

## Ethical Decisions - Responsibilities and Outcomes

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From the early 1980's we have seen a significant shift in attitudes towards how animals are used in research and teaching. These changes reflect growing community concern about such activities and the response from scientific institutions to address the ethical and social issues involved and, in so doing, bringing a wider community perspective to such deliberations.

The use of animals for scientific procedures is only one of a number of areas where the conduct of science continues to raise ethical and moral challenges as evident by the current debates about gene technology, xenotransplantation and stem cell research. As noted some years ago in an address by the former Governor of NSW, Mr. Justice Samuels, some scientific inquiries raise questions which need to be

answered on non-scientific grounds and, whilst endorsing the value of the principle of intellectual freedom, he advocated that such issues be resolved on the balance of the scientific outcomes matched against the ethical, moral and legal considerations [1]. It also has been argued that these are questions which should not be addressed by the scientific community alone but must embrace a wider community view [2].

One example of government's response to these issues is the identification of Bioethics as one of four key areas in the NSW Government's Biofirst strategy which has resulted in the establishment of the BioUNIT in the Premier's Department. The promotion of informed community discussion is a key platform in this initiative[3].

In a presentation to the Association of Commonwealth Universities in 1983, Michael Birt, a former vice-chancellor of the University of New South Wales, discussed the challenges posed to the conduct of research in universities by new and changing technologies. He argued that universities would be challenged by changing public attitudes to the morality of certain kinds of research as a result of which it may be agreed to abstain voluntarily from certain kinds of research. He recognised that such a change presented significant difficulties for the conduct of scientific research and raised important issues involving freedoms of inquiry.

Birt anticipated that universities will also be asked to accept the legitimacy of the claims of society to query, be informed about, and perhaps request delays in, or the cessation of, particular types of research. He argued that institutions had a responsibility to respond to these challenges and must provide for public scrutiny and debate to enable an adequate assessment of the 'balance of debt and credit' for proposed scientific and technological developments. He also put the case that universities and other research institutions should take a primary role in this assessment and noted the benefits of drawing on the insights of the entire 'community of scholars' in addressing these issues [4].

In essence, such a response would

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be modeled on a system of self-regulation with the initiative and responsibility for review being actively pursued within the community of the university but in such a way as to encompass the wider community with due recognition of their interests and claims.

### ***Animal Experimentation***

Few would argue that over the past 15 years the issue of the use of animals in science, be that for research, teaching or product testing, is one of the issues involving scientific activities most persistently raised in the public domain. In many ways, the response to these pressures has provided a model as to how scientists and institutions can respond to similar issues in a responsible and initiatory way.

In answer to increasing community concerns, in 1984 the Australian Senate established a Select Committee on Animal Welfare (SSCAW). In its report on Animal Experimentation, tabled in 1989, the committee concluded, "There is no doubt that the majority of the population supports biomedical research involving the use of animals provided that effective controls are operating to keep the numbers of animals and the level of pain and distress to a minimum"[5].

However, the committee's report also emphasised the need for openness on the part of the scientific community as to how they conduct such activities.

Given the scope and depth of that inquiry, it could be argued its conclusions, in general terms, define the outcomes expected by the community. Whilst there is agreement for the use of animals for scientific purposes this must be evaluated in a framework of necessity and benefits, with the caveat of minimum numbers and level of pain and distress.

The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes [6] sets out the circumstances which govern how animals are used for scientific purposes, in effect, it is a public contract between the scientific and the wider community. The Code details a set of principles, defines responsibilities and outlines a process to demonstrate compliance with the

declared principles.

The principles define the criteria whereby it can be judged as to whether or not animals should be used for a proposed project and, if so, the manner in which they will be treated. The principles of the Code are very much in line with the outcomes sought by the wider community as detailed in the Senate committee report. Thus the Code provides a framework for decision-making which is acceptable to both the scientific and the wider community.

Primary responsibility for such use of animals lies with the practitioner - the scientist and the teacher. Institutions, principally through Animal Ethics Committees (AEC), must ensure that the use of animals is justified and conducted within the principles of the Code. The AEC, through its varied activities provides the process for determinations. Members are drawn from the scientific and the wider community with special reference to animal welfare interests. It is intended that members will bring a diversity of values and beliefs to the deliberations of the committee and that the particular skills, interests and knowledge of each will facilitate the committee's determinations in a way which will embrace both the scientific and ethical dilemmas.

Thus the principles set out in the Code as the declared intent of the practitioner and the institution, with a process for scrutiny with community participation, are very much in the model of self-regulation as proposed by Birt.

### ***Responsibility : Accountability***

The notion of responsibility is the lynch-pin in any system of self-regulation. First, and foremost, practitioners must be responsible for their actions and decisions and, if there is to be confidence in the system, this must be readily demonstrable to others. The commitment of scientists and teachers to the principles of the Code must be credible to their peers and to the wider community.

Responsibility is accepted as a basic tenet of acceptable scientific conduct. There are two spheres of scientific responsibility, one relates to the conduct of research and the communication of results, the other,

## **Draft Revision of the "Australian code of practice for the care and use of animals for scientific purposes" (6th Edition 1997)**

The Animal Welfare Committee of the NHMRC has called for submissions on the draft revision of what is commonly referred to as "The Code of Practice". The first Code of Practice was produced by the NHMRC in 1979 and since that time the Code has been revised on five occasions. Revisions are carried out by the Code Liaison Group (CLG), which is comprised of representatives from the NHMRC, CSIRO, Australian Research Council, Australian Vice-Chancellor's Committee, State and Territory governments, and animal welfare groups. There is also input from the public consultation process. Copies of the draft revision of the Code are available from the NHMRC website at [www.nhmrc.gov.au](http://www.nhmrc.gov.au) "Hot Issues". To assist in preparing submissions, a copy of the NHMRC document Public Consultation - Procedures for Making Submissions is available from the website: [www.nhmrc.gov.au/publications/pdfcover/nh16covr.htm](http://www.nhmrc.gov.au/publications/pdfcover/nh16covr.htm).

**The Code of Practice is an important document in the context of animal welfare and animal ethics in Australia. ANZCCART strongly encourages interested individuals and groups to make a submission.**

The closing date for submissions is 4 June 2003.

to broader issues when the activities of science have social implications [7,8]. It has been argued that these two domains have much in common but that issues of social responsibilities 'cannot be properly considered without keeping in mind the general code of scientific behaviors' [7]. Nevertheless, a recent report by the National Research Council (USA), *Integrity in Scientific Research. Creating an Environment that Promotes Responsible Conduct*, highlights the benefits of and need for ensuring that research institutions support an environment which nurtures such conduct [9].

There are differing views as to the links between responsibility and accountability and, for some, they are synonymous. In an address to a workshop on *Scientific Responsibility and Public Control*, Rachelle Hollander of the National Science Foundation (USA) asserted that there was a conflict in the notion of responsibility depending upon whether it was in the context of 'public control' or 'research autonomy' [10], considerations which are most pertinent to this discussion of the self-regulation of science. Interestingly, in a different context, similar issues were raised by John Uhr (Public Policy Program, ANU) in a discussion of public accountability in government [11]. He argued that where accountability was sought through systems of control rather than of verification that this worked against responsible governance which was ostensibly the outcome sought by the community.

Unquestionably, there are implications for notions of responsibility depending upon the method for accountability. If accountability is sought through a system of control, this will devolve responsibility from the practitioner to the review authority. A system of verification will act to enhance the responsibility, and therefore liability, of the practitioner. The relationship between the practitioner and the review authority in these two circumstances is very different. The former will tend towards command and control, the latter, should reflect a more collaborative approach. Notions of responsibility and accountability are complementary; the processes to achieving these objectives are critical determinants of the outcomes.

### *Decisions and Outcomes*

There are significant implications for animal welfare in practice as well as due consideration of ethical issues depending upon how an AEC goes about its business and the balance of responsibilities between the AEC and practitioners.

The primacy of the responsibility of the practitioner is the foundation to the Australian Code of Practice. In the system of self regulation outlined in this Code, clearly the outcomes sought, i.e. proper ethical review and promotion of animal welfare, can only be achieved through a system of verification of claims. If a system of accountability through control is employed, the first casualty will be to distance the practitioner from responsibility for his or her actions. Furthermore, a system of control by its nature is rigid and prescriptive and thus will stifle critical evaluation and ethical review of proposals

The AEC has two key functions, it scrutinises the claims for necessity and justification of a proposal and, if approved, it monitors activities to ensure the agreed conditions are met. Thus the AEC, through its processes, is the key mechanism for practitioners to demonstrate accountability to their peers and the wider community. But also, because of the responsibilities of the institution and the AEC, both must be accountable for how matters are judged and monitored - due process must be demonstrable, credible, fair and transparent.

For the system of self-regulation to work, all parties must have a clear understanding of their roles. The delicate balance between the responsibilities of the practitioner and of the AEC often are not appreciated. A central issue is how the AEC operates- whether it is a mechanism for control or a process for verification of a set of claims and this will determine the kinds of animal welfare outcomes achieved.

The nature of the relationship between the AEC and the practitioner is very important. In his 1987 Boyer Lecture [12], Davis McCaughey, in a discussion of how the professions should address ethical dilemmas, argued that the establishment of guidelines, with input from the wider community, did not

mean that the individual was evading his responsibility nor that his own powers of moral judgement were not exercised. Rather, McCaughey concluded, "An exercise of moral responsibility diffused throughout the community is part of the shared vision that we should have for our society." Thus, if there is mutuality in the relationship between the AEC and the practitioner, the AEC can enhance the ethical and moral responsibility of the individual.

The AEC is at the interface between the scientist and the wider community and, as such, it can serve an important role as a facilitator of understanding, respect and trust. As noted by many eminent commentators, science is a social activity and a lot of the concerns in the wider community about certain kinds of scientific activities will be allayed if there is a greater openness about what is going on - a better understanding how science is done [12,13]. As noted by Goodfield, the social contract between the scientific profession and society is changing and we must find new ways to more faithfully reflect the real nature of the scientific activity and incorporate it into our culture [14]. Here, the AEC has the potential to play an important role beyond the remit of animal welfare issues.

### *Pitfalls and Challenges*

Although there is much support for this self-regulatory approach, when the system for accountability is locked into a legislative framework there is the risk of the process becoming one of control, particularly if the key players do not have a clear understanding of their roles and responsibilities. A recent review by the Animal (Scientific Procedures) Inspectorate in the United Kingdom, has highlighted the challenges in promoting an ethical review process within a regulatory scheme, especially the risk of bureaucracy overtaking a consideration of ethical issues [15].

If we are to achieve the outcomes we seek in this process, ultimately, it is the responsibility of practitioners to embrace the principles and the spirit of the Code and to demonstrate their commitment not just by participation in the process but by leadership. As argued by Andre

Oosterlinck when commenting on the ethical aspects of scientific progress, "Modern science confronts us with dilemmas. New possibilities lead to new responsibilities and difficult choices. Scientists must make others aware of this.... The ethical debate and modern science are inseparable" [16].

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The zebrafish (*Danio rerio*) provides an excellent model system for vertebrate development. Its advantages include a short

# Functional and Chemical Genomics in the Zebrafish

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life cycle, prolific breeding and well-studied anatomy. The optically transparent external development of the zebrafish embryo occurs within 72 hours to yield a larval fish. A fully-grown adult zebrafish is only 4cm to 5cm long. A large number of zebrafish can be maintained cheaply, and sexual maturity is reached at three months of age [1,2]. Importantly, considerable genomic data is publicly available [3].

While the zebrafish has assumed considerable importance to those interested in dissecting the process of development, our view is somewhat more abstract. We are concerned with vertebrate gene expression programmes and assessing the effects of perturbing those programmes using DNA-based or chemical-based methods. Prior to examining the ethical dimension of this research, the following discussion will attempt to elaborate on the two themes of functional and chemical genomics.

## Functional Genomics

Functional genomics involves the development and application of global experimental approaches to assess gene function by making use of the information and reagents provided by genome sequencing and mapping. In this context, we have embarked on a dual strategy for effecting changes in gene expression in the zebrafish in order to assess the consequences of these changes at a global level. Our focus here is to undertake a functional genomics programme concentrating on those genes that are implicated in human disease.

An accepted practice of studying human disease processes is to establish disease surrogates using model vertebrate and invertebrate species.

In many respects, this practice is predicated on the underlying assumption that all species have, to a large extent, the same repertoire of genes, which then leads to the conclusion that model species have common biological pathways. In the case of disease modelling, however, this line of reasoning can be false. Mutations in orthologues of human disease-causing genes do not necessarily result in the same pathophysiological outcomes. This is found to be the case in many neurodegenerative and neuromuscular diseases modelled in the most popular vertebrate species, the mouse

This shortcoming necessitates increasing the repertoire of vertebrate species for human disease modelling, but in such a way that the effects of reproducing a disease-causing mutation event are assessed to determine if there is common ground with the human disease process that is being modelled. In this context, we propose that targeting zebrafish orthologues of human disease genes may provide a complementary and more direct route to disease modelling compared to the mouse and other model species [2,4]. However, this approach requires two objectives to be fulfilled. The first is the ability to alter specific zebrafish gene expression in a stable and specific manner; the second is to determine if the consequences of altered gene expression encompass events that replicate the disease being modelled. Our focus here is on the neurodegenerative diseases, Huntington disease and Adrenoleukodystrophy, and the neuromuscular disorders, Duchenne and Limb Girdle Muscular Dystrophy.

The attempt to replicate these disease states in the zebrafish involves microinjecting zebrafish embryos with DNA-based reagents that mimic the human mutations under-

lying the disease being examined. The aim here is for integration of the exogenous DNA into the germ cells of the fish, thus creating transgenic zebrafish. This is a protracted exercise, as it requires breeding the adult fish raised from microinjected embryos and to identify those among the offspring who have inherited the exogenous DNA; the frequency of transgenesis is low in the zebrafish but recent research has led to significant improvements in this approach. The long-term goal of being able to modulate the expression of the transgene in a tissue-specific manner would enable cause-and-effect in disease processes to be understood in a more rigorous manner.

### **Chemical Genomics**

The identification of new medicines and the development of therapeutics involve the investigation and exploration of defined molecule interactions with complex biological processes. This specificity of action can provide drug prototypes and involves the modulation of gene product function, which comprises the area of Chemical Genomics. This field has been enhanced recently by studying the effects of drug prototypes on not only pure protein targets, but also on an organism's global network of protein interactions. This type of analysis has involved the development of whole-organism gene expression microarrays in which an organism's entire protein-coding potential (expressed sequences) is spotted onto glass slides in high-density arrays. The slides are subsequently hybridised using fluorescently labelled reverse-transcribed RNA and the slides scanned to detect fluorescent signal. The analysis of these signals provides a measure of expression levels of the genes that are represented on the array. To date, this type of work has been undertaken using invertebrate species only, but has overlooked the use of zebrafish as a model of vertebrate development.

The purpose of our research here is to develop the zebrafish as a robust analytical platform for drug discovery by assessing the effects of chemicals on global gene expression in developing embryos. This bioassay system lends itself to the dissection of biological processes,

while also offering the means of assessing the effects of chemicals on disease processes. It is worth stressing here that the fields of functional and chemical genomics find convergence, in that knowing the action of a chemical in a precise way can be used to correct the consequences of a heritable defect that underpins a disease that has been modelled in the zebrafish.

### ***Ethical Costs Balanced with Relevance to Health***

The New Zealand Animal Welfare Act (1999) requires Animal Ethical Committee approval for research that involves the manipulation of fish. In terms of formally identifying a time at which a fish should be considered an animal has led to the conclusion that any manipulation of zebrafish after 72 hours post-fertilisation falls within the remit of the Act. Most of the research that we are undertaking involves manipulations at the time of fertilisation in terms of either microinjections or the addition of chemicals. In some cases embryos are allowed to proceed past 72 hours of development, but are not subject to any further manipulation. Therefore, perturbation of gene expression occurs at a very early time of development, and hence does not technically fall within the Act, while the phenotypic consequences of the perturbations may only be revealed after 72 hours of development, which is not our primary goal at present.

The fact that we routinely handle hundreds of embryos for each experiment should not go unnoticed. Indeed, the ease of achieving vast numbers of optically clear embryos that carry the genetic information to form a vertebrate animal in a very short time frame makes the zebrafish an extremely attractive laboratory species. It should also be underscored that to understand the subtlety of gene expression and cell-cell signalling that represents vertebrate development and organogenesis necessitates experimenting on a vertebrate species. A reductionist approach to cell culture alone would fail to replicate the very process that is being examined.

Finally, the health relevance of the research described above is twofold. First, it analyses the

## **What is new at ANZCCART?**

After many years of devoted service as the Administrative Assistant to the Director of ANZCCART, Mrs. Ros Judson retired at the end of 2002. Ros was much more than a friendly voice on the ANZCCART Office telephone. She was an efficient and caring person who built up a wide circle of friends and colleagues in the animal welfare area in Australia and New Zealand.

ANZCCART has recently appointed Mrs. Julie Nixon to the position of Administrative Assistant. Julie has a Bachelor of Arts Degree from the University of Sydney, and has considerable experience in administration, accounting and computing.

Over the years, ANZCCART has enjoyed a good working relationship with the University of Adelaide. The University provides us with financial accounting facilities and office space. The ANZCCART office was originally located at the Waite Agricultural Research Institute, some 5 km. from the city campus. Several years ago we moved to the Department of Environmental Biology at the University's City Campus. Due to developments in Environmental Biology, it became necessary for us to relocate the office, and recently we moved to our new "home", in the basement of the Mitchell Building, where we enjoy pleasant facilities and increased space. The Mitchell is an impressive "modern Gothic" stone building facing North Terrace; it was the first to be built in the University grounds, and was officially opened in 1882. Readers of ANZCCART NEWS would be welcome to drop in and see us if they find themselves in Adelaide.

The new ANZCCART postal address is:

ANZCCART Ltd  
Mitchell Building Room B-03  
University of Adelaide  
South Australia 5005  
Australia

Our phone and Fax numbers and email address remain unaltered.

expression of genes and their encoded proteins that are both highly conserved across species and which appear to be required for normal development. Secondly, it opens up the possibility of using a highly manipulable species to model inherited human disorders that would complement studies that are currently undertaken in rodents.

Our research is focused on gene expression outcomes that are limited in scope, but underpin our view that disease modelling has greater relevance if the cascade of biological events that characterises the human disease process (in a temporal and spatial sense) is replicated in the species in which the modelling is being attempted.

The development of the zebrafish experimental platform should also enable the assessment of the effects of drugs/novel biochemical treatments for the disorders using a combination of gene expression microarrays, protein arrays and behavioural outcomes. It is by adopting a global view of assessment platforms covering a range of technologies that enables the maximum amount of information to be extracted from an experiment, which is especially important given that our experiments are animal-based.

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## ANZCCART PUBLICATION

We draw to your attention to a recent ANZCCART publication: "Learning, animals and the environment: changing the face of the future". The book covers the Proceedings of the joint ANZCCART / NAEAC Conference held in Hamilton, New Zealand (28 - 29 June 2001) and papers presented at the ANZCCART-sponsored Synthesium "Pain prevention - selection of anaesthetics and analgesics in animal models of differing neural complexity" held in Christchurch, New Zealand (30 August 2001).

**Copies can be ordered from  
ANZCCART,  
c/o Royal Society of New Zealand,  
PO Box 598, Wellington, New Zealand.**

## Pan Commonwealth Veterinary Conference

The Third Pan Commonwealth Veterinary Conference (PCVC) will be held in Wellington, New Zealand, from June 27 to 29, 2003, in association with the New Zealand Veterinary Association (NZVA) Conference. The conference, which will be opened by the president of the Commonwealth Veterinary Association (CVA), Bert Stevenson, and will be addressed by the Hon Jim Sutton, Minister of Agriculture and of Trade Negotiations, has a major focus on animal welfare.

Plenary sessions will include a presentation by Judy MacArthur Clark, Chair of the UK Farm Animal Welfare Council, on Animal Welfare and the EU; an Australian perspective on meeting community expectations for animal-based science from Mike Rickard of CSIRO; and a session on emerging diseases with speakers from Canada, Africa and Australia.

Welfare also features largely in joint sessions with the Food Safety and Biosecurity Branch of the NZVA, in topics that include large scale animal welfare disasters (Kevin Kearney), meat slaughter plants (Kathy Lloyd and Campbell Heath), and the poultry industry (Joanne Sillince), while David Bayvel will speak on animal welfare and the OIE. A joint CVA/ companion animal session on nutrition will feature speakers from Australia and the USA. The NZVA Conference will be held concurrently, with streams that include the Companion Animal Society, the Food Safety and Biosecurity Branch, the Equine Branch, the Industry Branch, the Holistic Branch and the Veterinary Nurses' Association.

**For more information contact:  
Virginia Williams: [vwilliams@xtra.co.nz](mailto:vwilliams@xtra.co.nz)**

# ANZCCART Conference 2003

18-19 August, Christchurch, New Zealand

Conference theme: "Lifting the veil: finding common ground"

New Zealand Green Party MP and Animal Welfare spokesperson Sue Kedgley threw down the gauntlet in 2002 with a provocative speech about secrecy in animal research, criticizing the lack of detail behind animal usage statistics, and questioning the need for secrecy in regulatory processes that govern research using animals. We are picking up the challenge, and as its main theme this conference seeks to explore how and why scientists use animals in research today, and what are the strengths and weaknesses of current processes governing this work. Speakers from a diversity of research areas, working with widely different species, will help to lift the "veil of secrecy", stimulating discussion about the value and ethics of animal research.

## Timing and venue

The conference will run through August 18-19 (Monday and Tuesday). Two full day sessions are planned, with a meal on Monday evening. The meeting is virtually back-to-back with the ANZSLAS conference, to be held in the same venue August 21-22. In addition, NAEAC have planned their committee meeting for the same venue, on Wednesday 23 Aug.

The venue is the Hotel Grand Chancellor, which is centrally located in downtown Christchurch. The venue is well equipped with conference rooms and for catering.

General tourist information about Christchurch can be found at: <http://www.christchurch.org.nz/>

## Invited Speakers and Provisional Topics

- Norman Burton (Home Office, UK) - UK Perspective on animal ethics and statistics
- Marilyn Brown (Charles River, USA) Strategies for raising the standards of care in commercial production of rodents
- Lyn Anderson (Merck Sharpe and Dohme, US) Title to be announced
- Graham Coleman (Department of Psychology, Monash University) Public attitudes to animal research
- Graham Tobin (Harlan Sprague Dawley, UK) Rodent nutrition
- Deborah Kelly (DEH, South Australia) - National statistics - an Australian perspective
- Sue Kedgley (NZ Green Party M.P. and Animal Welfare Spokesperson) Lifting the veil of secrecy surrounding animal experimentation
- Tim Kuchel (Institute of Medical and Vet Science, South Australia) Title to be announced
- Frank Griffin (University of Otago) Vaccine research
- Vicky Cameron (Christchurch School of Medicine) Animals & heart disease
- Linda Carsons (MAF) Summary of the revised Animal Welfare Act and collection of statistics
- Bruce Baguley (University of Auckland) Can we do cancer research without animals?
- Wyn Hoadley (Chair of NAEAC) Title to be announced
- Jane Harding (University of Auckland) Neonatal physiology
- Catherine Seamer (NZFSA) Shellfish toxin testing
- Michael Morris - Ethical issues associated with veterinary animal experiments in Australia and New Zealand
- David Palmer (Lincoln University) A sheep model of Batten's disease
- Simon Malpas (University of Auckland) Animal physiology

## Further information

Final details about of the conference and how to register will be made available on the ANZCCART website. Preliminary enquires can be addressed to Martin Kennedy, Department of Pathology, Christchurch School of Medicine, University of Otago, P.O. Box 4345, Christchurch, New Zealand.  
email: [martin.kennedy@chmeds.ac.nz](mailto:martin.kennedy@chmeds.ac.nz)

# Letter to the Editor

## ASSESSMENT OF ANIMAL ETHICS COMMITTEES

Dear Dr. Hope,

Under NSW legislation, inspection of Animal Ethics Committees by the Animal Research Review Panel (ARRP) is always a possibility. The ARRP seeks to ensure adherence to the legislation, and is not responsible for advising on efficiency and efficacy of the procedures used by committees. Busy people on Animal Ethics Committees can become embedded in sets of procedures inherited from bygone days when things were different. It is proposed that institutions may benefit from employing, on an occasional basis, an external reviewer.

A proposal for an external triennial review is contained in the draft Code of Practice for the Care and Use of Animals for Scientific Purposes, presently available on the Internet for public comment. Item 2.1.2 in the draft Code states:

To enable the institution to assess whether the care and use of animals in the institution complies with this Code, an external triennial review should be undertaken. Consideration should be given to making the results of the review publicly available.

Animal Ethics Committees have a daunting task to perform operating as they do under State legislation that incorporates the Code of Practice. The institution concerned is the "owner" of the Committee but the contributions of the external members may be particularly difficult especially for the compulsory externals namely, the "independent" (Category D) member and the "animal welfare" (Category C) member.

Combining their responsibilities for ensuring that the welfare of animals is always considered while also ensuring that the use of animals is justified, can be difficult for any

member.

The requirements of the Code and the law are demanding and the education of members can be seen to be an important part of the Committee's responsibility. Meeting irregularly to judge applications, oversee care and use of animals and meet an extraordinary range of legal obligations can be a challenging task. The institution can shoulder much of the burden if it provides a capable secretarial support system and establishes a feeling of confidence in members by instigating a regular external review.

Just as modern business practice has come to include quality control, embracing audits of finances, efficiency and efficacy, so the operation of committees concerned with the care and use of animals for scientific purposes should be conducted in a way that conforms to best practice.

In preparation for meeting this responsibility, it seems that institutions could take advantage of a process already conducted by me at one institution. The project appeared important because few people associated with the Committee had sufficient time to take an overview of operations. Changes in membership had exacerbated the problem and it was recognised that a complete review was desirable.

The project was undertaken over a period of two months but required about 10 working days to complete.

The project involved:

- Conducting site and procedure inspections.
- Interviewing research applicants.
- Developing a referenced list of Standard Operating Procedures for the institution.
- Designing a new, and computer friendly, application form.
- Developing a standard monitoring procedure for projects.

-- Developing improved procedures for the applicants and the Committee.

-- Designing a reporting system for both the care and the use of animals.

-- Presentation of results of the project to all staff.

-- Explanation of the legal responsibilities of the Committee to all staff.

-- Preparation of a report to the Committee.

In the course of the project, it became clear that researchers had mixed attitudes to the "demands" of the Committee and applications sometimes failed to satisfy the Committee. Fortunately, because of the excellent applications prepared by some researchers, it was possible to identify good methods of preparation and to demonstrate this to other applicants. The fact is that applications are now satisfactory and the systems are seen to be friendly by both applicants and Committee members. There is always room for improvement, of course, but it is not beneficial to make changes too frequently or for trivial reasons.

The addition of new forms and bureaucratic procedures met some resistance until experience showed that the procedures were both necessary and actually saved time.

The use of reference to standard documents has been a feature of the improvements.

These documents included forms designed:

- To reduce verbiage within an application (such as Standard Operating Procedures, Standard Monitoring Procedures).
- To smooth out recording within the institution (such as room and cage records, emergency response documents).
- To facilitate routine recording within projects involving the use of animals (such as standard reporting

forms for applicants and for animal carers).

The members of Animal Ethics Committees are very busy people and the use of a system of external review, designed to give transparency and precision to the Committee's operations has been appreciated.

Paul Gilchrist

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Dr Gilchrist is a Consultant Veterinarian with experience in government, industry and private veterinary practice. He has been a member of the CSIRO Molecular Science Animal Care and Ethics Committee for 6 years. Paul can be contacted by email: warra-ba@nobbys.net.au

#### References

1. Draft Revision of the "Australian code of practice for the care and use of animals for scientific purposes" (6th Edition 1997).  
[www.nhmrc.gov.au/research/awc/pca.pdf](http://www.nhmrc.gov.au/research/awc/pca.pdf).

## ANZCCART Ltd. Annual General Meeting and Workshop

**This year's AGM will be held at the University of Melbourne on Friday 23 May commencing at 5 pm.**

**An ANZCCART Workshop will precede the AGM and will run from approximately 10.30 am. - 4.00 pm.**

**Details of the workshop are still being developed and will be circulated at a later date.**

## Horizons in Livestock Sciences - the New Biology

**Ross Tellam, CSIRO Livestock Industries, has provided the following information:**

The Horizons in Livestock Sciences Conference, to be held at Sea World Nara, Gold Coast, Queensland, May 25-28, 2003, aims to identify the major scientific developments that will have significant impact on livestock research in the near future. This year's conference will focus is on the science of some of the rapidly changing disciplines of the current time, particularly genomics and disease emergence. The conference is supported by excellent international and national speakers.

**Further information and registration details are available from:  
[www.livestockhorizons.com/](http://www.livestockhorizons.com/)**

## The Australasian Society of Zookeeping (ASZK)

The ASZK Annual Conference is being held 16 -18 May 2003 in Canberra ACT. Hosted by National Zoo and Aquarium, the conference will provide a mix of spoken papers, posters and workshops that aim to increase skills in a number of areas of wild animal husbandry. Abstracts are due on the 15 April 2003 for both papers and posters. Please submit them to Carla Srb email [csrb@zoo.org.au](mailto:csrb@zoo.org.au).

Visit the ASZK website for further details - [www.aszk.org.au](http://www.aszk.org.au).

**Details are also available on the ANZCCART website -  
[www.adelaide.edu.au/ANZCCART](http://www.adelaide.edu.au/ANZCCART).**

## The Alternatives Research & Development Foundation (ARDF)

The ARDF is soliciting research proposals on the development of alternatives to the traditional uses of animals in basic research, product testing and education. Grants of up to \$40,000 are available for individual projects. Applications from non-U.S. institutions or researchers may be considered on a case-by-case basis. The application deadline is April 30, 2003.

**For more information, visit the following web site:  
[www.ardf-online.org/](http://www.ardf-online.org/)**

## Canadian Animal Use Statistics Now Available

The Canadian Council on Animal Care (CCAC) recently released its Annual Report of animal use in Canada for 2000. To view the results, visit:

[www.ccac.ca/english/facts/aus2000.htm](http://www.ccac.ca/english/facts/aus2000.htm)

## United Kingdom Statistics

The British Home Office has released Statistics of Scientific Procedures on Living Animals Great Britain 2001. The total number of animals used was down 3% from the year 2000. Interestingly, about one third of all procedures involved genetically modified animals. The full report can be obtained from: [www.official-documents.co.uk/document/cm55/5581/5581.htm](http://www.official-documents.co.uk/document/cm55/5581/5581.htm)

(Source: The Humane Society of the United States)

## ANZCCART asks readers for feedback

You will be aware that as a cost cutting measure it became necessary, last year, to publish ANZCCART NEWS electronically. This is the first of three issues of ANZCCART NEWS that will be published electronically this year.

While there are obvious disadvantages in using this mode of publication, we plan to develop the associated opportunities, such as the increased scope to use colour, figures and diagrams. Furthermore, readers can rapidly forward our newsletter to colleagues, thus increasing its circulation.

Soon after distributing this edition of our newsletter, we will send out a readership questionnaire. Your answers will assist us in improving the quality of ANZCCART NEWS, so we ask you to take a few minutes to complete the survey and return it to us. Thank you for your support.

Rory Hope, Editor.

## RDS NEWS

RDS is an organisation, based in the UK, which represents medical researchers in the public debate about the use of animals in medical research and testing.

The latest edition of RDS NEWS (Spring 2003) contains a leading article by Dr. Mark Matfield (pp1-3) reporting that the UK Government:

*"has announced its intention to publish anonymised summaries of all new project licences.*

*This will make animal research in the UK more open and transparent than any other system in the world".*

The article goes on to say:

*"This new openness will go a long way to reduce the public's concern about the way that animals are used in research and testing ...."*

## Report on Rodent Welfare

The Royal Society for the Prevention of Cruelty to Animals (RSPCA) UK and the Universities Federation of Animal Welfare (UFAW) have released a report (Rodent Welfare Group Report) which includes information about techniques for assessing pain, distress and suffering in mice and rats. Copies of the report can be ordered from: [Research-Animals@rspca.org.uk](mailto:Research-Animals@rspca.org.uk)

(Source: The Humane Society of the United States)

## NEWS FROM EUROPE:

In January this year, the European Parliament agreed to ban the use of nearly all forms of animal tests for the development of cosmetic products. The new rules will be phased in over a period of about six years.

## Websites of interest

From time to time, ANZCCART NEWS highlights interesting, useful and relevant web sites.

### **Animal Welfare Science and Bioethics Centre**

[animalwelfare.massey.ac.nz/](http://animalwelfare.massey.ac.nz/)

The Centre, which is located on the campus of Massey University in Palmerston North in New Zealand, was formed with the following objectives: "To promote via scientific research, education and advice, the humane and responsible care of animals, and to develop and apply ethical principles to guide human-animal interactions and the use of biotechnology." The Director of the Centre is Professor David Mellor.

### **CARE**

[www.med.unsw.edu.au/physiology/CARE/](http://www.med.unsw.edu.au/physiology/CARE/)

CARE (Caring for Animals in Research and Education) is an online course designed for students using animals or animal tissue in research projects, developed by Margaret Rose (University of New South Wales), Rosemarie Einstein and Michael Thompson (University of Sydney). CARE consists of a number of separate modules that cover ethical and social issues or focus on specific research situations.

### **University of British Columbia Animal Welfare Program**

(Faculty of Agricultural Science, University of British Columbia)

[www.agsci.ubc.ca/animalwelfare/](http://www.agsci.ubc.ca/animalwelfare/)

The University of British Columbia established the Animal Welfare Program in October 1997 to address the issues of the use of animals for agriculture, research, sport and companionship, concerns regarding humane animal care and management, and questions regarding the appropriateness of using animals for these traditional purposes. The program was set up to address these issues through teaching, research and public education.

HAVE YOU CHANGED YOUR DETAILS?

OR

WOULD YOU OR SOMEONE YOU KNOW LIKE TO BE ON OUR ELECTRONIC MAILING LIST?

IF SO, PLEASE SEND AN EMAIL TO:

[ANZCCART@adelaide.edu.au](mailto:ANZCCART@adelaide.edu.au)

and we will update your details.

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It is a publication for researchers and teachers; members of animal ethics committees; staff of organisations concerned with research, teaching and funding; and parliamentarians and members of the public with interests in the conduct of animal-based research and teaching and the welfare of animals so used.

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

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