and assessing them honestly, in well-chaired TV and radio discussion programmes which also present reliable statistics. They should address the validation issue:

"All of the traditional animal-based safety tests were never validated and would be unlikely to pass the level of proof required of new *in vitro* methods."¹

My favoured model would be some of the better TV programmes on the Hutton Enquiry. Animal experimenters fearful of animal rights extremists could have their identities concealed if necessary.

Trust

With regard to the provision of balanced information about research involving animals, I would not trust the words of representatives of, or shareholders in, companies which carry out, fund or promote research. In order for me to trust scientists, doctors or other experts I would require them to declare all interests such as sources of past, present and potential future funding for their work. I do not generally trust politicians on this issue (or many others!), largely because pharmaceutical companies contribute to party funding. As a science graduate and postgraduate student in medical science, I cultivate a healthy cynicism in all matters, so my trust or lack of trust for particular sectors of society is relative and conditional, the latter quality depending on what I already know and subsequently learn, and the former depending on previous experience of the sector or individual. I prefer to hear both sides of a debate before making up my own mind.

Labelling

Medicines should be labelled to show not only whether or not they were developed using animal research but also to reveal their ingredients, including a clear statement as to which, if any, are animal-derived. It is pointless telling ethical vegetarians and vegans, people with allergies and intolerances and members of religious groups which prohibit the consumption of certain animal products simply that a product has not been **tested** on animals. It would also be helpful to be informed of how successful a medicine has proved to be in the target species. If there is insufficient space on labels, small leaflets should be produced to accompany products, as is now routine for medicines.

As this consultation is not just about medical research but also about animal testing of agrochemicals, household products, toiletries, additives, etc., these and/or products containing them should also be labelled both with regard to animal research and animal-derived ingredients. I would not expect numbers or species of animals to be stated, but obviously where manufacturers *wanted* to specify these (e.g. to emphasise that they did not use vertebrates) they could choose to do so. For myself, and probably many others, statements about animal welfare and type of experiment would be irrelevant due to our complete opposition to such experiments, but some people might want this information. Measures would have to be taken to ensure that any such statements were accurate. For example, Tesco has recently been taken to task by animal advocacy groups over its promotion of lams pet foods, which are developed through laboratory animal research. Tesco claimed in its promotional materials and responses to enquiries that its intention was to enable customers to make informed choices, yet it failed to provide information, requested by enquirers, about lams's procurement of animal research. lams has itself stated: "By policy, lams only conducts research that is equivalent to nutritional or medical studies acceptable on people." (pers. comm. 25.10.03) This statement is highly suspect in the light of earlier lams-sponsored studies exposed by animal activists, in which animals suffered kidney failure and other lethal outcomes.

CHOICE

Opponents to animal experimentation are derided as hypocrites if they use animal-tested medicines and treatments, yet the only options offered to us under the NHS are morally unacceptable products and treatments - or nothing.

The British Government claims to be committed to offering people choice, and is keen on encouraging/allowing market forces to provide it. People are

allowed to choose to undertake activities whose hazardousness is well known, such as smoking, motor racing and the consumption of junk food, so there is no logical or moral reason why they should not be allowed to choose to use medicines and other products and treatments which are not developed through animal research. But current laws militate against this, and there appear to be moves to remove even some of the current, limited choice for such people represented by so-called 'complementary' medicines. My medical knowledge has not prevented me from preferring to use herbs and medicinal foods with a long history of safe human use rather than visiting the doctor or pharmacy; indeed, the more I have learned the stronger this preference has become, notwithstanding the Government's insulting claims that people opposed to animal experimentation are unscientific or anti-science.

People should be able to register preferences for non-animal-derived treatment with healthcare providers. At present - especially in hospital - we are offered no alternatives, our ethical and religious sensitivities being completely disregarded. This means that a Hindu can be given a graft of bovine tissue - an event which I understand has indeed happened and caused great distress to the patient concerned.

If healthcare is a universal human right, this lack of choice may be illegal.

REFERENCE

1. McArdle, J. (2003) 'Alternatives to Animal Research', New England Anti-Vivisection Society website:

<http://www.neavs.org/betterscience/FINAL%20ALT%20WEBSITE.htm>

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