

# Proceedings 5<sup>th</sup> World Congress 2005

Volume 23, Special Issue  
ISSN 0946-7785  
ALTEEK 23 (Spl)  
1-466 (2006)

# ALTEX

## ALTERNATIVES TO ANIMAL EXPERIMENTATION

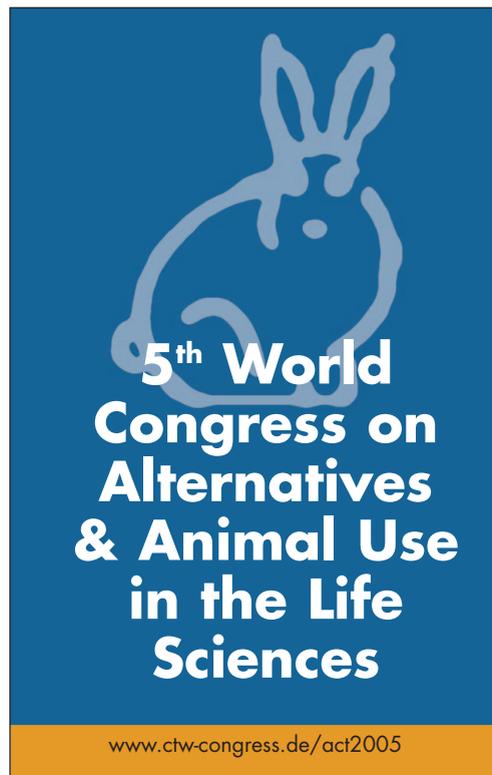
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# Educating the Veterinary Professional about Animal Welfare\*

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## Summary

*For many years, animal welfare organisations have taken the lead in bringing about improvements in animal welfare, as well as helping to change attitudes towards animals. Unfortunately, the veterinary profession has often lagged behind in its support for reform. It is vital therefore that veterinary training includes a good grounding in animal welfare education. In 2003, the World Society for the Protection of Animals (WSPA) and the University of Bristol launched the 'Concepts in Animal Welfare Syllabus' to assist with the teaching of animal welfare in veterinary faculties. The syllabus stimulates focused critical thinking on animal welfare issues.*

*Keywords: animal welfare, education, veterinary profession*

## Introduction

Animal welfare has developed into a science in its own right, and, as a result, there is a growing amount of research into this subject. This research is funded by governments and other agencies and is often used as the basis for the reform of animal welfare legislation, and of the conditions under which animals are reared for food, used in scientific research, kept in captivity for entertainment or other purposes, or used as companion animals. As the body of welfare knowledge increases, its inclusion in educational curricula is likely to increase (Hewson, 2006). Welfare issues are also becoming more important considerations of many national and international veterinary associations.

Veterinarians are widely considered to be informed, rational authorities who possess expertise on virtually any topic relating to animals, including animal welfare. Career options for veterinarians include: working in veterinary practices, in research institutes, as welfare advisers for industry (e.g. feed or pharmaceutical) or for the government (e.g. in transport, slaughter and meat inspection). Many veterinarians are driven by a genuine desire to help animals, and this goal can be achieved with a proper knowledge of animal welfare.

## Animal Welfare positions of Veterinary Associations

We reviewed the animal welfare positions of the World Veterinary Association (WVA), the American Veterinary Medical Association (AVMA), the British Veterinary Association (BVA), the Australian Veterinary Association (AVA)

and the New Zealand Veterinary Association (NZVA). Many of the policies of the NZVA were in line with or exceeded the guidelines developed by that country's National Animal Welfare Advisory Committee (NAWAC), and we used the more-readily available NAWAC guidelines to represent the NZVA's positions in our survey. The five animal-use practices considered were: so-called "battery" cages for laying hens; gestation crates for pregnant sows; small crates and nutritionally-deficient diets for "veal" calves; the use of animals in scientific research and education; and the tail-docking of dogs.

We compared the results of the veterinary review to the available research data on public attitudes towards the five animal-use practices. A detailed report of the results is beyond the scope of this paper, but is available from the authors on request. Briefly, there was widespread and persistent public concern about many aspects of each of the five animal use practices, in all surveyed countries. In contrast, many of these specific concerns were not addressed clearly in the five veterinary associations' positions. All of the veterinary associations either lacked positions on or were not categorically opposed to the close confinement of laying hens, pregnant sows and "veal" calves, although the NZVA did recommend time limits on the use of sow gestation crates, and both the NZVA and the AVA recommended group, rather than individual, housing of "veal" calves. The only practice to which the public and the associations appeared to share a common opposition was the cosmetic tail docking of dogs, although the AVMA did not take a firm stance against this. In the case of animal experimentation, both the general public and the veterinary profession appear to support experimentation for human medical research to some degree, although public opinion remains very critical.

Our results clearly suggest that veterinarians lag behind the general public in their desire for animal welfare reform, unless the positions of veterinarians are not accurately represented by the veterinary associations surveyed. Anecdotal evidence and

\*"Components of this paper were originally published in an article entitled "Concepts in Animal Welfare": A Syllabus in Animal Welfare Science and Ethics for Veterinary Schools" by Jasmijn de Boo and Andrew Knight in *J. Vet. Med. Educ.* 2005 32(4), 451-453, and are reprinted with permission of the Association of American Veterinary Medical Colleges".



some research (Farm Sanctuary, 2004) indicate that a proportion of veterinarians do care deeply about these issues, and support animal welfare organisations, in some cases taking the lead on animal welfare issues. Furthermore, international veterinary bodies like the WVA, the Commonwealth Veterinary Association, the World Small Animal Veterinary Association and the Federation of European Companion Animal Veterinary Associations have all organised major animal welfare symposia in recent years. Thus, there may be some inconsistency between the apparent level of concern about animal welfare expressed by the surveyed veterinary associations and the level of concern of individual veterinarians and some other veterinary associations. Nevertheless, even if the surveyed associations do not fully represent the positions of the majority of veterinarians, it appears likely that a substantial proportion of veterinarians lags behind the general public in their desire for the advancement of animal welfare issues. We attribute this in part to inadequate education about the science and issues of animal welfare during formal veterinary training.

### Trends in veterinary education

The veterinary profession has its origins in agricultural practice, although in the developed world today most veterinarians work primarily with companion animals. Veterinary medical curricula have been modified accordingly over time. Accompanying these changes is the marked feminisation of a previously male-dominated profession. This gender shift is bringing some changes in the attitudes of veterinary students towards animal welfare. For example, a cross-sectional study of veterinary students in their first preclinical year, first clinical year and final year of study showed that the women in each of these groups rated themselves as having significantly higher levels of emotional empathy with animals than did the men. This difference was most marked in the final-year students; moreover, the males in that group showed lower levels of empathy than their peers in the earlier year-groups (Paul and Podbersek, 2000). Research at a US veterinary school has examined veterinary students' attitudes to pain management. Fourth year students were less likely than second or third year students to provide analgesia for certain surgeries (Hellyer et al., 1999). Moreover, it appears likely that there is inhibition of the normal development of moral reasoning ability during the four years of veterinary school (Self et al., 1991).

These findings may be attributable in part to the attitudes of teaching faculty and the examples they set. The apparently reduced concerns for animal welfare might also, in some cases, represent adaptations that enable veterinary students to withstand what could otherwise be intolerable psychological stresses that result from being required to harm sentient creatures in the absence of overwhelming necessity (Capaldo, 2004).

During their training, veterinary students are frequently required to harm and kill animals in preclinical subjects such as anatomy (dissection, often of purpose-killed animals or animals from ethically-questionable sources), physiology, biochemistry

and pharmacology ("demonstration" experiments on living animals, usually of long-established scientific concepts, with animals usually killed during or at the end of the experiment). Students have also traditionally been required to practice clinical, surgical and anaesthetic skills by anaesthetising healthy animals, conducting surgical procedures on them, and killing any survivors at the end (not all survive these frequently-lengthy operations) (Knight, 1999).

While many veterinary schools are continuing to refine their curricula to avoid harmful animal use, such use may still be found in veterinary education worldwide, both in preclinical and clinical (surgical) training. Furthermore, students who are not aware of the existence of alternative methods to harmful animal use in education and scientific research are less likely to consider the 3Rs when planning research projects themselves at graduate and postgraduate level.

### Discussion

Where harmful animal use is retained in the curriculum and animal welfare education is lacking, it is likely that graduating veterinarians will have a diminished appreciation of animal sentience, and a diminished understanding of animal welfare science and animal welfare issues, all of which will impede their knowledge of the 3Rs and their abilities to guide their clients and the wider public appropriately. This may explain why the veterinary associations we surveyed seemed to lag behind the public in their concern about the welfare of animals in several management systems widely believed to result in poor welfare.

### Recommendations

Although animal welfare is necessary as part of formal veterinary education throughout Europe as part of the European Community's move towards harmonisation of professional qualifications, animal welfare education is underdeveloped in most veterinary schools and, we believe, has not received the attention it deserves in the curriculum. However, there are increasing numbers of courses on animal welfare being implemented around the world. Some of these courses are integrated into undergraduate veterinary education. In addition, there are post-graduate courses such as the MSc in Applied Animal Behaviour and Animal Welfare at the University of Edinburgh, Scotland, and the MSc in Animals and Public Policy at the Cummings School of Veterinary Medicine at Tufts University, USA. Moreover, one of the animal welfare mandates of the World Animal Health Organisation (OIE) is promotion of the inclusion of animal welfare in undergraduate and post-graduate veterinary curricula (Anon, 2005).

To encourage the introduction of animal welfare education into veterinary curricula worldwide, the World Society for the Protection of Animals (WSPA) developed an outline of the "Concepts in Animal Welfare" syllabus in 2000. The complete syllabus was developed in collaboration with the University of



Bristol, School of Veterinary Science, and was launched on CD ROM in 2003. The aims of the CD ROM are to help students:

- to develop an understanding of animal welfare relevant to an animal's physiological and psychological well-being;
- to recognise the welfare, ethical and legal implications of animal use practices and to be able to apply critical analyses from each perspective, for different species in different situations; and
- to stimulate focused critical thinking on welfare issues, which can be developed throughout the course and the individual's professional career.

The syllabus comprises 30 theoretical teaching units in PowerPoint format, illustrated topics with practical examples and case studies, questions and assessment materials, suggested reading lists, and additional relevant materials. There are seven

core and 23 elective teaching modules covering a wide range of animal welfare topics (tab. 1).

The materials are suitable for use in class as well as for independent study, and they also stimulate interaction between students and with the lecturer. Lecturers can easily adapt the materials to suit their needs, by adding relevant country-specific information or by omitting modules for which there is insufficient time. The CD ROM can be used both at undergraduate and postgraduate level, and it is suitable for use on its own or for integration into existing courses on behaviour, physiology, ethics, or veterinary law. Navigation of the CD ROM is easy, and the presentation of the materials is engaging. The modules build on the experiences of both the University of Bristol, which is one of the world's leading centres for the study of animal welfare science, and WSPA, which has 50 years of international experience in

**Tab. 1: Modules of the 'Concepts in Animal Welfare' syllabus**

Module number	Topics	Core module
1	Animal welfare introduction	Yes
2	Welfare assessment and the Five Freedoms	Yes
3	Physiological indicators of welfare (1)	No
4	Physiological indicators of welfare (2)	No
5	Immune and production indicators of welfare	No
6	Behavioural indicators (1)	No
7	Behavioural indicators (2)	No
8	Group assessment and management of welfare	No
9	Human-animal interactions	Yes
10	Introduction to animal welfare ethics	Yes
11	Interaction with other ethical concerns	No
12	The role of the veterinary profession and individual veterinarian	Yes
13	Humane education	No
14	Animal welfare organisations	No
15	Protection legislation (1)	Yes
16	Protection legislation (2)	Yes
	-Enforcement and political pressure	
17	Commercial exploitation of wildlife	No
18	Influence of the marketplace	No
19	Farm animal welfare assessment and issues (1)	No
20	Farm animal welfare assessment and issues (2)	No
21	Farm animal transport and markets	No
22	Slaughter of farm animals	No
23	Working animals	No
24	Animals used in entertainment	No
25	Animals in experiments	No
26	Companion animals (1)	No
	-Population control programs	
27	Companion animals (2)	No
	-Wider considerations	
28	Euthanasia	No
29	Wild animal management	No
30	a) Religion and animals	No
	b) War and natural disasters	



advancing animal welfare issues, including collaboration with governments, international organisations and veterinary professional bodies.

To facilitate the implementation of the syllabus, WSPA has organised a series of conferences and workshops since 2004 for over 300 veterinary faculties in Brazil, Central and South American countries, the Czech Republic and other Eastern European countries, Indonesia, India and the Philippines. As a result of the workshop in the Philippines in March 2005, a steering committee was formed, which is currently reviewing the national Philippine veterinary curriculum with a view to including more animal welfare aspects in existing modules on husbandry and breeding. Further conferences and workshops are planned for 2006 in Japan, Brazil, Latin American and South American countries, and Africa. In Colombia, animal welfare will be a compulsory part of the curriculum from 2006.

WSPA does not yet have a complete overview of which universities have implemented all or parts of the syllabus, but we know of many universities, in Australia, Brazil, Canada, Colombia, India, Indonesia, Kenya, New Zealand, the Philippines, South Africa, the United States of America, and many European countries, that are successfully using the resource. An extensive assessment form for users has been developed to help WSPA improve the syllabus even further.

## Conclusion

Informed positions on questions of animal use in education and scientific research are associated with humane attitudes and a sound knowledge of animal welfare science. Although that discipline is well-established, with an ever-expanding body of related research, most veterinarians will remain relatively ignorant of animal welfare science and issues unless they learn about them during their formal education. We hope that the "Concepts in Animal Welfare" syllabus will play an important role in assisting veterinarians to develop a sound understanding of this increasingly important field. The syllabus is designed to achieve this by stimulating students to

undertake focused critical thinking on welfare issues, not only during their veterinary course, but throughout their entire career.

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# ALTEX

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**A quarterly journal for new paths  
in biomedical science**

Official organ of the Middle European  
Society for Alternative Methods to Animal  
Testing (MEGAT)

**Bd. 23** (Special Issue 2006)

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#### ALTEX is published with the support of the society members and the following sponsors:

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Egon Naef, Thonex, Switzerland  
([www.fondation-naef.com](http://www.fondation-naef.com)).

**Layout:** H. P. Hösli, Zurich, Switzerland  
**Print:** Stürtz GmbH, Würzburg, Germany

**Distribution:** ALTEX, Schützenstr. 14,  
78462 Konstanz, Postfach 100125,  
78401 Konstanz, Germany,  
Phone: +49-(0)7531 16614,  
Mobile: +49-1726272224,  
Fax +49-7531 25833,  
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**Publisher:** Elsevier GmbH, Spektrum  
Akademischer Verlag, Slevogtstrasse 3-5,  
69115 Heidelberg, Germany,  
Phone: +49-6221-9126 324,  
Fax: +49-6221-9126 370,  
[www.elsevier.de](http://www.elsevier.de).

**Edition:** 1300

**Circulation:** 4 times per annum

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Subscription rates include costs of  
shipment (four issues/year) and taxes.  
Animal welfare organisations, students  
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former Soviet Union may ask for special  
subscription rates.

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ALTEX, edited by the Swiss Society ALTEX Edition is the official journal of MEGAT, the Middle European Society for Alternative Methods to Animal Testing. ALTEX is devoted to the publication of research on the development and promotion of alternatives to animal experiments according to the 3R concept of Russell and Burch: Replace, Reduce, and Refine. ALTEX is publishing original articles, short communications, reviews as well as news and comments, meeting reports and book reviews in English and German. Animal experiments are defined by the editors as all experimental procedures using animals which may cause pain, suffering, and emotional harm to animals and which are conducted in research and education or to obtain tissues, organs, and other animal derived products.

Besides covering the biomedical aspects of animal experimentation, ALTEX is also devoted to the bioethics of the complex relationship between man and animals. Articles published in ALTEX should express a basic concern about the dignity of living creatures. ALTEX is not only aimed at developing a new approach to recognise animals as partners but it also intends to introduce a scientific sight in the discussions on animal experiments. Articles devoted to the social and ethical aspects of this topic will, therefore, be judged according to stringent scientific standards. Manuscripts submitted to ALTEX are evaluated by two reviewers. The evaluation takes into account the scientific merit of a manuscript and the contribution to animal welfare and the 3R-principle.