

## Report on the 2007 ANZCCART Conference

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This year's conference was held in Melbourne at the Hotel Rendezvous from July 10<sup>th</sup> – 12<sup>th</sup>. We had the overarching theme "Getting it Right" as a focus for the conference and addressed this in different areas such as Wildlife Research, Techniques in Analgesia & Euthanasia, as well as Governance issues including the relatively new process of triennial reviews and some of the positive aspects that have come out of these reviews. The conference was opened by Sir Gus Nossal who spoke with conviction about both the important advances that have been made in medicine and immunology in particular using animals as well as the essential need to ensure that animal welfare standards are maintained at the very highest levels if animals have to be used.

### REGISTRATION:

The conference registration fees were deliberately kept as low as possible so that the cost of attending would hopefully not be an impediment to anyone (in line with ANZCCART's policy of inclusion) and this seems to have been reasonably successful as we managed to attract a total of 192 delegates over the three days (approx 25% increase over last years registrations). Importantly, registration fees also included all social sessions so that opportunities for discussion and sharing ideas in both formal and informal settings were optimised.

### FORMAL PRESENTATIONS:

#### *Studies of alcohol and drug dependency*

This covered the impact of drug dependency and its social implications and costs. Many species of animals are used to investigate drug addiction but the majority of work is with rats and mice. Physical dependence and characteristic withdrawal syndromes may be quantified in animals made dependent on the drug. Assessing psychological dependence requires models that are indicative of the animal wanting to experience the effects of the drug. The studies being undertaken are providing valuable tools to help elucidate the basis of drug addiction and identify potential pharmacotherapies.

#### *Animal models of epilepsy*

This disease is one of the most common neurological problems afflicting at least 50 million people worldwide. Current epilepsy research using rodent models offers great promise for understanding of the molecular mechanisms that underlie the aetiology of epilepsy in humans.

#### *Working with wildlife: understanding the issues and ensuring best practice*

Conducting research on wild animals has numerous issues and constraints that are not generally encountered in studies

using domestic or laboratory species. Knowledge of basic biology is used to establish appropriate capture, handling and sampling regimes and to understand behavioural and physiological responses that allow researchers to assess whether procedures are impacting seriously on animals. Another issue is a variable ability to recapture particular individuals or monitoring and sampling, and lack of ability to control external factors (such as adverse weather) that may impact negatively on the animals. Thus a flexible approach is required because wild populations can show enormous variation in their ecology and physiology.

### ***Degrading links and telemetry equipment on small animals***

The ever-increasing miniaturisation of electronic devices is providing opportunities for researchers to gain unprecedented information from 'tag and release' wildlife studies. Researchers using harnesses in particular should ensure they all have 'weak links' that will release an animal if it becomes entangled in vegetation and 'degrading or breakaway links' that actually do allow the harness to fall off after a specified time. Some links currently being promoted and sold as 'degrading links' do not seem to work effectively in this regard and clearly this represents a great risk to the welfare of those animals involved. As there can be no guarantee that a wild animal will allow itself to be trapped a second time and without a degrading link, there is a real possibility that some animals will be sentenced to carry expired equipment for the rest of their lives. This is potentially an extremely important issue for those working with wildlife and the manufacturers of this kind of equipment.

### ***Rodents in laboratories: Thinking outside the cage.***

This paper focussed on the most commonly used animals in scientific experimentation and testing (mice and rats) and presented an ethological perspective on their quality of life in the laboratory. It was pointed out that rats and mice are sentient beings and highly sensitive to their surroundings and quite aside from some scientific shortcomings of extrapolating from mouse to man, subjecting these creatures to typical laboratory regimens may be fundamentally cruel. Thus their environment and lessening of stress is most important for ensuring the well being of these animals.

### ***Working with transgenic animals to advance health care***

'Foreign' DNA maybe introduced into the genome of an animal using various strategies such as pronuclear injection of fertilised eggs; viral infection of embryos, manipulation of embryonic stem cells or nuclear transplantation to produce a transgenic animal. Use of these technologies has enabled the generation of precise animal models of human disease and this has subsequently allowed specific traits for diseases such as Alzheimer disease to be studied in these mouse models. They have also allowed pharmacological agents and therapies to be evaluated in the hope of advancing human health care.

### ***Pain management in laboratory animals – are we making progress?***

*This paper was presented to the audience via a pre-recorded DVD in combination with slide show as this speaker was unfortunately unable to travel due to injury. However with questions being answered by telephone link to the presenter in the UK, this proved to be a satisfactory alternative method which allowed the paper to be presented with some degree of interaction between the presenter and the audience still being available.*

Refinement of research procedures in order to minimise any pain or distress caused to the animals that may be used has become a widely accepted principle among the scientific community. One obvious opportunity for refinement is the control of pain; particularly following experimental surgical procedures as experience in medical and veterinary practice suggest this should be an attainable goal.

The potential for alleviation of pain is considerable since a wide-ranging selection of analgesic agents are available, most of which have already been developed and evaluated in laboratory species to demonstrate efficacy.

In order for these measures to have the greatest impact, they need to be incorporated into a package of peri-procedural treatments that acknowledge multiple factors that can influence the severity of pain and distress. Taking a broad approach to the welfare of laboratory animals ensures that pain and distress are minimised and that high quality scientific data are obtained using the minimum number of animals.

### ***Measuring pain in animals: Neurophysiological techniques and perspectives***

The best way to evaluate human pain appears to be to ask the patient. This presents obvious problems when assessing pain in animals resulting in increased reliance on objective indicators. Most of these can be divided into one of four categories: autonomic nervous system responses; endocrine stress responses; behavioural responses and electrophysiological indicators.

Early studies identified a close correlation between EEC changes and the subjective perception of pain in both human volunteers and patients suffering painful conditions. Animal studies have utilised these techniques to provide information about responses to noxious stimuli in a variety of situations. In particular, the minimal anaesthesia model has been developed and is currently being used in a number of species including the horse, sheep, red deer, ox, dog, rat and wallaby. The paper outlined the development, methodology, advantages and limitation of the minimal anaesthesia model and discussed examples of its use in applied pain research.

### ***Attitudes, human-animal interactions and research outcomes***

Research in both commercial and laboratory settings indicates that the nature of human-animal interactions significantly impacts the stress physiology, behaviour and welfare of livestock. Studies examining variation in anxiety-related behaviours of rats and mice in laboratory settings have suggested the possibility that human-animal interactions contribute to the variation in results, a possibility that is yet to be tested.

### ***Euthanasia of laboratory rodents, controversy and consensus***

*This presentation was also via DVD and telephone as it was the same presenter from the UK who was unable to attend as a result of injury.*

Every year, very large numbers of laboratory rodents are euthanased either at the end of research protocols or because they are surplus to the production needs of breeding colonies. The increased use of transgenic animals has exacerbated this problem, as the breeding programmes needed to maintain many of these rodent strains, results in the production of some animals that cannot be used for research. Current methods

of euthanasia for relatively small groups of laboratory rodents are physical techniques, or overdose of anaesthetic. However euthanasia of large groups of animals has almost always involved the use of carbon dioxide. For well over a decade, controversy has been increasing regarding the use of this agent. In addition, use of physical methods, and euthanasia using an overdose of pentobarbitone have also raised concerns and require re-evaluation.

The issues surrounding the use of carbon dioxide are complex. They have been extensively reviewed and a summary of recent reviews and source literature can be downloaded from [www.nc3rs.org](http://www.nc3rs.org). Initially the major concern associated with the use of carbon dioxide was that it could cause pain by the production of carbonic acid on the animals' mucus membranes. If this occurred before loss of consciousness, then the animals' welfare would be seriously compromised. Recent work suggests that carbon dioxide can be delivered in a way that avoids this problem. Compelling evidence was presented to show that, with the possible exception of a brief period of dyspnoea, all adverse effects of carbon dioxide were observed after the rat had lost consciousness and so were not welfare concerns. Obviously, decisions regarding euthanasia require difficult judgements involving animal welfare, research, economic and practical considerations. It is perhaps therefore not surprising that at present there remains considerable controversy. Nevertheless, with more detailed research being done to provide scientific validation of acceptable methods, there is still the opportunity for reaching some consensus.

### **OTHER PRESENTATIONS AND DISCUSSIONS**

Of the other papers presented most involved Australian or New Zealand experiences and strategies for reviews of ethics committees and included the problem of how animal use statistics are collected and collated and posed the question "what is the point of collecting national statistics in Australia considering each state does it in a different way". Also evident was the fact that these differences cause considerable frustration for the scientists and lay members of their ethics committees not only in regard to statistics but also in regard to the various other animal policies in place within each state.

The opportunity to contribute and discuss various matters of concern was achieved particularly by the two workshop sessions which considered the presentations given and also four fictitious research protocols which included some issues frequently questioned by animal

ethics committees. The latter brought to light the differences of opinion of the participants and certainly provided food for thought.

The conference programme was structured to include formal presentations, workshop sessions and more informal discussions during social gatherings to allow delegates the greatest opportunity to network with people sharing their interests as well as with those of varying perspectives during the conference. This approach is consistent with ANZCCART's stated goal of fostering open and balanced debate of the issues and provided ample opportunities in a friendly, non-confrontational setting.

#### **SPONSORSHIP:**

We were grateful to our sponsors for the support given to this year's conference. Our sponsors this year were the National Health and Medical Research Council and the Department of Primary Industries in Victoria. Their generous support was acknowledged verbally by the CEO of ANZCCART during the conference and in the abstract book and on the conference slide that was displayed at various stages during the conference.

#### **UNFORSEEN PROBLEMS:**

As indicated above, the advertised keynote speaker was Prof Paul Flecknell from The University of Newcastle, UK. Unfortunately Paul injured himself shortly before the conference and was unable to travel to Australia. We were very grateful to both Paul and his staff for putting together a video presentation to accompany his slides at short notice so that we could still benefit from his expertise.

The first day of the conference also happened to coincide with the worst fog in Melbourne for ten years. This meant that a number of our delegates as well as one speaker were left stranded, as their flights were unable to land in Melbourne. Fortunately we were able to adjust the programme so that the speaker concerned could give his presentation later in the day. This did not diminish the effects of these delays on a number of delegates, some of whom missed more than half the first day.

#### **SUMMARY:**

All indications were that this year's ANZCCART conference was a great success – due in no small part to the efforts of our organizing committee, the delegates that continue to support the goals and ideals of ANZCCART and the generosity of our sponsors:- the

National Health and Medical Research Council and the Department of Primary Industries of Victoria.

*Jeanette Crosado, New Zealand*

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## **2008 ANZCCART Conference**

The theme for next year's conference is "Blue sky to deep water: the reality and the promise" and will include sessions on sharing AEC experiences and the training of students and scientists in using animals for research

The Conference starts at 2.00pm on Sunday 29 June, concluding with lunch on Tuesday 2 July 2008 and will be held in Auckland, New Zealand. Early Bird Registration is set at \$NZ350 and closes 30 April 2008. For more information, visit upcoming ANZCCART events in the Events Calendar at [www.adelaide.edu.au/ANZCCART](http://www.adelaide.edu.au/ANZCCART)

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### **Revision of the ANZCCART publication "Euthanasia of Animals used for Scientific Purposes"**

Since this booklet was first published, it has been regarded as the "gold standard" by which Animal Ethics Committees judge the content of applications they assess and widely cited as one of the authoritative works in this area around the world. The current (second) edition was published in 2001 and a number of things have changed since that time, such as the Australian Code of Practice for the Care and use of Animals for Scientific Purposes (now in its 7<sup>th</sup> edition) and the availability of some reagents cited in this text and the natural progression that is part of technical refinements intrinsic in our system.

Accordingly, ANZCCART is planning a revision of the text and will publish the third edition of Euthanasia of Animals used for Scientific Purposes in 2008.

As part of the process of revising or if necessary expanding the text, we welcome comments from all interested parties. Please use this opportunity to bring to our attention your ideas that may address particular areas in need of revision or preservation and please feel free to highlight what you see as strengths, weaknesses, omissions or areas where you feel the current edition is not adequate to address questions or issues relevant to your work or your interests.

Your ideas and suggestions can be emailed to us at [anzccart@adelaide.edu.au](mailto:anzccart@adelaide.edu.au) and we would like to receive them as soon as possible.

## ANZCCART Website Updates

### Fact Sheets

ANZCCART is conscious that some of our publications have now been in circulation for a number of years and we are in the process of updating the information and publications available on the website, including all previously published ANZCCART Fact Sheets.

We have approached most of the authors of the Fact Sheets to review the information and hope to have some revised Sheets available on the website soon.

The list of Fact Sheets currently available can be viewed through Fact Sheets in the Resources Section at: <http://www.adelaide.edu.au/ANZCCART>

If you are interested in writing a Fact Sheet for ANZCCART, please contact us for more information. Alternatively, if there are any topics or areas you would like to see covered by a Fact Sheet, we can be contacted at: [anzccart@adelaide.edu.au](mailto:anzccart@adelaide.edu.au)

### Mail List

The Mail List section on the website has also been updated and now includes the categories of AEC members. ANZCCART collects this kind of detail so that we can tailor the information to be more specific to your needs. If you wish to update your details, please visit the Mailing List section on the ANZCCART website at: [www.adelaide.edu.au/ANZCCART](http://www.adelaide.edu.au/ANZCCART).

Please note that we are also using this information to set up some AEC Category specific email lists. These will allow you to specifically discuss issues with your colleagues from around Australia and New Zealand.

### AEC Mail List

ANZCCART has recently set up an email list for AEC Chairs and Executive Officers for the purpose of facilitating communication between AEC officers, to seek the advice of peers and to generally share collective expertise. This list is separate from the existing ANZCCART Mail List and will continue to be kept as a separate list. If you believe you are eligible to join this list please email your details to [anzccart@adelaide.edu.au](mailto:anzccart@adelaide.edu.au) or if you know of any other people who may be interested please let us know so ANZCCART can invite them to join.

## News from New Zealand

### Recent actions arising from the 2003 ANZCCART Conference

#### Introduction

Eight recommendations arose from the 2003 ANZCCART Conference in Christchurch. These recommendations were essentially action points that were extracted from discussions during the conference break-out session. The recommendations were subsequently handled by representatives of three New Zealand bodies: ANZCCART (NZ), Ministry of Agriculture and Forestry (MAF) and the National Animal Ethics Advisory Committee (NAEAC).

Of the eight recommendations, the one concerned with providing generally available lay summaries of AEC-approved projects is the subject of this article.

#### UK Home Office

In order to provide an international perspective of lay summaries, we took note of the recent initiative of the UK Home Office, which deals with issuing personal and project licenses to those undertaking animal-based research under the Animals (Scientific Procedures) Act 1986. The Home Office now publishes abstracts of all new project licenses granted on applications made from early 2005. The abstracts are written by the project license holders, and they own the copyright to the abstracts. The information includes:

- The specified permissible purposes of the research
- The fact that there are no non-animal alternatives
- The expected benefits must outweigh the likely adverse effects on the animals concerned
- The number of animals and their suffering must be minimised.

#### ANZCCART working party

A working party that comprised members of ANZCCART, MAF and NAEAC discussed the lay summary recommendation and decided that:

*AECs and all organizations that use animals and report animal use statistics to MAF, should be asked to provide feedback on all propositions. This should be in the form of a plain language summary (without Institutional affiliations) provided to MAF. Terms of reference should be constructed and examples of*

*summaries should be provided as a means of offering guidance to this proposition.*

The working party developed the following terms of reference and format of a plain language summary.

#### **Terms of reference**

- To recognize that providing plain language summaries is an important part of assuring the public that work involving the use of animals in research, testing and teaching is undertaken in a responsible manner with Animal Ethics Committee approval.
- To develop a code of practice for providing plain language summaries for work that involves the use of animals in research, testing and teaching. In this respect, it is instructive to view the latest directives of the UK Home Office, which deals with issuing personal and project licenses to those undertaking animal-based research under the Animals (Scientific Procedures) Act 1986. The Home Office publishes abstracts of all new project licenses granted on applications made from early 2005. <http://www.homeoffice.gov.uk/science-research/animal-testing/>  
The abstracts are written by the project license holders, and they own the copyright to the abstracts. The information contained in these abstracts is intended to reflect how the licensing criteria of the 1986 Act have been met. These criteria include the specified permissible purposes of the research, the fact that there are no non-animal alternatives, the expected benefits must outweigh the likely adverse effects on the animals concerned, and that the number of animals and their suffering must be minimised.
- To take regard of issues surrounding the commercial sensitivity of some work involving the use of animals in research, testing and teaching.
- To ensure that plain language summaries contain no overt Institutional affiliations

#### **Format of a lay summary:**

- Provide the context of the study by way of a brief background.
- Describe the aim of the study.
- State the necessity of using animals for the study with consideration of alternatives.
- Describe the outcomes of the study.

#### **Feedback**

Thirty four responses were received. A summary of the findings is given below:

1. 21 were not supportive, 4 had reservations (or reserved decisions), and 9 (26.5%) were supportive.
2. The commercial concerns encompassed commercial confidentiality and IP issues, and retaining a market edge. Conveying information was seen to be contrary to conventional commercial practice.
3. Summaries were thought by some respondents to provide ammunition to animal rights activists and might be misrepresented in the popular press. Anonymity could certainly not be ensured, and this would lead to risks for institutions, AEC members, researchers and animals. Any movement on this proposition should involve a risk assessment analysis.
4. The provision of lay (plain language) summaries was considered to be a compliance cost that should not be borne by Institutions.
5. Those AECs that generally considered "low impact" applications were supportive of providing lay summaries.
6. Some respondents thought it best to wait for the outcome of the attitudinal survey of the general public concerning the use of animals in research, testing and teaching (RTT) undertaken by MAF (see below).

#### **Conclusions**

The feedback from AECs indicated that there was poor support for providing lay summaries.

Following the receipt of the above feedback, the New Zealand Veterinary Journal published "Public attitudes in New Zealand towards the use of animals for research, testing and teaching purposes" by Williams VM, Dacre IT and Elliott M, Volume 55(2), 61-68, 2007. One of the conclusions of this report was that the majority of New Zealanders were neither interested nor concerned about the use of animals in RTT. In addition, the regulation of the use of animals in RTT was not well understood by the surveyed population.

ANZCCART(NZ) is examining ways of improving the dissemination of information regarding the scientific use of animals in research and teaching.

## News from Overseas

UFAW has just announced a new research Fellowship. The Professor William Russell Research Fellowship will support high quality research into one or more of the Three Rs Replacement, Reduction and Refinement. The closing date for submission of a Concept Note is 18<sup>th</sup> December. Further details can be found on the UFAW website. <http://www.ufaw.org.uk/williamrussellfellowship.php>

**UFAW Animal Welfare Science Conference 2008**  
**Recent advances in animal welfare science**  
**3rd July 2008**  
**Council House, Birmingham, UK**

### **Announcement and call for abstracts and expressions of interest**

As anyone working in the field of animal welfare will be aware, this cross-disciplinary area of study is attracting increasing interest and support and being asked to guide and inform legislation and practice relating to the use of animals. Nonetheless, the study of animal welfare is still a relatively young field of inquiry and it is one in which much still remains to be understood. As part of its on-going commitment to improving the way we understand and care for animals, the international scientific and educational charity the Universities Federation for Animal Welfare is holding a one day conference on Recent advances in animal welfare science. UFAW hopes that this meeting, which we intend should become a regular event, will provide a forum at which the broad community of scientists, veterinarians and others concerned with animal welfare can come together to share knowledge and practice, discuss advances and exchange views.

### **Call for papers**

We would like to hear from anyone interested in presenting at the conference on recent advances in applied ethology, veterinary and physiological science and the other disciplines that inform our understanding of animals and their welfare. Amongst those areas that we would be interested in this conference addressing are innovations in:

*Welfare assessment in individuals and/or groups*  
*Humane killing*  
*Identification of harm caused to animals through human activity or their use by humans*  
*Determining animal needs*  
*Diagnosis and alleviation of pain*  
*Assessment of animal management and husbandry practice*

This meeting will feature talks from both established animal welfare scientist and those beginning their career in the field. Early submission of a provisional title and abstract would be appreciated, as would expressions of interest in attending. Submissions should feature the title of the proposed presentation, the name and full contact details of all contributors and any abstract, which must be in English, should be no longer than 400 words. The deadline for submission of abstracts is **25th January 2008**.

*For further details, including a registration form, please visit the UFAW website ([www.ufaw.org.uk](http://www.ufaw.org.uk)) or email Dr Stephen Wickens ([wickens@ufaw.org.uk](mailto:wickens@ufaw.org.uk)).*

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**The opinions expressed in ANZCCART NEWS are not necessarily those held by ANZCCART Ltd.**

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