The Association of Medical Research Charities (AMRC)

The Association of Medical Research Charities has over 100 member charities who together contributed £660 million to medical research for 2002-03 in the UK. They are a major source of funding for research in all areas of medicine in the UK.

AMRC welcomes this inquiry and the opportunity to respond. AMRC consulted all its member charities on this response. The answers below apply to the use of animals in medical research from the perspective of AMRC and its member charities.

Question 1.

What is it your view about the use of animals in research?

The use of animals is usually treated as an isolated debate. But in reality, the primary goal is high quality medical research and this can raise a number of different ethical issues - some of which may be conflicting. For example, there has been considerable controversy over the use of human tissues and organs following the problems at Alder Hey. As a result, research using human tissues has become more restricted and this might cause difficulties in finding alternatives to animal use. Groups opposed to animal use seem to be unaware of these issues and frequently propose alternatives, including the use of human volunteers, without consideration of the ethical problems.

AMRC considers that the strictly regulated use of animals continues to be essential in some areas of research if people are to benefit from healthcare advances. Not all AMRC charities currently fund research involving animals, but all of them recognise the important role it has played, and its vital future contribution to understanding and treating human diseases

Do you think that research involving animals provides information that is not available by any other method?

Yes. Medical research is about understanding, preventing, treating and curing human diseases. Since the benefits are intended to apply to living humans, it stands that all of these processes of medical research must at some stage be applied to whole living organisms.

Many types of research are deemed unethical in humans - for example research which is invasive. The only other option for studying whole living organisms is to use animals.

The House of Lords Committee described animal models as "highly imperfect". Whilst there is truth in that, the statement in isolation fails to reflect the complexity of medical research. Animal models may be the only or best we have in any one situation. And switching to other methods does not guarantee perfection.

Animals are sometimes better models than humans for practical reasons. For example, the nematode, being multi-cellular, yet relatively simple, was chosen as the most appropriate model system to study genetic regulation of organ development and programmed cell death. This research led to characterization of these processes in humans and received the 2002 Nobel Prize in Medicine. Likewise the zebrafish is useful in developmental biology since it has transparent embryos. This feature is allowing the study of cancer genes which are conserved between humans and zebrafish. Research on human embryos is, of course, strictly limited for ethical reasons.

Whilst non-animal alternatives like yeasts are already used, inevitably the more closely related to man the animal is, the greater the insight from the experiment is likely to be.

Can results from research using animals be transferred to humans?

There are many examples where animal research has proven of value in treating .. find egs from member charities

Results from research using animals should always be treated with caution. Nonetheless, if the research is well-designed and of high quality, then useful knowledge from animal research can be applied to humans. When animals do differ from humans, this is often helpful in our understanding of the disease.

Does the acceptability of using animals depend on the purpose of the research?

Yes - the acceptability of using animals should be considered on a case by case basis within an accepted legal and regulatory framework. AMRC supports the existing system, including specific cost / benefit assessment for every project undertaken.

How much do you think animals suffer during research?

Much research on animals causes little or no discomfort. In some cases, however, just as a person might suffer from a disease, a research animal might develop the same symptoms. Continuous application of the 3Rs should reduce animal suffering.

What level of suffering do you think would be unacceptable, whatever the potential benefits of the research?

AMRC supports the current regulatory limits on animal suffering.

Question 2.

Do GM animals raise new or different issues?

For the legal and regulatory framework for animal use, GM animals raise no new issues.

However, since the number of GM animals is rising, it is important that there are sufficient resources to apply the 3Rs effectively within the scientific community. AMRC would welcome steps to ensure that there is adequate co-ordination, for example in databasing new strains of GM animals once they have been bred, and in sharing refinement techniques.

Some animals may be created to suffer on a long-term basis, for example from neurodegenerative diseases. Do you think this can be justified, and if so, why?

The use of such animals should be justified on a case by case basis through the cost benefit assessment (this balance reflects the potential harm to the animals versus the potential benefit to humans). Any suffering of GM animals is not in principle or in practice different to the suffering of non-GM animals.

Question 3

Do you think that there is there a need for more research into alternatives to research involving animals?

There are sometimes misunderstandings about so-called 'alternatives research'. Research funded by organisations like the Dr Hadwen Trust (perhaps using tissue culture) may be classified as alternatives research. The same type of work funded by charities is classified simply as medical research.

For example, one of AMRC's member charities has the following description of current medical research on its website: *"In the prostate cancer group, the major achievement has been to perfect cell culture models of prostate and prostate cancer invasion... This provides an ideal resource for testing, pre-clinical testing, therapies without recourse to animal models."*

Groups opposed to animal research sometimes claim that non-animal methods are 'overlooked'. This is completely untrue. Most medical research already involves non-animal work. For AMRC member charities, animal research might typically account for between 10 per cent and 30 per cent of research projects.

Far from being a separate activity, research into alternatives happens continuously when researchers seek and introduce new methods as part of normal working practice, and through the application of existing technologies. Replacement of animal use happens when information derived from new technologies allows us to gain knowledge which might otherwise have required animals.

However, it is often unclear whether developments in say tissue culture are genuinely 'alternatives' to animal use (even though that claim is frequently made). They may simply be 'different' methods which provide different information.

Furthermore, there is no point in 'searching' for alternatives which do not exist. So extensive funding of non-animal methods of medical research is required to develop the necessary sophistication so that they are capable of replacing animal methods. This is an important existing role of medical research charities and other funding bodies.

Despite the considerable work going on in this field to develop alternatives, AMRC does not envisage that it will be possible to replace all animal use for the foreseeable future.

AMRC does not in general support ring-fencing funds to 'seek' alternatives. There is little evidence that such an approach is effective and this approach goes against the principle that funds should be awarded on merit.

Question 4

How much duplication of animal research is there and would sharing of information reduce it? Which means of sharing information would be most appropriate?

Verification of research results is sometimes essential. Apart from this there should not be duplication. AMRC member charities support the principle of information-sharing to avoid duplication, and do actually share information in practice. The results of successful research

projects are published in learned papers and journals, and disseminated in other ways. There maybe an issue around unsuccessful research where the outcomes are not shared.

There are extensive mechanisms before research is funded to ensure that the research is of high quality and does not duplicate effort. AMRC member charities adhere to strict guidelines for peer review standards.

Question 5

If regulation in the UK is increased further, do you think it will impede research or drive researchers abroad?

Good, balanced regulation is necessary to ensure the ethical use of animals. AMRC would consider the merits of any proposed regulation on a case by case basis.

However, AMRC remains concerned about the implementation of existing regulations which have sometimes become overly bureaucratic or have involved lengthy delays. These problems have not necessarily improved animal welfare, and may have made things worse on occasion. There is a strong case for a proactive approach to reducing the burden of implementing current regulation.

Question 6

What sort of information do you feel you need in order to make judgements about the acceptability of research involving animals?

The current priority is to get more of the information which is currently collected about the use of animals into the public domain. All public institutions will have to comply with the provisions of the Freedom of Information Act, which allows information to be exempt in a range of circumstances, for example if it would endanger personal safety.

AMRC is open to arguments that there is a need to collect new information about the use of animals. There would need to be a clearly defined benefit. There may be an additional burden to doing so, and this would have to be carefully assessed to minimise bureaucracy.

AMRC considers that its member charities which fund research involving animals should be open about that. AMRC has encouraged its member charities to draw up their own position statements outlining why they fund research involving animals - and publish them on their websites. There are now approximately 20 such public statements from charities, more than in any other sector of medical research.

AMRC would welcome a more sophisticated ethical debate about the use of animals in research. For decades anti-vivisection groups have simply stated in public that all animal research is scientifically invalid. It follows from their view that there are no medical benefits, and therefore no moral reason to use animals. This false position has generally cut short sensible discussion on the ethical issues.

For example, there is still considerable discussion about the extent to which animals experience pain and suffering analogous to that of humans. There could be merit in encouraging debate on the scientific evidence and the moral issues involved here.