

Dr Michael Festing to lead workshops this year in Australia and New Zealand

ANZCCART is very pleased to announce that Dr Michael Festing, a research scientist with the Toxicology Unit of the UK Medical Research Council at the University of Leicester, will be giving a series of workshops in Australia and New Zealand in July.

The theme of the workshops is *Doing better animal experiments*. Dr Festing is well known for his contribution to this topic and to improving laboratory animal welfare, for which he has received a number of international awards. He is the author of over 200 publications.

The workshops will emphasise the principles of Reduction and Refinement and are intended for honours and post-graduate students, as well as researchers and technical staff. Members of

animal ethics committees are welcome to attend. Each workshop will commence at 10 am and conclude about 3 pm.

Dates and venues will be:

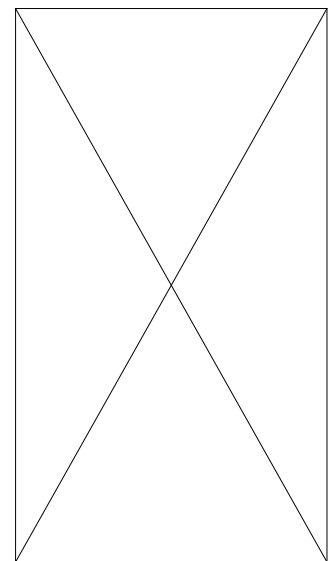
- Perth (University of Western Australia), Wednesday, 12 July.
- Adelaide (University of Adelaide) Friday, 14 July.
- Melbourne (University of Melbourne), Monday, 17 July.
- Sydney (University of New South Wales), Wednesday, 19 July.
- Brisbane (University of Queensland) Friday, 21 July.
- Auckland (University of Auckland) Tuesday, 25 July (to be confirmed).

A set of notes will be provided to all workshop participants.

Dr Festing has provided the following brief outline of the workshops.

For ethical and economic reasons laboratory animals should only be used in well designed experiments which are correctly analysed and interpreted. There appears to be scope for improvement. This workshop will discuss the choice of animals, the importance of genetic and microbiological quality, the use of animal models, and the ways in which animals can most effectively be used in experiments bearing in mind Russell and Burch's "Three Rs". We will examine the avoidance of bias, the importance of uniformity, sources and types of variability, the effective use of heterogeneous material, and the estimation of sample sizes using the power analysis and resource equation methods. The use of factorial designs to provide more information for a given input of resources will be shown using examples.

After discussing the concept of the "experimental unit", we will revise the principles of statistical inference, and examine a hypothetical badly designed experiment. Participants will then be asked to redesign the experiment, working in pairs, and a sample of these will be discussed by the group.



Dr Michael Festing

Active participation will be encouraged throughout the workshop, which will be directed mainly at scientists using laboratory animals, but it should also be suitable for laboratory animal professionals. While some background in statistics would be helpful, it is not essential, and complex formulae or calculations will be avoided.

Further information will be available from our website <http://www.adelaide.edu.au/ANZCCART/> There will be a registration fee of \$50 per person for each workshop, which will include a set of notes, morning tea and lunch.

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Animal welfare legislation in Australia for the future — what scope is there for a national approach?

Introduction

This paper addresses the question of what legal issues arise for any body or individual seeking to bring about the implementation of nationally applicable animal welfare legislation in Australia. Essentially, the aim is to identify legal issues which will need to be confronted in this context and to suggest, and to comment upon, some strategic options. While identifying legal issues (many of which appear to present difficulties!) my intention is to provide an analysis which might be a useful practical start for the consideration of possible tactics and strategies. Because of the nature of national legislation in a federal system of government, the legal issues dealt with are largely constitutional issues.

Assumptions

In this context I make a number of assumptions which, in the interests of certainty throughout the paper, I shall clarify here at the outset.

First, the term “animal welfare” is taken to be a reference to specific matters such as the prevention of cruelty to animals; the provision of appropriate exercise for animals which are confined to cages or whose freedom of movement is otherwise limited; the prohibition of poisoning, trapping etc; and the application of appropriate standards for the treatment of research animals. These things are typically provided for in existing State and Territory legislation.

The second assumption in this paper is that it is considered desirable either to have uniform laws for animal welfare applying throughout all States or, alternatively, that

there be one central legal regime which may or may not contain laws which are identical in all jurisdictions.

This paper does not address the question of whether there is actually a need to have uniform animal welfare legislation. It may be that, on an analysis of the effectiveness of the existing arrangements, it is apparent that there is little to gain in any practical sense from changing to a national approach. I take the approach that it is for animal welfare bodies to assess whether the present system of animal welfare legislation and administration is working and to identify areas where change might be needed.

The third assumption this paper makes is that it is considered desirable to have these uniform animal welfare laws contained in legislation as distinct from relying on case-based law — what we lawyers have traditionally called the “common law”. This is the law which is sourced in things such as the application of precedent, an area which is unlikely to have much impact on animal welfare issues.

Existing legislation: constitutional basis

The present position with respect to animal welfare legislation is that each of the six States and two Territories has its own legislation. This is partly a function of Australia’s federal system. Constitutional responsibility for making laws about animal welfare rests with the parliaments of those eight jurisdictions. As would be expected, many of the laws are similar from one State or Territory to the next, but there are also differences. There is nothing to prevent the parliament of any State or Territory from

amending its existing similar legislation so that it may differ more markedly from that of the other jurisdictions.

Of greater significance to the issue of possible uniform legislation is the reason why the States and Territories, and not the Commonwealth, have the legislative power with respect to animal welfare legislation. The Commonwealth Parliament’s power to make laws is limited, while the power of the State Parliaments (and to a lesser extent that of the two Territory parliaments) is, for all practical purposes, unlimited. The Commonwealth Parliament’s powers are said to be “enumerated”, while the State parliaments’ powers are said to be “plenary” or “residual”. What does this mean?

The Commonwealth’s powers

The Commonwealth Constitution provides, in section (s.) 51, that the “Parliament shall have power to make laws for the peace, order, and good government of the Commonwealth with respect to:-” and then goes on to list about 40 different subject matters such as trade and commerce; taxation; pensions; medical and dental services; external affairs; and conciliation and arbitration. This illustrates the precise nature of these specific (or enumerated) powers, which are often referred to as the “heads” of power. What is significant about them is that their presence in s. 51 of the Constitution indicates that the Commonwealth Parliament has the power to enact Acts of Parliament only if any given Act of Parliament can be characterised as being a law about one or more of the powers enumerated in s. 51. A concomitant of this is that if a purported Act is passed by the Commonwealth Parlia-

ment and that purported Act cannot be characterised as being under at least one head of power, the law may be held invalid by the High Court of Australia.

State Parliaments, on the other hand, have a general power to make laws for “the peace, order and good government” (or similar words which may vary slightly from one State constitution to another) of the State. There are virtually no limitations on the topics about which State Parliaments can pass legislation. They can even pass laws about the same topics as s. 51 of the Commonwealth Constitution gives to the Commonwealth Parliament. The only restrictions are that, where a Commonwealth law and a State law contain provisions which are inconsistent, the provisions of the Commonwealth law will prevail (s. 109), and where the Commonwealth Constitution gives the Commonwealth Parliament powers which are expressed to be exclusive (such as customs, excise and bounties - see s. 90).

A word about the Territories

An observation about the Northern Territory and the Australian Capital Territory is relevant here in order to clarify the picture. The Commonwealth Parliament has unlimited power to make laws for territories under s. 122. This legislative power is not confined to the enumerated powers provided in s. 51. Thus, any law passed by the Commonwealth in relation to the Northern Territory or the Australian Capital Territory providing for animal welfare will be constitutionally valid or, more accurately, it will not be invalid for the reason only that it is about animal welfare.

No “animal welfare” power

There is nowhere in the Commonwealth Constitution a head of power described as “animal welfare” or “animal protection” or “prevention of cruelty to animals” or anything remotely like it. This means that, as a basic proposition, the Commonwealth Parliament has no power to make laws with respect to animal welfare.

Characterisation — a way around the problem?

Does this mean that it is impossible for the Commonwealth Parliament to enact an animal welfare law? Not necessarily. The way in which the High Court interprets the Constitution allows for any given law to be valid so long as the law can be shown to be a valid exercise of any one head of power. This brings us back to the basic question of characterisation: if a law is a law under one (or more than one - it does not matter how many) head of power, it does not then matter that it is also a law about another subject or subjects not provided for in s. 51. To illustrate this, if a law about animal welfare were to be passed by the Commonwealth Parliament and could be characterised also as a law with respect to interstate trade and commerce, the law would be valid because interstate trade and commerce is one of the enumerated heads of power (s. 51(i)).

An example

From the early 1950s until the late 1980s, successive Commonwealth governments adhered to a so-called “two-airlines” policy. The Commonwealth Constitution does not give the Commonwealth Parliament an air transport or an airlines head of power so it would have been unconstitutional for the Commonwealth Parliament to enact a two-airlines policy Act. The Commonwealth Parliament used its international trade and commerce power (s. 51(i)) to regulate the number of aircraft imported into Australia. This was clearly valid legislation as the

Australian aircraft industry was not big enough to manufacture aeroplanes of sufficient size and sophistication to be used in commercial air transportation. The motive of the Parliament in enacting laws prohibiting the importation of more than a set number of aeroplanes was not relevant to the issue of the constitutional validity of the legislation. Legally, what mattered was simply that the law could accurately be characterised as a law with respect to “trade and commerce with other countries” (to use the exact words of the Constitution).

This suggests a strategy which may be considered as a means of getting around the stated problem of looking to a legislature which has no direct power to enact national animal welfare legislation.

Oh for a Treaty!

A suggested first step would be to explore in some detail the contents of international treaties to which Australia is a party to determine whether those treaties contain obligations on nations which are parties to them. The reason for suggesting this as a first step in this strategy is that there is clear case law in the High Court decisions for the legal principle that any legislation enacted by the Commonwealth Parliament to give effect in Australia to Australia’s obligations under an international treaty is a valid legislative exercise of the external affairs power (s. 51(xxix)). The subject matter of the domestic law enacted by the Commonwealth Parliament is irrelevant: as long as Australia is a signatory to an international treaty and in order to fulfil its treaty obligations, it is required to ensure certain things happen or do not happen or happen in a particular way. An Act of Parliament requiring those things within Australia will be a valid law.

The Franklin Dam

Thus, the Commonwealth Parliament was able to pass legislation in the 1980s preventing the Tasmanian Government from allowing the State’s Hydro-Electric Commission to build a dam on the Gordon River downstream of its junction with the Franklin River. Australia was (and still is) a party to an international treaty (the Convention for the Protection of the World Cultural and Natural Heritage) requiring Australia to do whatever is necessary to protect certain sites designated as world heritage sites. Normally, the Commonwealth Parliament would not be constitutionally able to move into a State and prevent that State (or one of its instrumentalities) from building a dam because not only is there no head of power which provides for this but there is, additionally, a principle of constitutional law that prevents the Commonwealth from interfering with the legitimate functions of State governments and their organs and instrumentalities. There was no suggestion here that building the dam would not have been a legitimate State (or State instrumentality) function. However, the High Court held that because Australia had an international obligation to protect the place where the proposed dam was to have been built and because wherever an inconsistency arises between a Commonwealth law and a State law, the Commonwealth law prevails (s. 109), the Commonwealth law was valid under the external affairs head of power.

A difficulty with the strategy of relying on the external affairs power is that it would be essential to identify an existing treaty under which Australia has obligations. Having regard to types of matters which are typically the subject of international treaties, it seems unlikely that there would be a general treaty in existence on which this strategy could be entirely based.

It may be that there are a number of treaties, each containing specific detailed provisions of an animal welfare nature, that could be relied upon in such a way that a Commonwealth Act or series of Acts could pick up and apply these particular provisions collectively. Again, I am of the opinion that such an option is unlikely to be available because of the usual types of matters which nations regard as of international concern and which form the basis of treaties.

Use of a Code with selected s. 51 powers

In settling on a strategy, it may be worth considering developing a Code of Standards for animal welfare in Australia and seeking to have legislation passed which could be linked to adherence to the Code of Standards. For example, a law could be passed pursuant to the trade and commerce power (s. 51(i)) which prohibited dealing in certain goods and services unless the Code of Standards were complied with. The Code might, for example, include minimum standards for the handling and treatment of cattle for meat production. The law enacted by the Commonwealth Parliament could prohibit the sale of meat produced other than in accordance with the conditions imposed by this Code of Standards. A limiting factor here would be that the sale of the meat would need to be inter-State or international in character. The trade and commerce power is specifically “with other countries, and among the States”. The Commonwealth Parliament has no power to make laws with respect to intra-State trade and commerce.

Another option to consider is that of the payment of bounties to producers who comply with certain standards of animal welfare protection. The Commonwealth Parliament has power to make laws with respect to “bounties on the production or export of goods” (s. 51(iii)). A difficulty arises here in the

fact that bounties involve the payment by the Commonwealth of money. Such an option, while clearly within the Constitutional power of the Commonwealth Parliament, would be unlikely to attract the support of the government of the day because it would not be revenue neutral.

The Commonwealth Parliament has power to make laws with respect to "foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth" (s. 51(xx)). Any law requiring corporations to do things with respect to animal welfare would be valid under the corporations power. To the extent that animal welfare standards should be imposed on corporations, there is a clear Commonwealth head of power here.

Too cumbersome?

From the examples given above, the best use that can be made of the Commonwealth Parliament's reliance on its enumerated heads of power is nevertheless likely to prove piecemeal and unsatisfactory. It would, by any standards, be best described as cumbersome and would almost inevitably not cover all circumstances or situations. For example, the hypothetical scenarios discussed above would not include standards for household pets or for horses kept for riding and dressage competitions and the like. As referred to in the brief discussion of the bounties power, the political will needed by government politicians would be very likely to be a problem. The question of political will, though not a legal issue as such, may present a real problem if an attempt is made to rely on the clever use of a variety of powers.

Referral by the States - s. 51(xxxvii)

To avoid having to rely on this piecemeal approach, an option that could be considered is that of referral of matters by State Parliaments to the Commonwealth Parliament. This is explicitly pro-

vided for in s. 51 (xxxvii) of the Constitution and there are precedents for it.

However, referral of powers by a State may be politically problematical. States do not like losing powers or control over matters in their jurisdiction. In seeking to implement this strategy, several points would need to be borne in mind.

First, it would be necessary to be clear, before any approaches were made, about the precise contents of the animal welfare legislation sought. It would be necessary to anticipate the States' question: "what exactly is it you want us to hand over?"

Second, it would be necessary to bear in mind that, when dealing with what are presently State jurisdictional issues relating to animal welfare generally, the questions of sheep and cattle production would arise — as would control of horse-racing.

The attraction of this option is that, as a possible strategy, it would have the merit of ensuring that the Commonwealth Parliament unequivocally had the power to pass an Act to make laws with respect to whatever power is referred by the States. With States effectively locked in at the stage of agreeing to refer the matter in question, the likelihood of a High Court challenge would be minimal. It would be advisable, as part of this strategy, to anticipate the possibility that some, but not all States, would be prepared to refer matters to the Commonwealth. It may be that the overall strategy of implementing national animal welfare legislation can be achieved only in a series of phases. If, say, three States initially agreed but the other three refused, it may be possible to ask the Commonwealth to co-operate with those three compliant States by passing animal welfare legislation to apply in those three jurisdictions in the hope that the others may follow in time.

If a State Parliament refers a matter to the Commonwealth Parliament, there is nothing to stop that State Parliament from repealing its referring legislation at any future time. It is a basic principle of constitutional interpretation that no parliament can bind future parliaments.

Complementary State and Territory legislation

A variation of the strategy of obtaining the co-operation of the States and Territories is one under which each State and Territory Parliament enacts its own animal welfare legislation but where the contents of each State and Territory Act are identical. This approach has the particular merit of avoiding the need to come to terms with the lack of clear Commonwealth power. As observed at the start of this paper, the State and Territory Parliaments have the constitutional power to make laws for animal welfare. A joint State and Territory co-operative scheme would involve a total of eight Parliaments passing legislation in exercise of this power.

Such an option could be pursued either with or without Commonwealth involvement. There is no legal necessity for Commonwealth involvement, but in the absence of some sort of binding or nationally unifying role, the success of such a strategy would be heavily dependent upon co-operation by a wide range of jurisdictions and jurisdictional needs.

This option would presumably be less threatening to the States than those discussed above. The States would not be asked to give up any of their powers. They would not have potentially overriding Commonwealth legislation, under the trade and commerce or bounties or external affairs powers, with which to contend. The States could be expected to agree in principle far more readily for the reason that they would be seen to have control over the legislation.

The administration of any joint legislative scheme would be complex. In the first place, having six States and two Territories agree on the details of an animal welfare protection regime may be difficult and time-consuming.

Summary

There are three broad options:

Option 1: The Commonwealth can pass legislation under one or more of its legislative powers having application throughout the Commonwealth.

Option 2: The Commonwealth can pass legislation pursuant to the referral to it by State Parliaments of matters under s. 51(xxxvii) and using its power under s. 122 to make laws for the Territories.

Option 3: Each State and Territory can pass identical legislation.

The simplest option is Option 3, but it has the greatest element of risk so far as longevity and stability of the scheme is concerned. The most secure, legally, would be Option 1, but there is little likelihood of there being reliable Constitutional power. Option 2 might well be the option to consider first because, if State Parliaments can be induced to refer animal welfare power only, one Commonwealth Parliament enactment would be all that is required.

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Editor's note

This is an edited version of a paper presented at the RSPCA Australia scientific seminar, Canberra, 22 February 2000.

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Changes to animal welfare legislation around Australia

The last issue of ANZCCART News highlighted the passing of new animal welfare legislation in New Zealand. There is no national animal welfare legislation in Australia, as this is a matter for the eight states and territories. Legislation in a number of states and territories has been or is being reviewed.

Northern Territory

The Animal Welfare Act 1999 was passed by Parliament in October 1999 and has been given assent. It replaced the Prevention of Cruelty to Animals Act (1980). The Act includes a new section (Part 5) on *Teaching or Research Involving Animals*, which includes the provision of licences to operate premises where animals are to be used for teaching or research. It also establishes animal ethics committees (AECs) and will adopt in its Regulations the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes.

It establishes an Animal Welfare Authority in the Northern Territory Department of Local Government, as well as an Animal Welfare Advisory Committee to the Minister.

Western Australia

An Animal Welfare Bill was introduced to the WA Lower House in February 2000. The current Act was passed in 1920, since when there have been enormous changes both in the use and handling of animals and in public attitudes towards them. The old Act does not cover the use of animals for scientific purposes. This and many other issues will now be covered once the new legislation is enacted.

South Australia

Following a review of the

Prevention of Cruelty to Animals Act (1985), amendments to the legislation came into effect on 1 February, 2000. The changes were relatively minor, as the Review Panel reaffirmed that the legislation is contemporary, necessary, adequate and appropriate. The amended Act now recognises five categories of membership of AECs instead of four, adding the person with responsibility for the day-to-day care of experimental animals. This brings it into line with the requirements of the Code of Practice for AEC membership.

Victoria

The Prevention of Cruelty to Animals Act (1986) was recently reviewed according to the requirements of the National Competition Principles. Changes were minor and did not relate to the use of animals for scientific purposes.

New South Wales

The Animal Research Act (1985) was reviewed in 1999. This included widespread public consultation. The report of the Review Committee has not yet been provided to the responsible Minister.

Australian Capital Territory

A new Animal Welfare Act is currently being drafted in the ACT. While a number of changes are proposed, these will not affect the use of animals for scientific purposes.

Queensland

A new Animal Welfare Bill is being drafted and will be known as the Animal Care and Protection Bill.

A summary of animal welfare legislation and its administration in Australia is shown in the table on page 6.

More on ANZCCART's webpage

<http://www.adelaide.edu.au/ANZCCART/>

ANZCCART has recently upgraded and expanded its website, to provide a more comprehensive service to its clients and to the interested public. In addition to the most recent edition of ANZCCART News, the website now includes all 21 published facts sheets, as well as notes from workshops held over the last two years. As there are no published proceedings from workshops, these notes are the only written record of what were in some cases very detailed discussions. For example, the workshop on animal health monitoring, held in September 1998, contains four papers from the invited speakers.

The website also includes a list of current publications and an index for volumes one to ten of ANZCCART News (1988 to 1998). This will be progressively updated. Further interest will be provided over the next few months when a selection of the best articles published in this newsletter will be added to the website.

One of the most useful attributes of any website is cross-linkages to other websites. ANZCCART has links to its major sponsors websites as well as to those of biomedical societies in Australia and New Zealand (in the latter case via the Royal Society of New Zealand), as well as to a number of overseas organisations. These include:

- Canadian Council on Animal Care (CCAC)
- Universities Federation for Animal Welfare (UFAW)
- Scientists Center for Animal Welfare (SCAW)

- Fund for the replacement of animals in medical experimentation (FRAME)
- NORINA

The availability of each new issue of ANZCCART News on our website is being promoted electronically to biomedical researchers throughout Australia and New Zealand, thus greatly increasing its access to practising animal scientists.

ANZCCART's 2000 Conference

*Farm animals in research
— can we meet the
demands
of ethics, welfare, science
and industry?*

This will be held in Adelaide on 30 November and 1 December, 2000.

The program is being prepared and will be published in the June issue of ANZCCART News. Please put these dates in your diary.

ANZCCART AGM

The 2000 Annual General Meeting will be held at the University of New South Wales in Sydney at 3pm on Friday, 26 May, 2000.

A notice of meeting including an agenda and copy of the 1999 Annual Report will be sent to all members in late April.

Members should contact ANZCCART's Adelaide office before 14 April if they wish an item of business to be placed on the agenda.

Robert Baker
Director

Animal Welfare Legislation and Administration in Australia

STATE / TERRITORY	LEGISLATION AND DATE	OFFICE RESPONSIBLE
New South Wales	<ul style="list-style-type: none"> • Prevention of Cruelty to Animals Act (1979) • Animal Research Act 1985 • Exhibited Animals Protection Act 1986 	<p>Animal Welfare Unit Department of Agriculture Locked Bag 21 Orange NSW 2800 Tel: 063 91 3670 Fax: 063 91 3570 www.austlii.edu.au/au/legis/nsw/consol_act/toc.html and, for documents, www.agric.nsw.gov.au/Aw/index.html</p>
Victoria	<ul style="list-style-type: none"> • Prevention of Cruelty to Animals Act 1986 	<p>Bureau of Animal Welfare Department of Natural Resources and Environment Attwood, VIC 3049 Tel: 03 9217 4147 Fax: 03 9217 4331 www.dms.dpc.vic.gov.au/</p>
South Australia	<ul style="list-style-type: none"> • Prevention of Cruelty to Animals Act 1985 	<p>Animal Welfare Office Department of Environment and Heritage GPO Box 1047, Adelaide SA 5001 Tel: 08 8204 8894 Fax: 08 8204 8717 www.austlii.edu.au/cgi-bin/disp.pl/au/legis/sa/consol_act/poctaa19853</p>
Queensland	<ul style="list-style-type: none"> • Animals Protection Act 1925 (under review) 	<p>Animal Welfare Unit Department of Primary Industries GPO Box 46, Brisbane QLD 4001 Tel: 07 3235 4315 Fax: 07 3239 3510 www.legislation.qld.gov.au/LEGISLTN/CURRENT/A/AnimalsProtA25_01_.pdf</p>
Western Australia	<ul style="list-style-type: none"> • Prevention of Cruelty to Animals Act 1920 - 1976 (under review) 	<p>Department of Local Government 15th floor, 32 St George's Terrace Perth WA 6000 Tel: 08 9222 0401 Fax: 08 9222 0559 www.dlg.wa.gov.au</p>
Tasmania	<ul style="list-style-type: none"> • Animal Welfare Act 1993 	<p>Department of Primary Industries and Fisheries New Town Research Laboratories St John's Avenue New Town TAS 7008 Tel: 03 6233 6883 Fax: 03 6278 1875 www.dpiwe.tas.gov.au</p>
Australian Capital Territory	<ul style="list-style-type: none"> • Animal Welfare Act 1992 	<p>Animal Welfare Officer Urban Services Environment ACT PO Box 144, Lyneham ACT 2602 Tel: 02 6207 2249 Fax: 02 6207 2244 www.act.gov.au/environ</p>
Northern Territory	<ul style="list-style-type: none"> • Animal Welfare Act 1999 	<p>Department of Local Government GPO Box 4621 Darwin NT 0801 Tel: 08 8999 8474 Fax: 08 8999 8426 www.nt.gov.au/dhlg/localgov</p>

Newly published

New publications on non-animal alternatives

The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (section 1.9) requires that:

techniques which replace or complement the use of animals in scientific and teaching activities must be sought and used wherever possible.

It is the responsibility of the researcher to abide by this and the Animal Ethics Committee scrutinising the proposed work must be satisfied that the use of animals is necessary. However, finding appropriate databases has not been easy for researchers or AEC members. This has been remedied by two new publications:

- **Searching for Information on Non-Animal Replacement Alternatives — a guide to search techniques, databases and specialised resources.**

Written by Dr Krys Bottrill from FRAME, this 52 page monograph is a slightly cut-down version of the *How to search for Three Rs information* that is presented on the FRAME website which is constantly updated. While the web version deals with all Three Rs, the hard copy deals only with replacement alternatives. Single copies of the hard copy are available free of charge.

Contact details:

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96-98 North Sherwood Street
Nottingham NG1 4EE UK
Fax: 44-0115-9503570
email:
krys@frame_uk.demon.co.uk
www.frame_uk.demon.co.uk/

- **Accessing Information on the Reduction, Refinement and Replacement of Animal Experiments. Report and Recommendations of a Focus on Alternatives Workshop by G. Langley et al., ATLA 27: 239-245 (1999).**

This report by representatives from RSPCA (UK), FRAME, UFAW and other groups is intended to assist in accessing information of the Three Rs. It includes a list of databases and websites on this topic. The workshop discussed the practicality of establishing a new, single, comprehensive database on the Three Rs and concluded that this does not appear feasible. A selection of smaller, comprehensive databases, each clearly focussed on a defined aspect of the Three Rs for a specific purposes, would be the best approach. A current example is the NORINA database of audiovisual facilities which can reduce or replace animal use in education. NORINA is available on the Internet free of charge.

Nerve Physiology software package*

The software package *Nerve Physiology* comes as two 3" disks which are easily installed into a Windows 3.1 or Windows 95 environment. The package contains the simulation program and a file of the manual to accompany the program.

Seven tasks (experiments) are presented which cover the core exercises given to students in (cell) physiology practical classes. The program maintains the need for students to "collect" data, analyse it and then use it to

develop an understanding of how nerves work. The exercises have been cleverly constructed to retain most of the valuable learning experiences. For example, data on stimulus strength versus action potential amplitude must be written down by the student, and can then be used to plot a graph, for which a facility is provided. Automating the transfer of data would detract from the program. Navigating through the tasks is simple. For each task there are actions to be taken, and questions to be answered. Moving back and forwards between these aspects has been made convenient. Thus the experimental data can be revisited once questions have been addressed.

There are a few theoretical errors in the script, but these do not subvert the learning of procedures. For example the tutors' notes (page 2) should point out that axons have the organelles and ability to synthesize enough ATP to run the membrane pumps for days. Also in experiment two the display may lead students to think there was a resting membrane potential of 0.5mV, which is not correct. An additional concern is that basic elements of experimental design are sublimated. For instances a very good sequence of time interval between pulses is predetermined for the students — since the students cannot learn that this should be done by discovering it for themselves it should be drawn to their attention.

At this point one has to ask why has this set of tasks been set for students to do over the last half century? Is it the knowledge, or the procedures involved? The knowledge is rather dated, but the procedures are still

worth it. My feeling is that the program would certainly help some students gain more from the practical exercise where live nerve fibres are used. However they would lose on several important aspects that we intend students to deal with: the need to use living material to advance biological knowledge; the care needed when handling delicate living tissues; and most importantly, the vagaries of biological experiments due to the possibility of errors when using complex equipment and to biological differences between samples of living tissue. One excellent use we could see for it is as a practical test for students who have done the practical class, an otherwise impractical form of examination.

Readers will have seen a more extensive discussion of these and other issues (Lluka and Oelrichs, 1999) in a previous ANZCCART News.

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Reference

Lluka, L. and Oelrichs, B. (1999). Replacement and reduction of animal usage in teaching physiology and pharmacology at the University of Queensland. *ANZCCART News*, 12 (2): 4-7.

* Available on loan from:
The Humane Society
Australian Office
PO Box 439
Avalon NSW 2107

Tel: 02-9973-1728
Fax: 02-9973-1729

Book review

Ethics, Animals and Science

by Kevin Dolan
Blackwell Science,
Melbourne

ISBN 063205 2775

Price \$85.00 (soft cover)

This book is written by a pastoral theologian, who tells us in the preface that he has also been involved in cancer research for 25 years. Its scope is very broad. The first third is devoted to ethics, with chapters on morality, ethical theory, freedom, personal morality, and ethics and society. Most of this material is poorly organised, with scarcely any relevance to the topic of the book.

The next third is titled *Ethics and Animals*, with chapters on human attitudes to animals, animal rights, benefits to animals from human activities (the first of such benefits is said to be 'domestication') and animal awareness and pain. A notable feature of this part of the book is a lengthy review of Peter Singer's doctrine of speciesism (in chapter 7) with no very clear verdict emerging at the end.

The final third of the book takes up the theme of the title - *Ethics, Animals and Science*. The chapters in this section cover respectively the controversy over the use of animals in science, the Three Rs, cost-benefit analysis of animal experiments, and ethics committees. The final chapters are dominated by extracts from a variety of sources, e.g., the UK Home Office, the

Canadian Council on Animal Care, the University of Utrecht, with only minimal commentary from Dolan himself.

There is little if any recognition of the work carried out in this field over the last 15 years. Writers such as Barbara Orlans, Andrew Rowan, and Bernard Rollins are hardly mentioned. On the philosophical side, there is no proper discussion of Tom Regan's views, let alone those of Peter Carruthers and Raymond Frey, or the recent and challenging work of Hugh LaFollette and Niall Shanks. Instead, the final part of the book increasingly focuses on distinctly British themes and concerns. For example, we are told that the activist group People for the Ethical Treatment of Animals is "unusual" because it is not "home-grown" (page 173).

When Canadian legislation is mentioned (page 246) it is said to be "surprisingly like the tenets of practice within our own legislation" and "includes many of the details of British legislation." The reason for this surprise must, I conjecture, be the author's ignorance of the impressive degree of international collaboration among those directly concerned in animal welfare and ethics, coupled with his unawareness of the history of the ethics review process in Canada. In hunting for a "working model" for animal ethics review committees, Dolan turns to human research ethics committees in the UK; in all this, he seems unaware of the existence of an Australian model which might have served his purpose.

Although nicely printed, the book is marred by a large number of typos. The late Alfred Jules Ayer is referred to as "Ayers" in most of the text (and in the index as well), and the author writes about him and John Mackie as if unaware that neither of them is still alive. For some writers mentioned, dates of birth and death are given, along with the full name. In other cases these details are omitted. The result is surprisingly slipshod for an academic work. Readers who want to know about Stephen Budiansky's views on the delayed adulthood of dogs and cats are not given his first name, and the only reference they can follow up is to a BBC2 television programme from 1992. I am surprised that Blackwell's copy editor did not insist on more rigorous standards for the book.

Other irritations are more significant from the standpoint of content. For example, throughout part I, we are given potted accounts of some moral philosophers and some styles of ethical theorising. The relevance of this material to animal ethics is never clarified. Each chapter is divided into short sections. These sections often fail to connect into any sustained argument across the chapter as a whole. Sometimes even the sentences that make up the sections fail to combine into anything coherent. Here is a typical instance. Discussing attacks aimed at "liberating animals" from scientific establishments, Dolan comments: "The released laboratory animal could be a helpless, endangered creature. For example, not so long ago in East Anglia pet cats suffered from attacks by

mink which had been released in an animal liberation operation" (page 174). The example here is not an illustration either of the helplessness, or of the endangered status of the mink (even supposing they were laboratory animals, rather than ones from commercial fur farms). The cumulative effect of dozens of such non sequiturs is disorientating for the reader and unacceptable in a book produced by a leading scientific publisher.

Chapter 4 is entitled "The Nature of Freedom". In it we are taken through a number of reflections, for want of a better term, headed respectively "Free will", "Determinism", "Existentialism (the farthest reaches of freedom)", "Liberty", "Freedom of Speech", "Liberty and the Commons", "Ethics and Pollution", "Population and the Commons", "Liberty and Rights", and finally "Slavery". Although the writer's historical knowledge is widely displayed by means of snippets from Kipling, Justinian, Sartre, Plato, Einstein, Moore, Huxley, Haeckel, Mill, Diderot, and many others, the chapter has no clear point, and has little relevance to the book's themes. Indeed, with the exception of the chapter on animal awareness and pain, most of the material of interest to readers of *ANZCCART News* is in part III of the book.

Despite his protests that he is not favouring any particular side in the debate over the use of animals in science, Dolan's sympathies are clearly pro-vivisectionist. Domestication, he thinks, is a great benefit to many animals, and relief from the fear of preda-

tion is a “little-mentioned privilege of the laboratory mouse” (page 144). (I look forward to Dolan’s defence of the “privileges” of imprisonment, bonded labour and arranged marriages.) He regards utilitarianism as the ‘ideal’ ethical theory for weighing up the costs and benefits of animal research. This may be why he spends so long reviewing the position of Peter Singer, while largely ignoring the work of non-utilitarian thinkers. He describes the opponents of animal use as “ignorant” people who argue without any “factual support for their opinions” (pages 182 - 3). Although I agree with the latter view, it is only fair to point out that people in glass houses should be careful. Despite his obvious faith in the “immense achievements of animal experimentation” (page 183), Dolan himself cites not even a single detailed case to justify his faith in animal research.

Towards the end of the book, there is increasing citation of documentation on animal ethics and ethics review processes. Much of this is quite interesting, though it reads as if the author rather gave up on writing the book and relied on quoting other sources instead. A critical commentary on this material would have been very helpful. Overall, the book is very much a curate’s egg, with some genuinely interesting material, but far too disorganised and self-indulgent to be of much use either to the working scientist or to the student of ethics.

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An overview of the National Registration Authority

Australia has a National Registration Scheme (NRS) for agricultural and veterinary chemical products to ensure that they meet Australia’s high standards for performance and safety. About 6,500 animal health and crop protection chemical products are registered for use in Australia. To reach the marketplace as products registered for legal sale, new products are scientifically evaluated and registered by the National Registration Authority for Agricultural and Veterinary Chemicals (NRA).

The NRA is responsible for administering and managing the NRS. Work of the NRA protects the health and safety of people, animals, the environment and Australia’s overseas trade, as well as supporting Australian agricultural and livestock industries.

Within the Scheme, the NRA assesses the safety and efficacy of agricultural and veterinary chemical products and determines whether their use is likely to jeopardise trade. It also approves product labels and specifies conditions of use, thus regulating agricultural and veterinary chemical products supplied to the Australian market. Once the product is sold, control of use becomes the responsibility of the States and Territories.

The NRA is a Commonwealth Statutory Authority within the portfolio of the Australian Minister for Agriculture, Fisheries and Forestry. The Parliamentary Secretary to the Minister has direct portfolio responsibility. A Board of Directors is responsible for providing good corporate governance, determining corporate strategy and providing guidance to senior management.

Principal responsibilities

The NRA’s principal respon-

sibilities are described in the Agricultural and Veterinary Chemicals (Administration) Act 1992 and the Agricultural and Veterinary Chemicals Code Act 1994. The Administration Act established the NRA and confers powers to administer the NRS, while the Code Act gives the NRA authority to:

- evaluate, approve and control the supply of active constituents for proposed or existing agricultural or veterinary chemicals; and
- evaluate, register and control the manufacture and supply of agricultural and veterinary chemical products.

The legislation also sets criteria for approving active constituents, registering products or reviewing existing chemicals. The active constituent or product:

- should not pose any undue hazard to the safety of people exposed to it during handling or using anything containing their residues;
- would not be likely to harm humans when used as directed or have an unintended effect that is harmful to animals, plants, things or to the environment; and
- would not unduly prejudice Australia’s overseas trade.

Issuing permits

The NRA also issues permits for use of registered products “off-label” and for use of unregistered products. Often the latter type of permit is required for data to be collected to support registration of that product. Any animal trials conducted under an NRA permit, e.g., to establish efficacy of a chemical product, must be approved by a relevant animal ethics committee. Such committees are often internal company committees that have external representation, such as a representative from the community, the RSPCA, or a minister of religion.

Requirements on animal testing

The NRA requires that applicants seeking to register chemical products have completed all the testing and evaluation necessary to ensure that the product meets all the criteria above to allow it to be registered. In many cases, an applicant would need to conduct tests on animals to obtain data.

The NRA requests that any data, including those generated from the use of the product in animals, are provided when applicants apply to register an agricultural or veterinary chemical product. Animal data are expected for evaluation of the potential for human toxicity and for evaluation of the effectiveness and safety of the product in target animal species (i.e., those for which the product is registered). Advice on human toxicity aspects is provided by the Therapeutic Goods Administration within the Australian Department of Health and Aged Care.

Concern over animal welfare is a primary reason why the NRA requires animal data in order to ensure the effectiveness and safety of the product in target animals. Where the NRA believes a product may compromise animal welfare (e.g., prolonged injection regimens), the NRA may consult with animal welfare organisations.

The NRA is also actively involved in international harmonisation of technical requirements affecting registration of veterinary products through the International Cooperation on the Technical Requirements for the Registration of Veterinary Medicinal Products (VICH).

The benefits and goals of establishing harmonised requirements include:

- a reduction in animal testing studies required by individual countries through agreement on the core essential studies which can be accepted by all countries; and

- implementation of uniform *in vitro* testing methods, in place of *in vivo* testing.

Of particular relevance to animal welfare, VICH is currently developing internationally harmonised guidelines to establish acceptable daily intakes of veterinary residues in humans (based on no effect levels in animals or *in vitro* studies), and to determine the efficacy of anthelmintics in cattle, sheep, goats, horses, dogs and cats.

Chemical review

Chemicals are not registered forever. Another key component of the NRA's work is to review older chemicals through the Existing Chemical Review Program. Through this program, the NRA determines whether chemicals continue to meet contemporary standards of performance and safety. If necessary, the NRA will change the conditions of registration or withdraw the chemical from the market.

The Special Review Program allows the NRA to immediately review chemicals if issues arise that could impact on the terms of registration, e.g., the findings of new research, availability of new scientific data or concerns that have been raised about the use or safety of a particular chemical. Market-place monitoring of agricultural and veterinary chemicals by the NRA occurs to ensure the products are registered and conform to the standards set at the time of registration.

States control use of chemical products

State/Territory agriculture, health or environment departments are responsible for the use of chemicals, including aerial spraying and licensing of pest control operators.

Joanne Brandson
NRA, Canberra

The JETACAR report on antibiotics

The Joint Expert Technical Advisory Committee on Antibiotic Resistance (JETACAR) Report - *The use of antibiotics in food-producing animals: antibiotic resistant bacteria in animals and humans* is now with the Ministers for Health and Aged Care and for Agriculture, Fisheries and Forestry. The report was commissioned as an Australian Commonwealth government response to a series of overseas reviews, including the World Health Organisation and agriculture agencies in the UK, Europe and USA, which dealt with the issue of transfer of antibiotic-resistant bacteria from animals to people or antibiotic resistance genes from animal strains of bacteria to human pathogens.

The terms of reference of JETACAR were directed towards resistance problems in human pathogens ascribed to the use of antibiotics in animals, but the Committee acknowledged that misuse or poor control of use of antibiotics in hospitals and community medical practice settings were the main causes of the major global resistance problems in human medicine. Major problems in Australia include methicillin-resistant *Staphylococcus aureus* (MRSA) and penicillin-resistant pneumococci. Overseas, extended spectrum lactamases and multi-resistant *Mycobacterium tuberculosis* are of significant concern as well. There is no evidence at this stage that use of antibiotics in animals has had or will have any impact on these particular resistance problems. However, because of issues with resistance in enteric bacteria, medical authorities are keen to protect antibiotics they regard as critical to treatment of various serious human infections. So they are reluctant to allow use of products such as third generation cephalosporins and fluoroquinolones in food-producing animals and

are concerned about the impact of commonly used antibiotics such as tylosin on the efficacy of the new macrolides. Use of these antibiotics by medical practitioners is controlled, usually by government restrictions or financial controls in hospitals.

Antibiotic resistance is widespread in enteric bacteria isolated from animals, particularly intensively farmed animals. This illustrates the point that if bacterial populations are exposed to antibiotics, resistant strains emerge.

It is quite clear that antibiotic-resistant strains of salmonella and campylobacter spread from animals to people via the food chain. Human infections with these organisms are usually self-limiting and are rarely treated with antibiotics. In very young, elderly or immunologically compromised patients infections can be severe and antibiotic treatment is essential. Treatment failure has been reported, with resistant strains traced to animal sources. Fluoroquinolone resistance in campylobacters and multi-resistant salmonella such as *S. typhimurium* DT104 is of concern overseas, but as fluoroquinolones are not registered for use in livestock in Australia (and we do not have *S. typhimurium* DT104 either) this is not a particular issue at this stage in Australia.

What are VREs?

Vancomycin resistant enterococci (VREs) were first reported in the late 1980s and the discovery in the mid 1990s of these organisms in pigs and poultry fed a related antibiotic, avoparcin, led to a flurry of international reviews and indirectly to JETACAR. Enterococci are commensal bacterial in the gut of all mammals and birds and have only emerged as human pathogens in high-dependency nursing situations in immunocompromised or otherwise critically ill patients. Because of huge problems

with MRSA in hospitals, vancomycin became the drug of choice in treating patients with *S. aureus* infections and in providing antibiotic cover for other patients perceived to be at risk of developing a nosocomial infection with *S. aureus*. There is mounting evidence that one type of vancomycin resistance, vanA, is connected with the use of avoparcin in animals. However, another type of resistance, vanB resistance, has not been found in avoparcin-treated animals. VanB VREs are the commonest VREs in the USA (where avoparcin is not used in animals) and in Australia. VanA VREs are a major problem in the UK and Europe where vanA VREs are very common in pigs and poultry. It is worth noting that vanA VREs are very common in pigs and poultry in Scandinavia too, but are very rare in people. MRSA is also very uncommon in Scandinavian hospitals, so there is no need to use vancomycin. Medical education and infection control practices in the Scandinavian health system have been effective in inculcating a much more responsible attitude to antibiotic use in human medicine.

Intrinsic high-level resistance and the capacity to rapidly acquire additional resistance genes is a feature of enterococci and this has led to medical concerns about the use in animals of other antibiotics such as virginiamycin and avilamycin. Like avoparcin these products are used as growth promotants and at least with virginiamycin there is some evidence of acquired resistance in animal strains of enterococci. The problem is that although there are currently no similar human products, because hospitals have such problems with VREs and MRSA (and now an emerging problem of reduced susceptibility of *S. aureus* to vancomycin), medical pharmaceutical companies are looking for alternatives. So there are human analogues of virginiamycin and avilamycin in the pipeline. The European

Union has responded to this by withdrawing approval (on a precautionary basis) for a number of antibiotics which had been used widely in Europe (and are currently used in Australia) as growth promotants.

Recommendations

The full JETACAR report is available on the web: www.health.gov.au/pubs/jetacar.htm

The recommendations cover five elements of what is described as an antibiotic resistance management plan:

- regulation;
- monitoring and surveillance;
- infection prevention;
- education; and
- research.

Some important recommendations are that:

- antibiotic use should be minimised in animals and people and that antibiotics used as growth promotants should not be agents used therapeutically in man or animals or that could cause cross resistance with therapeutic antibiotics;
- the registration of current growth promotants that may not meet the above criteria should be reviewed;
- there be an audit trail for antibiotics from importation to use;
- all antibiotics for use in people and animals be classified as prescription only products;
- there be uniform legislation around Australia controlling the way antibiotics are used;
- it be mandatory to follow any NRA label restrictions on antibiotic use;
- data requirements for registration of new antibiotics or new uses of exist-

ing antibiotics address antibiotic resistance issues; and

- there be a comprehensive system for surveillance and monitoring of antibiotic resistance and antibiotic usage.

In addition, there are recommendations covering reduction of contamination of food with food-borne organisms, research into alternatives to antibiotics as growth promotants, improved infection control in hospitals, codes of practice for the prudent use of antibiotics, education of doctors, veterinarians and the community about antibiotics and antibiotic resistance further research into antibiotic resistance and ensuring that there is a competent group responsible for coordinating a resistance management program.

At this stage it is not clear what the Ministers will do with the Report. However, the fact that the report is in the public domain enables other groups such as the veterinary profession to respond directly to some of the issues and recommendations. It is clear that there is a problem of antibiotic resistance in Australian livestock (and companion animals for that matter) and this cannot be in the best interests of the ongoing health and productivity of our livestock and pets. In addition, we do need to recognise that we have a responsibility to reduce the transfer of resistant bacteria/resistance genes from animals/bacteria in animals to people/human pathogens.

There is need for greater awareness and understanding of modes of action of antibiotics, antibiotic resistance and the spread of resistant bacteria and genes. The existing Code of Practice for Prudent Use of Antibiotics needs to be reviewed and adopted and followed by all veterinarians. Most importantly, the amount of antibiotics used in animals for growth promotant, prophy-

lactic and therapeutic purposes must be reduced. This will not solve the resistance problems in people but will contribute to a reduction in resistance in salmonella and campylobacters and perhaps also in enterococci.

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AVERT (Australian Veterinarians in Ethics, Research and Teaching)

Annual Conference Perth, June 27 - 28

Following a very successful two day program held during the annual Australian Veterinary Association Annual Conference in Hobart in 1999, AVERT is again presenting a program in Perth this year. Because of common interests, AVERT is joining with the Conservation Biology Group for one session looking at various aspects of Australian wildlife of mutual interest.

The final session of the two-day program will involve consideration of issues relating to the use of analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) in the treatment of farm animals. The majority of the program is to be devoted to ethical and AEC issues. These include matters associated with inspection of facilities and animals in research situations, and the complex matter of the use of alternatives to animals in teaching situations.

Speakers will include Dr Glenn Albrecht, a biological ethicist and Dr Tom Donnelly, an Australian veterinarian working and teaching in the USA in the area of animal welfare and animal facility inspections.

Coming up

Consciousness, cognition and animal welfare UFAW Symposium

11-12 May, 2000
London

Contact: Dr Stephen Wickens, UFAW
Tel: 44-01582-831818
Fax: 44-01582-831414
email: wickens@ufaw.org.uk

Australian Veterinary Association Conference

25-30 June, 2000
Perth

Contact: Ms Doreen Culliver, AVACOS
7 Phipps Place, Deakin, ACT 2600
Tel: 02-6285-2600
Fax: 02-6285-3600
email: avacos@ava.com.au

International Conference on Animal Science and Veterinary Medicine towards the

21st century
(ICA SVM 2000)

12-15 August, 2000
Beijing, China

Contact: Ms Xu Jinhua
Fax: 86-10-6289-5351
email: xmskyczy@public3.bta.net.cn

ANZCCART 2000 Conference

Farm animals in research — can we meet the demands of ethics, welfare, science and industry?
30 November - 1

December, 2000 Adelaide

Contact: ANZCCART's Adelaide office for details.
tel: 08-8303 7393
email: anzccart@waite.adelaide.edu.au

XXI World Buiatrics Congress

4-8 December, 2000
Punta del Este, Uruguay
Contact: Gabriela Rohr Congressos and Reuniones Cerrito 307
Montevideo 11.000
Uruguay

Fax: 598-2-916-8902
email: grohr@rohrsa.com; or
rjsu@adinet.com.uy

News

New Chair in Animal Welfare in Canada

The Atlantic Veterinary College of the University of Prince Edward Island, Canada, has obtained funding for a new Chair in Animal Welfare and will also provide a significant increase in the scope of the current Animal Welfare Unit at the College.

This Unit will be expanded to become the Animal Welfare Centre, whose function is to advance knowledge about issues of animal welfare and related ethical concerns through applied research and teaching.

The appointee will work with other faculty members to develop graduate programs in veterinary medicine specialising in animal welfare and will develop an undergraduate course for veterinary students and a continuing education program for veterinarians and other interested persons.

For further information about the Animal Welfare Unit, contact is website : www.upei.ca/-avc

Scientific use of animals in Canada, 1997

The Fall, 1999 issue of *Resource*, the newsletter of the Canadian Council on Animal Care (CCAC), has published detailed data on the numbers and types of animals used in research, teaching and testing.

These data were collated using the Animal Data Use Form, introduced in 1996. Numbers of animals used are broken down according to species, purposes of use and categories of invasiveness as

defined by the CCAC.

Compared to the 1996 data, the figures from 1997 showed a 24.6% decrease in the total numbers of animals used, from 1,952,045 to 1,471,611. A substantial decrease in the number of fish used accounted for 82% of that decrease. Fewer mice, domestic birds and wild species were used in 1997, but there was a net increase in the numbers of rats, farm animals and reptiles used in 1997.

Copies of the CCAC Survey of Animal Use 1997 and the Numbers of Animals Used in 1997 per Purpose of Animal Use and Category of Invasiveness can be obtained from the CCAC (email: cgauthier@bart.ccac.ca). The CCAC website address is www.ccac.ca

Workshop for Laboratory Animal Managers

This two and a half day workshop, co-sponsored by the University of Melbourne, the Ludwig Institute and ANZCCART, will be held at the University of Melbourne on Tuesday 30 and Wednesday 31 May and Thursday 1 June, 2000. This workshop is for animal house managers in Australia and New Zealand and will be led by Mr Fred Douglas, Director of Laboratory Animal Care at Purdue University, USA.

Mr Douglas has been an organiser and speaker at the ILAM (Institute of Laboratory Animal Managers) Laboratory Animal House Managers' Course in the USA. The Melbourne workshop will cover the following topics:

- determining staff levels;
- hiring the right staff;
- developing a good training program;

- evaluating performance;
- personal leadership skills; and
- dealing with difficult people.

The venue is Lecture Theatre 4, level 3, Medical Building, University of Melbourne, Grattan Street, Carlton.

For further information, contact:

Dr Lyndal Scott
Animal Welfare Officer
University of Melbourne
Parkville 3010
Tel: 03 9344 4070
email:
l.scott@research.unimelb.edu.au

NIH report on monoclonal antibody production

The US National Institutes of Health (NIH) has released a report from a panel of experts convened by the National Research Council (NRC) and the Institute of Laboratory Animal Resources (ILAR) on monoclonal antibody (mab)

production. This followed petitions from the American Anti-Vivisection Society (AAVS) and the Alternative Research and Development Foundation (ARDF), seeking a ban on the mouse ascites method for mab production.

The report is available on: <http://grants.nih.gov/grants/policy/antibodies.pdf>

Seminar on transgenics to be held in Sydney

This is to be held on 7 June, 2000 from 12 noon to 3pm at the University of New South Wales in Sydney. It will address the theme that "the next phase, if not the current phase, of biological research would emphasise genetic manipulation as the dominant tool of investigators".

For further details contact:

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ANZCCART News is published quarterly by the Australian and New Zealand Council for the Care of Animals in Research and Teaching Limited.

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.

Contributions to ANZCCART News are welcomed and should be sent to:

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ISSN 1039-9089