

Alternatives Forum – Wollongong

3rd October 2008

As more and more evidence becomes available about the lack of efficacy in extrapolating data from animal tests to human conditions, and as more people express concern about the unethical use of sentient animals in research, there is a growing need to explore new avenues of addressing the way we approach society's health. While health education, lifestyle choices, prevention and epidemiology studies offer a far more humane and logical approach to a healthier society there are some areas such as toxicology and vaccine production that do require some type of scientific intervention to evaluate their safety. Currently, animals are widely used for this purpose however it is being increasingly acknowledged that the use of animals is not a reliable measure of safety when applied to humans. They continue to be used however since there is not sufficient incentive for researchers to develop alternative testing methods, nor to use those already in place.

Overseas situation:

NC3Rs

The National Centre for the Replacement, Refinement and Reduction of Animals in Research is an independent UK organisation, established in 2004, that reports to the Science Minister.

The centre brings together members of academia, industry, government and animal welfare organisations for workshops and symposia in order to facilitate the exchange of information and ideas, and the translation of research findings into practice that will benefit both animals and science. The Centre's mission is to advance and promote the 3Rs in research and testing using animals.¹

The centre has a government budget of GBP5 million per annum for the next three years.² In 2009 they are making available up to £2.5 million for research grants.³

ECVAM

The European Centre for the Validation of Alternative Methods (ECVAM) was established 1991. Its mission is:

To promote the scientific and regulatory acceptance of non-animal tests which are of importance to biomedical sciences, through research, test development and validation and the establishment of a specialised database service.

ECVAM has completely validated 17 alternatives with nine more being in the last stage of peer review and another 25 undergoing final trials or analysis.⁴ (2006 reference –unable to find an updated figure).

ICCVAM

In the United States, the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) was established in 1997. The committee consists of representatives of 15 federal agencies and appoints panels of independent experts to review the available literature to assess the validity of a test.

Since its inception, ICCVAM has evaluated 16 alternative methods. Six have been adopted by regulatory authorities and others are undergoing recommended improvements.

¹ <http://www.nc3rs.org.uk>

² Dr Hadwen Trust media release 10/12/07 <http://www.drhadwentrust.org/news/government-funding-for-nc3rs-increases-but-still-not-enough>.

³ NC3R's website <http://www.nc3rs.org.uk/landing.asp?id=27>

⁴ "Reducing animal suffering often has the unexpected benefit of yielding more rigorous safety tests" Alan M. Goldberg and Thomas Hartung, Scientific American, Jan 2006.

The ultimate goal of ICCVAM is the validation and regulatory acceptance of test methods that are more predictive of adverse human and ecological effects than currently available methods.⁵

ZEBET

ZEBET, established in 1989, is the Centre for Documentation and Evaluation of Alternatives to Animal Experiments, which forms part of the German Federal Institute for Risk Management, Berlin. The goal of this scientific institution is to bring about the replacement particularly of legally prescribed animal experiments with alternative test methods, to reduce the number of test animals to (what they consider is) the absolutely necessary level and to alleviate the pain and suffering of animals used in experiments. ZEBET is responsible for the documentation and assessment of alternatives to animal experiments, and recommending them for legislative acceptance both nationally and internationally.

ZEBET undertakes its own research and has a separate budget to promote specific projects on the development of alternative methods by other institutions.

In Germany, \$96,707,281.92 was invested in developing alternative models to the use of animals in scientific procedures over a 17 year period (1980 to 1997).⁶

A German-developed online database was launched in April 2008 as an easy to use search engine for alternative methods to animal experiments.

www.GO3R.org draws on millions of articles and research papers. It is funded by the German Federal Institute for Risk Management and its service is free of charge.

Each of these institutions is largely funded and supported by governments.

Added to these are the non-profit groups which receive little or no government funding:

English-based UFAW (Universities Federation for Animal Welfare) is an independent registered charity that works to develop and promote improvements in the welfare of all animals through scientific and educational activity worldwide. They award the Professor William Russell Animal Welfare Research Fellowship which awards up to GBP120,000 to cover three years salary and costs for research that will lead to significant international advances in knowledge or application of the 3R's.

The Johns Hopkins Center for Alternatives to Animal Testing is a US-based non-profit center. They promote humane science by supporting the creation, development, validation, and use of alternatives to animals in research, product safety testing, and education. They seek to effect change by working with scientists in industry, government, and academia to find new ways to replace animals with non-animal methods, reduce the numbers of animals necessary, or refine methods to make them less painful or stressful to the animals involved. They offer grants, awards and workshops.

Dr Hadwen Trust

The Dr Hadwen Trust is the UK's leading medical research charity that funds and promotes exclusively non-animal techniques to replace animal experiments. Types of support include one-, two- or three-year grants for postdoctoral research fellows, technicians or research assistants, usually consisting of provision for salary, consumables and small items of equipment.

⁵ <http://iccvam.niehs.nih.gov/>

⁶ Lawyers For Animals Submission to the Senate Rural and Regional Affairs and Transport Committee, National Animal Welfare Bill 2005, 15 January 2006.

This list is by no means exhaustive but provides a snapshot of govt funding available for alternatives research.

In Australia:

Few opportunities exist in Australia to support the development of alternatives. Even according to the CEO of ANZCCART, “unfortunately this is still an area where we are doing exceptionally poorly.”⁷

In 2008, the NHMRC, one of Australia’s peak funding bodies awarded a total of \$338.2 million for project grants representing 671 separate research projects. Roughly half of these projects involved the use of animals. This does not mean however that the remainder used alternatives but rather that the research simply did not involve animals. In fact, correspondence from the NHMRC remains vague in this regard, stating “The development of non-animal alternatives will be undertaken with a number of our grants, as part of the requirements of local animal ethics committees, but we do not collect statistics on this.”⁸ NHMRC lists a number of “funding types” but none are directed to the development of non-animal alternatives.⁹

We have asked a similar question of the Australian Research Council which is the other government funding body and the CSIRO but have not received a response from either

I also contacted each state department responsible for animal welfare and the only one providing funding for alternatives was Victoria.

In Victoria, the Department of Primary Industries issues the “DPI Minister’s Prize for Application of the 3R’s” which is not specific to replacing animals but is the closest we could find. The total prize offered by the DPI is \$5,000 (broken down to \$4,000 for graduate researchers and \$1,000 for those with less than 3 years experience) and the selection criteria relates to the significance of work in replacing, reducing or refining the use of animals.

The ANZCCART Students Award provides \$1,000 for a paper on an animal welfare theme relevant to the objectives of ANZCCART. This is limited to “promote excellence in the care of animals used in research and teaching and thereby minimise any discomfort they may experience.” – again not a strong conviction about replacing animals and may instead be considered counter-productive by endorsing the need for animal use by ensuring high welfare standards.

The Public Sector

Over the past 12 months AAHR has contacted each of the Australian publicly-listed biotechnology companies obtained from the ASX website (www.asx.com.au).

We enquired:

1. Whether they use animals in their research.
2. To what extent they are committed to the 3R’s principle (Reduce Refine and Replace).
3. Whether or not they invest in the development and validation of non-animal methods of research.

⁷ Personal email 16/4/08

⁸ Personal correspondence from NHMRC dated 29 Feb 2008.

⁹ p.31 of Eliza’s LFA submission

While only a very small number of responses were received, some did acknowledge the limitations of using data derived from animal tests, however none of them have invested in the development or validation of non-animal methods.

Charities

Voiceless Eureka Prize.

The Voiceless Eureka prize of \$10,000 rewards research that has reduced, or has the potential to reduce, the use of animals or animal products in laboratory-based research, education and testing.

MAWA

The Medical Advances Without Animals Trust offers several awards including a \$75,000 doctoral research scholarship, a \$10,000 Honours research scholarship as well as supplementary research scholarships, bridging scholarships and research grants. What differentiates the MAWA Trust is that they do not fund refinement of animal experiments nor the reduction of animals used, but instead specifically address the replacement of animals. I'm sure you will learn more from our later speakers on the MAWA Trust.

Unfortunately, it seems unjust that in Australia research that is deemed more ethical and scientifically valid is dependent on charitable groups while animal-based research continues to receive vast amounts of government funding. If our government and research community were truly committed to the 3R's concept then Australia too would have a government-funded centre dedicated to replacing animals in research. Until this is addressed, Australia will never be at the forefront of medical research.

Summary:

While other nations forge ahead in the area of alternatives research, Australia sadly lags behind. Instead of committing to actively seek alternatives to animals, Australia focuses on ensuring that our laboratory animals are handled correctly, have comfortable bedding and toys to play with. While such environmental enrichment may clearly improve the lives of individual animals doomed to exist as mere laboratory tools, it does not address the fact that these animals should not be there at all. Instead, it reinforces the justification for using animals and detracts from the importance of finding alternatives.

The poor comparison in funding availability is reflected in the numbers of animals used. The Dr Hadwen Trust in the UK have expressed disappointment that the UK statistics have reached 3 million animals for the first time in 16 years. Embarrassingly, Australia uses more than double this number. And with a population of one third that of the UK, our high usage of animals per capita makes an absolute mockery of our system.

The Australian government urgently needs to address this huge void and allocate a meaningful percentage of funding to fostering new methodologies in medical research which do not involve animals, and utilising to a greater extent existing non-animal methodologies.

Considering the public interest in preventing cruelty to animals, the likelihood of non-animal alternatives providing more beneficial outcomes for public health and the legislation itself requiring adherence to the 3R's, Australia's peak funding bodies are duty-bound to allocate meaningful financial support to the development of non-animal models.