

Learning Without Killing: A Guide to Conscientious Objection

Edited by Andrew Knight BSc., BVMS, MRCVS



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Cover Illustration: Dillon Naylor

***“It is not enough to be compassionate
- you must act.”***

**His Holiness Tenzin Gyatso,
the Fourteenth Dalai Lama, 1992.**

REVIEWS

“Recent veterinary graduate Andrew Knight has leveraged his passion for animals and his considerable campaign talents into a highly instructional manual for change in animal-use practices in life science education. This book is an unprecedented resource for students and faculty in veterinary and other life science fields, and it should both accelerate and ease the inexorable transition towards animal-friendly learning.”

Dr. Jonathan Balcombe Ph.D, biologist, author of *The Use of Animals in Higher Education: Problems, Alternatives, and Recommendations*.

* * *

"Andrew Knight has set a courageous and compassionate example for students wishing to take advantage of alternatives to harmful animal laboratories at every level of life science and medical education. Learning Without Killing is an encouraging and thorough guide to conscientious objection that will help students and faculty accelerate the trend toward humane educational methodologies by initiating change at their own schools."

Dr. Neal Barnard MD; President, Physicians Committee for Responsible Medicine. Dr. Barnard has authored the following books: *The Power of Your Plate; A Physician's Slimming Guide; Food for Life; Eat Right, Live Longer; Foods That Fight Pain; Turn off the Fat Genes;* and edited *The Best in the World* - a collection of healthy recipes from restaurants around the world.

* * *

“Learning Without Killing is a must read for all people who are offended by the unnecessary use of dissection and vivisection in education, and especially for those who want to learn more about these abominable practices. Innumerable humane alternatives exist, there are many ways to present a strong case against harmful animal use, and the more students who protest the harmful use of animals the more rapid will be their replacement with ethically defensible non-harmful alternatives. Cruelty towards animal beings must be replaced with compassion, respect, humility, grace, and love. The earlier in life this happens, the better. There is absolutely no reason to harm or to kill animals to learn about the awesome beings with whom we share The Earth.”

Professor Marc Bekoff Ph.D, Department of Biology, University of Colorado, Boulder. Professor Bekoff is the co-founder with Jane Goodall of Ethologists for the Ethical Treatment of Animals. He is the editor of the *Encyclopedia of Animal Rights and Animal Welfare*, and the author of *Strolling with Our Kin; Minding Animals: Awareness, Emotions, and Heart;* and *The Ten Trusts* (with Jane Goodall).

* * *

“Too often, students in the biological sciences in general and veterinary medicine in particular think that they must resign themselves to violating their ethical principles in order to get an education. They mistakenly believe that it is only after graduation that they can effect change. As a student of veterinary medicine, Dr. Knight did not accept this, realizing that students hold the power to secure curricular changes that result in compassion for life, students and animals alike. His Guide is an important compilation of information to help other students who may need practical information or just words of encouragement to pursue their own course for changes at their university. My only hope is that it will quickly become obsolete because of the universal application of humane alternatives in education.”

Veterinary Professor Nedim Buyukmihci VMD, University of California School of Veterinary Medicine; President, Association of Veterinarians for Animal Rights.

* * *

“I did not need to harm or kill animals in order to learn how to be a veterinarian. Learning Without Killing explains why this is true and is a much-needed addition to the armamentarium of those who fight for compassion.”

Dr. Jean Greek DVM, Diplomate, American College of Veterinary Dermatology. Coauthor, *Scared Cows and Golden Geese: The Human Cost of Experiments on Animals*, and *Specious Science: How Genetics and Evolution Reveal Why Medical Research on Animals Harms Humans*.

* * *

“Andrew Knight's calm, well-reasoned guide is exactly what every ethical student needs before starting a course that involves harmful uses of animals. He writes with authority, because he has been through it all himself - and succeeded. A book to vindicate the belief that individuals can make a difference.”

Professor Peter Singer MA, BPhil., DeCamp Professor of Bioethics, University Center for Human Values, Princeton University. Peter Singer has authored the following books: *Animal Liberation*; *Democracy and Disobedience*; *Practical Ethics*; *How Are We to Live?*; *Rethinking Life and Death*; and *Writings on an Ethical Life*.

DEDICATION

This guide to conscientious objection is dedicated to all the animals around the world who have died in the name of education, and to all the students who are refusing to learn by harming or killing, and instead striving for the introduction of humane alternatives in their courses. Your spirits are the brightest and best.

ACKNOWLEDGEMENTS

This guide to conscientious objection is the culmination of several years experience within the humane education movement, including my own struggle as a conscientiously objecting veterinary student at Murdoch University, Western Australia, from 1997 to 2001. During that time I received advice, information and inspiration from fellow students, other individuals and groups too numerous to mention. The knowledge and experience I have incorporated into this book would not have been mine to share had I not been helped by all of these wonderful people, and I am forever grateful for their assistance.

I am particularly grateful to the following individuals, groups and journals for allowing republication of their works:

Alternatives to Laboratory Animals, *Alternatives in Veterinary Medical Education*, Lori Blankenship, Nedim Buyukmihci, *Directions*, Lucy Fish, *Good Medicine*, Lisa Hepner, Denise Humphreys, the International Network for Humane Education, *Journal of Veterinary Medical Education*, Jennifer Kissinger, Siri Martinsen, the New England Anti-Vivisection Society, Kari Pohost, Jo Powell, Anne Quain, Lara Rasmussen, Linnaea Stull, Thales Tréz, *The Veterinarian*, and Birgit Völm.

I am also grateful to Dillon Naylor and Animal Liberation Victoria (Australia) for allowing the use of the cover illustration, and to His Holiness Tenzin Gyatso, the Fourteenth Dalai Lama, for the use of the cover quotation.

It has been the highest privilege working with you all.

The responsibility for any errors or omissions remains mine alone.

Andrew Knight BSc., BVMS, MRCVS

ABOUT THE EDITOR

Andrew Knight was born in 1970 and has lived most of his life in Australia. He has been a peace movement activist since the early 1990s. He began with human rights and welfare and environmental issues but focused on animal rights issues once he realised that these involve the greatest levels of suffering. He entered veterinary college in 1997 primarily to gain a professional qualification that would make him a more effective activist - for the rest of his life. He completed the five year veterinary science course within Murdoch University's Division of Veterinary & Biomedical Sciences, in Perth, Western Australia, in 2001. During his time there he successfully ran a high profile campaign for the introduction of humane alternatives to harmful animal use in university life and health sciences education at Murdoch and other campuses. He plans to move to the US in 2002 and to focus primarily on pro-vegetarian/vegan and anti-intensive farming campaigns, as he believes that meat consumption and intensive farming (particularly of battery hens and in intensive piggeries) are the greatest sources of suffering in the world.

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INTRODUCTION

It is an unfortunate fact that life and health sciences education has traditionally involved the harmful use of animals. Countless animals have lost their lives in an attempt to teach practical skills and to demonstrate scientific principles which have, in most cases, been established for decades. However, at the start of the 21st century, many thousands of humane educational alternatives now exist. These include computer simulations, videos, plasticised specimens, *ethically-sourced cadavers* (obtained from animals that have died naturally, in accidents, or been euthanased for medical reasons), models, diagrams, self-experimentation, and supervised clinical experiences. By August 1999 at least 28 published studies had proven that students learning via such humane teaching methodologies are normally at least as competent as those trained via harming animals.

It is another unfortunate fact that, instead of enthusiastically embracing humane alternatives, many universities are resistant to such progressive changes and instead continue to kill and abuse substantial numbers of animals in their courses. Students who have the courage to request humane alternatives are all too often penalised or even failed if they refuse to participate in harmful animal usage.

Yet it is crucial that students who do not wish to harm animals during their education are able to complete their degrees, for several reasons:

1. It directly saves lives and prevents animal suffering. Once animal experiments are dropped from courses they are rarely ever re-introduced, particularly where student concerns have contributed to their replacement.
2. It allows students to obtain their qualifications without becoming nearly as desensitised as otherwise normally occurs.
 - a) This is very important for those students personally. There are numerous students who have dropped out of courses around the world because they were unable to cope with the callousness towards animals they encountered.
 - b) It is also important for the professions they will enter. It can only improve the character of the health and life science professions when those students with the most compassion *are* actually able to graduate, instead of being failed or forced to drop out of their courses. And it can only be beneficial for the future of these professions to have an increasing proportion of members who know that humane alternatives to vivisection and dissection do, in fact, exist.
 - c) Finally, it is important for the wider community. The potential benefits to animal welfare and numerous other community issues of having more compassionate life and health sciences professionals within our midst are great.

Although academics do sometimes assist with the introduction of humane alternatives, students are generally far more active in pressuring universities to adopt them. Most of the academics in the relevant faculties have been immersed in a pro-animal research environment for years, whereas students are usually far less desensitised to vivisection or dissection. Students have enormous power to achieve positive changes, when they are able to find the courage to demand that their universities fulfil their legal or ethical obligations to teach in ways that respect their conscientiously held beliefs against unnecessarily harming animals. Unlike academic staff, students campaigning for the introduction of humane alternatives cannot be sacked. Instead students with a committed and professional approach and access to the resources they need have enormous power to bring about positive changes.

This guide to conscientious objection is an attempt to give students access to the resources they need. It includes detailed information about humane alternatives and the reasons why they should be used – enough to make any student far more knowledgeable about the topic than their opponents, *including* the academics who are supposed to be experts in the teaching of their chosen fields; a detailed set of steps to follow when conscientiously objecting that should maximise a student's chances of success; a set of 15 very inspiring stories from students around the world who have been highly successful in their own campaigns; a list of nine of the world's best resources on humane alternatives and conscientious objection that may be found in the libraries of most Australian and New Zealand campuses that use

animals in their teaching, and in the libraries of numerous animal rights groups worldwide; descriptions and internet addresses of some of the world's best alternatives databases; descriptions and subscription instructions for some excellent humane education email lists; and a list of animal rights and other groups that may be able to offer further assistance to students.

It is my hope that new students around the world will join what is a growing international community of students unwilling to harm or kill animals in the name of their education, (particularly by subscribing to the excellent humane education email lists such as those listed at the end of this guide), and that they will use the resources, support and expertise of others available through that network, to win campaigns for humane alternatives on their own campuses, wherever they may be.

WHAT ARE ALTERNATIVES? WHY SHOULD THEY BE USED?

The following articles provide detailed information about humane educational alternatives, and the reasons why they should be used. They should be sufficient to make any student far more knowledgeable about the topic than their opponents, whether academic staff or students, and may be used in support of requests for alternatives, e.g. by including them in alternatives submissions.

Other articles, such as those demonstrating the superior or equivalent teaching efficacy of alternative methods in imparting knowledge or surgical skills, may also be exceedingly useful. By August 1999 the Humane Society (US) listed 28 such studies on its web site (available at www.hsus.org by following the links to Animals in Research, Animals in Education).

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Knight, A., Mar. 2002, “Alternatives to harmful animal use in tertiary education”. Updated from Knight, A., 1999, *Alternatives to Laboratory Animals*, vol. 27, pp. 967-974.

This paper introduces humane educational alternatives, some of the courses worldwide where they're successfully used, and the reasons given for and against their use. The author wrote it as a reference paper for students campaigning for humane alternatives in their education.

Introduction

On the 11th of November, 1998, Western Australia's Murdoch University took the groundbreaking step of formally allowing conscientious objection by students to animal experimentation or other areas of their coursework. Murdoch is, to my knowledge, the first Australian university to formally take this step, and its decision will have ramifications for other Australian universities. Additionally the University agreed to review the humane alternatives available in all 45 teaching units using animals within Murdoch's veterinary, biomedical and biological science courses. The recommendations of the review committee were approved on the 15th of September, 1999. Their report concluded that, "... Murdoch was in a position to and should aim to conduct teaching that does not require animals to be killed specifically for this purpose by 2005."¹

These results were not achieved easily but followed a year-long struggle by myself as a Murdoch veterinary student for humane alternatives to harmful animal usage to be made available in the veterinary course. Not surprisingly I entered the veterinary course because I hoped one day to become a healer of animals and was surprised and disappointed to discover that my participation was required in several teaching laboratories in which animals were seriously harmed or killed, and for which humane alternatives existed. When I and a classmate voiced our concerns and requested alternative assessments and educational experiences, these were granted in some units, for example in biochemistry, but denied in others, most notably in physiology.

The academics in charge were unmoved when I presented them with details of humane alternatives, of courses around the world where they're successfully used, and of the many scientific studies that demonstrate that "alternative" students are at least as competent as those trained by harming animals. Consequently we lost marks for refusing to participate in several physiology vivisection laboratories. After exhausting all the avenues available within the university at the time, I took legal advice as a last resort. I discovered that discrimination against students on the basis of their beliefs is, in some circumstances, illegal under Australian legislation. Consequently I took action through the state Equal Opportunity Commission with the result that negotiations commenced and my marks were returned to me. These events became the catalyst for the university reviews of conscientious objection and the use of animals in teaching which culminated in the enlightened decisions that followed.

Similar situations are occurring with increasing frequency all around the world. Partly as a result, by January 2002, 20 of the 31 North American veterinary colleges were offering alternatives to invasive experiments or other procedures. The University of Minnesota and Tufts University had gone further, eliminating invasive procedures entirely.² Terminal surgeries had been eliminated from all required courses in the veterinary colleges of the University of California (Davis), Cornell University, the University of Florida, the University of Pennsylvania, and the University of Wisconsin. Prince Edward Island and Tufts University had gone further, eliminating them from elective courses as well. Of the 24 remaining North American veterinary colleges, 16 were offering humane alternatives for students who requested them.^{2,3}

By February 2002, 92 of the 126 US medical schools (73%) had completely eliminated live animal usage and all but one of the remainder were offering alternative programs. The sole exception was a military college.⁴ 11 of the 16 Canadian medical schools (69%) had also completely eliminated live animal usage.⁵

For years all six of the UK veterinary colleges have had, by Australian standards, an alternative system. Instead of practising surgical exercises on donated greyhounds and other animals that are later killed, students learn by assisting with necessary surgery on real patients that actually benefit from the surgery, in the same way that human doctors learn.⁶

Of the four Australian veterinary colleges, the University of Sydney eliminated terminal surgeries in 2000, and this author and a classmate became Murdoch University's first alternative surgical students in the same year.⁷

Given the increasing frequency with which these changes are occurring worldwide, it would seem beneficial to review the topic of humane alternatives to harmful animal usage in tertiary life and health sciences education. In the following the alternatives themselves are briefly introduced and the arguments for and against their use examined.

What are Alternatives?

The field of humane alternatives to harmful animal usage in teaching is a rapidly growing one and internet databases listing thousands of educational alternatives now exist. They include computer simulations, videos, ethically-sourced cadavers, plasticised specimens, models, diagrams, self-experimentation and clinical experiences. In medical and veterinary courses alternatives at the preclinical level are mainly focused upon imparting knowledge, whilst those at the clinical level impart clinical and surgical skills as well.

Alternative veterinary surgical courses ideally comprise a number of stages. In the beginning students learn basic manual skills such as suturing and instrument handling using knot-tying boards, simulated organs, and other models. They then progress to simulated surgery on *ethically-sourced cadavers* obtained from animals that have died naturally or in accidents or been euthanased for medical reasons. Finally students observe, assist with, and then perform necessary surgery under close supervision on real patients that actually benefit from the surgery, as distinct from on healthy animals that are later killed.

An important part of alternative veterinary surgical courses worldwide are the highly popular animal shelter sterilisation programs, in which homeless animals are sterilised by students under close supervision and returned to the shelters. The popularity of these programs stems in part from the fact that all parties gain from them. The animals have their adoption rates consistently increased by sterilisation, the numbers of unwanted animals killed due to uncontrolled breeding is decreased, the students gain invaluable experience at some of the most common procedures they will later perform in practice, and their vet school has its image enhanced by providing a useful community service.

Reasons for Usage of Humane Alternatives

There are many reasons for universities to consider humane alternatives to harmful animal usage in teaching. These include ethical considerations, Code of Practice and legislative requirements, superior teaching efficacy, economic pressures, and the dangers of legal liability and adverse publicity if alternatives are not provided to students who request them.

Ethical considerations

Clearly the use of humane alternatives results in the saving of a considerable number of lives, and in some cases, prevents animal suffering too. At Murdoch University, during the period from 1994 to 1997, an average of 2,952 animals were used, and an average of 1,814 died, in veterinary, biomedical and biological sciences teaching experiments each year.⁸ The total number of animals used in Australian teaching is unclear, but in just four states that keep partial statistics the recorded use is in excess of 100,000 annually.^{9,10,11,12} Considerably greater numbers are used in some other countries.

In some scientific circles a feeling that ethical considerations are somewhat "unscientific" unfortunately persists, with the result that this reason for considering alternatives is sometimes neglected. If, however, science does not exist to help alleviate the suffering and improve the quality of life of sentient creatures then one must ask what, indeed, does it exist for? Simply to satisfy the intellectual curiosity of the members of one sentient species at the expense of the lives of others? Scientists, veterinarians and doctors should be at the forefront of the effort to save lives, minimise suffering and maximise well-being through utilisation of their special skills and knowledge. This

applies as much in teaching as it does in practise. These are, in fact, the most important reasons for the usage of humane alternatives.

Code of practice and legislative requirements

A worldwide increase in public concern about the use of animals in research and teaching has in many countries resulted in the introduction of Codes of Practice and ethics committees to oversee animal usage. Compliance with these Codes is increasingly backed by legislative requirements. In Australia, for example, the National Health & Medical Research Council (1997) *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*¹³ governs all use of living non-human vertebrates in research and teaching and states that:

“Section 1.9 Techniques which replace or complement the use of animals in scientific and teaching activities must be sought and used wherever possible.

Section 7.1.1 Animals are to be used for teaching activities only when there are no suitable alternatives for achieving the educational objectives.”

The Code does not say to institutions *“don’t use alternatives if you don’t agree with them”* or *“don’t use alternatives if you think you have higher funding priorities.”* It simply says that alternatives must be used wherever possible. Similar statements are found within the Codes and legislation of other countries.

By 2001 the NHMRC Code was legally enforceable in all Australian states and territories barring Western Australia and the Northern Territory, and was expected to become legally enforceable in Western Australia with the passage of new animal welfare legislation in 2002. Even in Western Australia and the Northern Territory, however, government funding of universities is dependent on compliance with the Code. Hence in Australia the Code of Practice and legislative requirements alone really make all further debate superfluous.

Teaching efficacy

The humane alternatives to harmful animal usage in teaching have been designed by scientists and educators. Their teaching efficacy is demonstrated by the fact that almost every study conducted to date has shown that alternative students perform at least as well as their conventionally-trained counterparts. By August 1999 the Humane Society (US) listed 28 studies affirming the superior or equivalent efficacy of alternative methods in imparting knowledge or clinical or surgical skills on its web site (available at www.hsus.org by following the links to Animals in Research, Animals in Education).¹⁴ Just two examples are given here:

1. Pavletic and others (1994)¹⁵ studied new graduates from the Tufts University veterinary class of 1990. The class included 12 students who had participated in an alternative small animal medical and surgical procedures course. These students and 36 of their conventionally-trained counterparts were assessed by questionnaires sent to their employers. Employers were asked to rate the competency of the new graduates at the time of hiring and 12 months later. It was found that there was no significant difference on either occasion in the abilities of the conventional and alternative graduates to perform common surgical, medical and diagnostic procedures; in their attitudes towards performing orthopaedic or soft tissue surgery; confidence in performing the listed procedures; or ability to perform those procedures without assistance.
2. Fawver and others (1990)¹⁶ studied 85 first year US veterinary students who were randomly split into groups assigned to either two live animal cardiovascular physiology laboratories or interactive videodisk simulations. Students were given a post-laboratory test to assess their mastery of the learning objectives. No significant difference in mastery was found but the alternatives were significantly quicker in terms of both student and staff time.

This study is particularly interesting for myself and Murdoch University because the first live animal laboratory in this study appears virtually identical to one of the physiology laboratories that I and a classmate were penalised for boycotting in 1998, with the exception that sheep were used at Murdoch instead of dogs.

Apart from the large number of published studies affirming the competency of students trained using alternative methods, the teaching efficacy of such methods is further demonstrated by the growing number of courses around the world in which alternatives are extensively and successfully used. Some of these were listed previously; numerous others exist.

Hence it is not surprising that there are many academics who believe that alternatives are more effective than animal-based laboratories at imparting knowledge (e.g., Scott 1986,¹⁷ Buyukmihci 1989,¹⁸ and Clamann 1998¹⁹). Clarke (1987),²⁰ in his description of nerve physiology experiments, provides some insights as to why:

“Previously, in such experiments, out of a typical allocated time of three hours, considerable time would be taken dissecting a viable sciatic nerve preparation and further time spent in trying to gain some small competence with the apparatus, at which point there would be a distinct possibility that the nerve was no longer viable (during the process of experimentation with the apparatus students often succeed in applying stimuli of enormous magnitude and frequency to the tissue). It is often a tired and irritable student who finally comes to the point in the experiment of measuring changes in response. Such a student is not in the optimum frame of mind to either perform the experiment with the due care and attention required or to think about the neurophysiological concepts involved. With the simulation, such problems are eliminated. Not only is much more time devoted to the experiment, but time is available to explore the subject in greater depth.”

I can personally attest to the accuracy of the above comments, as once again this exact experiment was part of my veterinary physiology course. Dissection of the nerves beforehand by technicians lessened but did not eliminate the still considerable problems involved. Unfortunately an alternative simulation was not provided.

The time savings alluded to above are a common feature of alternatives and have been demonstrated in numerous other studies (e.g., Fawver *et al* 1990,¹⁶ Dewhurst *et al* 1992,²¹ and Brown *et al* 1998²²). Because of this time saving, and because there are no limits on the numbers of “virtual animals” that can be used, students using simulations are able to investigate a greater number of variables and combinations of variables than those using real animals.

Greater flexibility of learning is another example of the superior teaching efficacy of alternatives. Students are more able to work at their own pace and can repeat experiments where necessary to aid understanding. With little difficulty computer labs can be made available around the clock allowing students to work at times that suit them, or even, via the internet, from home.

Harmful animal usage, on the other hand, can be so distracting to students distressed by it that any educational benefits of the exercises can be seriously compromised. For example, in 1999 370 veterinary students at the University of Illinois College of Veterinary Medicine were surveyed to ascertain the learning benefits they felt they had received from their first year physiology laboratories in which over 100 pigs, dogs, rats, and rabbits were killed annually.²³ Actual student comments included the following:

“It was difficult to get any great understanding of physiology because we worried most of the time about not having our dog bleed to death or die of anesthetic overdose before the experiment was over. In the end, what I learned about physiology (cardiology and respiratory physiology) I taught myself from the notes.”

“... most of us were too preoccupied with having to kill the dog that physiology wasn't concentrated on ...”

“Nothing that was covered in those labs could not have been learned from a demo, or a video. The guilt I felt for participating outweighed all beneficial aspects of the experience.”

“The stress of the whole ordeal was worth nothing in the end. I studied from these books not from my lab experience.”

“During one lab, my group accidentally killed our dog with anesthesia overdose because of lack of experience and the impatient ill-given advice of a professor. The experience overshadowed the benefit gained by the first lab.”

Of the 295 respondents within the 370 students surveyed, 59% said that they believed the non-survival animal physiology labs were not *“worth the resources used”*. Only 20% felt they gained *“great benefit”* in their understanding of physiology from the laboratories.

In 2000 all of these terminal physiology laboratories were removed from the University of Illinois curriculum.

Economic pressures

As economic pressures on universities around the world continue to rise, the economic advantages of humane alternatives have increasingly driven their implementation into courses worldwide. Laboratory animals are not cheap. Their purchase, transportation, housing, feeding, veterinary care when necessary, experimental anaesthesia, euthanasia and disposal, year after year, can add up to a considerable sum. Many alternatives, on the other hand, can be used largely for free, virtually indefinitely, once the initial purchase has been made. Often the initial sum required is really not that great. Most computer simulations, for example, are available for a few hundred dollars or less. The considerable economic advantages of alternatives have been demonstrated in numerous studies (e.g., Henman & Leach 1983,²⁴ Dewhurst *et al* 1994²⁵) and are likely to become increasingly important as economic pressures on universities continue to rise.

Student rights

International human rights legislation and the laws of several countries, e.g. Argentina, Italy, the Slovak Republic, and the US, support the rights of students to conscientiously object to participating in activities that run counter to their beliefs. This is recognised as being an essential feature of a democratic society. For example, Article 18 of the Universal Declaration of Human Rights, proclaimed by the General Assembly of the United Nations in 1948,²⁶ states that:

“Everyone has the right to freedom of thought, conscience, and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.”

Another example is provided by the Western Australian Equal Opportunity Act (1984),²⁷ which in some circumstances outlaws discrimination in education on the grounds of belief.

Universities that refuse to provide alternatives for students can find themselves legally liable and in some cases damages have resulted. In 1995 University of Colorado medical student Safia Rubaii sued her university for US\$95,000 after failing physiology and being forced to retake it at the Creighton University School of Medicine in Nebraska, where harmful animal usage was not required, because she refused to perform a required experiment at Colorado which involved giving a lethal injection to an anaesthetised dog. Dr. Rubaii successfully graduated from the University of Colorado Faculty of Medicine in 1995.²⁸

Furthermore, considerable adverse publicity has often been the result for universities whose uncompromising attitudes have resulted in lawsuits by students. As Francione & Charlton put it in 1992,²⁹ *“The conclusion that most people draw is an important and correct one: those who exploit nonhuman animals are often not reluctant to violate the civil rights of humans.”*

Objections to Usage of Humane Alternatives

Objections to the use of humane alternatives include claims that animal experiments are necessary because they teach essential tissue handling skills, provide an essential introduction to surgical procedures, are essential to illustrate biological variability, demonstrate how the experimental data and principles found in textbooks were obtained, and result in better understanding and retention of information.

Tissue handling skills

Opponents of humane alternatives sometimes claim that animal experiments are necessary to teach essential tissue handling skills. However, before we consider whether tissue handling skills might be obtained in other ways, it is interesting to reflect briefly on how essential these skills really are. Certainly such skills are essential for surgeons but it is ludicrous to suggest that surgical students would not gain a very thorough grasp of tissue handling skills in their surgery courses. Such skills are presumably also essential for biological or biomedical science graduates who will go on to become animal experimenters. It is illuminating, though, to consider the proportion of biological and biomedical science graduates who will even obtain jobs in the sciences, and the proportion of those who will perform animal experiments in their work, and the proportion of those who will not receive adequate in-house training by their new employers, particularly where new graduates are involved. When viewed realistically the numbers seem very small indeed. Given that this is so, and given the many powerful reasons in favour of humane alternatives, it seems illogical to impose animal experiments on entire courses for the sake of a very few.

However, even for those very few there are other ways that tissue handling skills can be taught. Tissues can be obtained via ethically-sourced cadavers from animals that have died naturally or in accidents or been euthanased for medical reasons. Plastic soft tissue organ models such as those successfully used in alternative surgical courses are available. In all cases videos can assist with the teaching of procedures. Certainly whenever studies have been conducted assessing the skills of students trained using such alternative methods their skills have been found to be at least as good as those of their conventionally trained counterparts (e.g. Jones *et al* 1978,³⁰ Pavletic *et al* 1994,¹⁶ and Greenfield *et al* 1995³¹).

Introduction to surgical procedures

Similar to the claim that animal experiments provide essential tissue handling skills is the claim that they provide an essential introduction to surgical procedures for those training to become surgeons. Not surprisingly, however, it is easily argued that the appropriate place to learn surgery is in a surgery course, and the numerous successful alternative surgical courses worldwide prove that there are ethical ways of doing that. The even more numerous pre-surgical courses where alternatives are extensively and successfully used, show clearly that early surgical familiarisation via animal experimentation is not necessary. The remarkable absence of published studies demonstrating the supposed advantages of such experimentation, despite the criticisms leveled at it, suggests that such early familiarisation is perhaps not even measurably beneficial.

Biological variability

It is sometimes claimed that alternatives lack the variability encountered in the biological world. However, numerous alternative methods can be used to illustrate this, including ethically-sourced cadavers, plasticised specimens, videos, and self experimentation. An August 1999 search of the US Association of Veterinarians for Animal Rights *Alternatives in Education Database* (online at avar.org) revealed 28 alternatives, many of them computer simulations, that incorporated pathological conditions or other forms of biological variability. Just three examples are listed here:

1. The veterinary Virtual Ventilator is an interactive simulation allowing students to practise setting up a surgical ventilator for a variety of patients with various degrees of lung pathology. Students can change the patient's ventilation parameters and immediately observe the effects on the patient and on the ventilator itself. A brief article on the Virtual Ventilator by Keegan (1998) can be found in issue 8 of *Alternatives in Veterinary Medical Education*.³²
2. The interactive problem-based anaesthesia case simulations used at Michigan State University cover a range of different disease syndromes, species and anaesthetic challenges.³³ Good student decisions are usually followed by good patient outcomes, but in some cases another problem will develop despite the best of care, just as in real life.
3. Finally, simulations such as the Ilium, from Biosoft, have random elements incorporated to simulate biological variability, in this case illustrating variability of responses to the same dose of drug.³⁴

Additionally, as mentioned previously, the time savings inherent in simulations, and the limitless numbers of “virtual animals” available, can in fact allow students to investigate a greater number of

variables and combinations of variables than can be encountered with a single animal during a typical three hour laboratory class.

Origins of experimental data and principles

Opponents of humane alternatives also claim that animal experiments are necessary because they demonstrate how the experimental data and principles found in textbooks were obtained. However, animal experiments are not necessary for this. Students can easily gain an appreciation of such things via alternative methods such as computer simulations, videos and books. Thankfully, students the world over learn how the atomic bomb was made without actually attempting to build one.

Understanding and retention of information

Opponents of humane alternatives such as Wheeler (1993)³⁵ claim that personal participation in animal experimentation results in a memorable experience that “*can persist for a lifetime.*” They claim that the powerful experiences involved result in better understanding and retention of information.

However, whilst indeed often memorable, the experiences can be so for the wrong reasons. Wheeler himself notes that, “*There is no doubt that the student’s first exposure to a mammalian dissection can be a traumatic and worrying experience for them, and for some a source of long-lasting negative emotions towards high school biology.*”

Furthermore, if personal participation in animal experimentation did indeed result in better understanding and retention of information then this would be apparent in the comparative studies of the performances of alternative and conventionally-trained students. However, as stated previously, almost every study published so far has shown that alternative students perform at least as well as those trained by harming animals. To claim otherwise is to deny the remarkably consistent scientific evidence.

Conclusion

The many reasons to use humane alternatives include ethical considerations, Code of Practice and legislative requirements, and economic pressures. Their teaching efficacy is demonstrated by the large number of published studies showing that alternative students are at least as competent as those trained via harming animals. Claims that animal experiments provide essential tissue handling skills or an essential introduction to surgical procedures are refuted by the numerous courses worldwide, including veterinary and medical pre-surgical courses, where alternatives are extensively and successfully used. Such alternatives can be used to illustrate both biological variability and the origins of experimental data and principles.

Universities which choose to ignore these factors would do well to ponder the fates of some of those universities which have denied alternatives to students. Students’ rights to conscientiously object to harmful animal usage are enshrined in international human rights legislation and the laws of several countries. Universities whose uncompromising attitudes have resulted in lawsuits by students have found themselves dogged by controversy and adverse publicity and have in some cases been forced to pay out considerable sums in damages.

On the other hand, universities which seize the opportunity to make progressive changes are able to portray themselves as ethical, financially responsible, and capable of providing the latest in educational methodologies. By becoming, to my knowledge, Australia’s first university to formally allow conscientious objection, Murdoch University has demonstrated its commitment to its ideals of tolerance and diversity and cemented its reputation as one of Australia’s most progressive institutions. By reviewing the humane alternatives in all teaching units using animals, and concluding that, “... *Murdoch was in a position to and should aim to conduct teaching that does not require animals to be killed specifically for this purpose by 2005*”,¹ Murdoch has the opportunity to become an Australian leader in this area and to build on its reputation for providing excellence in its teaching.

The number of students worldwide insisting on humane alternatives to harmful animal usage in their courses is rapidly increasing, as are the numbers of alternatives themselves. In considering their responses to the issues of humane alternatives and student concerns, universities are faced with two major choices. They can seek to hold back the tide by clinging to an increasingly outdated tradition of harmful animal usage, or they can embrace the exciting possibilities the rapidly expanding field of alternatives represents. They can, in fact, choose to help shape the future or to be shaped by it.

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This excellent essay by Veterinary Professor Buyukmihci argues that it is possible to teach veterinary surgery without harmful animal usage; suggests possible means of doing so; and examines the use of cadavers and of pound dogs. Additional useful information and quotations are given in the reference list.

The following is to stimulate thought about the dilemma of developing the psychomotor skills necessary to do surgery without resorting to ‘practice’ nonhuman animals in veterinary medicine. It is not intended to be a precise method of how to develop these skills, rather it is intended to argue that it is possible to achieve these skills without killing healthy nonhuman animals and to urge those facing this dilemma to voice their opposition and demand they be allowed to work towards a solution (alternative).

It must be understood at the outset that the surgical training veterinary medical students currently receive prior to obtaining their degree does not make them surgeons and, perhaps, we should not even teach this discipline to all students.¹⁵ At best, for the average student, it may increase their confidence as it initiates them to the complexities of surgery. It has the potential, however, of reducing the student’s confidence because of the confusion and frustration the students may experience during the very limited exposure they receive during school. Contrariwise, it may inspire overconfidence making the student a serious liability to patients and clients upon graduation, until experience improves the new graduate’s skills.

Although these problems will not be overcome simply by instituting alternatives, certain alternatives such as inanimate objects may allow for increased exposure to basic skills which are fundamental to more complex procedures.^{2,4,5,7,12,14} Because these materials are not associated with the logistical problems live nonhuman animal use entails, they can be used repeatedly and at the student’s convenience. Increased experience with knot-tying boards and suturing of foam rubber models cannot help but improve proficiency thereby making any subsequent live nonhuman animal experience that much more rewarding.

As an example, at the Ohio State University College of Veterinary Medicine, Dr. Dan Smeak taught students how to ligate blood vessels by using foam pads and red string to simulate incisions. He and his coworkers found that students who practiced on these inanimate models did better when faced with a real surgery than students who had learned on the animals themselves.^{21,22} Others have also developed models that have been effective in teaching hemostasis.⁸

Whereas one must at some point use live nonhuman animals to improve the skills necessary to do surgery, it does not follow that one must purposefully kill these animals in the process. In this respect the typical manner in which surgical skills are taught to veterinary medical students in this country is ethically indefensible. Nonhuman animals taken from pounds or purchased from dealers or breeders are used and killed like so many disposable commodities. This is in stark contrast to the situation in human medicine in which people aspiring to become physicians do not kill humans (nor, as is increasingly becoming the case, nonhuman beings) in the name of education.

The killing of nonhuman animals in veterinary medical education continues, unfortunately, out of convenience and habit, not because it is pedagogically necessary. There are several alternatives to the killing of healthy nonhuman animals in surgical training. Bear in mind that the British veterinary

¹ Veterinary Professor Nedim C. Buyukmihci VMD; Professor of Ophthalmology, Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California, Davis, CA 95616-8745; President, Association of Veterinarians for Animal Rights (AVAR), P.O. Box 208, Davis, CA 95617-0208; E-mail: ncbuyukmihci@ucdavis.edu. Copyright © 1989-2002 Nedim C. Buyukmihci. This paper is part of a series on exploitation of nonhuman beings by human beings. See the first paper, “Serious moral concern is not species-limited”, (available on the AVAR web site avar.org) for arguments on the moral value of nonhuman animals.

medical schools use cadavers and an apprentice system. The fact that many of their graduates compete successfully for residency and faculty positions in this country attests to our respect for their abilities.

In this country, however, when students have requested alternatives to the killing of healthy nonhuman animals, they usually have been met with ridicule and sarcasm. Their personal life-styles have been attacked as if absolute consistency is required in order to give credibility to a moral premise. Some faculty, apparently having only 'heard' the word alternative, have made sarcastic statements to the effect that one cannot learn surgery using vegetables. Some students have also been told that they should reconsider their career choice. This type of demeaning behavior towards these students not only is unprofessional, it also discourages a search for more humane methods of teaching.

Anything which involves a nonhuman animal or simulates certain anatomical features should be acceptable for the acquisition of basic skills such as suturing, some aspects of tissue handling, and the like. This can include knot-tying boards or similar mechanical devices, especially when combined with visual aids such as photographs or videotapes for use during times when personal supervision is inconvenient. Models simulating various organs also have been shown to be feasible in preparing students for the real patient, even with more difficult surgery such as microneurosurgery or microvascular surgery.^{1,4,5,7,8,9,10,12,17,19,20} A cadaver can provide the added dimension of learning surgical anatomy at the same time. There is evidence that students training on cadavers develop proficiency equal to those using live animals.^{3,18,23}

It should be obvious that the source of the cadaver is important if one is proposing an alternative for moral or ethical reasons. It would not do to use cadavers from the pound, for example, if one is opposed to using these animals in the living state even though the procedures may be terminal (non-survival surgery) and, therefore, would result in the same outcome for the animal (death). As in human medicine, cadavers can be obtained by developing willed-body programs at the institutions and surrounding private veterinary practices.¹⁶

Sharpening of one's skills in hemostasis and critical tissue handling seems unlikely to be accomplished except on living animals. One way this can be done is by using a patient who needs the surgery, under strict supervision by a surgical instructor.¹³ Initial involvement by the student may be limited to fairly simple steps such as skin incision or suturing. As her or his skills improve, the student gradually could increase the level of involvement until he or she was able to do some of the more common procedures in their entirety. This would mean more work on the part of those involved in the training of the students. In addition, it would be desirable, although not necessary, to increase the clinical part of the curriculum from the current average of less than a year to something longer in most situations in order to increase the students' exposure to clinical surgery. Any perceived 'disadvantages' to such a program should be viewed in the context that the program would help nonhuman animals who needed the surgery and would be ethically defensible and less desensitizing to the students.

An alternative could be the use of a patient dying of cancer or other hopeless situation. This is, in principle, no different from willing one's organs for use after death. After getting permission from the client, the patient would be deeply anesthetized. The various procedures would be done and then the patient would be euthanatized without allowing recovery from the anesthetic. It should be obvious that this is no different in any meaningful respect from the manner in which it is done on healthy animals who are killed afterwards. Postoperative care skills can be developed on any patient, including those who actually needed the surgery. It largely is immaterial from a pedagogical aspect that someone else did the surgery.

Another alternative which would provide not only surgical experience for students, but also would give the students experience in caring for animals after surgery involves cooperating with local animal shelters. Under this system, potentially adoptable animals would be transferred from a local shelter to a school of veterinary medicine. The animals would be attended to by veterinary medical students. Physical examinations, diagnostic procedures and treatments would be rendered by the students, with supervision by experienced faculty. Those animals not already neutered would be castrated or spayed by the students. After the animals have recovered and when it is safe to have them leave the hospital, they would be transferred back to the shelter. These animals have been shown to have a higher adoption rate. As with programs using patients already having human companions, this program would be beneficial to all.¹¹ The castration and spay aspects of such a program are a standard part of the curriculum at Washington State University, the University of California, and a few other schools.

The AVMA, which is responsible for accreditation of veterinary medical schools in this country, does not dictate the manner in which surgery is taught. Its concern lies primarily in ensuring that students are exposed to sufficient numbers of patients in order to have an experience base that will provide for continued learning after graduation. As mentioned, they have accredited at least one school which does not harm or kill nonhuman animals in its programs. Although sometimes used as a reason for disallowing alternatives, one can see that any such plea to AVMA accreditation problems is vacuous.

Because the majority of veterinary medical schools in this country utilize dogs or cats from pounds, it is appropriate to address this issue with respect to surgical training. The mind-set is that these dogs and cats are going to be killed anyway, so why not utilize them to some meaningful end? If it was that simple, it would be illogical to argue against this. There are, however, many factors that make the continued use of animals from pounds for surgical training a problem regardless whether the animals were actually going to be killed on the day of the proposed surgery laboratory.

One of the most compelling reasons for not using animals from the pound is that it institutionalizes our dependency upon a source of animals which all should be decrying and attempting to prevent. All would agree that the ‘overpopulation’ of dogs and cats, with its attendant mass destruction of ‘surplus’ individuals, is a societal ill due to human irresponsibility. If, however, it is maintained that animals from the pound are necessary for teaching, it may be unlikely that a concerted effort will be made to eliminate this tragic situation. The conflict of interest could be too great.²

Another compelling reason for discontinuing the use of pound derived animals is that it fosters confusion and insensitivity in students and faculty. There are no morally relevant differences between dogs from the pound and dogs who might have a human guardian. Dogs from either group have the same capacity to suffer or to enjoy life. The statement by many who support using pound derived animals that the latter animals are ‘going to die anyway’ ignores the principle of the matter. Veterinarians should have the highest sensitivity for nonhuman life and should be fostering a reverence for life in those aspiring to be veterinarians. Viewing and using other animals as simple teaching tools with no meaningful regard for their lives is the antithesis of this principle.

Another consideration is the stress placed upon the dogs or cats during transportation from the pound to the school. Whereas it may not seem like much to a human observer, one needs to be empathetic to the other animals’ situation. Having already been caught and transported to a strange place by strangers, any further handling and transportation by other strangers undoubtedly will cause further stress. The animals in question do not know, like a human observer would, that the trip is finite. If this was being done for the sake of these animals, as in the case of benevolent transfer, one could effectively argue that any additional stress would be outweighed by the prospect of a long life in a good home. Although killing these individuals rather than subjecting them to further handling and transportation may seem ‘wasteful,’ it is in the animals’ best interests, if it is decided that death is the final disposition.

Finally, it is specious to argue that the pound derived animals were ‘slated for death.’ Only the most socialized and docile dogs are chosen for use in surgery laboratories. These individuals also would have the highest chance of being adopted if there were resources available to keep them at the pound for a longer period of time. To say, therefore, that these dogs were ‘going to die anyway’ ignores the fact that their fate is heavily dictated by financial considerations and logistics. The situation is compounded when there is an agency ready and willing to purchase these animals.

In conclusion, there are no pedagogical reasons why nonhuman animals must undergo unnecessary surgery followed by death in order to teach the principles of surgery to veterinary medical students or others. Humane alternatives are available and require only a change in mind-set to facilitate their use.⁶ Students cannot legally be forced to harm or kill nonhuman animals as part of their education. There is ample precedent for this. It will take, however, continued effort by students to prevail upon various professors to provide an alternative program at all the schools. It can be very intimidating to do so.

² I realize one could argue that using this source of animals for spays and castrations is just as objectionable, in principle, if one *depends* upon this source. One might ask: If dog and cat overpopulation is eliminated, from where would individuals for surgical training come? I believe the situation needs to be seen as a temporary method until we alter our attitude so that we simply would *never* consider it acceptable to allow the killing of healthy animals in education. When we rise to this plane of sensitivity and compassion, we will find other methods to teach surgery.

Take heart, however, in the fact that there is nothing the professors can do to you that is as bad as what they expect you to do to the other animals.

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“The small animal surgical faculty have noted that students from the alternative surgical laboratory program are more timid and hesitant the first time they incise living tissue. This hesitancy is only apparent on the first live tissue surgery. In all other segments of the fourth-year small animal surgery and anesthesia rotations, including patient care, the alternative students perform on a par with the students from the standard laboratory experience.”

Knight, A., 2002, "The use of Pound Dogs in Veterinary Surgical Training".

A summary of the arguments against the use of pound dogs in veterinary surgical training, and of alternative surgical programs.

Live pound dogs have been traditionally used in terminal surgical laboratories at veterinary colleges worldwide. However the use of pound dogs raises a number ethical and other problems, including:

- Using pound dogs creates a dependency on pounds. Yet all would agree that the overpopulation of dogs and cats, with the resulting mass destruction of many thousands of unwanted animals annually, is a problem we should be urgently seeking to eliminate. If, however, it is maintained that a continued supply of pound animals is necessary for teaching, a conflict of interest is created that may reduce the desire to solve this problem.
- As trainee veterinarians, we most of all should be learning to respect life. Yet a dog from the pound is ethically no different from one with a human guardian. Both have the same desire to live and the same capacity to suffer or enjoy life. Killing those we should be learning to heal sends a confusing message that can result in a desensitization to killing and a loss of respect for life. The progressive desensitisation of veterinary students during their training has been documented in several studies published in reputable veterinary journals such as the *Journal of the American Veterinary Medical Association* and the *Veterinary Record*.

It is helpful to consider that we would never dream of teaching human doctors by using society's human outcasts in this way. We have too much respect for their rights, even though they may be without homes, families, jobs, or futures.

- Traditionally, when animals are selected from pounds or shelters for research or teaching, those with the best temperaments are chosen because they are the most socialised and easiest to handle. However these are also the animals most likely to be chosen for adoption.
- Once dogs are made available to universities for teaching, it is a comparatively small step to channel them into other, less acceptable areas, such as some research projects. Although through our vigilance we might prevent this from happening in the present, it is difficult to guarantee that this will never happen in the future if the university and wider communities become used to the idea of utilising pound dogs in a university setting.
- The use of pound dogs in terminal laboratories has commonly resulted in controversy and public opposition, which has in some cases resulted in laws against the use of pound-sourced animals in research and teaching, or in the shire councils concerned withdrawing their permission to use their dogs. It would seem unwise to base something as crucially important to the training of future veterinarians as the practical component of a veterinary surgical program on such a potentially unreliable source.

Partly because of these problems, many veterinary colleges worldwide have replaced their terminal use of pound and shelter animals with more ethical and less potentially problematic surgical training programs. Elements of these programs include:

- Inanimate models to develop instrument handling and manual skills such as suturing, and to practise surgical techniques. Such models may contain various "tissue layers", "nerves", "blood vessels", "organs" and even "broken bones" with a range of breaks and deformities to choose from.
- Practising surgical techniques on *ethically-sourced cadavers* obtained from animals that have died naturally, or in accidents, or been euthanased for medical reasons and donated for teaching purposes

in *educational memorial programs*, such as those formally operating in at least four US veterinary colleges by 2002.

- Assisting with and performing supervised sterilisations of shelter animals. The popularity of these programs in veterinary colleges worldwide stems in part from the fact that all parties gain from them. The animals have their adoption rates consistently increased by sterilisation, the numbers of unwanted animals killed due to uncontrolled breeding is decreased, the students gain invaluable experience at some of the most common procedures they will later have to perform in practice, and their veterinary colleges have their images enhanced by providing a useful community service.
- Assisting with and performing supervised surgeries in private veterinary practices on patients in genuine need of assistance. There is no more realistic training than this. It is how surgery is taught in UK veterinary colleges, and to a lesser extent how some veterinary students of other countries worldwide gain experience, and also how human doctors learn in teaching hospitals.

In conclusion, the use of pound dogs in veterinary surgical training poses several ethical problems and can prove to be a controversial and unreliable basis for a teaching program. Given the success of humane educational alternatives in numerous veterinary colleges worldwide, there is no longer any need to rely on the use of pound dogs. As of 2002 all six of the relevant published studies had demonstrated that the surgical skills of students trained using such alternative methods are at least as good as those of their conventionally trained peers.

Quain, A., 2000, “The real thing: A discussion of the use of pound dogs in the veterinary science curriculum”.

The cases for and against the use of pound dogs in veterinary surgical training, and an examination of the extent to which both traditional and alternative surgical programs can provide satisfactory training, are examined in this outstanding essay by University of Sydney Faculty of Veterinary Science Class of 2004 student and Honours philosophy graduate Anne Quain; who concludes that the use of pound-sourced or purpose-bred animals is neither necessary nor desirable.

Introduction

Due to changes in legislation, underpinned by broad community concerns about animal welfare, and a rise in the incidence of conscientious objection, veterinary schools have been forced to review and/or postpone the use of live pound dogs for surgical training. Stakeholders in the possible outcomes include veterinary schools, veterinary students (potential and actual), members of the public, future clients of veterinarians, animal welfare groups and pound dogs. This brief paper examines ethical, practical and scientific issues pertaining to the use of pound dogs.

Part One – A Pound of flesh?: Ethical arguments for and against the use of live pound dogs in veterinary schools



Pound dog, RSPCA April 17, 2000. Photo by A. Quain.

“Isn’t it disgusting that thousands of dogs every year are beaten, abused, starved, mistreated, unloved and abandoned? The disrespect these animals are shown in life is a crime; the invaluable experience that may be gained through their death is not. Whether these animals are euthanased painlessly at the pound or painlessly at the university makes no difference – other than to those who wish to perceive that there is one.” - Romy Feldman, Fourth Year Veterinary Student, The University of Sydney, 1998¹.

The case for using live pound dogs in terminal surgery practical classes

A review of the literature indicates that the primary justification for using pound dogs in terminal surgery classes is that these dogs are already destined to die, therefore failure to use them wastes a valuable resource¹⁻⁷. For many of the proponents of this view, the alternative to the use of pound dogs is the use of purpose bred animals, which appear to represent a gross waste of resources (including breeding programs, housing and care)⁸ as well as a waste of additional lives, of animals bred specifically for the program³. In the light of the number of pound dogs euthanased each year – over

33,900 Australia-wide at RSPCA⁵ shelters, not including those euthanased at the hundreds of council pounds – the use of alternative sources of live dogs could be perceived as indulgent^{3,5} and ethically unacceptable^{3,9}.

Arguments in favour of the case for the use of live *pound dogs* tend to be conflated with arguments for the use of live *dogs*, partly due to the belief of some proponents that the difference is merely subjectively perceived by certain individuals^{1,10}. This tendency is also partly due to the fact that purpose-bred animals are beyond the financial scope of most veterinary schools^{8,9} such that for these schools the question might be “pound dogs or no live dogs at all?”. Hence other justifications for pound sourced dogs include:

- if we avoid pound-sourced dogs, we might face the situation in which the first live surgeries a veterinary graduate performs are on a client’s pet³;
- similarly, the standard of surgery and care of veterinary graduates may be compromised⁹, as may employment prospects^{4,9}.
- Graduates of the Sydney University course are thought to be attractive by virtue of their surgical experience on live dogs, underlining the perceived educational value of such a curriculum^{4,9}.
- though the euthanasia of pound animals is regrettable, the percentage of pound animals used by veterinary schools is extremely small^{3,5,9}.
- the use of dogs in these classes contributes to the education of veterinary practitioners, which in turn benefits many more dogs than are actually used. The use of the dogs is therefore justified by long term contribution to animal welfare¹².

The use of pound dogs is heavily regulated through legislation such as the *NSW Animal Research Act 1985*, guidelines such as the NHMRC Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, and NHMRC policies¹³⁻¹⁵. These in turn are guided by the principles of “replacement, refinement and reduction” of animal use recommended by ethics committees⁶. Accordingly, there has been an enormous reduction in the use of pound dogs over the years^{5,9}. It is common for proponents of live dog use to cite adherence to the above as evidence that terminal surgery is ethically sound. Unfortunately, this conclusion does not logically follow. It is notable that the majority of proponents of the “yes” case acknowledge and agree with a strong argument for *reduction* of the use of pound dogs. This point is discussed at greater length in Part Two.

The case against using live (pound) dogs in terminal surgery classes

Public opposition to the use of pound animals in veterinary schools has resulted in the withdrawal of many councils from supplying dogs, in spite of reduction of numbers, and the implementation of ethical guidelines and other measures (see previous). Much opposition is based on the fear that lost or surrendered *pets* may become the subject of terminal surgery or other research^{5,14,16,17}. This argument might be seen as a justification for favouring use of purpose-bred dogs (or other animals such as pigs) over pound dogs, at least from a certain public relations perspective. In this case it is the dog’s past or potential relationship to humans that renders pounds an undesirable source.

Another important though less emotive argument is that the use of pound dogs by veterinary schools creates a dependence on pet overpopulation, whilst failing to address this problem in any meaningful way¹⁷⁻¹⁹. In other words, there is a perception that veterinary schools that use pound dogs are benefiting from the human irresponsibility and cruelty necessitating pounds, and that this is ethically unsatisfactory, something akin to the purchase of stolen goods.

Other arguments against the use of pound dogs include:

- we have moral obligations to pound dogs flowing from our relationship to them as ‘pets’, former pets or dogs bred as companions¹⁶, and this obligation prevents us from using dogs as tools;
- pounds are refuges for animals, such that pound seizure is a betrayal of public trust/perception of the pound, of those who must surrender animals to the pound, and of the impounded animals¹⁷.

Neither of these arguments is particularly persuasive. The former begs the question of why we euthanase pound animals at all if we have special obligations or duties to them. The latter gives a controversial view of the rôle of a pound: it is arguable that most councils and many community members accept the rôle of a pound and associated agents as instruments for controlling animal populations and protecting the community, property and local environment from animal related hazards, rather than as a “refuge” for animals. The claim that use of pound dogs betrays trust of the dogs themselves is contentious, since the ‘trust’ and its basis in animal consciousness have not been defined or established by those who use this argument. This argument relies on a perception of animal minds that is unlikely to have the support of the scientific community.

Nonetheless, by drawing out some of the common elements of the cases for and against, it can be shown that the case against the use of pound dogs is overwhelming. A review of the literature indicates the following trends:

- a. Both cases hold that the conditions necessitating pounds (neglect, cruelty) are morally deplorable, and the fact that thousands of animals must subsequently be euthanased in pounds is unquestionably negative;
- b. both cases imply that pound dogs upon which terminal surgery is performed are used as mere educational tools. It is clear that the dogs do not benefit from this experience;
- c. both cases support the view that the use of pound dogs in terminal surgery is ethically objectionable enough to warrant *at very least* reduction of the numbers of pound dogs used.

From the above points we can draw the following conclusions:

1. The dependence of veterinary schools on such an ethically unsatisfactory source represents a conflict of interest¹⁸ that impacts on the perception of the need to address the problems necessitating pounds;
2. The use of these live pound animals as mere tools for education generates a morally significant contradiction in a given veterinary program designed to prepare veterinarians who treat the interests and welfare of animals as paramount¹⁹;
3. If we have an argument for *reduction* on ethical and social grounds, we create a strong basis for an argument for the *elimination* of the use of pound dogs. Otherwise the burden of proof rests with the positive case to show why *any* pound dogs should be subjected to terminal surgery if there are strong reasons for *most* pound dogs not to be, particularly when points 1 and 2 are also invoked.

The remainder of this paper is dedicated to showing that in the face of scientific literature on currently available alternatives, it is no longer ethically viable to support the case for the use of pound dogs in terminal surgery.

Part Two – “The real thing”: Learning surgery ethically



Neutering an animal welfare dog. Photo by A. Quain.

“At some point, students have to gain experience with ‘the real thing’ ”³.

“The question is, why must any dog be put to death for teaching purposes?”^{17(my emphasis)}.

In light of the previous discussion, the question is now how veterinary students are to gain surgical skills and develop competencies if terminal surgeries on pound dogs are deemed nonviable. Those who have fought to retain the use of live pound dogs may feel that such an outcome heralds the demise of veterinary education. However, an examination of alternative models and curricula suggests that students can experience “the real thing” without putting any animals to death. I will argue that a well developed alternative curriculum can allow students greater and more meaningful experience of “the real thing” than do many traditional curricula based on non-recovery surgery of pound dogs.

Firstly, it is widely held that acceptable alternatives must, in the words of Greenfield *et. al.*, “allow...the student to reach at least the same level of proficiency as obtained when the same procedure is taught in a traditional manner”²⁰. The assumption here is that the traditional curriculum be the yardstick for alternatives. However, it is essential to note that in fact many traditional live animal laboratories have a number of disadvantages: because students typically work in groups, it is difficult to ensure that each participates and is evaluated fairly; shared animals reduce practice time; the cost of such practical classes often means that a given surgical procedure is only practiced once between a group of students; and these factors alone suggest that the experience is significantly artificial and different from the clinical situation. Furthermore, it is notable that many traditional live animal practical classes are supplemented by non-animal models and/or cadavers^{2,20-25} to overcome deficiencies arising from lack of exposure in the curriculum and variations in live specimens (e.g. anatomic structures and bleeding tendencies). Thus we can see that the traditional curriculum does not necessarily provide satisfactory exposure to “the real thing”, nor is it a faultless educational model. We must be careful that a bias toward the old curriculum does not affect our assessment of alternatives.

A comprehensive evaluation of each alternative is beyond the scope of this paper. However, I have summarised three main alternatives in Table 1.

Table 1: Advantages and disadvantages of key alternatives to terminal surgery

Alternative Method	Advantages	Disadvantages
Synthetic models to develop psychomotor skills	24 hour availability; ability to repeat tasks until competent; inexpensive; reduce performance anxiety ^{22,23} ; effective way of learning surgical technique ²¹ ; implementation of long term use of models improves curriculum ²⁴ .	Cannot simulate 'real' surgical situations such as bleeding; more conclusive evidence required ²⁷ ; live animal exp still required for tissue handling; Should be used as an adjunct or supplement to more realistic surgery ²¹⁻²³ .
Use of cadavers in surgical training	Can be ethically sourced ²⁸⁻³¹ ; more consistent than clinical case material ²⁵ ; can be pitched to appropriate level of difficulty ²⁵ ; no detectable differences between cadaver trained students and live-dog trained students ² ; no sig. diff in graduate employability ⁷ .	Do not mimic 'real' clinical settings for anesthesia and hemostasis purposes ²¹ ; further studies required before substitution proven educationally viable ^{2,37} .
Recovery surgeries on shelter or welfare animals	Allow experience with live animals; allow observation of post-op recovery ³² ; shelter spays a service to the community ²⁰ ; can supplement cadaver surgery re: tissue handling, exposure to hemostasis; poss. improvement to shelter animal welfare by increasing adoptability.	Curriculum change required; negotiation with shelters required; potential costs of setting up university teaching clinics ¹¹ .

Findings:

1. A number of the model and cadaver studies recommend these as an adjunct or supplement to terminal surgery pending further studies. However, as Dennett argues, *"the dictates of morality and the scientific method pull in opposite directions here"*³³ - the ethical path is to err on the side of alternatives until such time as they are proven inappropriate; the scientific course is to continue with current methods and place the burden of proof on less established alternatives. Meantime, the welfare of animals (ostensibly the *raison d'être* of the veterinarian) is at stake.

2. Many veterinary schools continuing terminal surgery recognise the need for and offer alternatives to students with conscientious objections. To satisfy educational and registration requirements, these schools must ensure that alternative programs are equally as rigorous and provide the same level of education⁹. Typically, alternative programs are provided through the use various combinations of all three of the above alternatives^{11,34,35}. However, if these schools can provide satisfactory arrangements for a handful of students, there is an ethical obligation (in accordance with the "3Rs") to apply these principles to the wider student body to the same extent.

3. Whilst it may be *"easier to move a cemetery than change a University curriculum"*³⁶, a well developed curriculum based on the above alternatives has several advantages over a "traditional" curriculum. Most of these are documented in Table 1. However, there are two additional benefits. The first is that clinging to the use of live pound animals is becoming an increasing public relations liability for veterinary schools, that are increasingly dependent on positive public perception in generating student enrollments as well as funding from private industry. It is arguable that the initial cost of curriculum change and establishment of any additional required clinical facilities would be offset by improvement in the public profile of veterinary schools and ensuing benefits. The second is that the implementation of alternatives such as shelter spaying technically satisfies the arguments presented in favour of terminal surgery on pound dogs. It does so by providing surgery students with "the real thing", utilising 'resources' that may otherwise go to 'waste', and, if integrated effectively, providing

an excellent standard of education and care in veterinary graduates. Viewed in this way, the use of currently available alternatives satisfies both cases more than a traditional curriculum can.

Conclusion

Veterinary schools have an ethical and educational obligation to review surgical curricula and incorporate alternatives that combine appropriate skills training with “real” surgical experience. The use of pound animals or purpose bred animals (to whom the above arguments also apply) is neither necessary nor in fact desirable in achieving this outcome. The ethical arguments both for and against the use of pound dogs logically entail that, in light of available alternatives employed thoughtfully and efficiently, the “3Rs” give way to the “3E’s”: eliminate, eliminate, eliminate. It is in the best interests of veterinary schools and their students to take an active rôle in implementing such change.

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**Knight, A., Mar. 2002, “Educational memorials:
Lessening the grief”. Updated from Knight, A., Sep. 2001,
“Educational Memorials: a way to ease the grief”,
The Veterinarian, p. 27.**

This article introduces the Educational Memorial Program (EMP) (body donation program) concept, outlines its benefits for conscientiously objecting students, clients and veterinary schools, and describes the benefits of EMPs in helping to reduce the documented desensitisation of veterinary students that occurs during their training. It introduces the topic of simulated surgeries on ethically-sourced cadavers, and gives the www.educationalmemorial.org website for further, detailed information on EMPs.

Lessening the grief

The case, unfortunately, was a hopeless one. The horse was a beautiful animal, but its injury simply beyond repair. Euthanasia was clearly the only possible option. The owner was distraught; obviously the bond between her and her horse ran deep. A gentle explanation of the routine options available for the disposal of the body only resulted in a fresh set of tears. The owner was horrified at the prospect of sending the body of her beloved companion to a rendering plant, and was uncomfortable with the idea of cremation as well.

Scenes like this are all too familiar in day-to-day veterinary practice. Traditionally, compassion and Kleenexes have usually been all we could offer to grieving clients such as the lady above. More recently, however, some veterinary schools have created another option. Following in the tradition of medical schools who have for decades run body donation programs for the benefit of their students, **Educational Memorial Programs (EMPs)** allow clients to donate the remains of their animals to further veterinary education. By June 2001 EMPs were formally operating at Tufts University, Texas A&M University, the University of California (Davis), and the University of Wisconsin, and body donations were being accepted on an ad-hoc basis at numerous other veterinary schools, including some in Australia.¹⁻³

When broached with sensitivity, many owners find the idea of donating the remains of their departed companions towards the betterment of veterinary medicine a significant comfort, as was the case when the lady above was finally given this option. The euthanasia brochure given to Tufts clients makes it easy to understand why:

“One very special option Tufts New England Veterinary Medical Center offers its clients is the Client Donation program. If your animal companion has received medical care at Tufts, you may choose to donate your pet’s remains to the veterinary school for teaching purposes. Donating your pet’s remains to the veterinary school can be a way of letting the spirit of your pet live on through the education of future veterinarians, who are being trained to heal other animals. In addition, your willingness to participate in the program supports a humane approach to obtaining resources for this training. Animal cadavers are invaluable for teaching veterinary students about animal anatomy and the skills they need to master to become competent veterinarians. If you choose the donation option, another drug will be injected in your pet’s vein at the time of euthanasia to prevent blood clotting. This drug does not cause any pain or discomfort.”⁴

The knowledge that their pets’ remains will be used to help other animals gives Tufts clients something positive to hold onto during their time of grief; something, perhaps, that can go some way towards lessening that grief. Additionally, clients who select the donation option are not charged for the euthanasia or the disposal of the body.

Fostering compassion

However the clients are not the only ones who can benefit emotionally from such programs. Surprisingly, perhaps, veterinary students can benefit too. In a March 2000 BBC program “Vets learn

to be hard”, it was noted that a certain tenacity and strength of character is necessary to cope with the daily stresses encountered in veterinary practice.⁵ However the BBC and others have raised concerns that contemporary veterinary education, whilst perhaps fostering such qualities, can also desensitise students to animal suffering. Such concerns have been given credence by several studies published in reputable veterinary journals. A 1991 *Journal of the American Veterinary Medical Association* study found that the normal developmental increase in moral reasoning expected in US veterinary students did not occur during their four years of veterinary school.⁶ A 1999 *JAVMA* study found that fourth year students were less likely to treat animals for pain than were second or third year students.⁷ The clear, progressive desensitisation of UK veterinary students to animal suffering during their courses was well documented in a March 2000 study in the *Veterinary Record*.⁸

However EMPs provide an opportunity to undo some of the damage done to the compassion and consciences of veterinary students during their training. As Dr. Norman Wilsman of the University of Wisconsin School of Veterinary Medicine puts it, an EMP can “transform the gross anatomy lab from an atmosphere of starkness and mostly unemotional cutting on nameless objects to an atmosphere that includes compassion for this deceased animal that has a name, a medical history, and a referring veterinarian who provided expert and compassionate care. ... We enhance the learning environment both scientifically and humanistically for students and faculty.”⁹

The relevance and interest of anatomy dissections to students is also increased when cadavers are accompanied by case histories and a variety of pathological conditions. Anatomy students performing such dissections are often very positive about their experiences, as exemplified by this Tufts student:

“When I started vet school, I was relieved that Tufts started a donor animal program. Donor dogs come in different shapes, sizes and breeds allowing the students to have a more realistic experience of what we will encounter in the clinics. There is no reason to kill healthy animals when clients will donate their loved pets for our benefit.”⁴

Cadaver surgery

However anatomy students are not the only beneficiaries of EMPs. Around the world increasing numbers of veterinary students are no longer willing to participate in terminal surgical laboratories, and in many cases alternative surgical courses incorporating *ethically-sourced cadavers*, (obtained from animals that have died naturally or in accidents or been euthanased for medical reasons), are being offered instead.

By January 2002, terminal surgeries had been eliminated from all required courses in the veterinary colleges of the University of California (Davis), Cornell University, the University of Florida, the University of Pennsylvania, and the University of Wisconsin. Price Edward Island and Tufts University had gone further, eliminating them from elective courses as well. Of the 24 remaining North American veterinary colleges, 16 were offering humane alternatives for students who requested them.^{10,11} For years all six of the UK veterinary colleges have had, by Australian standards, an alternative system. Instead of practising surgical exercises on donated greyhounds and other animals that are later killed, students learn by assisting with necessary surgery on real patients that actually benefit from the surgery, in the same way that human doctors learn.¹² Of the four Australian veterinary colleges, the University of Sydney eliminated terminal surgeries in 2000, and this author and a classmate became Murdoch University’s first alternative surgical students in the same year.¹³

Ideally, students in such alternative courses perform simulated surgeries on ethically-sourced cadavers after learning basic suturing and instrument handling using knot-tying boards, simulated organs, and other models. Obviously live animals are still needed to practice essential surgical skills such as haemostasis and anaesthetic technique. However it does not follow that animals must be killed in order to learn these skills; they can be practiced via sterilisations of shelter animals and participation in other beneficial surgeries.

Such was the experience of this author in 2000. Instead of participating in Murdoch’s terminal surgery laboratories, a classmate and I performed a variety of abdominal and orthopaedic surgeries on ethically-sourced canine cadavers, as well as performing and assisting with numerous beneficial surgeries on shelter and clinic patients. In total we gained approximately five times as much surgical experience as our conventionally trained classmates, including the opportunity to spay 21 (living) dogs and cats.

Within Australia, however, the concept of cadaver surgery as a teaching methodology is generally a new one, and there are many who would question its effectiveness. Fortunately, though, the effectiveness of such teaching programs has already been closely examined in some of the overseas schools that have trialled, and then adopted them, and their findings published in several veterinary journals. A 1991 *Veterinary Surgery* study, for example, compared the live animal surgical performance of veterinary students trained using cadavers to a peer group trained using live anaesthetised dogs. The authors concluded that:

*“We were unable to detect a significant difference between the surgical performance of the two groups in any of the categories considered. This might mean that there are no measurable differences between training with cadavers and live anaesthetised dogs.”*¹⁴

In fact, of the six relevant published studies, five concluded that no significant difference existed between the surgical skills of alternative veterinary students and those trained via terminal laboratories.¹⁴⁻¹⁸ The remaining study found a slight advantage for the alternative group, who in this case were able to repeat the procedures a greater number of times.¹⁹

Into the future

Clearly the “Educational Memorial” option can provide great comfort to a grieving owner, can provide veterinary schools with a free supply of varied teaching material, and can enhance both the moral development and anatomical skills and knowledge of veterinary students. EMPs are also particularly valuable in providing an ethical source of cadavers for the increasing numbers of students unwilling to participate in terminal surgical laboratories. For the benefit of their clients, students, and, in some cases finances, Australian veterinary schools would do well to follow the lead of those US schools that have already successfully established such programs. Fortunately, all the information they need to do so, in some considerable detail, became available online in 2001 at www.educationalmemorial.org, courtesy of the Humane Society of the US.

With grateful thanks to Linnaea Stull, University of Illinois College of Veterinary Medicine, Class of 2002, for assistance with the preparation of this article.

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Stull, L., 2001, “Educational memorial programs – A new perspective on the human-animal bond”.

This paradigm shifting essay by University of Illinois College of Veterinary Medicine Class of 2002 student Linnaea Stull won the U. Illinois C.V.M Dr. Florence Dunbar Award for the Human-Animal Bond in 2001. It describes the reasons why Educational Memorial Programs (EMPs) should be implemented in veterinary colleges as an ethical means of obtaining cadavers for anatomy dissection and surgery classes, and for fostering ethical development in veterinary students. It describes existing EMPs and their educational benefits and gives student feedback on them. It explores the issue of broaching this sensitive subject with clients, and ways of acknowledging their contributions. The five appendices cover: cadaver surgery, ethical concerns about the current sourcing of cadavers for veterinary colleges, veterinary student comments about EMPs, veterinarian endorsements of EMPs, and a step-wise plan for implementing an EMP at a veterinary college. The www.educationalmemorial.org web site is provided for further detailed information about EMPs.

Educational Memorial Programs

Abstract

For several centuries, humans have been able to donate their bodies “to science” upon death. Medical schools have utilized human donation programs to teach medical students anatomy and psychomotor surgical skills. In contrast, veterinarians learn anatomy on cadavers that were obtained from animal shelters, Class B dealers (including biological supply companies), purpose-bred research facilities or “surplus” greyhounds from the greyhound racing industry.

In recent years, veterinary faculty, students, and companion animal owners have begun to wonder if it were possible to donate a pet’s body to further veterinary knowledge and education, in the same way that people are able to when they die. This questioning stems in part from ethical concerns over the current sources of animals used in veterinary teaching programs; additionally, a growing number of state legislatures are barring the use of shelter animals for dissection in schools.

Today, several veterinary colleges now offer clients the option of an “Educational Memorial” at the time of euthanasia of their pets. Instead of cremating or burying their pet’s body, clients can honor the Human-Animal Bond by donating the body to the veterinary college. Donated animals are those which: 1) have been euthanized due to medically untreatable illness, 2) have been euthanized due to the client’s inability to pay for expensive treatments, or 3) have died of natural causes. Educational Memorial Programs offer veterinary colleges an ethically acceptable source of cadavers for teaching purposes, and give animal owners a special opportunity to support the training of future veterinarians.

The Human-Animal Bond

I first became interested in the idea of Educational Memorials in 2000. At this time, a fourth-year Illinois student described an unhappy situation that had occurred during her equine rotation. A client was told her beautiful horse had an injury that was beyond repair; there was absolutely no option but a humane death for her horse. The woman was visibly upset at this terrible news; it was clear the Bond between the woman and her horse ran deep. When Dr. David Freeman, the clinician in charge of the case, gently described the “routine” options of what to do with the horse’s body after euthanasia—a fresh set of tears was incited. The woman was horrified at sending her pet to a rendering plant, and she was not at ease with cremation either. It was at this point that Dr. Freeman offered her the option of donating the horse’s body to teach future veterinarians surgical skills in his surgery course. The client was relieved! She donated the animal immediately, and the current third-year students (including

myself) benefited from her generosity this year. It was clear that for this grieving client, donating her beloved pet's body for the betterment of veterinary medicine...was an incredible comfort.

The donation of a pet's body to an Educational Memorial Program is clearly not an option every client will find appealing. (Only a small percent of people donate their *own* bodies "to science" in their wills.) Veterinary schools that make donation available for clients need to approach the subject with careful respect for the Human-Animal Bond. The Tufts University School of Veterinary Medicine produced a euthanasia brochure for their clinics, to facilitate discussion of the subject when needed. The brochure details the Educational Memorial Program as one of many options for clients at the time of euthanasia:

*"Donating your pet's remains to the veterinary school can be a way of letting the spirit of your pet live through the education of future veterinarians, who are being trained to heal other animals. In addition, your willingness to participate in the program supports a humane approach to obtaining resources for this training. Animal cadavers are invaluable in teaching veterinary students about animal anatomy and the skills they need to master to become competent veterinarians."*¹

Tufts' veterinarian Dr. Gary Patronek says that clients have *"the satisfaction of making a contribution to veterinary medical training and eliminating the need to take the life of an otherwise healthy dog for this training."*² For certain clients, donating their deceased pet's body may be the best way for them to honor the Bond that human and animal shared over the course of the animal's life.

The use of Educational Memorial cadavers

Animal cadavers are a very real and necessary part of a veterinarian's education, just as human cadavers are essential in medical school programs. But how, exactly, are animal cadavers used in a veterinary program?

Client donated cadavers can be used in veterinary courses that do not require live animals for instructional purposes. Perhaps the most obvious use of these cadavers is for anatomy laboratories. Donated animals used for anatomy instruction are embalmed and the cadaver's vasculature may be infused with latex (red for arteries and blue for veins), if preferred. Donated cadavers may also be used to develop veterinary student skills in pathology labs, surgery/psychomotor and orthopedic labs, ophthalmology, and dentistry. Animals used for these purposes are usually frozen and not embalmed. Where a donated cadaver is placed in the teaching program depends largely on its condition. Traumatically injured animals or animals that died or were euthanized during surgery would not be appropriate for the anatomy department's use, but could potentially be used to teach various surgical procedures.

The modern veterinary surgical curriculum requires an additional supply of animal cadavers that was not needed in previous decades. Largely due to ethical concerns, the "traditional" nonsurvival use of animals in veterinary surgery classes is being phased out. The question remains: if nonsurvival surgery courses are eliminated from the curriculum, how do we teach the next generation of vets how to perform surgery? Without drifting off-topic, I refer you to Appendix I for a discussion on the exciting advances in veterinary surgery curricula, and the role that client donated animals are playing in this revolution.

For decades, veterinary schools have found sources of cadavers, other than Educational Memorial Programs, to support curricular demands. The greyhound racing industry provides "retired" greyhounds to veterinary schools, living or dead; victims of the pet overpopulation problem are readily available from shelters across America; and cadavers are purchased in bulk from Class A and Class B animal dealers. The practice of euthanizing healthy animals for educational use at veterinary colleges has come under scrutiny in recent years, and a more complete discussion on the ethical concerns over the current sources of cadavers for veterinary schools is available in Appendix II. After reviewing these concerns, it is clear why the push for Educational Memorial Programs (EMPs) is underway.

Educational benefits of Educational Memorial cadavers

One educational benefit of EMPs (as compared to the use of animals from Class B dealers or shelters) is that the donated animals are a catalyst for bringing case-based learning into the veterinary curriculum. Unlike the \$70 latex-infused dogs from Carolina Biological Supply Company (a Class B dealer), donated bodies come with associated histories and assorted lesions that add a valuable dimension to anatomical instruction. At Tufts University, each anatomy lab group is provided with a complete medical history of their animal, and is further expected to prepare a short presentation for the class on the animal's medical condition. For example, if a dog suffered from intervertebral disc disease, the anatomy group could be asked to prepare a presentation on the anatomical basis of this disease. According to Tufts University's Dr. Gary Patronek, the case records of animals used for anatomy dissection are "*provided to the students to make anatomy and other basic sciences more clinically relevant.*" Dr. Patronek further notes that Dr. Kumar, head of the anatomy program at Tufts, "*believes that this personal touch makes the students more careful in their dissection since they realize they are learning on a pet that was once a loved member of someone's family.*"²

Providing case records for the donated animals is simple. The original medical chart can be photocopied (or printed if computerized), and then given to the students after client information is blacked out. It is not necessary for the professor to summarize the animal's medical history; reading the actual medical chart will be a valuable experience for the first-year students.

Furthermore, the significant differences in anatomy among donated cadavers will encourage veterinary students to rotate between stations in the gross anatomy lab, rather than focus solely on their own dissection (a common occurrence in traditional anatomy labs). In this way, students expand their knowledge base not only of pathological conditions as they check out the "funny liver," "spotted kidney," and "cancerous uterus," but also the "normal" anatomy surrounding the pathology. Students will not graduate from a gross anatomy class with the feeling that any anatomy deviating from that which they learned on their nine-month-old black Labrador cadaver is automatically abnormal.

Fostering professional development in veterinary students

There is concern among some people that the current veterinary curriculum desensitizes veterinary students to animal pain and death. For example, dog cadavers for anatomy arrive in plastic bags from Class B dealers, sealed up like so much meat. Some worry that heavy exposure to these animal cadavers during impressionable periods of professional development may lead to less compassionate veterinarians.

The BBC recently broadcast the program, "Vets learn to be hard."³ In this program, the BBC noted that a certain tenacity and strength in character is needed to adapt to the daily stresses of a veterinarian. However, the BBC expressed strong concerns for the welfare of animals, noting that recognition of the sentience of animals is "*absolutely central to a vet's job*". The concern that current veterinary education practices may inure students to animal suffering has been given further credence by several studies published in reputable veterinary journals. A March 2000 article in *The Veterinary Record* detailed the results of a survey of veterinary students at two UK veterinary schools; the study found that students were less compassionate to the sensations of hunger and pain, and the emotions of fear and boredom in dogs, cats and cows at the end of veterinary school than at the beginning.⁴ Another study, published in *The Journal of the American Veterinary Medical Association (JAVMA)* in 1991, found that normally expected increases in moral reasoning did not occur over the four years of their veterinary education for the students evaluated. This suggests that the veterinary medical education experience somehow inhibited moral development in these students.⁵ A 1999 study also published in *JAVMA* found that the fourth-year veterinary students appeared to be less likely to treat animals for pain than were second or third-year veterinary students.⁶

An Educational Memorial Program provides the opportunity to *enhance* the compassion of our future veterinarians. Such professional development is already employed in human medical school programs. Dr. Goodenough, co-director of the Harvard Medical School's gross anatomy department, asks educators to consider medical students' first moments in the gross anatomy lab, which is often the students' first encounter with a dead human being. These students are about to violate a number of basic social taboos, including viewing naked cadavers in mixed company, and then methodically cutting these bodies apart. Goodenough believes that the starkness of that moment makes students open to important professional and personal development. The students learn to combine detached concern, a

necessary self-protection tool, with genuine empathy in a way that will best serve patients over a lifetime.⁷

The same opportunity to *humanize* students in the gross anatomy laboratory is easily translated to veterinary medicine through the Educational Memorial Program. Dr. Norman Wilsman of the University of Wisconsin School of Veterinary Medicine, says that an EMP can *"transform the gross anatomy lab from an atmosphere of starkness and mostly unemotional cutting on nameless objects to an atmosphere that includes compassion for this deceased animal that has a name, a medical history, and a referring veterinarian who provided expert and compassionate care. Rather than the isolation of the traditional gross anatomy lab with nameless cadavers from a biological supply company, we have links that extend beyond the walls of the gross lab, links to many people. We enhance the learning environment both scientifically and humanistically for students and faculty."*⁸

Established Educational Memorial Programs

A total of four U.S. veterinary schools have Educational Memorials Programs established for their clients: Tufts University, Texas A&M University, the University of California at Davis, and the University of Wisconsin. (While University of Illinois' Dr. Freeman occasionally offers the option of donation to select clients, this option is not routinely made available and is not offered at all to small animal clients. Interestingly, some animals that are signed over to UI CVM's necropsy department *do* end up as anatomy models after the necropsy is completed, but *without* explicit permission of the owner.)

The Tufts University Client Donation Program began in 1997. As of 1999, Tufts was able to provide all of the cadavers for its freshmen small animal gross anatomy class of approximately 80 students solely through its Client Donation Program. As of 2001, Tufts collects 20-30 cats and 30 dogs annually for the small animal anatomy course. Texas A&M University initiated its Body Donation Program in May 2000. Texas A&M, UC Davis and the University of Wisconsin currently utilize a combination of donated animals and animals procured from other sources. In a brochure on animal use in veterinary medical education, the University of Wisconsin states, *"It is our goal that eventually our Body Donation Program may eliminate the need to purchase canine cadavers."*⁹

Educational Memorial Programs are also being implemented in Australian vet schools. In 2000 the University of Sydney Faculty of Veterinary Science passed a college policy stating that their goal was to *"institute a mechanism for members of the general public to donate the bodies of their pets (dogs, cats and others) for teaching purposes, based on the model used by the Medical school for the collection of human cadavers."* And further that, *"resources be made available to prepare these animals adequately for storage, and to create a cadaver 'bank.'"*¹⁰

Student feedback on the success of Educational Memorial Programs

Following four months of anatomy taught with donated animals, 80 first-year vet students at Tufts University were given a questionnaire requesting their comments on the donation program. The Tufts' students overwhelmingly supported the donation program. 95% of students reported that given a choice, they would prefer to dissect and learn anatomy from a donor animal. These students cited ethical objections to dissection of a healthy animal that had been sacrificed. Only four out of 80 students reportedly felt that the animal source did not matter (donated animals versus purpose-bred).¹

Students who preferred the client-donated animals reported gaining knowledge of pathology and clinical conditions along with anatomy. Some pathological conditions the students observed included: intra-abdominal neoplasia, ventricular tumors, mast cell tumors on limbs, intervertebral disc disease, osteosarcoma, and gastric dilation and volvulus.¹

Tufts' Dr. Gary Patronek commented, *"The response from students, as well as clients, to this program has been very positive."*² For further student and veterinarian comments on EMPs, see Appendix III (Veterinary Students' Comments about Educational Memorials) and Appendix IV (Veterinarian Endorsements of Educational Memorials).

Informing clients about the Educational Memorial Program

First of all, the decision regarding body donation should not in any way be coupled to the medical and ethical decision regarding the euthanasia of a pet. At Tufts University, *"It is only after the decision to euthanize the pet is made by the client in consultation with the attending veterinarian that the options regarding disposal of the body are typically discussed."*² Further, *it is not mandated by veterinary colleges with donation programs that the donation option be offered to every client.* Due to the sensitive nature of the decision to euthanize a companion animal, discussion of the donation option is left to the discretion of the clinician.

Ideally, clinicians and fourth-year veterinary medical students should go through a training class with grief counselors on how to present the Educational Memorial Program, and other euthanasia options, to the clients.

Students at the U.C. Davis School of Veterinary Medicine created a euthanasia brochure providing relevant information on the school's Educational Memorial Program for clients. It states:

*"This most honorable type of donation helps teach surgical skills to the next generation of veterinarians. Your deceased pet makes a tremendous contribution to learning by becoming a noble part of the educational process in this way. The veterinary students benefiting from medical memorial donations are deeply grateful for this type of learning. People who make such thoughtful, personal contributions by donating their pet's remains can be assured that the body of their deceased animal will be treated with the utmost respect and dignity. Providing an educational memorial is truly a profound donation, for even after death, your pet can make a lifetime contribution to the education of a future skilled and compassionate veterinarian."*¹¹

Another approach is to introduce the issue of body donation upon first contact with the client. Notes Texas A&M University's Dr. Anton Hoffman, *"It may be a good idea to make clients aware of the Educational Memorial Program when they first acquire their pet. By making clients aware of the program at a time when their pet is healthy, they will already be knowledgeable of the program in the event that their pet becomes seriously ill."*¹² As part of a routine entry form filled out at the receptionist's desk, one of the many questions about the health habits and medical conditions of the client's companion animal might be: *"In the unfortunate event that your animal becomes terminally ill, do you have a preference to the disposition of your pet's body?"* Options will include simple disposal, cremation, body return, and of course the donation program. Notes Tufts University's Dr. Gary Patronek, *"An advantage of the printed list is it streamlines the process for the clinician, and in some cases may make the discussion easier."*² One of the advantages of providing this list of options to the client while their pet is *healthy*, is that it encourages the client to discuss body donation with their veterinarian early on, without the emotional stress that occurs at the time of euthanasia.

The cost of euthanasia is generally waived for clients donating to this program. However, to avoid the undesirable appearance that the donation program is being "marketed", this should not be mentioned prior to the client making a medical decision regarding their pet.

The veterinary college must keep all lines of communication open with the public regarding the Educational Memorial Program. In no way must clients feel they are donating their pets to experimental research programs. The University of Wisconsin School of Veterinary Medicine makes the distinction very clear on their Body Willed Donation Program client consent form:

*I, the undersigned, certify that I am the owner of the above described animal. I hereby authorize that, upon the death of my animal, its body may be used in the interest of furthering the education of veterinary medical students ... Bodies received as part of the anatomical gift program will be used only in conjunction with instructional programs of the School, and will not be used for investigational or research purposes."*¹³

Some veterinary college administrators are concerned that their clinical staff veterinarians would be unwilling to ask clients to consider the educational memorial option. This was a small problem at the initiation of the Tufts Client Donation Program: *“It was discovered that the program to collect client-donated cadavers had not been started when promised, because some faculty believed that it was insensitive to ask clients to donate their pets’ remains. ...Fortunately, the administration stepped in; a client-donated cadaver program was begun and the alternative laboratory proceeded. As it turned out, many people were willing to donate their pets’ remains and were pleased to have helped spare the life of another animal.”*¹⁴ Certainly, administrators cannot force their clinicians into offering this program to their clients at the time of euthanasia; the best that can be done is to persuade clinicians that many pet owners will be heart-warmed by the offer.

Acknowledgement of the Human-Animal Bond

A veterinary college and its veterinary students may wish to honor or recognize clients who donate their companion animals to an Educational Memorial Program. Such issues of how to acknowledge the Human-Animal Bond between a client and a recently-deceased pet may best be addressed by grief counselors at the college. At the same time, it is imperative that donation consent forms clearly have an option whereby the client may elect to remain anonymous. While some clients do not mind being recognized, others may wish to remain anonymous, and it is crucial to the success of the EMP that these wishes be respected. Well over 50% of the clients who have donated animals at Texas A&M University have elected not to be recognized.¹²

Many creative and meaningful ways to memorialize the animal can be explored. Suggestions include a memorialization quilt or wall. The college may want to send sympathy or thank you cards to the participating clients. The college may also wish to return the ashes (should state laws allow) in a special urn to the owners, as is being considered at the Western University of Health Sciences College of Veterinary Medicine in California. Perhaps the most important way to honor the animals' lives is for the veterinary students to learn as much as possible from them to benefit future animals.

Conclusion

In May 2000, I found another vet student who was interested in researching Educational Memorial Programs. She is Lori Donley, a Class of 2003 student at the Virginia-Maryland Regional College of Veterinary Medicine. We've spent the past year (in between our busy lives) finding out everything we could about Educational Memorials. Why does it work at some schools *so well*? Why are other schools nervous about making this option available to their clients? What are the restrictions on Educational Memorial Programs? We sent literally *hundreds* of emails back and forth to the anatomy instructors and other faculty at Tufts University, Texas A&M, the University of Wisconsin, and U.C. Davis - the four schools that have successfully established donation programs. We decided these schools had set a valuable, instructive precedent for others to follow. Our goal was to compile information we obtained from these schools and make it readily accessible to other veterinary schools who might want to establish Educational Memorials of their own.

The result was a 35-page document created by Lori and I describing everything a person could want to know about Educational Memorials! Some of the questions answered include:

- Why should a pet's remains be donated to a veterinary college's Educational Memorial Program?
- What are the ethical concerns over the current source of cadavers for veterinary schools?
- What are the educational benefits of an Educational Memorial?
- What are the cadavers used for?
- What is “cadaver surgery”?
- Does an Educational Memorial Program require extra staff?
- What are student opinions regarding Educational Memorials?
- How is the option of an Educational Memorial broached with clients?
- How is the euthanasia different if an animal's remains are being donated?
- Will an Educational Memorial Program cause a reduction in the number of necropsy cases at colleges of veterinary medicine?

- Can local veterinary clinics participate in an Educational Memorial Program?
- What are the costs associated with implementing an Educational Memorial Program?
- How are the donated animals embalmed for anatomy class?
- Is the quality of a donated cadaver equivalent to a cadaver from a biological supply company or other source?
- Can the vasculature be infused with latex?
- Is it difficult to obtain a sufficient number of appropriate cadavers (i.e., intact males and females, appropriate size and body condition)?
- Can an animal that died from natural causes be donated for use in an Educational Memorial Program?
- How do you document the transition of an animal into an Educational Memorial Program?
- How can you announce the availability of Educational Memorial Programs to clients?
- How can the veterinary college memorialize the animals?
- Can the Educational Memorial concept be applied to large animals?
- Can the Educational Memorial concept be applied to undergraduate anatomy?
- Are there any other precautions to establishing an Educational Memorial Program?
- Which veterinary colleges have implemented Educational Memorial Programs?
- Who can people turn to for help, should they have further questions?

Lori and I also created a step-wise plan for the implementation of an Educational Memorial Program (See Appendix V), sample euthanasia brochures addressing the Educational Memorial option tactfully, and sample client consent forms. Additionally, we obtained the specific protocols that Tufts and Texas A&M use for embalming donated animals, for it is ignorance of the technical details of embalment that is delaying implementation of an EPM at several veterinary schools we know of. Anatomy instructors from Wisconsin, Texas A&M, and Tufts Universities each volunteered their time to review our manuscript for accuracy. A total of 45 references add depth to our research.

In this modern world, Lori and I wondered how we could get this body of information out to the anatomy instructors, administrators, and clinicians at the 27 North American veterinary schools. The world wide web was the obvious solution. The Humane Society of the United States has kindly offered to sponsor a stand-alone web page for us. Our 35 page manuscript plus the many brochures and links we would like to add are now all available online at www.educationalmemorial.org.

Now that this web page is online, it will be easy to send letters to the various veterinary schools, asking that they consider making this unique option available to their clients. Clearly, veterinary schools have concerns about implementing any program that might cost money, drain faculty and staff resources, impact on educational value for their students, etc. Lori and I took careful note to address these concerns thoroughly. The aim of our web page is to provide helpful information about EMPs to veterinary students and faculty interested in establishing a program at their own school.

Donating a pet's body "to science", specifically to teach veterinary students anatomy and surgery, is clearly not an option every client would find appealing. But for certain clients, it is an important way to recognize the Bond humans and animals share – to bring a sense of purpose to a sad situation. Clients who choose to participate in an Educational Memorial Program are comforted by the idea of their pet's final contribution. In time, I believe all veterinary schools, and perhaps even private animal hospitals, will have the Educational Memorial option available for their clients.

Appendix I

Cadaver Surgery

Cadaver surgery is currently being utilized by many U.S. veterinary colleges to teach extensive aspects of surgical technique. Rather than perform nonrecovery surgeries on live animals, some veterinary colleges are opting to teach surgical techniques on cadaver animals—then later allowing students, under close supervision, to practice these techniques on animals that will benefit from the surgery. The most recent survey (2000) available on animal usage in North American veterinary schools noted that 16 of the 22 responding veterinary schools utilize cadaver surgeries in their curriculum.¹⁵

In 1986, Dr. P.B. Jennings noted in *The Journal of Veterinary Medical Education*, “At present, there are no real limitations on the use of small animal cadavers in surgical training.”¹⁶ Veterinary colleges are discovering the veracity of his words! At U.C. Davis, students learn the following techniques on cadaver animals: “chest tube placement, emergency jugular vein access/catheterization, nasal insufflation, skin grafts, epidural injection, bone marrow biopsy, liver biopsy, feline perineal urethrostomy, and various eye procedures, to name a few.”¹⁷ At the University of Illinois, students are taught instrument handling, suture techniques, surgical approaches to joints, orthopedic stabilization of limbs, and soft tissue surgical techniques on cadaver tissue. Innumerable psychomotor surgical skills can be developed on cadavers prior to performing recovery surgeries on live animals.

The benefits of cadaver surgery in teaching student veterinarians have been demonstrated at several veterinary colleges:¹⁸

Colorado State University

“Cadavers were compared with live anesthetized dogs for their effectiveness as models for surgical training of veterinary medical students. One group of students was trained using cadavers, and a peer group was trained using live anesthetized dogs. Both groups then performed an intestinal anastomosis using a live subject. The time to completion of the procedure was recorded. The anastomoses and celiotomy closures were evaluated. Each anastomosis was isolated and pressure tested. Reviewers blindly scored each surgical team’s performance based on actual inspection of the surgical site and on viewing videotapes of the procedure. The participants’ attitudes toward the use of live animals in teaching and research were documented before and after training. No statistically significant differences could be detected between the two groups. The results suggest that some substitution of cadavers for live dogs in surgical training might be feasible.”

“None of the participants changed their opinion about the use of live animals, but several students stated that, to their surprise, they found cadavers useful as a laboratory subject.”

“We were unable to detect a significant difference between the surgical performance of the two groups in any of the categories considered. This might mean that there are no measurable differences between training with cadavers and live anesthetized dogs.”

“Cadavers might well be used in preliminary skill-building laboratory exercises that culminate in live animal surgery. In such a plan, the use of live animals could be reserved for refinement of skills already obtained with cadavers or other alternative models, thus reducing the number of live animals used for surgical training.”¹⁹

Purdue University

In 1998-1999, 29 fourth year veterinary students at Purdue University were provided access to cadaver surgical laboratories in order to supplement their small animal surgical rotations. The control group of 28 students had begun their clinical rotations previously and did not have access to the cadaver laboratories. The authors found that student attitudes towards learning and participation were more favorable in the group with access to the cadaver surgeries. The authors asked:

“Why is it then that students in the experimental group (students performing cadaver surgeries) developed and maintained more positive attitudes, regardless of caseload? The cadaver laboratory probably simulated not only relevant situations, but relevant situations of appropriate difficulty. This setting allowed the opportunity for instructor, peer, and self-reinforcement following task accomplishment. ... Students in the experimental group were more self-confident in performing basic surgical procedures. ... Practice leads to the acquisition of skills which are directly related to the development of self-confidence.”²⁰

Tufts University

“In the alternative laboratory program, cadavers were substituted for living dogs. The cadavers had been procured throughout the academic year from clients willing to donate their terminally ill or dead pets for education of veterinary students. Cadavers were kept in a -20 C freezer and thawed just prior to the laboratory session. As feasible, students in the alternative program performed the same laboratory procedures as their fellow students in the conventional program; they received instruction in anesthesia by caring for selected clinical cases under the direct supervision of an anesthesiology faculty member.

“Our results suggest that use of cadavers during the third-year laboratory program, when supplemented with additional clinical training during the fourth year, can provide training comparable to that provided in a conventional laboratory program.”²¹

There is considerable question about whether nonsurvival surgical courses will remain a part of U.S. veterinary curricula at all. In early 2000, *JAVMA* addressed the question, “Will nonrecovery surgery courses survive?”²² *“For the past eight years, UC-Davis has had three nonsurvival surgical exercises in its core curriculum, although students can opt for a cadaver alternative for these exercises. The other six laboratory sessions in the core involve spaying and neutering animals from five area shelters. The faculty, in consultation with students, has decided to replace the nonsurvival surgical exercises with cadaver exercises beginning this next academic year.”²²* UC Davis follows both the University of Wisconsin and the Tufts University veterinary programs in eliminating terminal surgeries from their program.

Terminal surgeries are being withdrawn from modern veterinary education because of “attitudinal changes on the part of students, society, and occasionally faculty.”²² Notes Dr. Ann Johnson of the University of Illinois CVM, “As surgeons, we were tired of teaching a lab where dogs were euthanized.”²² The University of Illinois now has an entirely nonterminal small animal surgery course, utilizing models, cadavers, and survival sterilization surgeries on shelter animals.

Educational memorials will serve an important role in assisting in the development of the modern veterinary surgical curriculum, heavily reliant on a source of animal cadavers.

With thanks to Andrew Knight, fifth year veterinary student in Australia, for assisted research on the subject of cadaver surgery.

Appendix II

Ethical concerns over the current source of cadavers for veterinary colleges

A growing number of veterinary students and veterinary faculty are balking at the current sources of both small and large animals for use in anatomy and surgical psychomotor skills labs. The general public is also raising ethical concerns over the practice of euthanizing healthy animals for anatomical dissections at veterinary colleges and elsewhere. Some states and municipalities have passed legislation barring acquisition of shelter animals for these purposes.

Issues of concern are divided into the following categories:

- 1. Class A dealers**
- 2. Class B dealers**
- 3. Use of retired greyhounds**
- 4. Use of shelter animals**

Educational memorials, in part, address ethical concerns expressed by students, faculty and the public, and further promote animal welfare. Using animals received through an educational memorial program is a valid alternative to using animals that were euthanized for reasons other than terminal illness.

1. Class A dealers

Class A dealers are one source of animals for dissection. As defined in the federal Animal Welfare Act, Class A dealers derive income *"from the sale of animals to research facilities, dealers, exhibitors, retail pet stores, and persons for use as pets, directly or through an auction sale."* Animals raised in Class A facilities are "purpose-bred": the animals are born and raised on the premises of the facility for the sole purpose of being sold to research facilities, universities, and establishments.²³ Class A dealers who sell directly to research facilities (including universities) charge \$500 or more per dog.

For many years, Tufts University School of Veterinary Medicine utilized only Class A animals for their gross anatomy laboratories (Massachusetts state law prohibited the use of shelter animals for this purpose). Students and faculty alike found the killing of healthy animals for a DVM education wholly unacceptable, and the Tufts Client Donation program was developed as an alternative.

2. Class B dealers

Many of the animals used in veterinary education are obtained from Class B dealers, including biological supply companies. Class B dealers are licensed by the U.S. Department of Agriculture (USDA) to purchase animals from animal shelters (unadopted animals), other Class B dealers, auctions or private individuals who have bred and raised the animals themselves. A minority of Class B dealers can then legally resell these animals to research and educational institutions.

Serious concerns have been raised regarding the procurement, transportation, housing and treatment of animals by Class B dealers. Although notoriously difficult to obtain, there is documented evidence that some Class B dealers have bought or sold stolen family pets, as well as fraudulently answered "free to good home" ads with the intention of selling the pets to research and educational facilities. For more information on pet theft, see the Animal Welfare Institute's webpage at www.awionline.org/pubs/pop.

In the United States, at least twenty companies supply live and/or dead animals for use in education. These biological supply companies are most often licensed Class B dealers who obtain their animals from other individual dealers. Information about the procurement and treatment of animals by biological supply companies is difficult to obtain; however, several investigations have been made into the methods of handling these animals.

“In 1991, ten charges of violations under the Animal Welfare Act (AWA) were brought by the USDA against Carolina Biological Supply Company (CBSC). One of the charges questioned whether or not cats were still sentient at the time of embalming. During the hearing, two USDA veterinarians testified that several cats were still alive, but two veterinarians retained by CBSC testified that all the cats were dead when embalmed. The USDA judge ruled in favor of CBSC on the basis of their experience with and knowledge of embalming animals. CBSC was assessed a fine of \$2,500 based on its failures to: maintain complete records of acquired animals, properly sanitize and maintain enclosures, adequately store animal food, and keep its premises clean and free of accumulations of trash.”²⁴

“In 1994, the World Society for the Protection of Animals (WSPA) discovered that, in Mexico, cats were being taken from the streets and killed by putting ten animals into a sack and drowning them or by affixing the sack opening to a car exhaust pipe. The bodies were embalmed then shipped to the United States for use in dissection.²⁵ The man in charge of collecting the cats admitted that many of the cats were probably owned. The company, Preparation of Animals for Material for Scholarly Study (PARMEESA), had been supplying dead cats and other species to several U.S. biological supply companies including Fisher EMD, Delta, Frey Scientific, and Sargent Welch for over 20 years.”²⁶

It is not certain to what extent cases such as these are representative of procurement practices in the biological supply trade. However, many observers are concerned about the potential for unethical practices in the supply industry, given the lack of regulatory oversight, the closed-door policies of the suppliers, and the potential for desensitization among animal handlers when living animals are slated to be killed and sold dead.²⁷

3. Retired greyhounds

There is growing public concern about the fate of retired greyhounds. According to the Greyhound Protection League (see www.greyhounds.org), approximately 20,000 greyhounds are euthanized each year in the United States alone. The majority of unwanted greyhounds are not placed as pets because there simply are not enough homes for them all. The Greyhound Protection League reports that since 1990, there have been more than 51 media-documented cases of mistreatment of greyhounds, collectively involving thousands of dogs. These cases include greyhounds shot, abandoned, left starving in their crates, sold for medical experimentation, and even electrocuted.

Recently in the Midwest, greyhound owners were shocked to find that Dan Shonka, the trainer they had hired to race their dogs and adopt out poorly performing dogs, was in fact selling their retired greyhounds for \$300-\$400 each to a Minnesota research lab. One greyhound owner commented, *“I feel raped. I came to find out a lot of these dogs I gave for adoption in June were at the research facility in July. I’ve been in tears all week.”* A USDA spokeswoman said of this case, *“When buying a dog with the intent of reselling, a signature is needed from the owner that states the animal could be resold for research or education at a medical or veterinary school. Shonka did not get that approval.”²⁸* Shonka’s “scheme” of selling greyhounds lasted several years, involving hundreds of dogs. Concern about the greyhound racing industry has prompted at least one U.S. veterinary school (Colorado State University) to halt the use of greyhounds (alive and deceased) in their curricula.

4. Shelter animals

a. Transfer of live shelter animals

The Humane Society of the United States (HSUS) vigorously opposes the acquisition of live shelter animals (unadopted animals scheduled for euthanasia) for research or educational purposes, a practice known as “pound seizure.” Pound seizure is now illegal in 14 states and some localities. The Massachusetts Pound Seizure law had some influence on Tufts University's adoption of an EMP at the veterinary school; this Massachusetts law bars acquisition of both live *and* dead shelter animals by universities and research facilities.

Transfer of live shelter animals is increasingly becoming banned in the United States for a number of reasons. Shelter personnel argue that, in order to operate effectively, animal shelters must be seen by the public as a safe haven for lost, stray, or abandoned animals in which either a responsible, loving home or a painless and humane death is provided for those animals who are not reclaimed or whose owners can no longer keep them. Animal shelters cannot operate effectively without the confidence of the communities they serve. Giving up unadopted animals for research or teaching “*undermines the whole theory of sanctuary, safety, shelter*”, notes John Snyder, companion animal program director of The HSUS.²⁹ The concern is that people who find lost animals may be reluctant to turn the animals in to shelters, for fear that the animals may be relinquished to research or teaching facilities. This would make it more difficult to reunite pets with owners. Also, individuals who have animals they can no longer keep may avoid relinquishing them to a shelter and risk their being used for research or teaching purposes, and instead, relinquish them through less desirable means, such as “free to good home” ads or even abandonment.

Further, some in the animal protection community believe that veterinary schools’ use of shelter animals is an exploitation of the pet overpopulation problem.

b. Transfer of euthanized shelter animals

Veterinary educators have questioned the “problem” of utilizing deceased shelter animals for use in the veterinary curriculum. In this day of pet overpopulation, they ask, what is the issue in utilizing this abundant supply of cadavers? To address this question, I asked the Humane Society of the United States to clarify their position on the availability of cadavers from animal shelters. In fact, the HSUS *condones* the transfer of euthanized animals from shelters to research or educational institutions, but under very limited circumstances:

“First, no transactions of live animals should occur, and any animal involved must have been humanely euthanized due to either mortal illness or injury, or because no suitable home could be found for the animal within a reasonable time.

Second, animal cadavers may be transferred only when the animal’s former owner has been informed of this policy and has given consent. Full public awareness of any animal transfer policy is vital to maintaining public trust in animal shelters. Regardless of owner consent, however, shelters not wishing to supply animal carcasses to institutions should not be compelled to do so.

Third, such transfers should not involve elementary, middle or high schools. The HSUS opposes the practice of animal dissection in pre-college classrooms for numerous reasons. At the college level, The HSUS acknowledges the need for animal cadavers in veterinary training, for instance, but emphasizes the importance that any cadavers come from humanely euthanized animals and that no animals be raised or killed specifically for use in dissection.

Fourth, transfer of animals from animal shelters must never involve an exchange of money. The existence of so-called “surplus” cats is a result of the tragedy of pet overpopulation. Millions of cats are killed yearly in US shelters because there are not enough homes for them all. When there is money to be made in dealing in their carcasses, there may be less incentive for addressing overpopulation. There is also the perception that the shelter would rather gain from this tragedy than spend their monetary resources necessary to help solve it.”²⁴

There are mixed feelings among the veterinary community regarding the use of shelter animals for educational purposes. Notes Dr. Anton Hoffman of Texas A&M University, “*Unfortunately, due to*

severe pet overpopulation, euthanasia of unadopted shelter animals is currently commonplace. Some veterinary professors feel it is not an exploitation of the pet overpopulation problem to use euthanized animals for educational purposes; it is preferable to the animals' remains being incinerated or left to decompose in a landfill."¹² Other professors feel the educational use of euthanized shelter animals *desensitizes* future veterinarians to the pet overpopulation problem, ultimately leading to vets apathetic about shelter medicine issues.

Appendix III

Veterinary student comments about Educational Memorial Programs

Tufts University School of Veterinary Medicine

During the formative stages of Tufts University's Client Donation Program, half of the anatomy class dissected donated animals, while the other half dissected embalmed dogs from commercial sources, due to inadequate numbers of donor dogs. The following are some of the written comments from the class.¹

"My group did have a donor dog and I felt much better about the circumstances leading up to our dissection of the dog. I think this program is a great idea and is true to many of the commitments of veterinary medicine to better the lives of animals (not take them for our own purposes when there is an alternative)."

"As aspiring veterinarians, I think it is critically important that veterinary schools lead the way in promoting progressive thinking about the ethical issues involved in use of animals, particularly lab-bred or otherwise healthy ones - for educational purposes. Awareness of the issues surrounding the controversy should absolutely be a part of veterinary education. I am grateful that Tufts recognizes the importance of this awareness and for its support of this notion via the donor animal program."

"We are not going to see perfect purpose-bred dogs in practice. The donor dogs were of all ages and breeds and there were plenty of dogs to compare for normal anatomy."

"The (donor) program seemed to be implemented rather easily here despite the split campuses. Considering most normal vet schools have their anatomy labs on the premises of their hospitals, it would be a very easy, inexpensive and ethically sound program for other schools to adopt."

"When I started vet school, I was relieved that Tufts started a donor animal program. Donor dogs come in different shapes, sizes and breeds allowing the students to have a more realistic experience of what we will encounter in the clinics. There is no reason to kill healthy animals when clients will donate their loved pets for our benefit."

"Our dog was a donor dog and was a very good specimen. But even if he had not been, I would much prefer to use a donor dog due to ethical objections to breeding and euthanizing healthy dogs for dissection purposes."

"Our dog was a donor dog and was just as good a specimen (anatomically) as the non-donor dogs (purchased from Nasco). I was more comfortable dissecting a dog that had not been purpose-bred and the fact that a family donated their pet commanded a greater respect during lab."

University of Florida College of Veterinary Medicine

"As a freshman veterinary student with a conscientious objection to the slaughter of healthy animals for the sole purpose of education, I did not want to dissect a purpose-bred pony for a required large animal anatomy class. I found it very difficult to convince a committee of veterinary faculty and clinicians that using a client-donated animal was a perfectly acceptable alternative. After being given the choice either to transfer or take a leave of absence I knew more extreme measures would have to be taken for the school to take my objections seriously. I weighed several options which included contacting the media and finally chose to get a lawyer. Within several days after receiving a letter from my lawyer I got word from the college that a client was willing to donate his horse and that it could be used for the large animal anatomy class."

In an anatomy room filled with purpose bred ponies, my client-donated horse stood out like a sore thumb. I told myself I could live with the ridicule and strange stares for three more years of vet school, it's the guilty conscience that I could not bear for the rest of my life.

In the fall of this year the sophomores (myself included) will use cadavers to practice spinal taps and other procedures. I am hopeful University of Florida will approve a Body Donation Program so the veterinary students can learn these procedures on client-donated cadavers. An ethical source of cadavers for anatomy and other laboratories is a crucial element of modern veterinary medical education.”³⁰

Kari Pohost
Class of 2003

University of Illinois College of Veterinary Medicine

“With all the discussion and research into computer programs and anatomic models to replace the anatomy cadavers in first-year veterinary curricula, I’m perplexed by the rarely-mentioned alternative to dissection: a better source of the dissected animals. I’ve seen the computer programs, and some of them are excellent, and I believe they can completely replace dissection at the high school level. However, I feel the benefits from dissection and prosection of cadavers at the veterinary school level is only supplemented by the computer programs, and cannot be replaced by them. It’s about time the medical school concept of donated bodies to teach anatomy and surgical psychomotor skills was applied to veterinary medical education.”

Linnaea Stull
Class of 2002

University of Missouri College of Veterinary Medicine

“Clearly, veterinary schools must teach anatomy, and cadavers are the ideal anatomy teaching tool. However, sacrificing healthy animals for dissection is morally reprehensible. The murky background of class B dealers who supply these animals compounds the wrongness of using commercial source specimens.

Body Donation Programs are more than simply an ethically acceptable alternative - they are a moral absolute. From the sorrow of a pet's death, they offer a sense of purpose for grieving pet owners. Clients who choose to participate are comforted by the idea of their pet's final contribution. Vet students, too, benefit from these programs. Donated bodies have associated histories and assorted lesions that add a valuable dimension to anatomy. What better introduction to pathology than gross specimens with vivid histories and multiple examples of normal for comparison.

Needless death of animals is the wrong introduction to veterinary medicine. We are entering a caring profession, and compassion is a good thing.”³¹

Betsy Arthur
Class of 2003

Virginia-Maryland Regional College of Veterinary Medicine

"My objection to the current use of pound animals is that it sends students a mixed message -- specifically, that it's OK to kill healthy animals when it suits our purposes and when those animals do not have a personal advocate, a.k.a. an owner with a checkbook; otherwise, we should dedicate our professional lives to enhancing and preserving the lives of animals. This two-faced approach to veterinary education is reprehensible. Medical schools do not kill humans for educational purposes. If the veterinary profession wants to enhance its prestige and standing within the medical community, it should act in a more professional manner. Patients are patients, and teaching commodities are teaching commodities. It would behoove the administrations of our nation's vet schools to start making the distinction."³²

Anonymous veterinary student

"The learning of surgical principles at the VMRCVM currently involves the sacrifice of many animals during the third year of the curriculum. Previously, the only alternative available to students was the use of cadavers of dogs who were healthy, euthanized only because they were homeless...Many students were concerned about the source of these cadavers, as well as the mechanism of euthanasia of these animals. Students proposed obtaining cadavers of animals who died or were euthanized for medical reasons... It is our hope that the VMRCVM will institute a client donation program to obtain cadavers from our veterinary teaching hospital who died or were euthanized for medical reasons. This would further prevent the unnecessary death of homeless animals in veterinary education."³³

Lori Blankenship
Class of 2000

Norwegian School of Veterinary Science

"I am a third year veterinary student at the Veterinary College in Norway. As a veterinary student I have to have knowledge about how animals look internally, and one way of doing that is, of course, dissection. Animals are killed for dissections, but I don't think it has to be that way. You can also use naturally dead animals, as I did in my studies.

One solution is to call animal owners and ask them if they can give you their animals that die naturally. In that way I got horses, cows and sheep for dissection. And it is a very good solution for veterinary colleges who want to use naturally dead animals to link up with veterinary clinics, both for small and large animals.

And so I brought the animals to the pathology lab - it is important that it's a non-infectious disease or an injury and then I did the dissections on the ethically-sourced animals.

The use of animals for dissection is actually the most common harmful use of animals in education. Both in biology and veterinary medicine, and also in many other fields, they use killed animals for dissections, so I think that starting to use naturally-dead animals is really one of the most important ways of decreasing the number of animals killed for education."³⁴

Siri Martinsen
Class of 2002

University of Sydney Faculty of Veterinary Science

“A program where clients donate the bodies of their deceased animals is the only way to ensure an ongoing and ethical means of obtaining cadavers for anatomy and surgery classes. Other sources make use of animals surplus to society or industries’ needs, a situation we as veterinarians should be doing our best to end. Using the bodies of healthy dogs that are surplus to society’s needs does nothing to alleviate the huge over-population problem, and in a way condones it.”

“I consider the use of dogs surplus to the greyhound racing industry an unethical and unjustifiable source. Any move by universities to make use of this disgraceful waste of life is seen as not only taking some of the burden off these breeders, but also as promoting the industry.”³⁵

Lucy Fish
Class of 2001

Murdoch University Division of Veterinary and Biomedical Sciences, Australia

“Here in Australia we're on the verge of bringing in Australia's first "alternative" veterinary surgical programs. I and a classmate are the first veterinary students in Western Australia allowed to learn surgery without killing healthy animals in the process. We've been allowed to learn partly by sterilizing homeless cats and dogs from shelters instead. It would significantly increase our confidence if we were able to practice these and other surgical procedures on ethically-sourced cadavers prior to performing them on real patients.

It's very important that veterinary schools end their reliance on pounds and disreputable animal dealers to provide animal cadavers for psychomotor (surgery) and anatomy labs. It is perfectly accepted that we, as humans, decide upon obtaining our driver's license whether or not to donate our bodies in the tragic event of our death; it should be just as natural to do the same with our companion animals. An educational memorial program at our teaching hospital would provide ethically-sourced cadavers for veterinary students, such as myself, wishing to obtain their education without purposeful loss of animal life.”³⁶

Andrew Knight
Class of 2001

Appendix IV

Veterinarian endorsement of Educational Memorial Programs

"We believe the donor animal program is a workable program that can be implemented by veterinary schools. The donor animal program is cost-effective and presents a number of advantages over acquiring animals via the traditional route. These advantages include providing students with a valuable education that emphasizes the clinical aspects of anatomy and the ability to integrate the ethical values of veterinary medicine beginning in the first year of veterinary education."¹

A.M. Kumar, Ph.D., MVSc.
Donald Brown, D.V.M., Ph.D.
Gary Patronek, V.M.D., Ph.D.

"At Texas A&M College of Veterinary Medicine, we have implemented a 'Body Donation Program' whereby pet owners in the local community (who have made the difficult decision of euthanasia) can donate their pet's body to the veterinary school. From an educational perspective, the use of client-donated dogs has some benefits. Not only does it bring pathology into the anatomy lab, but it also forces students to look at several cadavers to get a good feel of normal versus abnormal."²

Anton Hoffman, D.V.M., Ph.D.
Texas A&M University
College of Veterinary Medicine

"The College of Veterinary Medicine at Western University of Health Sciences will rely solely on a Willed Body Program for all cadaver accessions used in the curriculum. All animals will have died or been euthanized due to serious illness or injury. Animals without guardianship that are killed secondary to the 'over-population problem' will not be included in our Willed Body Program.

We are at a point in human civilization where we need to ethically account for our actions. Human medical training has relied on and benefited from Willed Body donations for eons. We as veterinarians must show the same respect for our patient populations. We must no longer kill or rely on suspect means to fill our cadaver labs."⁷

Lara Marie Rasmussen, D.V.M., D.A.C.V.S.
Assistant Professor
Western University of Health Sciences
College of Veterinary Medicine

"We train doctors of human medicine without purposefully harming or killing human beings, so we can apply the same principles in the training of doctors of veterinary medicine. It is not educationally necessary to harm and kill animals in veterinary medicine. Training veterinary students without harming animals has been done in many veterinary medical schools across the country for those students who are conscientious objectors. Furthermore, it has been shown repeatedly that these students' skills as veterinarians are on par with those of students who were trained in the traditional animal-consumptive manner. The Client Donation Program, which is similar to human body will programs, is an important part of the process of making veterinary medical education sound, both pedagogically and ethically."⁸

Nedim C. Buyukmihci, V.M.D.
Professor of Ophthalmology
University of California
School of Veterinary Medicine

"I graduated from Ohio State University in June 1995. Before I started vet school, I had inquired about obtaining anatomy cadavers that had died of natural causes or were euthanized for medical reasons. The important thing for me at that point of my career was that the animal did not die for the sake of my education. Ohio State (back in 1991) then threatened to withdraw my admissions if I was not willing to participate in the anatomy laboratories as is. I obtained legal counsel. This is when Ohio State backed down and responded to my request. So, I was able to reach my goal of not using any animal that had died for the sake of my education, but some would not consider all the sources "ethical."

As a practicing veterinarian, I cannot tell you how many people would receive great comfort in donating their beloved pet's body for the betterment of veterinary medicine - and to save the life of a healthy animal. I am looking forward to working with the University of Wisconsin on helping them create their own Willed Body Donation Program. I know that many people in this area, caretakers and veterinarians alike, will welcome the opportunity to participate."³⁹

Susan B. Krebsbach, D.V.M.
Madison, Wisconsin

"I believe that my veterinary education did not emphasize enough, the veterinarian's role in addressing pet overpopulation as a primary cause of companion animal mortality each year.

The concept of euthanasia of "surplus animals" in our communities has become commonplace. By allowing such "surplus animals" to be used in a veterinary teaching environment, we reinforce the belief that the pet overpopulation problem is nothing but an inexhaustible supply of animals available for veterinary education. Sadly, this practice desensitizes veterinary students to the thousands of animals that are euthanized each year in animal shelters around the country.

As a veterinarian who's spent the past four years practicing quality shelter medicine at The San Francisco Society for the Prevention of Cruelty to Animals, I applaud the Body Donation concept. Students are still taught the necessary skills to become competent veterinarians, but they are not desensitized to the pet overpopulation problem."⁴⁰

Ilana Strubel, D.V.M.
Pacifica, Calif.

"Since the major role of veterinary medicine has dramatically shifted from one that helps farmers with their animal property for production means to one that helps families with their beloved pets, teaching methods must evolve with this in mind. Most of today's students did not grow up on farms. They grew up loving companion animals and are now seeking the veterinary profession due to their deep respect and devotion for animal life and well-being. These beliefs must be honored and promoted since compassionate care is essential for companion animal medicine.

Respect and compassion for animal life and welfare is greatly undermined when homeless animals are exploited and even killed, out of sheer convenience, for our veterinary training. What message are students getting when an animal loses its rights for life and welfare simply by being a victim of overpopulation?

As a veterinarian who sought the ethical treatment and use of animals in my training, the source of animals for anatomy and surgical courses were of great importance to me. Owners of terminally ill pets often ask to donate their companion's remains for science, in hopes that their pet's death could in some way contribute to the welfare of future animals. This allows for a very meaningful and abundant source of cadavers for veterinary training, which still respects the life of the beings we are learning to help.

Just as human medical training does not "practice" on homeless or disabled people before venturing out on true patients, a thought considered utterly inhumane, neither should we on misfortunate subjects.

Veterinary medicine has long been delinquent in dealing with the pet overpopulation issue. Let's end pet overpopulation once and for all, through revolutionary spay and neuter programs and breeding

bans, let's stop callously taking advantage of this great misfortune of companion animals and teach compassion and respect for the rights of our fellow animals. It is time we live up to our profession's great potential as healers and not killers of our patients."^{A1}

Jennifer Kissinger, D.V.M.
Berkshire Cat Hospital
Lenox, MA

Appendix V

Step-wise plan for implementing an Educational Memorial Program

No two colleges are likely to take identical approaches to implementing a donation program. However, the following basic outline is common to existing successful programs:

1. Formulate a committee of interested faculty and staff in the basic and clinical science departments, including especially the gross anatomy faculty and ICU/Medicine technicians. It is vital to the success of the program that the faculty and staff support and understand it. Veterinary students can be recruited to help with the embalming and physical labor as the program begins to succeed; therefore, it is strongly recommended that the students are also involved in giving input in these early stages.

2. Assess available facilities. Is a storage cooler room available in clinics and near the anatomy laboratory? Are there tables for embalming in an anatomy preparatory room? If cadavers will be used for surgical procedure or psychomotor skills labs, is there freezer space to store the bodies?

3. Draw up a budget for the following items:

- Permaflow solution (Dodge Chemical Co.)
- Peristaltic pump (Fisher Scientific)
- Needles, cannulas, catheters
- Stock embalming solution (Hydrol Chemical Co.) or FES/PG
- Ear tags (Nasco Company)
- Euthanasia brochures
- Client consent form for donation of pet remains
- Additional freezer storage space
- Technician salary or student compensation

4. Submit a protocol for animal use to the Institutional Animal Care and Use Committee (IACUC). Institutional policies typically specify that IACUC approval is required for the use of all vertebrate animals, even deceased ones.

5. Create a stepwise plan for the program, starting when the client signs over the body, to transporting of the body to the anatomy lab, embalming, storing, and disposing.

6. Consider options for disposition of the remains. Regulations for disposal of the body vary from state to state. Contact state authorities. Cremation is standard at several universities. Consider returning the pet's ashes to the client (this would involve individual cremations and careful planning) or consider some other way of honoring the human-animal bond the client and pet shared.

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STEPS TO FOLLOW

1. Choose your course

If you have not yet been admitted to a competitive course, such as a veterinary course, then proceed with care. Whilst not so in many universities, in some institutions (particularly veterinary colleges) any suggestion that you have animal rights sympathies may prejudice your chances of admission. If you suspect this may be the case, or if in reasonable doubt, then enquire discreetly or anonymously about the animal usage involved in the course, and the alternatives available for conscientious objectors.

If harmful animal usage is a part of the course and humane alternatives are not yet available for conscientious objectors, but you wish to remain true to your beliefs, then you have two main choices. You can choose another course or university that does provide alternatives, or you can gain admission and hopefully become responsible for your course or university changing its position to allow alternatives and conscientious objection! In this case you'll have the enormous satisfaction of knowing that you've saved what will probably be a large number of animal lives, in the present and the future, and that you've opened up another course or university to students who don't want to harm animals during their education.

If you choose this route, then DO NOT give any indication that you may be a conscientious objector until after you are safely enrolled. It's always OK to say that your position changed after enrollment, once you found out about the animal usage in the course, and the alternatives available, in more detail, and had time to consider the issue in depth. Especially given that one of the objectives of universities is to teach their students to think. They should therefore be pleased that your thinking has evolved!

Requirements to sign statements to the effect that you will participate in harmful animal usage during your training are blatantly unethical and fortunately rare. They are challengeable on the basis that no university can require you to sign away your conscientiously held beliefs or your civil, constitutional or other legal rights, where applicable, and as such provide a weakness that can be exploited through adverse media publicity, and possibly legal action.

Once you are safely enrolled you can raise hell, if necessary. Unlike staff members, you cannot be silenced or sacked. The only way the university can get rid of you is by failing you. So always keep your marks safely above pass level, so that if you are failed you can show that your marks have been manipulated, or that you failed as a direct result of your refusal to participate in harmful animal usage, which would greatly strengthen your case against the university.

2. Start as early as possible

Do start as early as possible, particularly if you are likely to be facing a fight. It takes a lot of time to educate yourself about humane alternatives, prepare an alternatives submission, and negotiate with your university. Even more time is required if you need to pursue your case legally. Ideally you should allow several full-time weeks, and several months at least if you need to pursue things legally.

In particular, if you do not give your academics several weeks or, preferably, months, notice of your request for alternatives, then they may claim they did not have time to prepare alternatives for you, if these need to be specially prepared. It will also be far more likely that you will be given substandard alternatives, which will portray humane alternatives in a poor light at your university and may not provide you with the best learning opportunities.

On the other hand, do not be completely discouraged if you have left things until the last minute. In reality most students begin their campaigns only once the labs have already begun, yet many are still highly successful.

As stated previously, it is essential to keep your marks safely above pass level, so that if you are failed you can show that your marks have been manipulated, or that you failed as a direct result of your refusal to participate in harmful animal usage, which would greatly strengthen your case against the

university. If things get busy, as they very commonly do when running an alternatives campaign, then keeping your marks reasonable will require you to be professional and organised, which serves to re-emphasise the need to allow yourself as much time in advance as possible.

3. Find out exactly what animal use is involved, and what alternatives are available

Request this information from the academic in charge of the course. Do this as early as possible.

You need not do this in writing, however, a written request should get you a written response, and is advisable if you suspect that you may be given incomplete or inaccurate information, that the academics may later change their story, or that you will need to pursue the matter further. Remember, keep it concise and polite.

Here's an example letter:

<date>

<academic's title, name and address>

Dear <academic>,

Animal use in <course>

I am a student who will be taking the above course during <dates>.

Can you please write back to me informing me what use of animals or animal tissues, living or dead, is involved in the practical component of this course, what the sources of those animals or animal tissues are, and what non-invasive or non-animal alternatives are available to students not wishing to participate in such activities.

Could you please also list the learning objectives for any practical classes involving the invasive use of animals or animal tissues, living or dead, for which non-invasive or non-animal alternatives are not available.

I would appreciate a timely reply.

Thank you and sincerely,

<your name and address>

Asking what the "learning objectives" or "skills to master", etc., are, may force the academics to think about and define what it is that they are trying to teach, and you may then be able to encourage and work with them to find the most effective ways of doing so, given the needs of their conscientiously objecting students. For example, you may present alternatives submissions containing lists of alternatives that satisfy the stated learning objectives.

Academics will commonly fail to respond as a means of stalling you. Prevent this by always requesting a timely reply. If you do not receive one within, say, seven days, send another letter requesting a response by a certain date, e.g. another seven days, and informing the academic that if they fail to provide you with written notice to the contrary by the requested date you will assume that no harmful animal use is required in the stated course, and that, if your assumption is incorrect, you request non-invasive or non-animal humane alternatives. Carefully choose your wording to cover all possibilities.

4. Work out your own position

Start by educating yourself about humane alternatives. Read the relevant articles in the previous chapter. Consult the other resources listed towards the end of this guide if necessary.

Then work out your own position in detail, *before* any negotiations commence. Decide what you are and are not prepared to do.

The following is an example position statement based on the one I worked out for myself at Murdoch University in 1998. It is not intended to be adopted without further thought; indeed everyone will have their own individual position. It is, however, intended to provide an example of the sorts of issues and choices you may need to consider.

What classes will I boycott?

I'll boycott any classes where *significantly sentient animals* are *seriously harmed or killed, primarily for teaching purposes*, and not for some other reason. E.g.,

I would boycott:

- Dissections or experiments involving the cadavers or body parts of animals killed just for teaching purposes.
- Non-recovery surgical training on animals that would not otherwise be euthanased in the immediate future for medical reasons.
- Recovery surgical training on *any* animals where the procedure is more than minimally invasive, regardless of if and when they are to be euthanased, due to the post-operative suffering. Post-operative care can be learnt ethically on real patients.

I would not boycott:

- Killing or serious harming of minimally sentient organisms. E.g., killing cells in cell cultures via viral infection in virology experiments.
- Harming or distressing animals where the level of harm or distress is relatively minimal. E.g., blood or urine sampling.
- Serious harming or killing of animals for reasons unrelated to teaching purposes. E.g., assisting a farmer with a husbandry procedure performed on a farm animal during compulsory farm experience. These procedures would be performed whether or not students were present.
- Dissections, simulated surgeries, or other uses of *ethically-sourced cadavers* (obtained from animals that have died naturally or in accidents or been euthanased for medical reasons), e.g. client animals euthanased for medical reasons in the veterinary teaching hospital and donated for teaching purposes.
- Usage of cadavers from animals that have been killed for reasons that, although unethical, are not related to teaching purposes. E.g., greyhounds donated due to poor racing performance, or abattoir byproducts.

Please note that when I established my own position at Murdoch University in 1998, conscientious objection and humane alternatives were almost unheard of at Murdoch and most other Australian universities, and the attitude of Murdoch towards humane alternatives was very hostile. Some of the activities I participated in or was prepared to participate in if required may not have involved the serious harming or killing of significantly sentient animals primarily for teaching purposes, but were nevertheless clearly unethical. E.g., dissection of greyhounds euthanased due to poor racing performance, dissection of abattoir byproducts, and farm husbandry procedures (I was not required to participate in these, although I was in the dissections).

I was prepared to participate in these activities because I knew that if I tried to oppose all harmful animal usage in my veterinary course, rather than simply focusing on the worst cases, I would very probably have bitten off too much, failed the course, been kicked out of vet school, and failed to achieve the significant improvements I *was* able to make within the course, and that I hope to make on other animal welfare issues as a qualified veterinarian.

It's better to tackle only as much as you can realistically achieve, and to achieve it, rather than to tackle everything that's wrong, and achieve little or nothing because you've spread yourself too thin.

However, now that some very powerful precedents at Murdoch and other universities around the world have been set, as of 2002 it's probably possible, and indeed probably quite achievable at many universities, (and certainly most Australian universities), to win humane alternatives to virtually all harmful animal usage a student may be faced with. I certainly would NOT make the compromises I was prepared to make in 1998 if I was a student in 2002, because the environment within Australia, and in some other countries, has changed since then, and it's now possible to achieve much more. And it will continue to become possible to achieve more and more, as progress is made over time.

Every person is unique. You must work out what you realistically believe you can achieve given the university environment you are in at the time, (and do NOT underestimate your power in the face of a hostile university if you follow all of the steps in this guide), and you must find a position that you can live with. Probably the most important thing is that ultimately you must be able to live with your choices.

Note that it may strengthen your case but it is not generally legally essential, at least in the US, that you be consistent in your beliefs, e.g., that you maintain a vegetarian or vegan diet and lifestyle. (It's more important that your beliefs are sincere and conscientiously held).

Finally, decide how far you are prepared to go to maintain the position you have decided upon. Are you prepared to be ostracised by or endure the hostility of your classmates and academics? Are you prepared to lose marks? To fail? To pursue your case legally and through the media if need be? To hunger strike? Everyone will have their own position and level of commitment. But you must know yours *before* the negotiations commence, and the pressure comes.

5. Formally request alternatives

Do this as early as possible. As stated previously, if you do not give your academics several weeks or, preferably, months notice of your request for alternatives, then they may claim they did not have enough time to prepare alternatives for you, if these need to be specially prepared. It will also be far more likely that you will be given substandard alternatives, which will portray humane alternatives in a poor light at your university and may not provide you with the best learning opportunities.

If, however, your academics fail to publicise to the student body information about animal use well in advance, along with a request for students with difficulties with the described activities to contact them, then you can use this in your defence if you are unable to give adequate notice.

Simply state that you are unable to participate in the relevant activities due to your conscientiously held beliefs, and request alternative learning and assessment activities. Resist the temptation to get into further discussions about your beliefs, unless the academic is supportive. Otherwise they'll probably only try to pick holes in your beliefs and attempt to use any they can find, real or imagined, as a reason to deny you alternatives. Almost certainly you won't change their minds and they won't change yours. It is acceptable for them to question you to determine that you are genuine in your beliefs but they should *not* seek to cross-examine you unduly, harass you, or seek to alter your beliefs.

A written request will not be necessary in every case. A polite written request is, however, advisable, if your academic is anything other than supportive and trustworthy. In this case make your request as far in advance as possible, and ensure it is dated.

For example:

<date>

<academic's title, name and address>

Dear <academic>,

Animal use in <course>

I am a student who will be taking the above course during <dates>.

I wish to inform you that participating in or directly observing activities involving the harmful use of animals, including performing invasive experiments on animals, anaesthetised or otherwise, or on animal tissues, and including dissecting animal cadavers other than those *ethically-sourced* (obtained from animals that have died naturally, in accidents, or been euthanased for medical reasons), would be a violation of my conscientiously held beliefs. This includes participating in <name the practical classes concerned>.

I am, however, keen to learn the material involved in other ways. I therefore respectfully request that you arrange for me alternative learning and assessment activities for the above practical classes that do not involve performing or directly observing invasive experiments on living animals or animal tissues, or dissecting cadavers, unless ethically-sourced. I would be glad to work with you to establish acceptable alternatives, and can be contacted on the number below.

Can you please write back to me informing me what alternatives you will be providing for me.

I would appreciate a timely reply.

Thank you and sincerely,

<your name, address and phone number>

The alternatives you agree on should ideally be of approximately equal difficulty and require a similar amount of time and effort as those you are boycotting. They should *not* be punitively difficult. Some degree of compromise may be required if the situation is difficult however.

6. Be prepared to present an alternatives submission

Be prepared to present ideas for alternatives or even a formal alternatives submission, but remember that if it comes to the crunch, it's the responsibility of the paid academic staff to design the curriculum, not yours. In reality, though, you will commonly succeed as the first conscientious objector only if you are prepared to do this work yourself.

An alternatives submission is a brief description of the laboratories or practical classes you wish to boycott, including the stated learning objectives for each, if available, along with a list of suggested alternatives for each that satisfy any stated learning objectives - whether individually, or in combination with other alternatives. You can compile this list fairly quickly using the internet alternatives databases and other resources listed in the following chapters. You'll commonly find a couple of hundred alternatives for five to ten laboratories, without consulting more than one or two sources. Most teaching experiments are repeated with little variation around the world, and hundreds of alternatives have been created for them.

Include a covering letter repeating your objection to participating in the relevant activities and your request for alternatives. You may wish to include additional information in appendices, such as some of the articles in this guide, summaries or full texts of relevant published studies demonstrating that alternative students are at least as competent as those trained via harming animals (summaries are available at www.hsus.org by following the links to Animals in Research, Animals in Education), information about courses at other institutions both domestically and internationally that use humane alternatives, etc.

Examples of alternatives submissions, and perhaps of additional information to include, may be found on web sites such as the InterNICHE web site or the web site associated with the AVARStudents email list (see Groups following). You may be able to download and adapt one of these existing submissions to your needs in a relatively short space of time.

Binding is not expensive and will give your submission a professional look. You'll probably need several copies. You will need to allow at least several days, and preferably a week or more, to prepare a good alternatives submission. It's not at all necessary to read the details of all of the alternatives or other material you include, and it will take you *far* longer if you attempt to do so. Just be familiar with it, and impress your academics with the quantity and quality of the material you've managed to provide.

Besides presenting your alternatives submission to the faculty, you may also wish to present it to your university's Institutional Animal Care and Use Committee, Animal Ethics Committee, or similar ethics committee, if one exists. Such committees generally oversee and grant approval to all animal usage that occurs at their universities. You may quote passages from relevant national or state legislation or Codes of Practice that require alternatives to be used wherever possible, and request that the members of the ethics committee fulfill their duty to uphold the legislation or Code and stop the laboratories altogether.

E.g. within Australia, the National Health & Medical Research Council (1997) *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* governs all use of living non-human vertebrates in research and teaching and states that:

“Section 1.9 Techniques which replace or complement the use of animals in scientific and teaching activities must be sought and used wherever possible.

Section 7.1.1 Animals are to be used for teaching activities only when there are no suitable alternatives for achieving the educational objectives.”

By 2001 the NHMRC Code was legally enforceable in all Australian states and territories barring Western Australia, (although expected to become legally enforceable in WA with the passage of new animal welfare legislation in 2002), and the Northern Territory; and in *all* states and territories government funding of universities is dependent on compliance with the Code.

The composition of most ethics committees is not at all balanced, and is in fact commonly weighted in favour of animal experimenters. However, this does not mean that the committee is in a position to ignore a strong case for the cancellation of certain labs, particularly if it is hinted that your submission may be leaked to the media if the committee does not respond appropriately.

The ethics committee submission approach was successful in largely ending Murdoch University's physiology vivisection laboratories in 1999. A similar student submission (to the veterinary college rather than the ethics committee) ended all physiology vivisection laboratories at the University of Illinois College of Veterinary Medicine in 2000.

The cancellation of the labs as a result of your successful submission to the ethics committee may make you very unpopular with those students who wish to learn by harming animals, not to mention the academics in charge of the course. This can, however, be minimised if you request that the committee follows the correct procedures of maintaining confidentiality.

Always request a timely response from the faculty and the ethics committee in response to your alternatives submission, and make sure you follow up until you get one.

7. Exhaust all existing avenues available within your university

If necessary go up the academic chain of command within the faculty, and then within the university, appealing the decision to deny you alternatives. Appeal to all relevant Heads of Departments, Deans, Vice-Chancellors, etc., and to any applicable committees. See if your student organisation or other student representatives can help. Many university committees have student representatives.

Document every approach you make to your university. To be able to show that you were justified in taking the matter outside your university, e.g., to the media or the courts, it's important to be able to show that you first exhausted all the existing avenues available within your university.

8. Create new avenues and apply pressure: State your goals, student surveys, conscientious objection policies, letter writing appeals and petitions, legal action, media coverage, hunger strikes, strategies of last resort.

If you have exhausted all the avenues available within your university without success, then you will probably need to create some new avenues and apply some pressure. The following are a selection of strategies you might use. But they are certainly not the only ones. Seek further ideas if you need to, e.g. in the student success stories and on the humane education email lists described in the following chapters, then decide what is best for your particular situation, and create your own campaign!

State your goals

When things start getting really controversial all sorts of accusations may start flying around about your real motivations and intentions (e.g. you are trying to “end all animal usage for all students”, you are really “animal rights terrorists”, etc.). An excellent way to counter such claims is to clearly *state your goals* as soon as you know what these are – particularly if you are getting organised as a student group. This will clarify your intentions for your academics, administrators, fellow students, and the media, etc.

For example, in 1999, eight University of Illinois veterinary students signed the following statement and distributed it with their alternatives submission and placed it on a student web page for all to see:

“MISSION STATEMENT

Our goals as a student organization are:

- *To insure the incorporation of viable alternatives to live animal terminal use.*
- *For students to be informed within the syllabus about the availability of alternatives.*
- *For these alternatives to be treated as valid options to the current terminal labs.*
- *For the professor to present and implement the use of the alternatives in class.*
- *For the alternatives to be presented in a timely manner to ensure the purchase of an appropriate number of animals for the terminal labs.*
- *For the College to ensure that the animals are acquired from reputable and humane sources; for this information to be readily available to students upon request.”*

Student surveys

A 1999 student survey was highly successful in helping to bring about the elimination of all physiology vivisection laboratories at the University of Illinois College of Veterinary Medicine in 2000. Previously, over 100 animals' lives (pigs, dogs, rats, and rabbits) were taken each year in the first year physiology curriculum. Another student survey conducted in 2001 was similarly successful at the Massey University Institute of Veterinary and Biomedical Sciences in New Zealand. From 2002 two of the six third year physiology vivisection laboratories were stopped altogether, and the remaining four were replaced with demonstration laboratories, with two sheep being killed for the entire class, instead of a sheep for every student group. The number of sheep killed each year was decreased from 68 to eight, and the Physiology Department intends to end these laboratories entirely from 2004. Both of these official university surveys of student opinions of the labs were organised by students.

There are commonly a very large number of students, probably the majority in fact, who are concerned about and opposed to such laboratories, but who lack sufficient courage or depth of caring to publicly

express any opposition to the status quo. The anonymous student survey allows these students to safely express their views and to be counted, and can very effectively destroy the common claim that students desiring alternatives are only a very small minority that the university should not bother catering to.

Of the 295 respondents within the 370 students surveyed for the 1999 University of Illinois survey, for example, 59% said that they believed the non-survival animal physiology labs were NOT *"worth the resources used"*. Only 20% felt they gained *"great benefit"* in their understanding of physiology from the laboratories.

The questionnaire also allowed for student comments, which were similarly beneficial. Actual student comments included the following:

"It was beneficial in the sense that we handled live tissues, but we weren't prepared well enough. It was difficult to get any great understanding of physiology because we worried most of the time about not having our dog bleed to death or die of anesthetic overdose before the experiment was over. In the end, what I learned about physiology (cardiology and respiratory physiology) I taught myself from the notes."

"It was a good experience in learning how to intubate an animal for anesthesia, monitor the animal, etc., and venipuncture - however, these experiences could've been gained without sacrificing an animal. I did learn physiology concepts from the lab also but I probably would've learned that part from a step-by-step procedure, cause and effect type report on paper."

"If you tell me a drug works in a certain way - I will believe it. I don't need every drug demonstrated in order to believe that it works in a certain way."

"We were completely unprepared. It was chaotic."

"The experiment went so poorly that nothing was learned. The review session after taught me what I learned - that tells me the labs were a waste of time, money, and dogs' lives."

"Proper surgical techniques were not used."

"This wasn't surgery: there was very little instruction on techniques, instruments, or anesthesia! NONSTERILE techniques were used."

"I didn't do the surgery in either lab, and we weren't taught about surgical techniques before the labs. This had absolutely no impact on my surgical skills."

"For each lab, ONE person in FOUR got to place an IV catheter; most of us were too preoccupied with having to kill the dog that physiology wasn't concentrated on; there was nothing surgical about the procedure."

"Nothing that was covered in those labs could not have been learned from a demo, or a video. The guilt I felt for participating outweighed all beneficial aspects of the experience."

"The stress of the whole ordeal was worth nothing in the end. I studied from these books not from my lab experience."

"During one lab, my group accidentally killed our dog with anesthesia overdose because of lack of experience and the impatient ill-given advice of a professor. The experience overshadowed the benefit gained by the first lab."

"Animals were put on earth by God to be used by man as he sees fit. As there is an overabundance of hogs in this country, not much in the way of resources was actually used."

The incredible value of such statistics and student comments to any campaign is obvious. Many more comments can be found in the abridged survey results, which may be available on the InterNICHE web site or the web site associated with the AVARStudents email list (see Groups following).

In the 2001 Massey University survey, third, fourth and fifth year students were asked whether they *completely agreed, agreed, were unsure, disagreed, or completely disagreed* with each of the following statements:

1. *The aforementioned labs have added to my scientific understanding of biological functions and behaviours.*
2. *The physiological knowledge gained from the labs justified the use of live animals.*
3. *The surgical knowledge and skill gained from the labs justified the use of live animals.*
4. *The anaesthesia knowledge and skill gained from the lab justified the use of live animals.*
5. *The live animals were treated with respect and dealt with in a humane way at all times during the lab.*
6. *It is acceptable to continue the use of live animals in the aforementioned labs to demonstrate an accepted scientific principle.*
7. *I would prefer to learn live tissue handling (surgical skills) in a more clinically oriented veterinary paper.*
8. *If alternatives were offered (computer simulation, models, videos, tutorials) as well as live sheep labs, I would choose not to participate in the terminal sheep labs.*
9. *I believe that such alternative learning methods could still provide me with the required knowledge of physiological principles taught by this course.*

The results were then analysed, discussed and presented in a report by an independent university statistician/researcher.

The Massey University questionnaire and survey report provide outstanding examples of how to design a survey questionnaire, statistically analyse the survey results, and present the information in the form of a scientific report. Statistical tables and coloured histograms clearly reveal the results of the survey – which were that, on every single category assessed, the opposition of the students to the laboratories increased between the third and fifth (final) years of their veterinary course, and, in several very important cases, (e.g. the value of the laboratories in teaching physiological knowledge, or in teaching surgical or anaesthesia skills and knowledge), even became *majority opposition* to the laboratories.

The preparation of the survey report by university staff and an independent university statistician/researcher meant that the results were analysed, discussed and presented in the scientific and statistical language of the academics themselves. It was partly the fact that this report was presented so scientifically and professionally that made it impossible for the academics to fail to see the obvious, which was that, as the students neared the end of their veterinary training, they believed that educational value of the laboratories was much less than they had previously believed or been told, and generally not worth the lives lost. It then became nearly impossible for those academics to maintain any sort of scientific credibility without acting as they did, by cancelling almost all of the experiments.

As stated, the Massey University questionnaire and survey report provide outstanding examples of how to design a survey questionnaire, statistically analyse the survey results, and present the information in the form of a scientific report. It would be very, very easy to adapt the Massey University questionnaire and survey report for use elsewhere. It should be available on the InterNICHE web site or the web site associated with the AVARStudents email list. Alternatively, enquire on the HumEdANZ@coollist.com humane education email list whether anyone has a copy (see Humane education email lists following).

The vast majority of Illinois and Massey veterinary students surveyed were in no way radical. They were, in fact, quite the opposite. Although it always depends on the campus in question, it is highly probable that similar results would occur if surveys were conducted in relation to similar teaching laboratories anywhere in the world. The student survey therefore potentially provides an extremely powerful tool to aid in the elimination of such laboratories.

Some general guidelines on preparing surveys and survey reports include:

- The survey questionnaire must be short. It should be possible for a student to easily complete it in under five minutes.

- Word your survey questions carefully and very impartially. Allow spaces for comments, as these can provide a very powerful source of ammunition against the laboratories.
- Try to work with your administrators and academics to make your survey an official university survey, if possible, as it will then have a far greater chance of being taken seriously by both students and academics. After all, your administrators and academics should have as much interest as you do in gauging the level of educational benefit the students believe they are getting from the labs.
- Don't get stuck with tallying up the results or typing up all the comments if you can avoid it! If it's an official university survey then the relevant university staff should do this.
- To ensure credibility with all parties, ensure that the analysis and discussion of the results in the survey report are as impartial as possible. Try to get independent university statisticians/researchers to do this. Try to get an independent and credible person to write the survey report. Certainly do not let this be done by any of the academics that have been calling you a "minority" up until now! If you can't find any independent and credible person to write the report, then either write it yourself, very, very impartially, or simply present the results, and allow the readers to draw their own conclusions.

Finally, ensure that the survey report is available to all academics and students. Ensure a copy is placed on reserve in your library and ask the administration to advertise its presence there.

If you are successful and your survey report or student comments about the labs could be helpful to others running similar campaigns elsewhere, then give it to InterNICHE and/or other groups and ask them to place it on their web sites, and have its presence advertised on the humane education email lists and in newsletters, etc.

Conscientious objection policies

At Murdoch University in 1998 student representatives on the University's governing Academic Council were successful in calling for the establishment of two independent university working parties into conscientious objection and animal use in undergraduate teaching. They were possibly only successful because of the great controversy that had arisen up until that point, due to the veterinary school's lack of compromise in providing physiology alternatives to myself and a classmate, and the consequent beginnings of adverse media attention and legal action. The results were that Murdoch adopted its *Guidelines on Conscientious Objection in Teaching and Assessment* in 1998, formally allowing conscientious objection by students, becoming, to my knowledge, the first Australian university to do so; and also undertook in 1999 a range of measures to facilitate the adoption of humane teaching alternatives. Since then numerous students have been provided with alternatives at Murdoch.

Following in Murdoch's footsteps, in 2000 the University of Sydney Faculty of Veterinary Science adopted its very similar *Faculty of Veterinary Science Policy on Conscientious Objection in Teaching and Assessment*, and similar policies supporting conscientious objection have resulted from student campaigns at some other campuses around the world, e.g. in the Portland Community College Science Department's *Biology SACC Response to the Student Choice Policy Regarding Animal Dissection in the Anatomy and Physiology Laboratory* in Oregon, US, in 1998; the University of Illinois College of Veterinary Medicine's *Animal Usage Policy* in 2000; and for Massey University (New Zealand) Institute of Veterinary and Biomedical Sciences' physiology laboratories in 2001.

Such "student choice" or "conscientious objection" policies are a way of getting alternatives successfully established at a university without generating the overwhelming opposition and consequent total failure that might accompany efforts to eliminate all harmful animal usage for *all* students.

(Although alternatives submissions and student surveys etc. can be, and have been, successful in eliminating harmful animal usage for all students at some campuses, e.g. most physiology laboratories at Murdoch University in 1999, all terminal surgical laboratories at the University of Sydney Faculty of Veterinary Science in 2000, all physiology laboratories at the University of Illinois College of

Veterinary Medicine in 2000, and most physiology laboratories at the Massey University Institute of Veterinary and Biomedical Sciences in 2001.)

Even simply trying to get alternatives established for students who request them can be very confronting to many academics and students who believe in the necessity of harmful animal usage for teaching, and who need that belief to remain intact in order to justify to themselves all the killing they have done in the past and “must” continue to do. Once the success of alternatives has been demonstrated, it is then much easier to eliminate the remaining harmful animal usage. However, the process may take many years.

Suggestions for getting a conscientious objection policy passed include:

- Try to get it passed at university, rather than faculty, level. A university-wide policy allows all students to potentially benefit, rather than simply those in one faculty.
- Also, a university level committee is generally much more likely to be impartial and to rationally consider the arguments than an animal-using faculty committee, and faculties should be bound by decisions made at the university level. You are much more likely to find allies on a university level committee, including sympathetic student representatives, and you should do your best to cultivate them.
- The issue of alternatives and conscientious objection is likely to be controversial, complex, and difficult for the university to deal with, given the opposing viewpoints of the faculty and conscientiously objecting students. It is not something that is likely to be easily sorted out at a single university level committee meeting with numerous competing agenda items.

Instead, try to demonstrate that there is a need for the university to set up a working party to prepare a report and make recommendations on how the university should deal with conscientious objection issues. Stress that the working party *must* be seen by all sides as being balanced and impartial, and that it should have an equal number of representatives from all sides - e.g., one from the affected faculty, one pro-conscientious objection student representative, one law school academic to advise on the legal obligations of the university (the addition of any independent, rational person is likely to be an advantage), and an independent chair who has the confidence of all sides (at Murdoch this was a respected humanities academic from another university).

The mandate of the working party should include researching the issue of animal use in teaching and alternatives generally, and also finding out what animal use occurs and what alternatives are presently offered at your university and other comparable universities; researching the legal obligations, if any, of the university towards students, animals and professional licencing organisations such as medical or veterinary boards; researching how other universities have dealt with student conscientious objection; accepting submissions on the issue from the university community and the general public; and finally, reporting on its findings and producing a set of recommendations for the university.

My submission to Murdoch’s working party: Knight, A., 1998, *Submission to the Murdoch University Working Party on Conscientious Objection in Teaching and Assessment*, unpublished, 21 pp, giving reasons for the adoption of a conscientious objection policy, a discussion of the definition of conscientiously held beliefs, advice for assessing student claims of conscientious objection, and for disseminating information about the policy to students and staff, along with supporting information about humane educational methodologies, is available for re-use. It should be available on the InterNICHE web site or the web site associated with the AVARStudents email list. Alternatively, enquire on the HumEdANZ@coollist.com humane education email list whether anyone has a copy (see Humane education email lists following).

- In order for the university to take the issue seriously enough to establish a working party and go through this process, it may be necessary to demonstrate that a real conflict is occurring that could adversely affect the university via legal action by students and/or media exposure, due to the failure of your faculty to compromise or consider the issue rationally, and further, that such conflicts are only likely to increase in the future with the rise of alternatives and student

conscientious objection around the world, if the university does not intelligently and rationally resolve the issue.

The beginnings of legal action and media exposure encouraged Murdoch University to take the issue very seriously in 1998. However, if you take such steps, be careful not to make enemies on the university committee or conscientious objection working party, as long as the issue hangs in the balance.

- Crucial to our success at Murdoch University was our strategy of calling for a policy allowing alternatives for students with conscientiously held beliefs against *any* teaching or assessment activity within the university – including activities unrelated to animal use. E.g., students unwilling to perform learning or assessment activities on holy days. This was seen as being consistent with the University’s ideals of tolerance, cultural diversity and democracy, and it very effectively countered the animal-using faculties’ opposition to the conscientious objection policy.

You may wish to try to get statements similar to the following included in your policy:

- The university recognises that some students may have conscientiously held ethical, moral, religious or cultural beliefs against participating in certain teaching or assessment activities.
- The university will make reasonable efforts to accommodate such students.
- All animal usage, including the sources of all animals or animal tissues used, whether living or dead, must be fully described in writing in the student information and course materials for all courses in which animals or animal tissues are used, and this information must be made available to all students at the start of semester or earlier.
- The rights of students to conscientiously object to teaching and assessment activities must at least be summarised (if lengthy) in writing in the student information and course materials for all courses in which animals or animal tissues are used, and this information must be made available to all students at the start of semester or earlier. The university policy on conscientious objection must be published in full in the university handbook, and any summaries must state that the full policy is available in the handbook.
- Students wishing to conscientiously object to a teaching or assessment activity should request an alternative from the academic in charge of the course as early as possible, e.g. preferably before the end of week three of the semester in which the activity is to occur.
- Academics may assess students to determine whether their beliefs are genuine conscientiously held beliefs, but may not cross-examine students unduly nor seek to alter their beliefs.
- Alternatives provided to a teaching or assessment activity should be of comparable difficulty, and should require a similar amount of time and effort. They must not be punitively difficult.
- Students unhappy with the alternatives, or lack of alternatives provided to them, may appeal, e.g. to an independent and balanced student appeals committee, with student representation, and strengthened by the addition of a law school academic in such cases, given the possible legal implications for the university.

The **Murdoch University *Guidelines on Conscientious Objection in Teaching and Assessment***, as approved by Academic Council in 1998, are provided as an example:

1. The University recognises that some students may have a conscientious belief which is in conflict with teaching and/or assessment practices in one or more units in which they enrol. The University shall endeavour to make reasonable accommodations to meet such beliefs.
2. In considering such cases, the University accepts that conscientious

belief is:

- an individual's inward conviction of what is morally right or morally wrong;
- is genuinely held after some process of thinking about the subject; and
- is uninfluenced by any consideration of personal advantage or disadvantage either to oneself or others, and perhaps when put to the test should be ordinarily combined with a willingness to act according to the particular conviction reached although this may involve personal discomfort or suffering or material loss.

A conscientious belief is more than just a strongly held belief or feeling, or a reaction to something which is distressful to the student. It does not have to have a religious basis, nor does the staff member have to accept its underlying reasoning.

The no-advantage clause does not mean that the student must accept a disadvantage or personal cost in order to prove a conscientious belief. Rather, it is used to establish that the belief is not designed to obtain an advantage or preferential treatment, and that the depth of the belief is such that the person is willing to act in accordance with the conviction even though this may be at a personal cost.

3. The onus is on the student to take the initiative in identifying a conscientious difficulty with a teaching or assessment practice and to draw this to the attention of the University before undertaking such practice. [A student cannot appeal against a practice which he or she has already undertaken.] It is preferable for students with a conscientious objection to be identified early, so there is time to assess it and to make any necessary arrangements. Wherever possible, students with a conscientious objection in a unit should raise their difficulties with the Unit Coordinator prior to the start of the unit or in the first three weeks of semester. If the difficulty is with units in future semesters or is systemic to units offered in the programme, the student should discuss this with the Programme Chair as early as possible. It is for these staff to assess whether the claim constitutes a conscientious objection and what arrangements can be made to accommodate it. The staff member has the discretion to ask for more information from the student in order to establish whether or not the student has a conscientious belief.
4. In cases where Unit Coordinators can foresee students having problems of belief in their unit, the unit study guide should mention these and advise any students with problems about this to see the Unit Coordinator.
5. The student can request that there be a suitable alternative, but has no right to demand that the alternative take a particular form. There are also countervailing factors to be taken into account in deciding whether and (if so) how to meet the student's concerns, including:
 - professional requirements: those of external registration bodies, and staff concerns to be able to certify that graduates have the basic professional competencies. This requires a careful consideration of whether or not the teaching or assessment practice at issue is essential for the training of practitioners in that profession.
 - whether it is a required or an elective unit (the case for expensive alternative arrangements in an elective unit is much weaker)
 - whether there is time to put alternative arrangements in place
 - whether it would result in the University breaching its equal opportunity obligations
 - whether other students would be disadvantaged in the quality of their education
 - cost
 - the University is not obliged to accommodate a conscientious belief which violates a law (e.g. a belief based on racism)
6. Students with a conscientious objection to a particular teaching or assessment practice should not simply be excused from an activity, but instead be given an alternative that is equally difficult. Alternatives made available to students with a conscientious objection do not have to be made available to all other students in the unit.
7. A Unit Coordinator who has considered a student case of conscientious objection should advise the Divisional Executive Officer of this, giving details of the nature of the conscientious belief and of any alternative arrangements made. The Divisional Executive Officer should maintain records of such cases for future reference.
8. A student who is dissatisfied with the decision of the Unit Coordinator or Programme Chair can appeal to the Student Appeals Committee. If the Committee determines that alternative arrangements shall be made by the Division and the arrangements then made (or not made) are still unsatisfactory to the student, the student may appeal about this to the Student Appeals Committee. If on the other hand the Division is not prepared to implement the Committee's decision on the grounds of cost, the issue should be referred to the Vice Chancellor for resolution.

[Source: Murdoch University, 2000, "Conscientious objection in teaching and assessment", *Murdoch University Handbook 2000*, Perth, Western Australia: Murdoch University, accessed online at wwwcomm.murdoch.edu.au/handbook.]

Despite the imperfections of this policy and the ongoing resistance of certain academics to alternatives, by the start of 2002 several Murdoch students including myself have been successful in gaining alternatives to dissection or vivisection, and no student who has pushed hard enough at Murdoch has been refused alternatives since the introduction of this policy. However, this is also because the university is now very aware of the potential adverse media and legal consequences of denying alternatives to students.

Once passed, you should ensure that the university circulates your conscientious objection policy to all academic staff and publicises it to all students. At least a summary should be included in the student information and course materials for all courses in which animals or animal tissues are used, with the full policy (if lengthy) being published in the university handbook.

Letter writing appeals and petitions

The advantage of a petition is that it's very quick and easy to sign, so many signatures can be gained. The advantage of a letter, on the other hand, is that it demonstrates a greater depth of concern about the issue, and, significantly, forces the university to respond to each letter individually, although standardised responses will be commonly used. Requesting answers to specific questions may go some way towards countering standardised responses.

Very commonly, students with beliefs opposite to yours will greatly outnumber you, at least when they are in public, as is sometimes the case when signatures are being collected for petitions. If you start a petition calling for the banning of all labs, (or even just humane alternatives for students who request them), you may provoke the creation of a counter-petition much larger than yours. However, you and your supporters are far more likely to be genuinely committed to the issue, and consequently it may be much easier for you to generate a large number of letters. Particularly if your opponents do not know that this is being done.

Here are a few general guidelines for writing a letter writing appeal:

- Keep it as short as possible, or people won't have enough time or interest to wade through it.
- Make it as easy as possible for people to write by providing a few points they might like to consider including, but ask that people express themselves in their own individual way to appear more sincerely concerned and less "coached".
- Stress that it's the number of letters received that is normally most important, and hence even single paragraph letters are very helpful if that's all people have time for, particularly if the university has to reply to them.
- The primary targets of your letters should probably be university administrators such as the Vice-Chancellor, rather than your faculty academics (although you should ask people to copy their letters to the faculty Dean and the academic in charge of the course), as the university administrators are much more likely to be concerned about the public image of the university and much less likely to be convinced of the "necessity" of harmful animal usage; and because they may have the power to force a reluctant faculty to change.
- Ask people to inquire what action the university intends to take concerning the issue, and ask them to follow up if they don't get a reply.
- Circulate your letter writing appeal as widely as possible. Post it to the humane education email lists described in the following chapter. Ask animal rights groups to forward it to their memberships. Include a line asking people to forward it to anyone else they think might be able to help.

Here's a fictional example:

Letter writing Appeal – Darkages University - <date>

Dear friend,

I am a 2nd year veterinary student at Darkages University, Perth, Western Australia, and am writing to ask for your help.

I am refusing to participate in harmful experiments on sheep, guinea pigs, rats, toads and other animals in the veterinary course. The worst have been in physiology, where groups of students anaesthetise sheep, then perform experiments on them. Students cannulate arteries and veins (insert tubes) and inject various drugs to demonstrate the effects on blood pressure. In some cases arteries are occluded entirely. They sever nerves to demonstrate the effects on heart rate, and force their victims to breathe various gases to demonstrate the effects on respiration. One procedure involves blocking the air supply entirely. At the end of the experiments those sheep that are still alive are killed by the students via a drug overdose.

I have asked for humane alternatives to be provided to these labs, but my requests have been denied. My refusal to participate in these labs has cost me marks.

It is extremely important that students who do not wish to unnecessarily harm animals be able to successfully complete their veterinary degrees in Australia. I therefore sincerely ask that you write a short letter to the university requesting that such students be provided with humane alternatives. Even just one paragraph will make a significant difference, for the university is very sensitive to the *number* of people in the community who care about this issue.

Please write or email:

<title, name and contact details of the Vice-Chancellor and other senior administrators>

and please copy your letter to:

<Faculty Dean and academic in charge of the course>

Please use your own unique wording in your letter. However points you may wish to include are:

- Hundreds of humane teaching alternatives for these specific physiology labs exist, including computer simulations, videos, non-invasive self-experimentation, and clinical experiences.
- Humane alternatives have been successfully introduced into many other university courses around the world.
- By August 1999 at least 28 scientific studies existed affirming the superior or equivalent teaching effectiveness of humane alternatives such as these.
- Humane alternatives are almost always cheaper in the long run.
- The NHMRC *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* clearly states that humane alternatives must be used in teaching wherever possible. This is legally enforceable in every Australian state and territory barring WA and NT, and is expected to become legally enforceable in WA in 2002.
- Ask why Darkages allows the continuation of such outdated and cruel labs.
- Ask why Darkages will not respect the conscientiously held beliefs of students who do not wish to unnecessarily harm animals in their training.
- Ask whether Darkages intends to make any positive changes.

Please ask for a reply, and follow up if you don't receive one (this forces the university to deal with the issue), and please copy the replies to me (so I know what the university is saying). Polite letters have a more positive effect than abusive ones.

Thank you so much for your help!

I would be grateful if you would forward this letter writing appeal to anyone else you think might be able to help.

Yours sincerely

<name, contact details>

Finally, if you win, follow up with a letter thanking all your supporters, and asking them to write and congratulate the university administrators and the faculty Dean and academic in charge of the course. Such praise will be very rare for them, will again demonstrate the depth of community concern about the issue, and will probably have a substantial positive impact.

Legal action

If your civil rights as a student or the legislated rights of the animals are being violated, and all else has failed, it may be worth pursuing legal action. Varying degrees of protection for the rights of conscientiously objecting students or of the animals used in teaching, especially below university level, were provided in the legislative or non-legislative provisions of several countries, including Argentina, Australia, Brazil, Catalonia, Colombia, Denmark, England, France, Germany, India, Israel, Italy, The Netherlands, Norway, Poland, the Slovak Republic, Sweden, Switzerland, Taiwan, and the US (both by the freedom of religion clause in the US Constitution, and by the laws of several states), by 2002. The 1986 European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes restricts animal usage in European education generally, to only those procedures deemed "*absolutely necessary*", and irreplaceable by any other comparably effective method. More general state, national and even international human rights or animal welfare legislation or agreements may also be applicable.

Several students in the USA and Germany, at least, have successfully sued their universities for refusing to provide them with humane alternatives. In 1995 University of Colorado medical student Safia Rubaii sued her university for US\$95,000 after failing physiology and being forced to re-take it at Creighton University School of Medicine in Nebraska, because she refused to perform a required experiment at Colorado which involved giving a lethal injection to an anaesthetised dog. Dr. Rubaii successfully graduated from the University of Colorado Faculty of Medicine in 1995. Other students have mounted lawsuits and failed.

Sympathetic lawyers may be willing to represent you cheaply or *pro bono* (for free). You may be able to find them through animal rights organisations, organisations such as the ALDF (Animal Legal Defense Fund) in the US, state Law Societies, or your campus student organisation. Legal advice

clinics in law schools or community legal centres may also be able to advise you, but you really need someone able to look at and pursue your case, and the legal avenues available to you, in depth.

Alternatively, you may be able to formally complain to your state government department responsible for administering any anti-discrimination or civil rights legislation in your state. In this case complain that you have been discriminated against in your education, and ask them to take the case on. A major advantage is that the process should be largely free. Disadvantages can include the slowness of the process, and the difficulty in demonstrating that your particular case is covered by the relevant legislation. This approach was, however, successful at Murdoch University in 1998 (see my story “Andrew Knight” in the following chapter).

Before becoming embroiled in legal action you need to carefully weigh up the potential costs, time, and energy required against the likely chances of success, and the ability to use the legal case to generate what could potentially be a very large amount of negative publicity against the university. In contrast to using letter writing appeals and media pressure, the costs, time, and energy can be very large indeed when mounting a legal case.

Media coverage

You may get to the point where you consider it necessary to apply media pressure. Most universities are very sensitive about their public image. The key is your ability to damage that image. The story of a student being penalised by a heartless university for refusing to kill animals, despite presenting lists of humane alternatives that are scientifically valid, and the use of which is required by legislation or Codes of Practice, is an extremely damaging one. It is also likely to be of great interest to the media.

The story will be best if, by normal standards, truly terrible things are being done to the animals (and you are able to provide good descriptions), you have been severely academically penalised (or even failed), and legal action against the university is proceeding. It is difficult to maintain the interest of the media, so it may be best to wait until the story is as strong as possible before contacting them. You may wish to increase the graphic appeal of the story (for TV, newspapers and journals) or vary it over time to maintain interest by use of demonstrations, caged protestors, vigils, etc., with the help of local animal rights groups, or even hunger strikes, lab raids and animal rescues (an outstanding example of the latter was provided by Thales Tréz in Brazil in 1998. His story, “Rescuing number 51”, follows). To occupy the high moral ground and maintain credibility, always try to present a non-violent and respectable image.

A word about defamation is appropriate at this point. It is not inconceivable that your university might threaten both you and the media outlet that publicises your story with defamation lawsuits in an attempt to silence you. However, this could leave the university exceedingly vulnerable to further adverse publicity unless your actions were obviously incorrect, and consequently such cases are exceedingly rare. The defences against defamation lawsuits vary around the world, but in Australia at least, a great deal of protection can generally be gained from ensuring that anything you publicise relates to a matter of public interest, and by sticking to the facts, and prefacing any opinions with “*In my opinion ...*”, or similar. Obtain legal advice relevant to your situation if you feel the risk is great enough. And remember that if you are an impoverished student, there would probably be little they could take from you, even if they won. Always weigh up the possible risks versus the likely benefits, and have courage! Media exposure has helped a number of students, including myself, win spectacular successes in campaigns around the world.

Exposing your university through the media is a very big step. It may very possibly bring you victory, but you’ll almost certainly make a great many enemies amongst both students and staff by doing so. Most importantly, you may have more leverage with your university *before* major media exposure, than after it has occurred. Hence it may be advisable to meet with the university administrators and explain that the faculty’s lack of compromise has made you feel you have no option left other than going to the media. Outline how bad the story will make the university look, and request their rapid assistance in averting the situation. (This approach was successful at Murdoch University in 1998.) The university administrators, rather than your faculty academics, are far more likely to have to deal with any adverse media coverage, and are also far less likely to believe in the necessity of animal abuse. Be polite and as non-threatening as possible, whilst remaining firm, and take a witness if possible.

If you wish to apply media pressure then write a media release and have it faxed to all local and national media outlets. You should be able to use fax machines with pre-programmed media fax numbers (one button may be able to dial them all) in the offices of sympathetic politicians (e.g. green politicians). Alternatively, ask your local animal rights group to arrange this. You will probably be very busy if you've gotten to this point and local animal rights groups should be willing to help you. You shouldn't have to spend hours at the fax machine yourself.

If you have not dealt with the media before, try not to let your fears of public speaking stop you. You will discover that the media is almost always on your side, rather than your opponents, in cases such as yours. Many activists, including myself, have gone from initially being terrified of any kind of public speaking, to being relatively fearless and highly successful. In my case it was the experience I gained in my alternatives in education campaign that made me so. The experience you will gain will be invaluable to you personally, and to any future campaigning you ever do.

Here are some guidelines for writing a successful media release:

- The key to writing a good media release is to keep it short, and punchy. It should *grab!* the attention of an editor who may have a sea of media releases on her or his desk.
- Due to the volume of material editors must wade through your media release should definitely be less than a page in length, with extra material included in a background information section at the end, or available on request.
- Include a few quotes from yourself and others.
- Provide photo opportunities if you can (e.g. by use of demonstrations, caged protestors, vigils, etc., with the help of local animal rights groups, or simply of yourself).
- Photos of the labs themselves can be very powerful, but can carry great risk. Carefully check the rules of your institution to ensure you can't be expelled if they're published. Alternatively, supply photos "anonymously", or use photos of similar labs at other universities, or photos of humane alternatives. Some excellent example photos from other universities etc. are available on the web sites of groups such as InterNICHE, or by contacting them directly.
- Include 24 hour contact details for at least two people, if possible.

Here's a fictional example:

Media Release – <date>

Darkages University forces students to vivisect

Second year veterinary student Andrew Knight has taken out a lawsuit against Darkages University after the University penalised him for refusing to take part in several laboratory classes in which sheep, guinea pigs, rats and toads were killed.

Knight said that the worst labs were in physiology, where groups of students anaesthetised sheep, then performed various experiments on them. They cannulated arteries and veins (inserted tubes) and injected various drugs to demonstrate the effects on blood pressure. In some cases arteries were blocked off entirely. They severed nerves to demonstrate the effects on heart rate, and forced the sheep to breathe various gases to demonstrate the effects on respiration. One procedure involved blocking the air supply entirely. At the end of the experiments those sheep that were still alive were killed by the students via a drug overdose.

Said Knight, "*These labs are cruel and outdated. There is simply no excuse for continuing to kill these animals now that so many humane alternatives exist*".

Earlier this year Knight presented the university with a 122 page submission describing 163 alternatives for nine of these labs, along with details of courses around the world that successfully use such alternatives to teach their students, and a list of 28 scientific studies confirming that students who learn

by using such humane alternatives are at least as competent as those trained by harming animals. However, these details have so far been ignored by the University. Since then he has lost marks for refusing to participate in four laboratory classes.

Said Knight, *"I entered the veterinary course to become a healer, rather than a killer, of animals. With so many of the world's best veterinary schools now offering humane alternatives to their students, there is simply no need for Darkages to force its students to kill. This lawsuit will prove that it does not have the right to."*

High quality photos of lab classes and humane alternatives are available from Andrew Knight.

Comments and further information is available from:

Andrew Knight
<contact details>

<contact details for at least one other person, e.g., President, student organisation; President, local animal rights group>

BACKGROUND INFORMATION

- The field of humane alternatives to harmful animal usage in teaching is a rapidly growing one and internet databases listing thousands of educational alternatives now exist. They list hundreds of humane teaching alternatives for these specific physiology labs, including computer simulations, videos, self-experimentation and clinical experiences.
- Humane alternatives have been successfully introduced into many other university courses around the world. By January 2002, 20 of the 31 North American veterinary colleges were offering alternatives to invasive experiments or other procedures. The University of Minnesota and Tufts University had gone further, eliminating invasive procedures entirely. Terminal surgeries had been eliminated from all required courses in the veterinary colleges of U.C. Davis, Cornell University, the University of Florida, the University of Pennsylvania, and the University of Wisconsin. Prince Edward Island and Tufts University had gone further, eliminating them from elective courses as well. Of the 24 remaining North American veterinary colleges, 16 were offering humane alternatives for students who requested them.

By February 2002, 92 of the 126 US medical schools (73%) had completely eliminated live animal usage and all but one of the remainder were offering alternative programs. The sole exception was a military college. 11 of the 16 Canadian medical schools (69%) had also completely eliminated live animal usage.

For years all six of the UK veterinary colleges have had, by Australian standards, an alternative system. Instead of practising surgical exercises on donated greyhounds and other animals that are later killed, students learn by assisting with necessary surgery on real patients that actually benefit from the surgery, in the same way that human doctors learn.

Of the four Australian veterinary colleges, the University of Sydney eliminated terminal surgeries in 2000, and Murdoch University offered its first surgical alternatives in the same year.

- By August 1999 at least 28 scientific studies existed affirming the superior or equivalent teaching effectiveness of humane alternatives such as these (summaries available at www.hsus.org by following the links to Animals in Research, Animals in Education).
- Humane alternatives are almost always more cost effective in the long run. Laboratory animals are not cheap. Their purchase, transportation, housing, feeding, veterinary care, experimental anaesthesia, euthanasia and disposal, year after year, can add up to a considerable sum. Many alternatives, on the other hand, can be used largely for free, virtually indefinitely, once the initial purchase has been made. Often the initial sum required is really not that great. Most computer simulations, for example, are available for a few hundred dollars or less. The considerable economic advantages of alternatives have been demonstrated in numerous studies and are likely to become increasingly important as economic pressures on universities continue to rise.
- The NHMRC *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* governs all use of living non-human vertebrates in research and teaching and clearly states that humane alternatives must be used in teaching wherever possible:

“Section 1.9. Techniques which replace or complement the use of animals in scientific and teaching activities must be sought and used wherever possible.

Section 7.1.1. Animals are to be used for teaching activities only when there are no suitable alternatives for achieving the educational objectives.”

This Code is expected to become legally enforceable in Western Australia in 2002.

Finally, if you win, do follow up with a media release congratulating the university for introducing humane alternatives. Any positive media coverage generated will start to mend the wounds created by the negative media coverage, and might help to get the message out to other universities and other students that might be interested in campaigning for humane alternatives elsewhere.

Hunger strikes

Most people are not prepared to go this far. However, done intelligently, it can apply a huge amount of media, moral and political pressure to a university. A hunger strike can turn a red-hot media story into one that's white-hot, especially if you can arrange to lock-on to or occupy some part of campus (easily accessible by the media and supporters) and be (peacefully) arrested and jailed for refusing to leave. The key is media coverage, because you may be able to make a big impact on the university's public image, and the university is far more likely to care about that than about you.

A hunger strike by two students requesting alternatives to dissection was successful at Virginia Tech in the US in 1999 (story available from *The Roanoke Times* archives at archives.roanoke.com).

Strategies of last resort

With the possible exception of student surveys, most of the above strategies, and in particular media pressure, will very likely cause your faculty to feel like it's under attack. Almost certainly it will then react very defensively and become much less likely to change voluntarily. Hence most of these are strategies of last resort, to be used only when there is no real chance of your faculty making reasonable progress voluntarily, within a reasonable timeframe. If this is the case however, then you have little to lose and much to gain by proceeding. Such strategies can be (and have been) highly effective in forcing reluctant universities to make the required changes involuntarily.

9. Publish your story!

Publishing your story can help raise public awareness about the harming and killing of animals in teaching, and humane alternatives, and may also help inspire and guide other students in the future. In particular, if yours is a success story or contains good ideas other students could use, then please do consider submitting it to InterNICHE for inclusion on their web site, and get it republished as widely as possible on animal rights and campus web sites and email lists and in animal rights journals, etc.

GENERAL GUIDELINES

Working with your academics

Unfortunately, as of 2002 the opposition of academics to students requesting humane teaching alternatives is far more common than their support. Many of the academics in the relevant faculties have been immersed in a pro-animal research environment for years, and are often quite desensitised to vivisection or dissection. However the attitudes of academics do cover the full range of the spectrum, and many will offer varying degrees of support, and there are a few truly remarkable academics out there who are very progressive in designing or implementing humane teaching alternatives themselves.

If it is possible to achieve the introduction of humane alternatives by working with your academics rather than against them, then you should always do so. This will require a far smaller expenditure of energy, and may be far more productive. It will also result in much less alienation of the academics and other students towards alternatives and conscientious objectors. It will very probably require compromise on both sides, but the gains you may be able to make and the costs you will avoid may well be worth it.

Try to remind your academics that learning should be a team activity, with students such as yourself making the academics aware of students' learning needs, and the academics contributing their valued knowledge and experience. Remind them that they should be leaders in striving to teach as effectively and as humanely as possible, taking both the needs of their students and the animals into account. Encourage them to learn about and consider the science of education, and to always strive for best practice in their teaching methods. Use the relevant scientific studies from the Humane Society (US) list of studies demonstrating the superior or equivalent efficacy of alternative methods in imparting knowledge or clinical or surgical skills (available at www.hsus.org by following the links to Animals in Research, Animals in Education). Ask your academics for their "learning objectives" or "skills to master", etc., and thereby encourage them to think about and define what it is that they are trying to teach. And then encourage them to find the most effective ways of doing so, given the needs of their students.

Always maintain - and be seen to maintain - this desire to work cooperatively with your academics wherever possible, even if their minds are so closed that it proves impossible to work with them to achieve reasonable goals within a reasonable timeframe, and you are consequently forced to follow all of the steps listed in this guide to mount a major campaign against your university.

Writing letters

If the situation deteriorates and it appears likely you'll need to take the issue outside your faculty, limit your communications to formal letters. Keep them concise and polite, choose your wording carefully, and ensure your spelling and grammar are correct. These may later be used as evidence to support your case, whether or not in a legal setting. For this purpose signed letters probably carry more weight than emails, which are not really recommended. Poor letters can and almost certainly will be used against you as an excuse to dismiss or belittle your requests.

As stated previously, academics will commonly fail to respond as a means of stalling you. Prevent this by always requesting a timely reply. If you do not receive one within, say, seven days, send another letter requesting a response by a certain date, e.g. another seven days, and informing the academic that if they fail to provide you with written notice to the contrary by the requested date you will assume ... whatever you need to assume to be able to take the matter further.

You can certainly publicise your own letters, assuming they are not defamatory, and it is often quite safe to publicise letters from academics without permission, if you think the antagonism it might cause is worth it. There are generally no laws or university rules against this, and it would be exceedingly rare for anyone to attempt to sue you for this. And in any case, to sue for defamation the "damaged" party must prove the nature and quantity of the damage inflicted on them by your publication of their letter, to the satisfaction of a court. If they have acted properly then it may be extremely difficult for them to

prove that your publication of their letter has damaged their interests. If they have acted improperly then they are vulnerable in other ways – such as by your publicising the case further, should they attempt to silence you. As stated previously under Media exposure, the defences against defamation vary around the world, but in Australia at least, a great deal of protection can generally be gained from ensuring that anything you publicise relates to a matter of public interest, and by sticking to the facts, and prefacing any opinions with “*In my opinion ...*”, or similar.

Take a reliable witness to meetings

A witness will not, of course, be necessary in every case. However, one is advisable if the meeting is important, and your academic is anything other than supportive and trustworthy. A supportive academic would be a good witness, and may also become both more willing and able to help you if they observe meetings for themselves. It may also be beneficial for your fellow conscientious objectors to observe or participate. However your primary witness should not be anyone who might later buckle under pressure or, perhaps, anyone employed by the university. A student advocate from your campus student organisation would be ideal, if available.

Keep a diary of relevant events

Backdate this as best you can to the beginning of your campaign, if need be. Your diary will be invaluable in the future if you need to take legal action or write letters or articles, etc. Record dates and important details of meetings, verbal communications, letters, agreements, information provided to you, labs participated in, labs boycotted, etc. Record especially any threats, hostility, contradictory or inadequate information or any other biased or unprofessional behaviour expressed towards you. Update your diary as soon as possible after each relevant event, before you start to forget important details. Keeping a good diary is time-consuming, so keep it concise, but try to record all the important details.

Keep copies of all relevant documents

Particularly letters to and from your academics.

Be professional

Always, always, always remain polite, professional and factual, whilst maintaining your compassion. This can be incredibly difficult, given the amazing provocation you may be subjected to by academic staff or fellow students who are insensitive, ignorant, or just plain evil. However, just as it is true that any lapses by your academics can be used against them, and should be recorded by you, it is also true that any lapses in your behaviour can and probably will be used against you. Never grovel, but always remain polite. Furthermore, it is essential in overcoming the common misperception that the concerns of conscientious objectors are irrational and emotionally based, that you base your case on rational arguments and facts, as well as compassion. You are in a very scientific environment. You can, and indeed, must, state that you have strong ethical, moral or religious objections to participating in the activities in question. But you must express that calmly and rationally, rather than emotionally.

Always try to follow up on things, and provide information promptly when you have promised it. Be professional, and you’ll win respect, and then support.

STORIES FROM STUDENTS WHO HAVE SUCCEEDED

Despite the opposition of their universities, some students campaigning for the introduction of humane teaching methods have been spectacularly successful. The following 15 stories from veterinary, medical and biology students around the world provide a good illustration of the experiences students may have to go through and the steps they may have to follow when campaigning for humane alternatives. They provide some excellent ideas that other students might use, and they prove beyond any shadow of a doubt that it is often possible to overcome the strongest opposition, and win!

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AUSTRALIA

Dr. Lucy Fish BVSc. (Hons)

**University of Sydney Faculty of Veterinary Science, Bachelor of
Veterinary Science**

1997 - 2001



In 2000 the University of Sydney Faculty of Veterinary Science became the first of the four Australian veterinary colleges to completely eliminate ALL terminal surgical laboratories, and began acquiring ethically-sourced cadavers (obtained from animals euthanased for medical reasons) for use in its surgical and other training. It also passed an exceedingly progressive faculty policy on the use of animals in teaching, and a conscientious objection policy. In 2001 it introduced a pound dog sterilisation program into its surgical curriculum, in which dogs from a local pound are sterilised by students under supervision and returned for adoption. Lucy Fish was the student who was the catalyst for these exceedingly progressive changes at the University of Sydney.

Photo: Lucy and Rupee, whom she adopted from the animal shelter where she gained much of her surgical and clinical experience.

**Fish. L., 2000, “Learning to heal without learning to kill”,
in “Veterinary students making a difference”, *Alternatives in
Veterinary Medical Education*, Issue 15, pp. 2-3.**

Ever since I first discovered what a veterinarian was, I have wanted to become one. For me it meant being in the ultimate position to help animals by having the ability to save lives and prevent animal suffering.

In 1997, I was accepted into the five-year Veterinary Science degree at the University of Sydney. Having refused to do dissections in my previous schooling and being involved in the anti-vivisection movement from an early age, I was horrified to discover that dissection and vivisection of healthy animals was a required part of the veterinary curriculum. Not only was this a fact that no one seemed to question, but also there appeared to be no other way to learn how to become a competent veterinarian. I felt that my beliefs must therefore be inappropriate in this case and started first-year anatomy dissections with the aim of "overcoming" these feelings and in a way desensitise myself. After all, it is not hard for a 17-year-old to feel intimidated by grey-haired academics in a totally unfamiliar environment. We were fed lies about the failings of veterinary graduates in the UK because they did not perform lethal surgeries and told horror stories of dogs being bandaged to stop the abdominal contents from falling out after spays.

It was not until my third year, when faced with the task of conducting post-mortem examinations on healthy dogs from the pound who had died of lethal injections, that I started to question how it was possible for my ethical beliefs to be wrong. I knew that I had survived the dissections only by distancing the flesh and blood I had before me from the living, feeling, healthy animals they had once been. Now I was faced with the grim reality of the system I had become a part of, with not only a live

animal in front of me, but also one whom I was required to take for walks, anaesthetise, perform surgery on, and then kill.

The animals received for classes were surplus to an industry that I abhor: the greyhound racing industry. It discards these graceful creatures when they are no longer fast enough to be profitable. I could feel the perceived intrinsic values of the animals decreasing in the eyes of students, not only through using them to "practice" on, but also due to the utilitarian view that had been pushed onto us since first-year: because these animals were unwanted by society, for us to use them somehow made their miserable fates justified.

After a relatively brief search on the internet, I was able to gather quite a library of information through contacting animal welfare groups and other students facing similar situations around the world. I discovered that, not only was the implementation of alternative programs expanding rapidly in the US and Europe, but also there was ample evidence demonstrating their effectiveness to be equal to or better than traditional methods.

After discussions with the appropriate veterinary faculty at my university, I was told that while no alternative program currently existed at the University of Sydney, my ethical beliefs were respected and that alternative ways to teach me would be sought. I was surprised and delighted to receive such a response, as I had become quite familiar with the battles students had fought elsewhere with their uncompromising universities. I was concerned about students who would follow after me who did not want to do these practicals, and I was told that an official alternatives program would not be put in place as the university was currently making moves to phase out these practicals altogether.

I felt it was vitally important to let others know that they did not have to vivisect to become a veterinarian, as I had heard stories of students dropping out or not even applying for the program for this reason. In October 1999, Andrew Knight, a conscientiously objecting vet student from Murdoch University in Perth, came to Sydney to give presentations on alternatives. We were able to gain some publicity, with the hope that this message would get out to current and prospective veterinary students.

During the 1999 summer vacation, I spent some time at animal shelters learning surgery, anesthesia and other general veterinary skills. In preparation, I reviewed my notes, watched videos, and practiced the basic surgical preparations of gowning and gloving, as well as suture techniques, at home. My first surgical experiences were cat and dog castrations. These were followed by observing spays and other operations, then assisting with minor parts such as ligations, making incisions, and skin suturing. I then worked my way up to performing unassisted spays (but always with veterinary supervision). I have learned the principles of soft tissue handling, haemostasis, and surgical technique through performing spays and castrations. This enables me to feel confident about assisting with further beneficial operations during the remainder of my veterinary education.

I am now more confident than ever that surgery not only can be taught this way, but that it should be taught this way. Learning basic surgery by performing castrations and spays has so many benefits. Instead of taking advantage of the huge surplus of unwanted animals that society creates, you are actively doing something about the problem: preventing overpopulation by performing spays and castrations on animals who benefit from it. The student works with the same animal from pre-anaesthetic assessment, through premedication, anesthesia, surgery, and finally, recovery, until the next morning when the animal is ready to go home or be returned to the animal shelter for adoption. In addition, the student is given the opportunity to work with a variety of breeds. The experience I gained also allowed for a natural progression of my surgical skills from performing a simple cat castration through to a more complicated dog spay.

It is important for students to realize that they cannot be forced to harm animals in the name of education. The information and resources are out there with so many caring people willing to help you get started. Students should never be intimidated into thinking that their ethical beliefs are wrong. My story is testimony to the fact that there is no need to kill to learn how to heal.

Establishment of a pound dog sterilisation program

Fish, L., 2001, “Progressive Moves for Sydney Uni”, posted to the humedanz@coollist.com email list.

Hi Everyone!

I have some exciting news from the University of Sydney Faculty of Veterinary Science. They have recently introduced a spay and castration clinic as part of the undergraduate program, which is improving students’ skills in surgery, anaesthesia and medicine, and helping to tackle the problem of overpopulation of dogs and cats. Here’s the full story:

I was fortunate to be amongst the seven fifth year students involved in the first day, when we desexed and vaccinated ten dogs from Blacktown pound, which were then returned the next day for adoption. In the past the pound has sold undesexed dogs which only perpetuated the problem of overpopulation. Instead of the veterinary faculty taking advantage of this unfortunate situation, we are now doing something to actively tackle the problem by providing a desexing service. Furthermore the pound has a no kill policy with these dogs so they must be rehomed.

The anaesthetic and surgical experience gained from this new clinic is invaluable to final year vet students who, under veterinary supervision, are able to follow the complete anaesthetic and surgical procedure as they may be required to when they graduate at the end of the year. Many final year students are now opting to spend time during the inter-semester break to participate further, as the program continues outside university semesters.

A great deal of time and effort has gone into the organisation and co-ordination of this program, for which the veterinary faculty must be congratulated. The University of Sydney vet school is striding ahead of other Australian universities, many of whom do not even recognise students’ rights to object to lethal practicals. It means a very positive and efficacious teaching program, which benefits all involved, including the dogs themselves.

Lucy Fish, 2001
Final Year Veterinary Science Student
University of Sydney

Knight, A., 2002, “Adoption of alternatives in teaching applied anatomy, surgery and anaesthesia at the University of Sydney Faculty of Veterinary Science”

In 2000 the University of Sydney Faculty of Veterinary Science reviewed its terminal veterinary surgical laboratories. Reasons for the review included the impacts of NSW legislative changes, the concerns of the University, students and the general public about the use of live dogs in terminal practical classes, and some publicity in the popular press.

The review report [Hunt, G., (2000), *Working Party on the Use of Animals for Teaching Applied Anatomy, Small Animal Surgery and Anaesthesia – Final Report*, Sydney: University of Sydney Faculty of Veterinary Science], was ratified by the Faculty in 2000, and since then its 11 recommendations have been largely implemented, and its *Policy for Animal Use in Teaching Applied Anatomy, Small Animal Surgery and Anaesthesia* was also ratified in 2000.

In my view this report with its exceedingly forward thinking and progressive recommendations and Policy have set the standard for the future of Australian veterinary surgical training. I have gained the permission of the Working Party Chair to distribute this report.

Recommendations included:

“1) That live dog applied anatomy and surgery practical classes be replaced by classes using cadavers, tutorials and models.”

This occurred in 2000, with the University of Sydney Faculty of Veterinary Science becoming the first Australian veterinary college to completely eliminate ALL terminal surgical laboratories.

4) The Faculty intended to purchase anaesthesia and clinical skills training mannequins from the University of California (Davis) School of Veterinary Medicine and US company Rescue Critters. However as of March 2002 this had not occurred.

“5) That clinical small animal case exposure be increased by at least 50% to make up for the absence of live dogs in practical classes.”

In 2000 extra staff were employed in the Sydney clinic to run a general access practice to increase students' exposure to routine clinical practice, including spays and castrations, dentals, etc. In some areas students were seeing 50% more cases by March 2002.

“6) That replacement of live dogs with other live species not be undertaken on ethical and educational grounds ...

That the Faculty, in collaboration with the Veterinary profession, wherever possible:

7) *Design a list of options for practical classes to accommodate different philosophical viewpoints. Regardless of the option taken, all practical classes will be supported by group discussions and experience in the University Veterinary Centres.*

Options might include:

A) *Structured practical classes which may involve the use of live animals where educationally appropriate.*

B) *As above, with students who abstain from classes using live animals being required to fulfil objectives from those practical classes using other teaching aids or resources.*

C) *As above, with students who abstain from classes using dogs from particular sources given access to cadavers of client-owned pets (dogs, cats, other) which have been donated specifically for the purpose of teaching.*

D) *Animal-based practical classes being replaced with a schedule of compulsory attendance at an approved, external clinic in order to fulfil specific learning objectives.*

8) *Act immediately to create a position to organise and co-ordinate extramural practical work and various clinical ‘out-rotations’, as agreed already by Faculty resolution, thereby expanding the list of clinics participating in Option D. ...*

9) *Continue negotiations with the RSPCA, Animal Welfare League, Cat Protection Society, Ferret Rescue Society and other welfare organisations or interested individuals to enable more exposure of students to surgery, either in their clinics, or by making animals available to the Veterinary Centres for desexing.”*

In fact, in 2001 the Faculty introduced a pound dog sterilisation program into its surgical curriculum, in which dogs from a local pound are sterilised by students under supervision and returned for adoption. The program is very popular with students, who are gaining invaluable experience at sterilisations – the most important surgeries new graduates need to be proficient in - with some students reportedly choosing to perform extra sterilisations during their semester breaks.

“10) Pursue the option of creating a clinic at Camden (and possibly also Sydney) for spaying and castration of companion animals belonging to the general public.

The spay/castration clinic commenced operations at Camden in early 2001.

11) Institute a mechanism for members of the general public to donate the bodies of their pets (dogs, cats and other) for teaching purposes, based on the model used by the Medical school for the collection of human cadavers. Resources be made available to prepare these animals adequately for storage, and to create a cadaver ‘bank’.”

Although no formal program has yet been created, the collection and storage of the cadavers of dogs that died from diseases or were euthanased for medical reasons was begun in 2000. In that year fourth year veterinary student Lucy Fish was able to perform simulated surgeries on the cadavers obtained from a practicing veterinarian of two privately-owned dogs that were euthanased for chronic orthopaedic problems and behavioural problems respectively.

***Faculty Policy for Animal Use in Teaching Applied Anatomy,
Small Animal Surgery and Anaesthesia***

This Policy was listed in the preceeding report and ratified by the Faculty in 2000. Excerpts include:

“Use of animals in these Units of Study will adhere to principles stated in the NH&MRC Code of Practice for Care and Use of Animals For Scientific Purposes ...

- 1) All animals should be treated, and referred to, with care and respect, whether conscious or anaesthetised, alive or dead.*
- 2) Students should be made aware of legal requirements and ethical arguments pertaining to their use.*
- 3) The necessity of using live animals must be constantly evaluated against learning objectives and the impact on the animal. Live animals should only be used where suitable alternatives do not fulfil the educational objectives and learning outcomes or it is felt that alternatives will engender overconfidence or a false sense of competence in students.*
- 4) Where live animals are considered essential for fulfilling learning outcomes, the minimum number possible should be used, and the impact on each animal minimised.*
- 5) Students should be taught that alternatives are not necessarily an inferior substitute to live animals, indeed they may be superior in some instances, they may complement the use of live animals and may provide a useful adjunct.*
- 6) The Faculty should continue to keep up to date with the development of alternatives to live animal use in teaching and regularly review its use of these alternatives.*
- 7) One species should not be substituted for another on the basis of different perceived (and possibly erroneous) attitudes towards them. The species should be used that best enables the learning outcomes to be fulfilled.*
- 8) The Faculty continues to be considerate of staff and students with varying philosophical viewpoints.*
- 9) The Faculty continues to involve all interested parties in the formulation of policy, and show leadership and confidence in the ethical position it adopts.*

Options for Practical Classes According to Philosophical Viewpoints

The Faculty recognises that students and staff have the right to object to certain activities on the basis of their beliefs, and will make other options available for students to fulfil the requirements of the Applied Anatomy, Surgery and Anaesthesia Units of Study, depending upon their philosophical views. Whichever option is chosen, it is understood that the learning and assessment process will be equally rigorous. Students should refer to the Faculty Guidelines for Conscientious Objection in Teaching and Assessment [renamed as follows] for information on how to proceed further. ...”

Faculty of Veterinary Science Policy on Conscientious Objection in Teaching and Assessment

This Policy was ratified by the Faculty in 2000. Excerpts include:

“1. The Faculty recognises that some students may have a conscientious belief which is in conflict with teaching and/or assessment practices in one or more units in which they enrol.

2. The Faculty will endeavour to make reasonable accommodations to meet such beliefs where it is possible to do so. Students should recognise however, that while every effort will be made, it may not be possible to do so in every instance.”

It is closely based on Murdoch University’s conscientious objection policy (see Steps to follow, Conscientious objection policies, previously), but is weaker than Murdoch’s in a few important ways:

- It only covers only the Faculty of Veterinary Science, and not the whole university.
- It states: *“It is the responsibility of ... staff to assess whether the claim constitutes a conscientious objection and what, if any, arrangements can be made to accommodate it. The staff member may have to ask for more information from the student and, where appropriate, from relevant religious, cultural or other certifying bodies in order to establish whether or not the student has a conscientious belief.”* Presumably if there are difficulties in obtaining relevant external certification, this might cause problems for students.
- There is no mechanism for student appeals against faculty decisions.
- It does not require the policy to be mentioned in unit study guides, although a statement mentioning the policy is required in the Faculty Handbook. There is no requirement for the full policy to be listed anywhere.

This is an example of what can happen when the policy is developed by the faculty, rather than by a balanced university working party with representation from all sides and an independent chair (as occurred at Murdoch). However as of 2002 almost all other Australian universities lacked formal conscientious policies of any kind, and this Faculty Policy still has a great deal of potential to assist students.

Dr. Andrew Knight BSc., BVMS

**Murdoch University Division of Veterinary & Biomedical Sciences,
Bachelor of Science (Veterinary Biology), Bachelor of Veterinary
Medicine & Surgery**

1997 - 2001



In 1998 Murdoch University became the first Australian university to formally allow conscientious objection by students. This followed a year-long struggle by veterinary student Andrew Knight for humane alternatives to be made available to harmful animal usage in the veterinary course. His main struggle began when Murdoch refused to allow alternatives and tried (unsuccessfully) to penalise him for boycotting several terminal physiology vivisection laboratories. After the beginnings of legal action and media exposure his marks were restored, and his alternatives submission to the university's ethics committee resulted in the cancellation of nearly all of these laboratories in 1999. In 2000 Andrew and a classmate became Murdoch's first alternative surgical students, gaining approximately five times as much surgical and anaesthetic experience as their conventionally trained peers. The groundbreaking precedents set at Murdoch have since helped bring about changes at other campuses

within Australia and overseas.

Since then Andrew has donated nine of the world's best resources on alternatives and conscientious objection to the library of every Australian and New Zealand campus considered likely to use animals in teaching; established a humane education email list for Australia and New Zealand in 2000; and published his book: Learning Without Killing: A Guide to Conscientious Objection, in 2002.

Photo (by Michael Wearne): Andrew with friends Indy and Suzy.

Knight, A., Mar. 2002, "Refusing to quit: Winning the right to conscientiously object at Murdoch University". An updated version of Knight, A., 1998, *Animals Today*, Vol. 6 No. 4, pp. 18 – 20.

On the 11th of November 1998, Western Australia's Murdoch University took the groundbreaking step of formally allowing conscientious objection by students to animal experimentation or other areas of their coursework. Murdoch is, to my knowledge, the first Australian university to formally take this step, and its decision will have ramifications for other Australian universities. Additionally, the University reviewed the humane alternatives available in all 45 teaching units using animals within its veterinary, biomedical and biological science courses, and concluded on the 15th of September 1999, that, "... Murdoch was in a position to and should aim to conduct teaching that does not require animals to be killed specifically for this purpose by 2005." These victories did not come easily but followed a year-long struggle by myself as a Murdoch veterinary student for humane alternatives to be made available to harmful animal usage in the veterinary course. This is the story of how we won.

How it all began ...

For me it all began back in the deep, dark mists of time when someone hollered at me to "Go get a job!" I think I was demonstrating outside a circus at the time. For years I had alternated between travelling, working in unqualified jobs, and periods of unemployment during which I campaigned on animal rights and other issues. I'd always thought it was who you were and what you did that was

important, not what job you held. Nevertheless, it began to annoy me when I was asked in interviews what I did for a living. Once I realized that people judge the merits of your arguments by things such as your appearance and qualifications, I began to seriously wonder if I should try to get into a profession.

I thought about a number of professions, but becoming a veterinarian seemed likely to enable me to do the most good. Whilst I care about all the "green-left" issues, I care most about animal rights, and the thought of healing animals all day long seemed like a dream come true. Not to mention the enormous impact being a veterinarian would have on my ability to campaign effectively on animal rights issues, in which case I just can't wait to be asked some day by an opponent what I do for a living.

And so it was that I went back to school, studied hard, and made it into the vet course. I had the vague idea that parts of my training might involve doing nasty things to animals and also a vague idea that alternatives were probably available, but was ignorant of the details of either. I rationalised that if I was forced to perform unethical experiments it would be worth it because I would be able to do so much more good later as a qualified vet.

First blood in first year

Thus unprepared I entered first year in 1997. In the introductory biology units we dissected cockroaches, snails, worms, fish, rats, and body parts from abattoirs. For reasons that were never made clear to us there seemed to be a strange obsession with lampreys. I tried not to think too much about where all these bodies had come from. I was finally brought up hard against reality at the end of first year by a Cell Biology laboratory class. Rats were killed by demonstrators and their still-living intestinal segments extracted so that the students might investigate their role in the absorption of glucose from various solutions. At last the animals were not appearing neatly prepared from some unknown location but were being killed right there and then for our use. The unavoidable reality of it finally snapped me out of my dream world.

On this occasion however I was poorly prepared. I only voiced my opposition on the morning of the lab and had not studied the alternatives available nor the reasons why they should be used. The academics in charge were hostile and I was refused an alternative learning and assessment activity, which cost me a grade. I was, however, the first in many years to boycott a lab, and this stirred up a great deal of controversy, with some academics supporting me. This controversy, combined with economic pressures, eventually resulted in the entire lab being cancelled in 1998, which saved the lives of around 30-50 rats each year.

At one stage I endured a fairly unpleasant meeting with two of the academics in charge of Cell Biology, during which they attempted to change my views. I knew that many of their claims were wrong but was frustrated by my inability to respond effectively due to my ignorance of the arguments. They left me with dire warnings that the Cell Biology lab was only the tip of the iceberg compared to what I would later have to face in the vet course and suggested that I re-evaluate my suitability for the course. Their warnings did not have the desired effect but instead motivated me to research the alternatives and the reasons for their use in greater depth.

Making preparations

I sent out urgent appeals for help to animal rights groups around the world and discovered that I was not alone. I received help from several but three in particular deserve special mention. The Humane Society International (HSI) (Australia) provided me with constant moral support and invaluable contacts, amongst other things. The European Network of Individuals & Campaigns for Humane Education (EuroNICHE) provided me with advice on conscientious objection, and summaries of the relevant legislation on the rights of European students. Their book *From Guinea Pig to Computer Mouse* is quite simply probably the best book on educational alternatives in the world, and was to prove invaluable to me. It lists nearly 400 humane alternatives including many for the physiology labs I would later boycott. The US Association of Veterinarians for Animal Rights (AVAR) provided me with details of the rapidly expanding field of alternatives in veterinary training in the US.

And so it was that I learnt that the number of humane alternatives available worldwide has grown exponentially in the last decade, with a similar rise in the number of courses in which they are offered. By January 2002, 20 of the 31 North American veterinary colleges were offering alternatives to invasive experiments or other procedures. The University of Minnesota and Tufts University had gone further, eliminating invasive procedures entirely. Terminal surgeries had been eliminated from all

required courses in the veterinary colleges of the University of California (Davis), Cornell University, the University of Florida, the University of Pennsylvania, and the University of Wisconsin. Prince Edward Island and Tufts University had gone further, eliminating them from elective courses as well. Of the 24 remaining North American veterinary colleges, 16 were offering humane alternatives for students who requested them.

By February 2002, 92 of the 126 US medical schools (73%) had completely eliminated live animal usage and all but one of the remainder were offering alternative programs. The sole exception was a military college. 11 of the 16 Canadian medical schools (69%) had also completely eliminated live animal usage.

For years all 6 of the UK veterinary colleges have had, by Australian standards, an alternative system. Instead of practising surgical exercises on donated greyhounds and other animals that are later killed, students learn by assisting with necessary surgery on real patients that actually benefit from the surgery, in the same way that human doctors learn.

The variety of alternatives used in such courses is rapidly increasing and databases listing thousands of educational alternatives now exist. They include computer simulations, videos, ethically-sourced cadavers, plasticised specimens, models, diagrams, self-experimentation and clinical experiences. In medical and veterinary courses alternatives at the preclinical level are mainly focused upon imparting knowledge, whilst those at the clinical level impart clinical and surgical skills as well.

Alternative veterinary surgical courses ideally comprise a number of stages. In the beginning students learn basic psychomotor skills such as suturing and instrument handling using knot-tying boards, simulated organs, and other models. They then progress to simulated surgery on *ethically-sourced cadavers* obtained from animals that have died naturally or in accidents or been euthanased for medical reasons. Finally students observe, assist with, and then perform necessary surgery under close supervision on real patients that actually benefit from the surgery, as distinct from on healthy animals that are later killed.

An important part of alternative veterinary surgical courses worldwide are the highly popular animal shelter sterilisation programs, in which homeless animals are sterilised by students under close supervision and returned to the shelters. The popularity of these programs stems in part from the fact that all parties gain from them. The animals have their adoption rates consistently increased by sterilisation, the numbers of unwanted animals killed due to uncontrolled breeding is decreased, the students gain invaluable experience at some of the most common procedures they will later perform in practice, and their veterinary college has its image enhanced by providing a useful community service.

Finally, I learnt of the numerous scientific studies affirming the competence of alternative students compared with those trained by harming animals. The studies examined the performances of medical, veterinary, biology and pharmacology students and in almost all cases concluded that the alternative students were at least as competent. By August 1999 the Humane Society (US) listed 28 studies affirming the superior or equivalent efficacy of alternative methods in imparting knowledge or surgical skills on its web site (available at www.hsus.org by following the links to Animals in Research, Animals in Education).

Now I knew about the alternatives, the courses worldwide where they're successfully used, and the many published studies showing that alternative students are at least as competent. It was undeniably clear to me that there was no need to kill to learn how to heal.

However one last element remained. What was I to do if my academics proved unwilling to listen to reason? I needed legal advice. It came in the form of another book: *Vivisection and Dissection in the Classroom: A Guide to Conscientious Objection*, by Gary Francione and Anna Charlton (publisher: American Anti-Vivisection Society, 1992). This book was also to prove invaluable to me. It gave step by step instructions on how to approach my academics. Advice included: take a witness to all meetings and keep a detailed diary of events. If academics are hostile limit all communications to letters, and keep copies. Sample letters were included, as well as detailed responses to some of the arguments my academics might use. Further information about this book is available at www.animal-law.org.

Thus armed I was prepared to face second year. Following step one of the book I first worked out my position in detail. I decided I would compromise as far as I possibly could, and thereby hopefully exert moral pressure on the vet school to similarly compromise. Although there were many things I didn't like, I decided to take a stand only on those laboratories where significantly sentient animals were being seriously harmed or killed, primarily for teaching purposes. I would infect cell cultures with viruses and kill them in virology experiments, as these single-celled organisms were minimally sentient. I would take blood and urine samples from sheep via catheters, as the level of harm in these cases was minimal. I would dissect greyhounds euthanased because they could no longer race fast enough to make money, or abattoir byproducts, because in these cases the animals were killed primarily for reasons unrelated to teaching. However, where significantly sentient animals were being seriously harmed or killed primarily for teaching purposes, I would take a stand.

A month before classes were due to start I went and asked the relevant academics what animal usage was involved in their units. Animals were to be seriously harmed or killed in four labs in both biochemistry and physiology. I stated that participation in such labs would violate my conscientiously held beliefs and requested alternative assessments. I was joined at this point by a classmate, Michael Taylor. Alternatives were granted to us in biochemistry, where we were allowed to write theoretical reports instead, but not in physiology.

Second year: Welcome to Hell

Upon the commencement of classes we discovered that the second year labs made those in first year look tame. Students and demonstrators killed sheep, guinea pigs, rats and toads in order to demonstrate scientific principles that have been established for decades. The worst were in physiology, where groups of students anaesthetised sheep, then performed vivisectionist experiments on them. Students cannulated arteries and veins (inserted tubes) and injected various drugs to demonstrate the effects on blood pressure. In some cases arteries were occluded entirely. They severed nerves to demonstrate the effects on heart rate, and forced their victims to breathe various gases to demonstrate the effects on respiration. One procedure involved occluding the air supply entirely. The laboratory instructions read:

"Watch the animal closely and if respiration ceases return immediately to air. It may then be necessary to artificially respire the animal for a short time."

However the lab guide gave no instructions on how to do so. Not surprisingly I was later told that several sheep died prematurely during this lab.

At the end of all experiments the surviving sheep were killed by students via drug overdoses before regaining consciousness. Students were instructed to open up the chest cavities to ensure the sheep would not come back to life. Incredibly, one of the stated objectives was that students would develop a sense of responsibility for an animal under their care, and the academics maintained that the labs were not desensitising. The farcical nature of these claims was demonstrated by the student who was thrilled to discover, upon placing her hand inside a sheep's chest cavity, that she could actually feel the animal's heart stop as it died.

Fighting and winning

Our refusal to participate in several of these physiology labs cost us marks. During the course of second year I spoke many times with the physiology unit coordinator who was a hard core vivisector. I gave her details of alternatives, of courses around the world where they're successfully used, and of the many scientific studies that demonstrate that alternative students are at least as competent as those trained by harming animals. I put my case to both her and the Dean in writing but still they refused to give any ground.

As a last resort I took action through the state Equal Opportunity Commission. I used the legal strategy outlined in *Vivisection and Dissection in the Classroom: A Guide to Conscientious Objection*. It seems that in Australia there is, as yet, no legal protection for students upholding mere ethical beliefs. However, there *is* strong protection, in the US at least, for students acting in accordance with their religious beliefs. It has been shown many times in US courts that a religious belief need not involve a belief in a God or Gods, nor a traditional religion, but merely needs to be a fundamental belief that has a significant impact on the life of the believer. Students who have "reverence for life" beliefs are covered, and the courts are easily satisfied of their sincerity if they are vegan and refuse to use products tested on animals, etc. My beliefs do not involve a God(s), nor a traditional religion, but they would

easily satisfy the above definition. Additionally, most English dictionaries include as a definition of religious belief, “*any sincerely held belief to which one is devoted or bound*”, or words to that effect. The Australian Concise Oxford Dictionary uses, “*A thing one is devoted to or bound to do*”, and the Heinmann Australian Dictionary uses, “*Any practice, matter, etc., treated with devotion or keen conscientiousness.*”

Thus armed, I formally complained to the state Equal Opportunity Commission that I had been discriminated against in my education on the grounds of my religious beliefs, which is illegal under the state Equal Opportunity Act (1984). They had never encountered a case like mine and looked up the definition of religious belief under the Act, only to discover that it was undefined. They decided that, as I had indeed made a case that my beliefs could be considered religious, they would provisionally take the case on.

The Commission has the power to order an offending institution to cease its discriminatory actions and even make redress for past damages, up to a maximum of A\$40,000; however it first seeks to resolve cases by extensive efforts at conciliation. Average case resolution time is six months. Negotiations commenced and the university wisely decided to give my marks back fairly early in the process, thus denying me a more significant legal precedent and avoiding further adverse publicity.

Victory!

The biggest victories, however, came on the 11th of November 1998. Murdoch’s Academic Council unanimously adopted the recommendations of two reports that had resulted from initiatives put to the Council by our student representatives. The first report was on conscientious objection in teaching and assessment and was prepared by a working party established to examine the issue. The Council adopted all of its recommendations, including passing a set of University *Guidelines on Conscientious Objection in Teaching and Assessment*, which stated, amongst other things, that:

“The University recognises that some students may have a conscientious belief which is in conflict with teaching and/or assessment practices in one or more units in which they enrol. The University shall endeavour to make reasonable accommodations to meet such beliefs.”

And so it was that the university formally opened the doors to conscientious objection by students who object to harming or killing animals in their coursework. However, the decision was not limited just to animal usage. The resolution will help students with conscientiously held beliefs of any kind, including, for example, those of students whose religious beliefs prevent them from taking examinations or performing work experience on holy days.

The second report considered by the Council was prepared by Murdoch’s Animal Welfare Officer and endorsed by its Animal Ethics Committee. The report was on animal usage in teaching throughout the university. The Council adopted its recommendation by launching a major review of animal usage and the alternatives available in all 45 teaching units in which animals were used. The review was in keeping with the University’s obligation of compliance with the National Health & Medical Research Council (NHMRC) Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (1997), which governs all use of living non-human vertebrates in research and teaching, and states that:

“Section 1.9 Techniques which replace or complement the use of animals in scientific and teaching activities must be sought and used wherever possible.

Section 7.1.1 Animals are to be used for teaching activities only when there are no suitable alternatives for achieving the educational objectives.”

In 2001 Western Australia was the only Australian state in which the Code was not yet incorporated into legislation (this was also the case in the Northern Territory). However with the expected passage in 2002 of Western Australia’s new Animal Welfare Act it is likely that breaches of the Code will become punishable by statutory penalties.

The result of this review of animal usage was a *Report on the Review of the Use of Animals in Teaching*, which, as stated previously, urged Murdoch to eliminate the killing of animals for teaching purposes by 2005. The high standard and very progressive nature of this report make it a worthy model

for other universities. Its recommendations, if implemented, have the potential to propel Murdoch to the forefront of humane education within Australia. They were passed by Academic Council on the 15th of September 1999.

The media storm

The enlightened decisions taken by Academic Council in November 1998 were nothing less than historic. Murdoch is, to our knowledge, the first Australian university to formally allow conscientious objection by students. This presented media opportunities not to be missed. It was time to give the university some public praise for its decisions and to start to get the message out to other Australian universities. In this we were hugely successful, achieving extensive TV, radio and newspaper coverage. One was an excellent front page story in the Murdoch area local newspaper; another was on page nine of Saturday's *The West Australian*. This is the state's biggest selling newspaper with a circulation of just under 1,000,000. Both of these stories had large photos. We also achieved a flood of letters to the Editor congratulating the university. I am particularly grateful to the following Perth groups who provided invaluable assistance in gaining this media coverage: Animal Rights Advocates (ARA), Compassion for Animals (CFA), and The Greens (WA). My final exams were underway at the time so I had the added entertainment of having to juggle interviews with exams.

Into the future

By becoming, to my knowledge, Australia's first university to formally allow conscientious objection, Murdoch has demonstrated its commitment to its ideals of tolerance and diversity and cemented its reputation as one of Australia's most progressive institutions. By reviewing the humane alternatives in all teaching units using animals, and concluding that, "... Murdoch was in a position to and should aim to conduct teaching that does not require animals to be killed specifically for this purpose by 2005", Murdoch now has the opportunity to become an Australian leader in this area as well.

Murdoch has shown the way and it is now up to other Australian universities to follow Murdoch's lead. In particular it is up to their enlightened students and staff members to make it happen. In order to assist them I have amassed a considerable wealth of resources and useful contacts that I am keen to make available. I am also working on a student guide to conscientious objection. I am seeking funding to assist with the production of this guide and its donation to Australian tertiary libraries, along with other resources on humane alternatives and conscientious objection, including *Vivisection and Dissection in the Classroom: A Guide to Conscientious Objection* and *From Guinea Pig to Computer Mouse*.

If you are a student or staff member considering tackling your university on the issues of conscientious objection and humane alternatives then these are the sort of tools you need to win. More important than any tool, however, is the determination not to quit until every option has been exhausted. This was really how we won at Murdoch. With determination like this, resources like these, and Murdoch's precedent to use, the next university should only be easier. Why not make it yours!

Acknowledgements

I gratefully acknowledge the assistance of the Association of Veterinarians for Animal Rights (AVAR) and the European Network of Individuals & Campaigns for Humane Education (EuroNICHE) for allowing the use of excerpts from the following publications within this article:

- Anonymous, 1998, "An interview with Andrew Knight", *Directions* [AVAR journal], No. 52, pp. 4-5.
- Knight, A., 1998, "Andrew Knight (Australia)", in Jukes, N., (Ed.), *Conscientious Objection to Animal Use in Education: Testimonies From Twelve Students*, Leicester, England: EuroNICHE.

Alternative veterinary surgical program at Murdoch University

Excerpted from: Knight, A., 22nd Feb. 2001, "Learning to heal without having to kill: Winning the right to conscientiously object at Murdoch University", presented in Brussels at the first InterNICHE conference, *New teaching*

approaches in the life sciences: Developments in biological science, veterinary and human medicine.

In 2000 classmate Michael Taylor and I became Western Australia's first vet students to be granted alternatives to all of the fourth year terminal surgical laboratory classes. Additionally, I conscientiously objected to participating in one recovery surgical laboratory class – a sheep abdominal (rumenotomy) surgery.

In place of the recovery sheep rumenotomy surgery I was eventually offered the option of performing a non-recovery rumenotomy on a Murdoch sheep being euthanased due to neoplasia, which I accepted.

In place of the terminal surgical laboratories we were eventually offered, and accepted, alternatives involving: external experience in private veterinary clinics and animal shelters, supervised sterilisations at Murdoch on real patients, e.g., from shelters, and required attendance as observers at all of the terminal surgical laboratories.

Despite the latter requirement the program was an outstanding success overall. Jointly we did not participate as surgeon or assistant surgeon in a total of *at most* 13 scheduled surgeries at Murdoch. However we performed or assisted with a total of *at least* 62 additional surgeries instead, not including the abdominal surgeries I performed on a "DASIE" surgical simulator I purchased from Canada. These surgeries were performed under supervision, mostly in private practice. Our experiences had both depth and breadth – depth in the case of the large number of spays and castrations we performed, and breadth in that we also participated in a range of other surgeries as well. In total during 2000 I sterilised 23 dogs and cats, and Michael sterilised 22 dogs and cats.

The most important surgery for new graduates to be able to perform is the spay (female sterilisation). Most veterinary students - at least at Murdoch - do only one or two before graduation, generally in final year (fifth year). Jointly we did 21 spays before even beginning fifth year. It felt exceedingly good to be contributing positively towards the dog and cat overpopulation problem by sterilising animals, and thereby preventing unnecessary deaths, instead of causing them during our surgical training.

My very serious concerns that alternative students be given the opportunity to practice their surgeries on cadavers before performing them on real patients, led in July 2000 to the delivery of my submission *Ethically-Sourced Cadaver Surgery - A Submission to Murdoch University's Division of Veterinary & Biomedical Sciences* (Knight, 26th Jul. 2000), to the vet school. This 100 page submission described in detail client donation programs successfully operating in US veterinary schools, and provided ample information to aid in the establishment of a similar program at Murdoch. It formally requested that the Division take steps to organise an ethically-sourced cadaver surgical program as part of its alternative surgical program as a matter of urgency.

Despite my requests nothing discernible was done and no cadavers provided until I again exerted significant pressure on the academics in charge. Finally, in the last two laboratories, ethically-sourced canine cadavers obtained from animals euthanased for medical reasons were provided to us, allowing us to perform seven simulated surgeries on them.

In January 2001 I wrote to the vet school asking what progress, if any, was being made towards formally introducing a client donation program at Murdoch, and towards formally incorporating ethically-sourced cadaver surgery as part of Murdoch's future alternative surgical program.

[A reply to my submission was finally received dated the 27th September 2001, some 15 months after its delivery. The Division stated that, "*We recognise students have the right to request ethically-sourced cadavers that are suitable for their learning and which are congruent with their personal values*", and further, that a donation option had been set up for Murdoch clients whose animals are euthanased within the teaching hospital!]

Conclusion

In summary, Michael Taylor and I gained approximately five times as much surgical and anaesthetic experience as our conventionally trained classmates, and there can be no reasonable doubts whatsoever that the first year of Murdoch's alternative surgical program was an outstanding success.

I believe that the arguments in favour of harming and killing animals in education are strongest in the field of veterinary surgical training. The fact that we were able to complete our veterinary surgical training without harming or killing any animals for teaching purposes suggests to me that such harmful animal usage is unjustifiable in all fields of education.

Spreading conscientious objection across Australia and New Zealand

As far as I'm aware no significant further obstacles stand between me and my graduation as a veterinarian at the end of 2001. However, in the hope of assisting students across Australia and New Zealand to conscientiously object to harmful animal usage in their courses long after I'm gone, I have three projects underway: In 2000 I created humedanz@coollist.com, the Humane Education email list for Australia and New Zealand, in the hope that it will provide an important support network for conscientiously objecting Australian and New Zealand students in the future. I am working on a guide to conscientious objection for Australian students, with a section on their legal rights, which I hope to finish and distribute later in 2001. And through my Australian & New Zealand Tertiary Libraries Donation Project, I'm working to ensure that every Australian and New Zealand campus using animals in teaching has the world's best resources on alternatives and conscientious objection freely available in the campus library, so that students and others have the resources they need to run successful campaigns available at their fingertips.

BRAZIL

Thales de Astrogildo e Tréz BSc., MSc.

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1995 - 2000

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2000 - 2001



In 1998 Thales Tréz rescued and re-homed a dog about to be vivisected in a physiology teaching laboratory at the University of Santa Catarina in Brazil. Instead of being expelled, his penalty was that he was required to organise three public debates on the use of animals in education. In 1999 five students anonymously photographed the bodies of dogs killed in the medical school surgery course, and delivered the photographs and an accompanying poem to a newspaper. These actions resulted in national media coverage of the laboratories and of the concept of alternatives; a lawsuit against the University by the Attorney General; the cancellation of many of the laboratories; and the introduction of alternatives.

*Thales graduated in Biological Sciences from the University of Santa Catarina, Brazil, in 2000. Along with Sérgio Greif, a biologist from Unicamp/SP, he wrote the first book in Brazil to focus on the use of animals in research and education: *The True Face of Animal Experimentation: Your Health in Danger*, which was published in 2000. In 2001 he was the Co-ordinator of RedeNICHE, a growing humane education network of students and professors based in Brazil, and linked to InterNICHE. In 2001 he finished a masters program in Applied Ethics at K.U.Leuven in Belgium, focusing on humane education.*

Tréz, T., 2002, “Creative conscientious objection to harmful animal usage in education”

There are a wide range of possible actions – both anonymous and otherwise – available to students wishing to show their objections to the harmful use of animals in education. Sometimes these actions can be followed by surprises, both good and bad. The successful experiences I will share with you in the following are examples of the impact that simple acts can have in provoking debate about the harmful use of animals in education, and even in shaping public opinion. Many people in the general public and even in the university community have no idea what happens inside some university teaching labs. The first step in generating debate about the issue is to make people aware of what’s going on in their own communities. And the most creative ways of doing this can also be the most effective ways, as illustrated by the following ...

Rescuing number 51

It was 9:55 in the morning, on November 17th, 1998. Close to the Physiology Department of the University of Santa Catarina in Brazil, I nervously stood, with fellow biology students Carolina and Marcia. In a few minutes an innocent dog would be used here in a “human physiology” teaching experiment. At the end of the class the dog would be euthanased. The week before we had had a big discussion with the professor when he announced the experiment to the class. It began when I started questioning the experiment, and then to my surprise everybody became engaged in the discussion. I still remember the professor’s words: *“If you want to be scientists, you have to know how to properly distinguish and choose between rational thinking and emotional feelings”*. In the end he invited those students interested in the experiment to attend ... and those with “problems”, to stay at home. Out of 30 students, only four were intending to show up to the class.

So there we were... looking at the clock, at each other and all around, waiting for the man who was supposed to deliver the dog to the laboratory. The class would start at 10 am. It was already 9:55, and there was no sign of the man with the dog. *“Maybe he is late...”*, Carolina said. *“Maybe the dog is already inside”*, I replied. Our plan was becoming difficult, and we began to get nervous. So we decided to do something. While Carolina and Marcia stood watch outside, I walked naturally into the building and went in the direction of the lab. Inside the lab, there was nobody but the dog. He was lying on the ground, tied by a chain and looking up at me, with his head between his paws. He looked very scared. In just a few minutes, the people would start to arrive. I thought to myself: *“It’s now or never”*. So I swallowed my fear, took him in my arms, and ran out of the building. Behind me somewhere I heard people shouting. I ran suddenly past Carolina and Marcia, who jumped, startled, as I and the dog appeared. I ran through the Biology Bar, filled with students at the end of their break. I can still remember the surprise written all over their faces. It seems funny, looking back on it now, although it didn’t at the time.

In a safe place away from the Biology centre, Marcia reached me, and stayed with the dog until I collected the car and drove him home. I vividly remember him resting his head in my lap, looking up at me whilst I was driving. It was a short but intense moment. I felt like he was recovering from a big fright, and needed some cuddles. I felt like he was thanking me... At that moment I realised what we had done, and I was happy.

At home, I gave him a nice meal and we walked around the neighbourhood.

The day after, I was called in to give some explanations about what had happened. The academics knew that I was involved, but not the other students. We held a secret meeting and decided to collectively take responsibility for the entire act. So Marcia and Carolina confessed their role in the rescue too. The police were called in and we were charged with invasion and public property stealing – enough to get us expelled from the university. We all knew what could happen to us, but none of us regretted what we had done.

We were then called to an Academic Council Meeting, with many professors, Heads of Departments and student representatives. We had to defend ourselves and, at the end, receive our penalty. Of course the head of the physiology department was there too, and very nervous – more than we were, I think. Outside the meeting room, many students and some professors were expressing their support – they were all aware of what could happen to us.

The positions of the Academic Council members were very diverse – from people who implicitly supported our position, in a moderate way, to people who wanted us expelled – like the head of the physiology department. He argued that we should return the dog – along with its chain, of course – in order to receive a softer penalty. We agreed to return the chain – and indeed I placed it on the table in front of him – but we refused to discuss returning the dog.

The head of the physiology department was very nervous, smoking a lot and pacing from side to side. In contrast we were calm and spoke with conviction, and, by explaining our ethical reasons, were able to justify our action as legitimate. We had not *“invaded”* the Physiology Department; I had used no violence to enter the lab; I was properly enrolled in the course; and I had entered the lab during a normal class period. We had not *“stolen public property”* as the dog had been arbitrarily taken from the streets, and the university had no documents to prove their ownership of the dog. Indeed, if there was someone to be charged, it was the university – perhaps with kidnapping. By explaining our belief

that there was an ethical difference between an inanimate dog chain, which the university had a right to own and destroy, and a living dog, which it did not, we convinced most of the staff that we had thought through our reasons and held a strong ethical position. Guess who was not convinced?

Finally, they voted for the softer penalty. They gave us a formal warning, and the task of organising and publicising three debates about the use of animals in education. Could you imagine the smile on our faces? Guess who was still not convinced, and smoking even more?

We organised and publicised two debates afterwards, with high participation from students, professors and people from the wider community (the third debate is probably still to come). And the dog we rescued is now living somewhere safe, with people who care about him, and has a name, instead of the number 51 around his neck.

But the happiest ending was still to come. We were all surprised to learn afterwards that these experiments were replaced by videos. So no more dogs will be killed in this course. As of 2002 the physiology department is investing in other new alternatives as well, and has, for example, replaced its frog experiments with CD-ROMs like the ADAM series, as well as videos and tutorials.

I learnt a lot from this experience. I learnt that rescuing a dog could be gratifying in several unexpected ways – from the first engaging discussion with the students and the professor, to the support we received from other students and professors, the positive repercussions this action had in the academic and local media, and the consequences this simple action had on the replacement of harmful animal use at the university. Also gratifying was the fact that I graduated at the end of it all!

I also learnt a lot in those few minutes when that dog was looking at me whilst I was driving home, resting his head in my lap. I cried, and even today some tears still come when I remember that special moment. And I am surprised all over again. Animal lover or not, that look shook me somewhere deep inside, and I've never been quite the same.

Exposing the cruelty

It was 10:30 am on March 31st, 1999, at the University of Santa Catarina in Brazil. Five students from different faculties were gathered close to the university hospital. Two of them were in possession of cameras. Unfortunately one had no film in it, a fact realised by its owner only after apparently taking 60 photos on a 36 frame roll, with still no end in sight!

The students had previously learnt that in Surgical Techniques - one of the medical courses - medical students practised surgical procedures on healthy dogs they then killed and subsequently threw away in the hospital garbage. Two of the five had then posed as journalism students and had been allowed inside the lab to take photos prior to the commencement of the surgery class. They were deeply saddened by the sight of the caged dogs awaiting their fates, and would later share their memories and photos with their friends.

And so it was that the five stood waiting outside the hospital for the end of the surgery class, wearing the white coats of medical students. They knew that the dogs were being sliced open and killed nearby. At one point they heard a dog's deeply touching howl emanating from somewhere inside. Weighed down by a heavy sense of guilt and complicity, they waited in silence.

Finally, after a seemingly interminable wait, some medical students appeared carrying bulky and heavy-looking white plastic bags with red crosses on them. They carried them to the garbage building and left them there. Two more students came bearing more white plastic bags and left again. The waiting continued.

Eventually it was lunchtime. Once everybody was busy with their meals the waiting five walked into the garbage building and one of them broke in through a door into the biohazard area. There the plastic bags lay waiting, hidden amongst many others. However the correct bags were soon identified by touching them with a surgical glove. The dogs' bodies could be easily felt inside.

These bags were then carried out of the other side of the building, to a safe area out of sight of the laboratory and surrounding buildings. They were still warm. With a knife, one student quickly opened the bags. One by one, the contents were revealed - five bodies, that had recently been five beautiful and healthy dogs - with still shining eyes. Whilst one student held up the dogs, three others took photos, and the remaining student stood watch. Two of the students recognised some of the dogs as dogs they had previously known. One of these was a black and white dog that had his mouth cruelly tied shut by a tight string.

The photographers had almost finished their grisly work when a man in a small tractor came to throw more garbage into the building. They kept calm, talking and acting like students that needed to record more details about their last class. The worker looked to the students and to the dogs' bodies with some curiosity, but left after finishing his job.

Finally the photographers finished, and with a feeling of despair, threw the dogs' bodies into a small river nearby, and returned home in silence. Two of them were crying. Later that evening one of them wrote a small and moving poem entitled "A poem for the garbage".

Soon afterwards the photos and poem were delivered anonymously to the offices of the university newspaper. The story was published a few days later, and the scandal involving the use of dogs at the university began to unfold. The photographs shocked the general public and university community into an awareness of the issue. There was widespread media coverage and the word "alternatives" constantly appeared in the media and in debates in a positive way. This author was asked to speak on national television about the case. As of 2001 these pictures and accompanying writings are still published on some web sites.

At one point a debate was organised in the biggest auditorium in the university. It was completely filled. The discussion ran for four hours, and stopped only when the auditorium closed. The speakers and audience comprised students, academics and the general public. There were people from a wide range of disciplines, including biology, philosophy and human medicine. A video was shown in which previous medical students stated that during the same course (Surgical Techniques) it was sometimes very uncomfortable for them to work, due to the howling of the animals. One of them described a scene in which a dog stood up on the table in the middle of a surgical procedure, after prematurely recovering from the anaesthesia.

The repercussions of this case included a lawsuit against the university by the Attorney General, demanding more control in its use of animals. According to the Attorney General, "*man is not anymore the owner and lord of all forms of life. Now we should favour a conception of harmonic life among the planet's living creatures*". The titular professor and surgeon responsible for the course, Dr. D'Acampora, argued that it was impossible to teach surgery in any other way, but to no avail. Formerly about 200 dogs from city pounds were killed each year in that course. As a result of this lawsuit a permanent Ethics Committee on the Use of Animals was established, and the use of animals in that course and many others was provisionally stopped due to the court decision. As of 2002 some of the labs have been recontinued, but, although I don't know for sure, I hope that less dogs are being used than before. And at least one humane alternative has been introduced into the course: the suture-arm, which is a plastic arm with artificial wounds that students can practise suturing up.

As of 2002 the students responsible for the pictures are unknown to the police and university staff. The details in this story were taken from an anonymous letter received by the author, together with copies of about 30 pictures.

Choosing a strategy

These stories demonstrate two powerful ways of bringing the harmful use of animals in education to the attention of the media and the academic community. In the first story, the students identified themselves as the perpetrators of their actions, and deliberately drew their actions to the attention of the media and the academic community. In the second, the students carried out their actions anonymously and trusted people from the media and the university to tell their story for them.

Some important words of warning should be added. Actions like these can be very beneficial, but can carry great risks. Students can be expelled from their universities if the proper precautions are not taken. Even a single photograph published in a newspaper could result in expulsion from a university. Such an event contributed to the expulsion of University of Colorado medical student Shana Dodson in 2000, when Shana released a photograph of a physiology dog vivisection lab. Students should always carefully weigh the likely risks against the probable gains. If the risks are too great, the actions should perhaps be conducted anonymously, or even wisely abandoned.

All these considerations should be *contextualised* within the reality of the students involved in the actions; for example, their involvement with the student rights movement, and their relationships with their classmates and professors. Students may then reach the *feeling* that things will work out with a good chance of success. However, no matter how well planned they may be, we can never know with surety all the outcomes of our actions.

And to be honest, and as some will have noticed, the actions I was involved in, namely the rescue of number 51, were not perfectly planned. But what helped a lot in my case was that I had a very good relationship with the biology student organisation from my university, and with the student rights movement, and also a nice relationship with some of the professors and university authorities, who previously knew my views on this issue. My knowledge of ethics and animal rights also helped me a lot in providing a sound justification of our actions.

Contextualise and good luck!

Establishment of the RedeNICHE humane education network

I have been working on alternatives to the use of animals in all courses in tertiary education. We have established and co-ordinate Rede Humanitária de Educação (RedeNICHE), a Brazilian-based network of students and professionals from different regions and backgrounds, and have a comprehensive web site in Portuguese (www.geocities.com/redeniche). At the moment we are trying to develop the network in universities across the country, and are closely supporting conscientious objection cases. The support from InterNICHE, ARCA-Brasil, PCRM (USA), NAVS (USA), ATRA (Switzerland), the Comitato Scientifico Antivivisezionista (Italy), and many other organisations and individuals has been crucial to the development of this network in Brazil.

I have also finished my MA in Applied Ethics (at K.U. Leuven, in Belgium), focusing on the issue of animal use in tertiary education.

GERMANY

Dr. med. Birgit Völlm

University of Frankfurt Faculty of Medicine, Medicine

1986 - 1990



In 1990 University of Frankfurt medical student Birgit Völlm became the first German student to successfully sue her university for refusing to provide her with alternatives (to physiology experiments in which frogs were killed). The University appealed to a higher court which ruled in 1991 that Birgit could not be forced to participate in experiments for which animals were killed. When her University offered Birgit the same experiments on frogs which had been killed for research purposes, she decided to complete her medical training at the University of Herdecke Faculty of Medicine, where no animal dissection or vivisection occurred. She completed her training at the University of Herdecke in 1996, and her lawsuit successfully laid the foundations for similar cases in Germany.

Völlm, B., 1998, "Birgit Völlm", in Jukes, N., (Ed.), *Conscientious Objection to Animal Use in Education: Testimonies From Twelve Students*, Leicester, England: EuroNICHE.

I was the first student in Germany who won a lawsuit against her university for a study without animal misuse.

In 1986 I began to study human medicine at the University of Frankfurt. Besides the dissections in the biology practical which can be avoided by students, there are also in the programme the well-known frog experiments in the physiology practical. During the first three semesters (the physiology practical takes place in the fourth) I tried several times to convince the professors of the necessity to offer alternatives, but I had no success. I conscientiously objected to the experiments and as a result I did not get the certificate for the physiology course.

Because it was impossible to reach agreement with the professors I had to take my university to court. In July 1988 the lawsuit began at the administrative court in Frankfurt. I wanted the university to become obliged to offer me alternative practical methods that would not involve the killing of animals. I referred to my personal freedom of conscience, but also to the animal protection law. The university proclaimed that the experiments were necessary and that I could go to another university if I didn't want to take part in them. They also said that I would not have to carry out the experiments with my own hands, but they insisted on me watching the experiment and taking notes.

It took two years until finally, in October 1990, the judicial hearing on the first level took place. The court's decision followed two months later: I was right. The court gave more weight to my freedom of conscience than to a professor's freedom of teaching. There was great public interest. But the university did not accept this decision and took the case to a higher court. Another year passed until the second

judicial hearing was held. In 1991 the court in Kassel (second level) again decided that I was right. The judges stated that I may not be forced to take part in experiments for which animals are killed.

Unfortunately the court's decision is a bit unclear: because the judgment does not explicitly exclude the use of animals that have been killed for other animal experiments and not the practical in question, it left the university the (unexpected) possibility to again try to force me to take part in the experiments. The university saw the weakness in the judges' decision immediately, and offered me to do the same experiments on frogs which had been killed at a research institute for other purposes.

Of course I also refused to take part in experiments on these animals, and I decided to continue my study at another university where no animal experiments and dissections are done. I completed my studies and qualified at the University of Herdecke in 1996. But the lawsuit has not been in vain because it built the foundations for many other cases in Germany.

NEW ZEALAND

Dr. Jessica Beer BVSc.

Massey University Institute of Veterinary and Biomedical Sciences, Bachelor of Veterinary Science

1998 – 2002



In 2001 one third year veterinary student at Massey University's Institute of Veterinary and Biomedical Sciences conscientiously objected to participating in physiology vivisection laboratories in which sheep were killed. She was initially denied alternatives, but, after other third year students voiced similar concerns, Massey decided to allow conscientious objection to the labs. Fourth year student Jessica Beer, who had previously seen and experienced how little herself and her classmates had learnt from the labs, gained permission to survey the opinions of third, fourth and fifth year students on how much they believed they had learnt from them. The results were damning, resulting in the complete elimination in 2002 of two of the labs, with the remaining four becoming demonstration labs, with only two sheep being killed for the entire class – a total of eight sheep killed annually. Previously 68 sheep had been vivisected and killed in these labs each year. In 2004 the Physiology Department intends to end these laboratories entirely (although rabbit uteri, rabbit small intestines and toad skeletal muscle tissues may still be used in the second year physiology labs).

The vast majority of Massey University veterinary students were in no way radical. They were, in fact, quite the opposite. Although it always depends on the campus in question, it is highly probable that similar survey results would occur if student surveys were conducted in relation to similar teaching laboratories anywhere in the world. Hence student surveys like this one potentially provide extremely powerful tools to aid in the elimination of such laboratories.

Beer, J., 2002, "Student survey ends labs at Massey's veterinary college"

In 2001 one third year veterinary student at Massey University's Institute of Veterinary and Biomedical Sciences conscientiously objected to participating in physiology vivisection laboratories in which sheep were killed. She was initially denied alternatives, but, after other students voiced similar concerns, Massey chose to allow conscientious objection to these labs. Faced with the fact that this was more than just one or two odd students, the faculty released a statement to students in the third year of the course to the effect that these sheep labs would no longer be compulsory. By this point the class was part way through the series of labs, and a small group of five to six students elected not to participate in any further labs and instead were given the alternative of writing an essay on the same topic. This was the first victory for the students, progressing from the labs being compulsory to them becoming an elective learning tool.

During my third year I had seen and experienced how little I and my classmates had learnt from the labs, and so I gained permission to survey the opinions of third, fourth and fifth year students on how much they believed they had learnt from them. The results were strongly indicative of the students' perceptions, and had a strong influence on the reconstruction of the Veterinary Physiology course. At the end of 2001 there was a decision to eliminate two of the six labs and to present the remaining four labs as demonstration labs only - a total of 68 sheep reduced to only eight sheep being used for

teaching purposes in the third year course. It is not a perfect solution but that means only eight more left to save.

For some background to what these labs involved, in the physiology course for our veterinary degree there were a series of live sheep labs where groups of three students would anaesthetise sheep to conduct physiological experiments on them, including:

- An introduction lab on the procedures and skills to be used during the year
- The effects of Haemorrhage
- Autonomic responses
- Arterial Blood Pressure
- Bile acid secretions
- Saliva production

During the laboratory classes students would have limited supervision by instructors who were shared amongst all the groups. The drugs and protocols used during the anaesthesia and surgery were archaic and are almost never used in modern veterinary surgery. e.g. tracheal cannulation, and no aseptic technique was used. Many students felt extremely stressed and often the results would be so wildly inaccurate that students could not learn any facts from the outcomes. At the conclusion of these labs, if the sheep were not already deceased by that time, they were then euthanased by the students using an overdose of potassium chloride.

The achievement at the end of 2001 to eliminate some of the labs was such a huge break though, and proved to me the importance of working *with* the academic staff. I had formed a respectful relationship with the Head of the Physiology Department and he was full of encouragement for us to investigate the benefits and disadvantages of these labs from the students' point of view. Many of the other lecturing staff were far more scathing about this survey, but by presenting a reasoned and scientific argument to the Head of Department we achieved change even in the face of the views of certain professors.

Over the vacation of 2001-2002 further work was done by the university in regards to the format of the Physiology Curriculum in Massey's BVSc. course. When I returned to undertake my final year in 2002 I approached the Professor to get confirmation of the changes to the Physiology laboratory classes. He informed me that it had been decided to continue demonstrating four of the labs until the end of 2003, and from 2004 onwards there will be no further use of live sheep in student laboratories. However I noted that at this point they will be continuing the use of rabbit uteri, rabbit small intestines and toad skeletal muscle tissues in the second year physiology labs.

Every step is a success, and the change in the attitudes of these professors is the best sign of things changing. The survey was a fair bit of work, and I have personally got some subtle abuse for it from fellow students, as well as disapproval from some of my lecturers. But the grin I now have, because I have helped make a change, is worth it. If anyone is a student and they object to the way their course is run in regards to animal treatment and animal rights, then there is something you can do. Don't waste time antagonising the staff and lecturers, that only wastes time and creates anger. Working *WITH* them no matter how much you disagree with their philosophies on life - this is the best way to make a change.

The preparation of the survey report in co-operation with university staff and utilising an independent university statistician/researcher meant that the results were analysed, discussed and presented in the scientific and statistical language of the academics themselves. It was partly the fact that this report was presented so scientifically and professionally that made it impossible for the academics to fail to see the obvious, which was that, as the students neared the end of their veterinary training, they believed that the educational value of the laboratories was much less than they had previously believed or been told, and generally not worth the lives lost. It then became nearly impossible for those academics to maintain scientific credibility without acting as they did - by cancelling almost all of the experiments.

The Massey University questionnaire and survey report provide outstanding examples of how to design a survey questionnaire, statistically analyse the survey results, and present the information in the form of a scientific report. It would be very, very easy to adapt the Massey questionnaire and survey report

for use elsewhere. It should be available on the InterNICHE web site or the web site associated with the AVARStudents email list. Alternatively, enquire on the HumEdANZ email list whether anyone has a copy. - Editor.

NORWAY

Siri Martinsen

Norwegian School of Veterinary Science

1996 - 2002

Norwegian School of Veterinary Science student Siri Martinsen has been a pioneer in the use of ethically-sourced cadavers – obtained from animals that have died naturally or in accidents or been euthanased for medical reasons. When faced with the dissection of purpose-killed animals in her anatomy course in 1997, she obtained permission to try to acquire ethically-sourced cadavers instead. She obtained phone numbers from farmers' associations, etc., and called sheep, cattle, pig and chicken farmers, and horse stables. The farmers were often sympathetic with Siri's desire to spare lives, and happy to help. Siri also attended autopsies of clients' animals at her veterinary college. In these ways she obtained all the cadavers she needed for her anatomy dissections.

Siri also refused to perform several invasive or terminal physiology experiments on frogs, guinea pigs, rats, mice and sheep in 1997. However, her physiology academics rejected the alternatives Siri proposed and refused to compromise. They declared her physiology exam invalid, despite the high marks she received. As she nears the completion of her veterinary course in 2002 Siri still does not know for certain whether she will be allowed to graduate (although it appears likely that she will). If necessary she intends to take the matter further, for example, to the Department of Education.

Martinsen, S., 1998, "Siri Martinsen", in Jukes, N., (Ed.), *Conscientious Objection to Animal Use in Education: Testimonies From Twelve Students*, Leicester, England: EuroNICHE.

As a student of the Veterinary School in Norway, I was prepared to face harmful use of animals for educational purposes. I knew that I would have to do a lot of work and be clear about my position to have any hope of being able to do the courses without compromising my ethics. My position is the following: I do not want to cause animals suffering because of my education. This means also that I do not want to do experiments on animals, even if they do not physically suffer - as long as they are bought and kept in the experimental animal department only for the sake of the students. This is because I regard it as suffering to be kept in a sterile laboratory environment for one's whole life without ever having been outside, and with minimal opportunities for normal behaviour. However, I will agree to cause animal suffering as part of treatment in clinical work, provided the animal needs the treatment and will personally benefit from it in the end.

Neither do I want cause the death of an animal for the sake of my education. This includes dissecting animals bought for use of the students - even if this is only a demonstration (such as 60 students on one animal). However, I do not object to using slaughterhouse offal, and animals killed in the hospital - even in cases where I as a veterinarian would not agree with putting the animal down. On the other hand, I do object to using slaughtered animals which are bought by the school and would otherwise be eaten; and so-called "surplus" animals (which might actually be ordered just for student use). The logic here is that I, as a student, do not want to create a market for killed animals. I do not create such a market, however, if I take animals or biological material from the "garbage bin".

My first encounter with dissection of purpose-killed animals was in the beginning of my second year, in 1997. The first year's dissections were done on formalinised dogs, having been put down in the clinic, mainly because of diseases, and where the owner had agreed to donate them for dissection. This was not a problem for me. In the second year, however, we were to dissect lambs that would otherwise

be sent to the slaughterhouse. I had numerous discussions with the different teachers in anatomy, most of whom seemed unaccustomed to the issue of ethical problems with dissection. However, I sent a letter to the institute leader and to my great relief they allowed me to find a "naturally dead" animal (of course with practical restrictions); I would have to take a test if I was not able to find the animals in time for the course.

Encouraged, I set out to acquire a naturally dead sheep - calling most sheep farmers in the areas nearest Oslo (55 in number), asking if they would be so kind as to tell me if one of their animals accidentally died ... Surprisingly, many farmers expressed sympathy with the wish to spare animals' lives by dissecting one that had died naturally. On the Sunday before the start of the course I got a call from a farmer saying that his biggest male lamb had suddenly died. In total I got seven calls in six weeks from farmers offering me such sheep. I had to dissect the lamb in the pathology department, as the anatomy department was afraid of having foreign material in their dissection hall.

All the following dissections were done on slaughterhouse material, or we had the choice between slaughterhouse material and killed animals. However, there was an "in situ" course where a killed pig, a horse, cows and hens were used. The Institute of Anatomy kept their promise, and I was allowed to find ethically-sourced animals for this course as well. I called pig farmers, cattle farmers, stables and chicken owners. Their phone numbers were obtained through the various farmers' associations.

As I had dissected the lamb in the pathology department, I had also come in contact with the technical assistants there. I had been allowed to attend autopsies of animals, put down because of illness and brought in from the clinic. I had left my phone number for them, so that they could tell me whether any animals of the species I needed were to have an autopsy performed on them. I attended two autopsies on horses, and one on a cow. But during the autopsies I was standing in the background with the pathology students, and was not able to do the dissection myself. I was allowed to dissect a horse on my own - the pathologists were only using one injured leg, and the rest was left untouched. I also dissected a calf that had died in its mother - who had to be put down because of a severe oesophagus injury. I dissected two pigs that I fetched from farmers. After calling only seven farmers I got four offers in one week. I also got a hen which had died in an accident.

There was also a course where fish were killed and dissected. I suggested a video of a fish dissection as an alternative - but it was not accepted. To find an ethically sourced dead fish was the most difficult task. I finally got a fish that was not to be sold and eaten from a fishing boat at the bay in Oslo - but I was not really satisfied with the solution. Finally I passed my anatomy exam and got 11 out of 12 as a mark, along with written confirmation that the courses with ethically-sourced animals were approved of.

The animals used in the physiology courses are a totally different issue. The experiments are: the frog nerve/muscle; the guinea pig ileum; mouse metabolism/temperature; a sex hormone experiment on a rat, including castration and killing; and a circulation/respiration/rumen physiology demonstration on a sheep.

At first we were four students who wanted to refuse the frog nerve/muscle experiment. Two professors had a meeting with us. Their attitude turned out to be very different from that of the anatomy professors. They delivered all the usual arguments - from the "necessity" of touching a "slimy and disgusting" frog preparation, to the "outstanding well-being" of the animals used. However, they agreed to look at the multimedia computer simulation 'SimNerve', which was provided by us through the EuroNICHE Alternatives Loan System, and we also delivered a written application for exemption from taking part in animal experiments.

After some time both professors gave their reaction. They thought the computer program was not good enough, and boring. We also got a written reply stating that they insisted on us doing the experiment. We sent a letter of complaint, offering suggestions for a different alternative: the simulation 'SimMuscle' in combination with a student self-experiment that was being done in the physiology course at the biology faculty.

A long time passed and we did not get an answer to our complaint. Finally I was approached by one of the professors, telling me that they had reached their final conclusion. It was the same as before. They

did not comment on the new suggestion on alternatives. One also told me that I would face a hard time with the opinions I have. He said I would have to do the experiments or take the consequences.

In the meantime I had approached the biology professors and asked them if I could participate in this course as an observer. I was allowed to do this but when I also asked on behalf of the other three students, the biology faculty would not allow them to come with me.

On the day of the frog experiment two of us actually performed it. The other two of us wrote a complaint to the rector. The answer we got was rather vague, basically saying that the decision had to be left to the physiology professors and that he would not evaluate the situation as he trusted their judgment.

We also wrote an appeal to the professors, with extensive suggestions of alternatives to the remaining animal experiments. Six students signed the letter, but I was the only one not to take part in the experiment. There was no answer to this letter, but I got a warning that my exam would not be valid as I had not taken part in the courses. Due to changes in the curriculum, the physiology semester was a very busy one for both students and teachers, so I realised that it would not be the appropriate time to organize a final meeting with the professors and rector about my case. I was allowed to do my exam, and got the grade 10 out of 12. However my exam is not valid because of the courses I didn't attend.

During the whole case I have tried to collect letters of support and signatures for a petition from professors and veterinarians in Norway and other countries. I have also collected scientific reports about the educational value of alternatives. Within the animal rights organisation NOAH, I also created a student group against animal experiments. This group applied for money from the Alternatives Fund in Norway - money with which we bought 'SimMuscle'.

As one of the animal experiments is the castration and killing of a rat, I asked two vets I know to let me participate in castration/sterilisation of animals in their clinic. I participated in the castration of two rabbits and a cat, and the sterilisation of a female cat. They were all homeless animals that I had taken care of for rehoming. Therefore I was able to see to them not only during the operation, but also be responsible for the post-operative care and recovery. I see this as far more useful for a veterinary student than castrating and killing an experimental animal. I got confirmation of my participation from the vets - but I still do not know if this will be approved of by my physiology professors.

I am still working to get my exam validated, and I am not sure what measures I will have to take. As the physiology professors seem to be unwilling to change their minds, my next move is to approach student organisations, the college board, and eventually the Department of Education, with my information on alternatives and my request for a humane education.

USA

Dr. Lori Blankenship Ph.D, DVM

**Virginia-Maryland Regional College of Veterinary Medicine,
Doctorate of Veterinary Medicine**

1996 - 2000



During her time at the Virginia Polytechnic Institute and State University (Virginia Tech), veterinary student Lori Blankenship was involved in numerous activities aimed at enhancing the welfare of the animals at her college, including the establishment of: a Student Chapter of the Association of Veterinarians for Animal Rights (SCAVAR), an alternative to a teaching laboratory that involved inducing illnesses in sheep, the ethical sourcing of cadavers from private veterinarians as an alternative to terminal surgical laboratories, spay-neuter-and-release programs for two feral cat colonies, an Animal Welfare Concern Board to investigate anonymous complaints, a dog walking and environmental enrichment program for dogs and cats used in teaching and research, and a policy allowing for the sale of these animals to students, staff and members of the community once they are no longer needed.

**Blankenship, L, 1999, “Veterinary students making a difference”,
Alternatives in Veterinary Medical Education, Issue 11, pp. 1, 6.**

Many students at the Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM) are concerned about animal welfare and animal rights issues. We have both a Student Chapter of the Association of Veterinarians for Animal Rights (SCAVAR) club within the college, and an Animal Welfare Club. These clubs have worked to institute new programs to promote animal wellness. These programs include alternatives to required laboratories and surgeries which are harmful to animals, a feral cat spay and neuter program, an animal welfare concern board, a program to allow the sale of institutional animals who are no longer needed, and a dog walking and enrichment program for dogs and cats used in research and in veterinary education.

The VMRCVM curriculum includes a variety of laboratories which utilize healthy institutional animals. Some of these laboratories result in animal discomfort, an occasional unexpected death, and some laboratories involve terminal procedures resulting in euthanasia. Many students have become involved in implementing changes such that animal suffering is reduced, while still learning principles and procedures required for a sound veterinary education.

Members of the class of 2000 were concerned about a required laboratory for the Clinical Nutrition course offered in our second year of veterinary school. During this four-day laboratory, an illness was induced in sheep, and students were required to examine, diagnose, and treat these animals. Both the induction of illness and the potential for death of the animal were of concern to many students. Interested students wrote a proposal to the course leader suggesting an alternative to inducing illness in sheep. Students proposed to work on a made-up case, while performing physical exams, and faux treatments on well sheep. This proposal was accepted, and both students and faculty were very pleased with its outcome. Approximately 10% of the class of 2000 participated in the alternative laboratory. As a result of its success, this alternative was also offered to the class of 2001. Fortunately, this laboratory

has been removed from the curriculum.

The learning of surgical principles at the VMRCVM currently involves the sacrifice of many animals during the third year of the curriculum. Previously, the only alternative available to students was the use of cadavers of dogs who were healthy, euthanized only because they were homeless. The mechanism of euthanasia is via carbon monoxide at the local pound. Many students were concerned about the source of these cadavers, as well as the mechanism of euthanasia of these animals.

Students proposed obtaining cadavers of animals who died or were euthanized for medical reasons. The proposal was accepted by the college administration, and a new school policy was instituted, allowing students to obtain their dogs used for surgery from an ethical source. Private practice veterinarians agreed to provide this alternative method of disposal to their clients, which provides for the decrease in the number of healthy animals euthanized for surgical training. Thus far, five cadavers have been donated by pet owners through their veterinarians. While not all of the cadavers needed have been obtained, we are pleased with the willingness of veterinarians and pet owners to participate. It is our hope that the VMRCVM will institute a client donation program to obtain cadavers from our veterinary teaching hospital of animals who died or were euthanized for medical reasons. This would further prevent the unnecessary death of homeless animals in veterinary education.

Along with proposing changes in the standard protocol involving the use of animals in education, the Virginia Tech Student Chapter of AVAR also works in the local Blacksburg community to decrease the feral cat population. The feral cat spay-neuter-and-release program began in 1998, when a club member, while visiting the local library, noticed a colony of cats living in and around public drainage systems. After some investigation, it was found that neither the county nor the town of Blacksburg provide a shelter or holding facility for homeless cats.

After investigating the newfound colony and finding it to be in need of management, a program was devised to spay or neuter the cats and release them back into the colony. The club solicited the help of a local veterinarian, Dr. Mark Dallman, who graciously provides the space, equipment and guidance necessary to allow third and fourth year students to spay and neuter these animals. The cats are trapped, tested for feline leukemia, vaccinated for rabies and distemper, given Ivermectin for deworming, and finally spayed or neutered. Kittens who are too young for surgery are removed from the colony and are advertised for adoption.

Currently two feral cat colonies are involved in this program. Students donate food to the local residents who are caring for these colonies. This program is funded by donation only. The first donor was the town of Blacksburg, which graciously supported the establishment of the program. Students and their parents who wish to enhance student learning, while benefiting the health of feral cats, have continued to support this program since its beginning. So far, approximately fifty cats have been neutered and released or were placed in new homes. With student participation, this program will continue, hopefully minimizing the feral cat population in Blacksburg.

Also involved in animal wellness, the Animal Welfare Committee has a variety of programs to protect and enrich the lives of animals utilized in veterinary education at the VMRCVM. This committee created the Animal Welfare Concern Board in 1996. This board receives anonymous concerns, via a locked box placed in the library, from any member of the college. The board investigates the concerns and responds by suggesting alternatives, or making recommendations to the individuals or groups involved. This board is composed of one or two students from each class, and two faculty members.

The Animal Welfare Committee also manages the dog walking program. This program was designed in 1996 to allow dogs used in research and education the opportunity to escape their cement and wire runs for a walk outside. Interested students walk animals during lunch and other class breaks. This program was augmented by the Department of Research and Graduate Studies which generously funded the construction of a large dog run. During the school season, most dogs are walked at least once a week by student volunteers.

In 1997 the committee proposed the purchase of beds for the institutionally-owned dogs as well as toys and grooming aids for both the dogs and cats. These members constructed a proposal for funding which was submitted to the Hill's food committee. Funding was granted, and many animal toys and beds were bought to increase the comfort and daily activities of animals used in research.

Finally, the committee proposed a purchase policy for animals once used in teaching and research. Students, faculty, and staff members worked together to implement a policy which allows for the sale of these animals for a nominal fee to students, faculty, and staff as well as members of the community. A rigorous screening method has been developed to ensure that these animals will be placed in appropriate homes. The policy prohibits the placement of any unneutered animal and the Veterinary Teaching Hospital has agreed to spay or neuter animals prior to their sale. This policy is in the final stages of approval by Virginia Tech University and placement of a number of these animals is expected during the spring of 1999.

The use of animals in veterinary medical education, research, and in the community is of interest to many of the students at the VMRCVM. Students have contributed a lot of extracurricular effort to create and implement programs promoting animal wellness, and it is hoped that this enthusiasm for improving the lives of animals will continue with the future students of the VMRCVM.

Lisa Hepner BS

University of New Mexico, Bachelor of Science (Biology)

1988 - 1992



Lisa Hepner's polite request for an alternative to a fetal pig dissection in her biology course resulted in a detailed interrogation of her beliefs by the course instructor. After initially being refused she was finally successful, becoming the first University of New Mexico student to be granted an alternative to dissection. She then entered into a three year struggle with the Department of Biology to develop a conscientious objection policy that would ensure alternatives were provided to all students who did not wish to dissect. After putting her proposal into writing and soliciting signatures of support from professors, doctors, veterinarians, and nurses, she was finally successful, with the Department implementing a conscientious objection policy in 1991.

*Lisa then established a statewide dissection hotline to help other students implement alternatives to dissection at their own campuses. In 1994 she published her book *Animals in Education: The Facts, Issues and Implications*, which is filled with detailed information about dissection in teaching in the US, and detailed advice for other students in following in her footsteps.*

Hepner, L., "Winning alternatives to dissection at the University of New Mexico".

My struggle for an alternative

In 1989, I was taking an Introductory Biology Class. The first semester proved to be exciting. I realized that I loved the study of Biology, and decided to declare Biology as my major. Then the second semester approached, when I found out that we would have to dissect a fetal pig. As soon as I found out about the dissection, I told my teaching assistant (TA) about my objection and I requested an alternative. He immediately said there was no alternative. Upon questioning him further, he said he didn't think an alternative would be possible, but that I could talk to the instructor of the course. All the while, he tried to discourage me and made it sound impossible to get an alternative.

I made an appointment to talk to the instructor of the course about requesting an alternative to dissection. He questioned me and examined my motives like a police officer doing an interrogation. He told me that I would have to get used to dissection, that there was no alternative, and that the fetal pigs were taken from the slaughterhouse anyway, etc. I told him my stance, told him that I was a vegetarian, and told him that I would never perform a dissection. I pointed out to him that the syllabus stated that the purpose of the pig dissection was to learn human anatomy, so I came equipped with human atlases, study manuals, etc., that I requested the right to study from. He told me that I would still have to study fetal pig anatomy, and that I would still have to take the practical exam from the formalin-preserved pig. I told him that the whole purpose for requesting an alternative was not to participate in the dissection, at all.

He told me that if the TA agreed to test me from the diagrams of the fetal pig that I needed to study, then that would be okay with him. It was settled; my alternative was to study diagrams of the fetal pig and be tested from them.

I made an individual appointment with the TA. He told me that he had to make the test harder for me since I chose the alternative. The test was oral. He asked me forty questions (compared to the twenty the other students answered) and wanted me to give a detailed oral response. Not only did I have to

name the organ, or vessel, but I also had to talk about the function, the interrelationship, and other details. I passed with flying colors. I missed two questions out of forty, and received an “A” on the practical.

Winning a conscientious objection policy

My next mission was to make it easier for other students to have an alternative. I didn’t feel their ethics should be scrutinized, or that they should be punished by choosing an alternative.

The campaign to get alternatives to dissection on a wide scale was a three year battle, filled with unreturned phone calls and broken promises. The details of the campaign are quite extensive but basically it was a lot of run around. I was told I needed to talk to one person, and then I was told I needed to talk to another person. After wasting my time and energy on the instructors, lab coordinators and TA’s, and getting no results, I turned to the Head of the Department. Even then, I could not get him to return my phone calls. Several months went by with unreturned phone calls.

My success finally came in 1991 when I put my proposal into writing. I wrote statements of exactly what I wanted. I requested that ALL students be offered an alternative, and that the alternative be announced. I requested that the students choosing the alternative would not be penalized or harassed, etc. I put it all down in writing.

Then I started soliciting signatures for the proposal. I tried to mainly find doctors, veterinarians, nurses and professors who would sign the proposal. After acquiring around twenty signatures, I sent the proposal along with the endorsements to the Head of the Department, the individual biology instructor, the lab coordinator, the teaching assistants, and the Dean of Arts and Sciences.

I finally got an appointment with the Head of the Department of Biology. A sympathetic veterinarian that I knew went with me. The Head of the Department said that he could not promote alternatives and that he still felt they were inferior to dissection but that they would offer alternatives. He gave me a copy of the new 1991 "Statement and Philosophy on the Dissection and Use of Preserved Specimens in the Courses Taught in the Department of Biology, The University of New Mexico", which stated that, *“...Members of the faculty are keenly aware that some students object to dissection on moral, philosophical or religious grounds. As part of our Department’s desire to serve the needs of a diversity of students, these objections are respected. On the other hand, many of our faculty believes that the only way for students to really learn anatomy is to require them to do dissections of invertebrate and vertebrate animals and of plants. If religious or other strong personal commitments dictate that dissection of preserved or fresh specimens of organisms is unacceptable to certain sensitive individuals, we will provide, within the limitations of our time and resources, an alternative, which, in our collective opinion, may minimally reduce the educational experience of the course in question.”*

While I wasn’t too happy with the slant of the policy toward dissection, it did state that they would offer an alternative. The head of the department even told me that he told all the professors to announce that there were alternatives available.

An article in the *New Mexico Daily Lobo* the next day read, *“Dissection of animals will no longer be a requirement for all biology students, now that an animal rights activist has convinced a reluctant biology department to offer alternatives.”*

Reaching out

After this long battle, I started a dissection hotline for the state of New Mexico and made student information packets. I also took all the information I had received, and all the contacts and resources I had collected, and ended up writing a 300 page book entitled *Animals in Education: The Facts, Issues and Implications*.

I had the honor of speaking at the National Animal Rights Conference in Washington, DC in 2000. And while I’m not currently as involved in animal rights as I used to be, due to pursuit of other writing projects, I can still occasionally be found heading off to Neah Bay, Washington to save the whales from being hunted by the Makah Indians.

Dr. Jennifer Kissinger DVM

**Ohio State University College of Veterinary Medicine, Doctorate of
Veterinary Medicine**

1988 - 1992



In 1989 whilst completing her Bachelor of Science in Biochemistry at Ohio's Antioch College, Jennifer founded "The Animal Center" within the Student Center building, which promoted animal rights issues and a vegetarian lifestyle. In 1990 she was responsible for the implementation of an alternatives track at the Ohio State University College of Veterinary Medicine. As a third year student, Jennifer conscientiously objected to the use of live, healthy nonhuman animals as "practice subjects" in the traditional terminal surgical laboratories. After nearly a year of requesting faculty and administrators to allow her to learn surgery via humane alternatives, she was told that she would be failed and expelled if she did not participate in the laboratories. Subsequently, Jennifer filed a lawsuit against the school with the help of Professor Gary Francione, Director of the Rutgers School of Law Animal Rights Law Clinic. Within five months, OSU developed a curriculum for Jennifer and any other

student who now chooses not to harm and kill animals in the pursuit of a veterinary education.

Excerpted from Anonymous, 1997, "After alternatives: An interview with a former alternatives student", *Alternatives in Veterinary Medical Education*, Issue 4, pp. 1, 6.

Q. Dr. Kissinger, what were your reasons for pursuing an alternatives track?

A. The reasons I pursued this track stem from my respect for animal life. Since the traditional courses ended in the euthanasia of healthy, innocent animals, it was hard for me to justify my participation in these courses. I had only to look as far as human medical schools to realize that the traditional methods in veterinary schools were outdated. Medical students learn through practice on cadavers, models, and by assisting in surgeries of true patients, under the direct supervision of surgeons, until they gain enough exposure and experience to handle more and more roles as primary surgeon. If this training is good enough for human surgeons, it should be good enough for veterinarians.

Q. Tell us about your training and how it differed from the traditional track.

A. The traditional track required ten surgical exercises, in which three students were assigned to each animal. The animal was killed after each exercise. Students rotated in the role of primary surgeon, assistant surgeon, and anesthetist, which means each student was primary surgeon only three or four times. With this arrangement, it was possible to actually graduate without doing many routine surgeries as primary surgeon.

As an alternatives track student, I did almost 20 live animal surgeries as compared with traditional track students, who were primary surgeon or assistant for only six or seven live animal surgeries. Not only was I primary surgeon for every required surgery, but I repeated each surgery at least three times, first practicing on a cadaver, then assisting in the surgery of actual patients, mostly at local veterinary hospitals in the area, and finally performing each surgery on a patient with supervision. In the traditional course, there were two to three professors to every 15 or so students. I had one-on-one supervision throughout each procedure.

I did perform two of the more difficult required procedures, a gastrotomy and a cystotomy, with the client's consent, on a terminally ill dog named Tiffany. Tiffany gave me invaluable experience, not at the cost of her life, but rather at the end of her natural life.

Q. Do you feel that pursuit of an alternatives track affected your ability to get a job?

A. That is one of the main concerns facing a veterinary student considering an alternative surgery course. How will future employers view this nontraditional training? In my case, because I felt that my surgical skills were comparable to those of any new graduate, how I obtained my training was not a big issue. I was offered a job by one of the first few practices that I interviewed with.

Q. How do you personally feel about your surgical abilities?

A. I feel I have succeeded well in my endeavors as a veterinarian. Recommendations from my employers have stated, "*Dr. Kissinger has performed beyond expectations and we value her very much*", and "*I would highly recommend Dr. Kissinger be accepted to your surgical residency program.*"

Q. What long-term effects has your pursuit of alternative surgical training had on you?

A. Because of the adversity one experiences when being different from the norm, I developed an outstanding commitment and fervor not to fail in my goals. I had a unique passion to prove myself. I was going to be the best surgeon there was, just to prove it could be done without killing helpless animals. It is this kind of true passion that can lead to great things. It can be done. You just have to make it so. We owe it to ourselves and we owe it to the animals we have devoted our lives to care for.

"I have worked with Dr. Kissinger for two years, and I can say she is one of the most competent surgeons I have seen. She knows her anatomy and has excellent technique. I am very pleased with the surgical training she received." - Dr. Jan McGough, Seattle, Washington.

"Dr. Kissinger has terrific tissue-handling skills. Her surgical technique is certainly up to par with any other veterinarian who has worked with me." - Dr. Cady Barns, Turner, Maine.

Kari Pohost

University of Florida College of Veterinary Medicine, Doctorate of Veterinary Medicine

1999 - 2003



When University of Florida College of Veterinary Medicine first year student Kari Pohost requested ethically-sourced cadavers for her anatomy dissections in 2000, she was given four options: to use the cadaver of a purpose-killed animal, to leave the College for a year to see if the program would change, to transfer to another veterinary college, or to leave the school immediately. She was given 72 hours to decide.

She contacted animal rights organisations, the Animal Legal Defence Fund, and state congressional leaders, and appealed to her university against the decision. Thanks to the support she received and the willingness of the university to repeal its initial decision, she was back talking to her Dean of Students one day after the deadline had passed, discussing the use of a horse that had been euthanased for medical reasons.

In 2002 she is working with her college to establish surgical alternatives and an educational memorial program similar to the body donation programs that operate in medical colleges.

Photo: Kari and Buffy, whom she adopted from her veterinary college after Buffy had been used for research in a nutrition study.

Pohost, K., 2001, "In pursuit of ethical-source cadavers", in "Veterinary students making a difference", *Alternatives in Veterinary Medical Education*, Issue 16, pp. 2-3.

Before entering veterinary school, I planned on accepting the "necessary evil" of killing animals for the required anatomy courses and other veterinary school training. I remember justifying this position to myself by arguing that, no matter what I had to do to get through veterinary school, I would ultimately be a veterinarian and would, therefore, save many more animals than I would kill in school. It was only after my first few months of working on cadavers of once healthy dogs that I started questioning this reasoning. I began reading articles in the *Alternatives in Veterinary Medical Education* newsletter and talking with students from other veterinary colleges. I remember reading an article about Andrew Knight, a veterinary student in Australia, who spoke out about the animal abuses occurring at his veterinary school. I thought he was really brave. I wished someone like him were in my class so that I would not have to be the only one to speak up.

When I realized that the required 2000 large animal anatomy class was only two months away, I felt I must immediately address the need to acquire an ethically-sourced cadaver for this course. The instructor informed me that the cadavers were from ponies purchased from a farmer who bred them for meat. It seemed logical to me that, if human medical students are able to learn about anatomy and surgery without killing humans, veterinary medical students could learn without killing nonhuman animals. Ultimately, I realized that nothing was going to change unless I did something about it - I would have to be the one to speak up.

I started my "journey" by contacting the Association of Veterinarians for Animal Rights (AVAR) to find out more about alternatives to harmful animal use in veterinary schools. AVAR's Science Director Dr. Susan Krebsbach advised me to talk with the administration about the possibility of obtaining a cadaver from a client-donated animal who had died of natural causes or was euthanized for medical reasons. I then contacted the Dean of Students to inform him that I found the killing of animals for the sake of my education to be in conflict with my ethical beliefs. He subsequently set up a meeting with a committee of clinicians and researchers to discuss the curriculum requirements and possible ways of addressing my concerns.

In preparation for the meeting, I brought several copies of an article from the *Alternatives* newsletter that discussed a program at the Tufts University School of Veterinary Medicine, where client-donated, rather than purpose-bred, animals are used in the anatomy courses. The article pointed out some of the advantages of using client-donated animals, including introducing pathology into the first year curriculum and encouraging students to work together to compare normal and abnormal anatomy. I also brought a prepared speech to the meeting, thanks to the advice of Dr. Krebsbach.

Unfortunately, neither the article nor the speech had much of an impact on the committee. Instead of considering my suggested alternative of using a cadaver obtained through a willed body donation program, the committee concluded that within 72 hours I would have to decide whether to leave school or choose between three of their alternatives: 1) I could agree to take the anatomy course in February using a cadaver from a purpose-bred animal; 2) I could leave for a year and wait to see if the program would change; or 3) I could transfer to another veterinary college where my ethical concerns would be respected.

After leaving the meeting, I felt desperate and confused. I knew I was running short on time. It seemed that my worst nightmare was coming true. I did not want to leave veterinary school, but how could I be responsible for an animal being intentionally killed for my education - especially when suitable alternatives were available. I immediately called my brother who helped calm me down.

We started contacting animal protection organizations to ask for suggestions. Daniel Kossow from the Humane Society of the United States posted my story on-line. This, in turn, prompted individuals like University of Illinois veterinary student Linnaea Stull and organizations like the New England Anti-Vivisection Society to write letters in support of my request for an alternative. My brother and I also contacted state congressional leaders and an attorney recommended by the Animal Legal Defense Fund, who agreed to write a letter urging the administration to find an alternative. Peter Wood from People for the Ethical Treatment of Animals contacted me and was willing to lend support as well. I should mention that I had no previous affiliation with any of these animal organizations but, when I sought their assistance, they were very willing and able to provide an enormous amount of support in a short period of time. Finally, I read through the veterinary school student handbook, which stated that, if the college made a decision about my education that I did not agree with, the decision could be appealed to the university's Vice President of Health Science Student Affairs. So, I wrote a letter asking for an appeal of the decision in my case.

Thanks to everyone who lent their support and to the willingness of the administration to repeal their initial decision, I was in the office of the Dean of Students one day after the deadline had passed talking about the availability of a client-donated horse cadaver for the large animal anatomy class. The horse had been euthanized for medical reasons.

A year has passed since all this transpired. I am now less afraid to speak up for what I believe and am actively pursuing the implementation of other alternatives to harmful animal use at my school. Currently, I am working with the administration to use alternatives in surgical training that do not depend on harming or killing healthy animals. I am also working with other veterinary students to get a willed body donation program up and running at the University of Florida. With the support of other students, it is hoped that the clinicians and the administration will be convinced of the need to adopt such a program for the entire student body.

Jo Powell

Portland Community College (Oregon) Science Department, Human Anatomy and Physiology

1997 - ?

Jo Powell entered undergraduate school in the Portland Community College Science Department in Oregon, US, in 1997, with the aim of eventually becoming the best doctor she could be. She was shocked to discover that dissection of rats, cats, lambs and pigs was required in her Human Anatomy and Physiology course. After her college refused her request for alternatives, she gained the support of animal rights groups such as HSUS and PETA, and of her campus student organisation. She started a petition, wrote letters and arranged meetings. She eventually stated that she would not stop until a formal conscientious objection policy was installed, and explained that, if it was not her, eventually a student would sue the college over its failure to provide alternatives, probably for a lot of money, and that, in such cases, the student usually won. A formal conscientious objection policy was installed by the Science Department within a month (in 1998).

Powell, J., 1998, "Jo Powell", in Jukes, N., (Ed.), *Conscientious Objection to Animal Use in Education: Testimonies From Twelve Students*, Leicester, England: EuroNICHE.

I enrolled in a college level Human Anatomy and Physiology class at Portland Community College in Oregon in autumn 1997. After many years of extensive study of botanical medicine and therapeutic herbalism, I was excited that I would be studying anatomy and physiology to a greater depth than before, and would soon enter a university medical degree course to prepare further for my career in human medicine.

Things were looking good. On the first day the instructor clearly knew the material and was a confident teacher. The next day was the first day of laboratory. All of a sudden, with no mention on the syllabus and no word from the instructor, we were told to dissect a rat. This was the beginning of my nightmare. The course description never stated that non-human animal dissection would be an integral part of the curriculum, and nowhere could I find the college's pedagogical methods described. I had no idea that this kind of practice even persisted these days, and certainly not at an institution in one of the country's most 'progressive' communities. I was shocked. Never would I have guessed that as I continued my education in the field of health care for humans, in a course called 'Human Anatomy and Physiology', I would be expected to dissect a rat, cat, lamb or pig. In order to become the best healthcare practitioner – the best doctor – that I can, I would most certainly choose to work with human bodies and human parts. As an animal rights activist, I also completely disagree with all concepts of animal experimentation.

I told my instructor that I was unable to take part in any dissection of non-human animals. I was concerned about the medical/physiological aspects of the species issue, and my spiritual and philosophical beliefs were insulted by this practice. I asked for an alternative and told him that I had no problem working on human tissue, let alone the vast array of alternative materials available such as models, CD-ROMs, and videos.

He was stunned, maybe never having met this situation before. He tried to reassure me that the rats were bred for this purpose and that the other animal parts were waste products from the food industry. I replied that neither justification was acceptable, and that both industries were offensive to me and my sensibilities. He assumed I was being squeamish, and his attitude suggested that as he had learned like this, so should I. Another biology teacher told me, "*There is a certain level of maturity involved in this level of coursework. I tell students that if they can't dissect, then they should reconsider their career*

decision." I was appalled, angry, and dismayed by her inconsiderate and ignorant response. She knew nothing of me, and clearly not my mature and deep commitment to my education and future career in the field of healthcare.

The dean of the department told my instructor that it was up to the individual instructor's discretion on how to handle these issues. He pretended to compromise with the "look but don't touch" suggestion, which I rejected. I told him I would withdraw from the class, and he suggested I withdraw from the school. To one that could accommodate my needs. I then realized I had a large hill to climb if I wanted to do the course at this college. With tears in my eyes, I saw my entire academic year and career plans about to slip away.

But I resolved to pursue an alternative here and to refuse to let this archaic system impede upon my value system. Moreover, my financial situation meant that I couldn't move to another college. So I went to the Women's Resource Center on campus, a supportive and pro-active group, and planned my moves. Firstly I talked to my peers. Did they know that this was going on? Did they believe that dissection was the only way? Overwhelmingly they were with the alternatives. Many said they were disgusted with animal use for human anatomy and physiology teaching but conformed because the courses were mandatory for their degrees. Secondly, I refreshed my knowledge on animal rights and called on the support of PETA (People for the Ethical Treatment of Animals) and the HSUS (Humane Society of the United States) who promptly provided resources to help me.

I used the PETA outline on implementing a student choice policy, and the HSUS list of medical schools that use no animals, and the process was quite straightforward from there. I sent official letters to the relevant deans, respectfully requesting a formal Alternative to Dissection Student Choice Policy and to be kept informed as an alternative program was implemented. I told them that because of my *"sincerely held religious and moral beliefs about the sanctity of life"* I was unable to participate in any non-human animal dissection practices. They replied with curt letters saying they would look into it, and good luck with my academic pursuits. The Dean of the Science Department mentioned that a faculty committee had been formed to look into this issue, and with my experience in the similar realm of the Student Senate, I requested to be a student representative. He thought this would not be appropriate but said he would discuss it with the committee and let me know. In fact he did not inform the committee and I never heard from any member of it.

The Affirmative Action Office on campus also chose not to address the case, and just passed it on to another dean, higher up the chain of command like any bureaucracy. Before climbing this myself I approached the student government, working with the Student Body President to lobby the Student Senate until they formally resolved to ask the faculty and administration to implement an official Student Choice Policy. This policy would allow a student the unfettered right to request and get an alternative to non-human animal dissection without any retribution or penalty. The vote was passed nine to one. The resolution was formally drafted and signed by the Senators and then published in the college newspaper.

Apparently, many students felt threatened by my campaign. Some liked dissection, others suggested that we best not challenge the status quo - after all didn't our instructors know best how to teach this material? But the Student Choice Policy wasn't demanding an end to all dissections. It may be a step along the path towards abolition, but I felt that bringing in the topic of this perhaps unattainable goal would confuse the immediate issue. Many of the students against the policy were young and had rarely questioned authority before. And anyway, they could continue with their rat dissections. What the policy did ensure was that students with moral and spiritual objections to this practice would not be coerced into dissection, and that they be offered an alternative. I argued for respect of diversity (a popular approach at the moment), and that it was wrong not to honour another person's morals and spirituality. Of course I sometimes added that I am also a taxpayer who contributes to a public institution, and additionally a dissatisfied consumer of public education.

I created a space for a petition in a busy area of the campus, and here showed the rat dissection video from the HSUS Alternatives Loan System and gave out relevant information. The stall lasted for six months and I gathered almost 300 signatures, which was significant.

The Student Body President began negotiations with the faculty and administration, and made comprehensive packets of information for all the deans. Student attendance on the faculty committee

was declined, due to the 'difficult issues' of academic freedom and curriculum, but she successfully arranged and attended an official meeting.

The Executive Dean was quite polite and receptive towards me. She wanted to assess me and my integrity and intentions, and to see if I was the stereotype of the animal rights activist. Of course, I was able to demonstrate otherwise: I had my arguments well prepared and I was articulate. I was not emotional and I kept cool and calm. I was dressed professionally and had supportive documentation with me. I had copies of the letters that I had sent and received back from the Deans, and the signed petitions. I knew the information and presented my story and myself very matter-of-factly.

The meeting lasted two hours. Both deans talked to me as if I was the only person in the world who had problems with dissection - a technique used to minimize the overall issue. I kept bringing the bigger picture back into the light: I knew national facts and figures; I talked about the message of disrespect for life that this kind of education sends to students. And with both deans being women, I tied together the issues of non-human animal oppression and the oppression of women to better demonstrate my points. I avoided the argument of dissection being bad science, as I am not a scientist and didn't feel confident enough to defeat their responses. They asked me if I would pay more money to use the more costly human body parts, and I rejected this absolutely on the grounds that I was already a taxpayer and on top of this was now being penalized for my spiritual beliefs.

Finally she asked me what would be the one main point that I wanted her to hear the most. I told her not to take it as a threat, but that if it weren't me, eventually someone would sue the school for intimidating and compromising students' religious rights. I explained that the political climate was such that in cases which end up in public battles and in court, the judicial and legislative systems were both leaning toward the side of the alternative. In one case a student had won \$95,000 damages from her university. The college would lose a lot of money and it would be easier for everyone if they implemented an official Student Choice Policy. If I didn't get the resolution I wanted I would take the issue to a higher level and the media. Essentially I told her that I wasn't stopping until I got a formal policy installed. Within one month it was installed.

The wording of the policy adopted by the faculty committee was not exactly what I had written, but the crucial elements were included: *"We respect the fact that our diverse students have different religious, moral, and spiritual beliefs and understand that these beliefs affect their opinions regarding the ethics of animal dissection in the classroom... We will work with students with objections to animal dissection in a cooperative effort to provide mutually acceptable alternatives to animal dissection."*

Overall, I am quite satisfied. The next student who voices their objection to animal dissection can complete their coursework successfully. I will have to do more work at my next stage of anatomy and physiology because of the delays, but I have to move on. I would like to see the end of dissection practices altogether but it will not come in one swoop. The method is deeply ingrained in the scientific community. The new policy in Portland, however, is a step in the right direction. With other students doing their bit at their colleges, we can continue to add to those which have moved towards the light, towards humane education.

Veterinary Professor Lara Rasmussen DVM, Diplomate, American College of Veterinary Surgeons

University of California (Davis), Bachelor of Science (Biological Sciences and Policy Studies), 1984 - 1988

University of California (Davis), Doctorate of Veterinary Medicine, 1989 - 1993

Washington State University, Certificate of Completion (Basic Surgical Techniques - Alternative Laboratory), 1992

Washington State University, Visiting Instructor (Basic Surgical Techniques - Alternative Laboratory), 1996, 1997

American College of Veterinary Surgery Board Certification (Small Animal Surgery), 1999

Western University of Health Sciences College of Veterinary Medicine, (California), Assistant Professor (Surgery and Clinical Skills), 1999 - present



Lara Rasmussen's journey as a conscientious objector reached an action stage in 1986 as an undergraduate at the University of California (Davis), when she refused to participate in two final-year physiology experiments involving frog skin and muscle. In 1989 she was accepted into the U.C. Davis School of Veterinary Medicine, and was disheartened and distressed at the amount of killing she encountered for teaching purposes. In 1992, after a great struggle, she and some classmates were allowed to participate in learning experiences that replaced three terminal surgical and anaesthesia laboratories. This they did, participating in the Washington State University (WSU) Alternative Surgery course and a U.C. Davis Veterinary Medical Teaching Hospital anaesthesia summer clinic.

She graduated from the U.C. Davis School of Veterinary Medicine in 1993, and excelled as an intern at a small animal referral centre. In 1994 she was accepted into the surgical residency program at the University of Minnesota, and she returned to teach alternative surgical students in the WSU Alternative Surgery course in 1996 and 1997. She completed her residency in 1997, accepted a Clinical Instructor position at WSU for one year, and worked in private surgical referral practice for one year. In 1999, she received board certification from the American College of Veterinary Surgeons.

She became an Assistant Professor at the Western University of Health Sciences College of Veterinary Medicine (California) in 1999, where she is currently charged with developing the surgical and clinical skills curriculum. This is the first North American veterinary college to develop its curriculum based on the twin goals of avoiding any harm to animals whilst focusing on the mastery of clinical skills. It will accept its first students in 2003.

Lara is a living proof that an alternative surgical student can rise to the very highest levels of surgical skill and professional achievement.

Photo: Lara with shelter dog 'Sandy', whose mauled face she repaired before finding him a loving home.

**Rasmussen, L., 1998, "After alternatives",
Alternatives in Veterinary Medical Education, Issue 7, pp. 1, 2, 6.**

I'm afraid my story begins quite clichéd. My ambition since childhood has been to help animals; over the years this drive developed into a goal of becoming a veterinarian, and subsequently, a surgeon. My story perhaps deviates from the norm with, to quote our Hippocratic oath, my desire to "*above all do no harm.*" I resolved that I would educate myself in the veterinary arena without the detrimental use of animals. The following account documents my actions based on my beliefs. I do not pretend that my existence on this earth does not harm other creatures; my want is to minimize this influence. Perhaps some view this as naïve given the nature of the animal kingdom, but I believe humans are different. We have achieved a place in the animal kingdom quite unique and profound. We have been given the choice to be kind.

As an undergraduate at the University of California (Davis), two final-year exercises using frog skin and muscle brought an end to my physiology major. My polite refusal to participate was met with anger and threats compromising my veterinary future. Diplomacy and politics allowed me a change in majors and actually a chance to be exposed to such diversifying subjects as rhetoric, public policy, and environmental law.

I subsequently applied to veterinary school and was refused. I do not know whether or how much the aforementioned physiology threats influenced this outcome. Over the subsequent year, I reevaluated my beliefs; and in retrospect, I think I "sold out". My adopted attitude became, "*the good of the many must outweigh the good of the few or the one.*" Apparently, my contrition in my second application allowed my acceptance into the U.C. Davis School of Veterinary Medicine.

My exuberance and celebration were cut short on my first day of school in front of the anatomy cooler. The sight of so much death - so many young, healthy, but all too dead dogs and cats and horses and cows and goats and chickens; I could no longer pretend it was "a few". Through veterinary school I was repeatedly faced with situations requiring the detrimental use of animals. My puny attempts to change these means of educating became stronger and stronger attempts, bolstered by my personal disgrace and my disgust with the irony of "the veterinarian" - perceived as a healer yet training through killing.

I decided in my sophomore year that my goal of becoming a veterinarian carried too many sacrifices from others; "the few" had become too many. Junior surgery was the proverbial "straw". Several of us worked very hard for many months to develop an alternative to the famed three terminal surgeries that would teach us the basics of surgery and anesthesia. To abbreviate an exhaustive ordeal, we were allowed an alternative. We participated in the Washington State University (WSU) Alternative Surgery course (3 weeks) and a U.C. Davis Veterinary Medical Teaching Hospital anesthesia summer clinic (6 weeks). To this day I am still impressed by this basic surgery and anesthesia training.

After veterinary school I was offered an internship in a small animal referral center. My surgical skill evaluations from that year were very positive, and my propensity to pursue further training increased. I applied for a surgical residency with strong recommendations from the surgeons with whom I had been working.

I was accepted into the surgical residency program at the University of Minnesota. My alternative skills training was not an issue, and I felt no unique limitations regarding my abilities. I performed, I believe, as all residents do, with my share of successes and failures. Most surgeries I did were "for the first time on live animals," not because I took the alternative track but because that is the way it is. We can never be taught in school all of the procedures we will face in practice. What we need in school, and what I received, are the basic skills of instrument handling, gentle tissue handling, rapid problem solving, etc. My books and many visits to the necropsy floor to review anatomy and practice techniques supported

me through my residency.

A very positive outcome to my alternative training occurred in my second year of residency. I volunteered to teach the WSU Summer Alternative Surgery Course, and they welcomed me back. That fall, the Minnesota junior surgery instructor approached me about teaching an alternative laboratory section for 13 students. The traditional exercise was a terminal celiotomy; the alternative was to be on cadavers using proper surgical protocol. I was excited by the potential this alternative inspired, yet very disappointed in the rationale of those electing an alternative. The alternative used cadavers that were killed at the pound and sold to the university, in contrast to the traditional laboratory, which used live dogs from the same pound and killed them under anesthesia. I do not believe this alternative issue is about our sensitivities and how detrimental or painful it is for *us* to kill an animal. A cadaver killed at the pound is just a live terminal surgery dog that was spared 24 hours of transport to the university. The alternative issue is about not wanting to see any animals killed unnecessarily for our training. I want to solve the pet overpopulation problem and stop viewing homeless animals as surplus, expendable, "*they are going to die anyway*" objects.

After my residency, I was offered an instructor position at WSU. My surgical abilities as a result of my junior surgery alternative training were not an issue. I was much beyond that, and I don't think that will influence my future except perhaps in one way: I like to teach, and I like to teach surgery; but my bittersweet alternative surgery experience at Minnesota led me to the decision that I will only teach under conditions that meet my moral specifications. I am a living example that it can be done well, so why should I sacrifice any more animals under my direction?

Would I do it all again? Yes, I believe I would. I am quite disappointed in the many people who put up roadblocks along the way, but they are all so insignificant. More importantly, I am impressed with the assistance I have had on my journey. The many interactions and discussions have strengthened my philosophical and rhetorical skills and made me who I am today.

During veterinary school and residency, I faced intense opposition or blank-faced apathy from humane societies, shelters, and veterinarians when I tried to procure acceptably sourced cadavers. Established human organ donor programs are accepted by the public and the medical profession; I see natural death cadaver donations in the same light. When handled compassionately, learning from death is a positive thing.

As cadavers are an integral part of veterinary training, their technical management needs improvement and refinement. The topic is not pleasant but is quite in need of advancement. Everyone involved in the use of cadavers as a veterinary training tool must understand the limitations. No one should expect dead tissue to bleed spontaneously or handle the same way as live tissue. Understanding what one can expect to gain from an exercise is as important as the exercise itself. The unpleasantness of working with nonpreserved cadavers must also be acknowledged, minimized, and accepted. Dealing with an unpleasant smell in order to gain invaluable experience without causing a healthy animal to suffer and die is a trade-off I accept.

So what do I say to aspiring veterinarians? Be strong and resourceful! Study well your personal beliefs, and learn to articulate them in a controlled manner. Unfortunately, there are times when you must justify yourself to others who stand in the path of your chosen future. Decide who and what you will sacrifice to achieve your goals, and justify that to your conscience. I caution you also not to allow yourself to become hardened and indifferent to suffering and pain as a means of dealing with our difficult role. Why enter this profession if not to help animals and people? Yes, even the large animal veterinarian should care about the downer cow, the exotics practitioner should care about the little boy whose turtle just died, and the surgeon should treat the postoperative pain in the "stoic" dog.

And as a product of the system, what do I say to the system? I see a system resistant to change. If the hypothesis is that we can only produce good veterinary surgeons with live terminal surgery training, then I disprove this hypothesis. The pilot study results are in. I strongly believe that veterinary surgery skills and anesthesia training must encompass so much more than they do today. We need to emphasize basic hand-eye coordination and manual dexterity; we need models and videos and demonstrations and tutoring. We need mentors to guide those in training. We need live recovery experience on animals who benefit from our work. We need minimum standards and enforced repetition. We need excited and motivated teachers.

The list goes on. But above all, we need to require excellence; without it, we dishonor the art of surgery.

**The Western University of Health Sciences
College of Veterinary Medicine, California**

Excerpted from Rasmussen, L., 2000, "Why does it matter?", *Viewpoints 2000 Series - Veterinary Medicine*, [New England Anti-Vivisection Society], pp. 6-8.

Life is often described circular and I feel that my professional life has come full circle. I write this as an assistant professor and Director of Surgery and Clinical Skills for a fledgling veterinary school embarking on a long and noble journey. I was chosen for, among other things, my strong beliefs about, and aptitude for, teaching clinical veterinary skills without the harmful use of animals. So I can now answer my own questions that I posed daily as an undergraduate college student and a veterinary student: "*Why in the world am I doing this? Why struggle against the establishment? Why bring down such scorn and animosity upon myself?*" All along I knew there had to be a reason bigger than just me and my personal future. My efforts now enable me to speak from experience and impart my knowledge, skill, and experience to many more future generations of veterinarians. How they learn will dictate, potentially to a large extent, how they view animals and people and how they practice their chosen profession. To be part of that ongoing learning and teaching experience completes a perfect circle for me.

Core values

Students at the Western University of Health Sciences College of Veterinary Medicine will not be forced to make the sacrifices and choices so many of us have had to make. They can concentrate on both learning and caring about animals during their four years with us and beyond. The school is committed to: 1) cooperative, student-centered, life-long learning; 2) excellence through residential clinical skills programs and alliances in the private/public sector; and 3) a "Reverence for Life" philosophy.

The curriculum relies heavily on the science of education. Our cadaver exercises will be supplied through a willed body program that involves students in acknowledging the animals and their guardians in life. The ethical problems of killing healthy unwanted animals will be dealt with forthrightly through the students' direct exposure and experience with this devastating problem. The curriculum relies on the non-detrimental use of animals.

We can choose to be kind

It feels good not to hurt someone. It feels good to move a snail off the sidewalk instead of squashing it. It feels good to comfort an infant. It feels good to help someone in need. It felt immeasurably good to watch my husband carefully take a gnat who was sitting on our kitchen window outside instead of killing it. We are human beings who can choose to be kind. We all must acknowledge that the choice to be kind is a worthy pursuit. It is actually good for us. I am glad that my own need to be kind translated into the courage I needed to challenge a system of education that had somehow lost sight of this. Clichéd though it sounds, we can make a difference. And I am glad that now as a veterinary educator I can support this moral conviction to be kind in others.

Dr. Safia Rubaii MD

University of Colorado School of Medicine, Medicine

1991 - 1995



In 1992 University of Colorado medical student Safia Rubaii's spiritual beliefs in the sanctity of all life prevented her from participating in some of the School of Medicine's first year physiology laboratories. In these labs students observed the effects on dogs of injecting them with various drugs before killing them, and performed experiments on body parts obtained from freshly killed frogs. Her offer to locate and pay for alternatives herself was rejected. Her refusal to participate in the labs resulted in her officially failing physiology, despite passing the written exams. She was consequently barred from the second year of her course.

Safia then mounted a lawsuit against the University of Colorado in 1993, and in 1995 was awarded \$95,000 in damages from the University. She also re-took the physiology course at the Creighton University School of Medicine in Nebraska, in which no harmful animal usage occurs, and passed it with honours, after which she was allowed to proceed to the second year of her course. As a condition of the legal settlement the University of Colorado was

required to remove the original failing grade from Safia's academic transcript, and was also required to provide an alternative for any student with "religious" objections to the labs (sincerely held beliefs that serve as guiding principles in one's life). By 1998 it had extended this to all conscientiously objecting students. Dr. Rubaii successfully graduated from the University in 1995.

McCaffrey, S., Autumn 1995, "A medical student stands up for compassion", *Good Medicine*, pp. 6-9.

As a first year medical student at the University of Colorado, Safia Rubaii probably never imagined that she would still be struggling with a basic physiology course long after she had graduated. But she also probably never imagined to what great lengths she would have to go to be granted an alternative to the required dog lab in the course and guarantee that other students would be afforded the same right.

Safia entered medical school no stranger to the medical community, having been a nurse in obstetrics, critical care, and emergency medicine for many years. When she learned that laboratory exercises - one using dogs, another using frogs - were required parts of a first year physiology class, she knew that these labs were not essential to understand the basic concepts they demonstrated. Safia also felt that using animals in this fashion was morally and ethically wrong, mocking many of the personal beliefs that had contributed to her desire to become a doctor in the first place. In February of 1992 she asked the course director if she could perform an alternative to the labs, citing these reasons. She suggested using a videodisc or computer simulation that covered the same principles, and/or observing specific patients in the intensive care unit and charting their progress. She even offered to locate these patients herself, or pay for any expense that an alternative would incur.

The University would not allow Safia any of these alternatives. If she did not participate in the labs, she would fail the course. The Dean did say that she could take a physiology course at another medical school during her summer vacation, and her transcript would reflect that she had "dropped" the course. Safia could not accept this arrangement because it prevented other students from learning of, and benefiting from, her efforts. She had been inspired by the accounts of students from other medical schools who had successfully pushed for an alternative to animal labs, and wanted the medical school

to make a permanent change that would apply to all students, not just herself. When the labs came, her fellow students carried out the traditional exercises of injecting dogs with drugs, recording their effects on the heart, blood pressure, etc., and finally killing them with an overdose. They also used parts from recently-killed frogs. Safia did not participate.

At the end of the physiology course, Safia achieved a final passing grade on the required written lecture and laboratory exams. Despite this, the promotions committee decided that she would be placed on academic probation and would not be promoted to the next grade level, because she did not participate in the animal labs. Safia appealed on the basis of her moral, ethical, and religious beliefs - founded in Buddhist principles that stress the sanctity of all life - but the decision was upheld.

She then went to the dean and asked to take a physiology class at another school during her summer vacation so she could be promoted and have the failing grade taken off her transcript. The dean agreed, but said that her transcript would reflect that Safia had failed the original course. Safia would not accept this compromise, because it did not show that she had, in fact, completed the course at Colorado, minus the animal labs, and had passed the final exam.

Unfortunately for Safia, Colorado is one of the very few medical schools in the country that makes participation in animal labs mandatory. Yet, as she learned later, the university had granted exemptions to several students in the past who opposed the labs on other the basis of spiritual beliefs, such as those held by Quakers and Buddhists. Furthermore, Colorado did not require transfer students who had taken, physiology without animal labs at another school to take the labs or repeat the course.

Safia had no choice. In the spring of 1993, she sued the University of Colorado for the right to be granted an alternative to the dog lab. That summer, she completed with honors a physiology course at Creighton University School of Medicine in Omaha that did not include an animal lab. Creighton students are taught physiology primarily through lectures and readings, and can use computer simulations and a videotape of a cardiology dog lab on a completely optional basis. Safia transferred the credit to Colorado and was promoted, but her transcript still reflects the failure of the physiology course at Colorado, pending the outcome of the lawsuit.

After completing her fourth year of medical school this spring, Safia began an internship in internal medicine in Colorado, to be followed by a residency in emergency medicine in Jacksonville, Florida. As part of her emergency medicine training, Safia recently completed the Advanced Trauma Life Support (ATLS) course at the University of Maryland in Baltimore, which has used cadavers to teach emergency medical procedures for several years, unlike most other ATLS courses, which still use dogs to teach these skills. Safia rated the Maryland course as excellent and, in fact, discovered that many of those attending had come specifically to learn emergency medical skills without having to practice on dogs.

Hopefully, Safia's challenging experience at the University of Colorado will soon be resolved, and future students at this school will have the right to an alternative to the dog lab, as they have at nearly all other medical schools that still have such labs.

In the future, with her internship and residency completed, Safia would like to practice emergency medicine, possibly working overseas to integrate her interest in cross-cultural studies. Wherever she ends up, her dedication, integrity, and expertise will no doubt be of tremendous benefit to the entire community.

Happily, many medical schools no longer offer animal laboratory exercises in their curricula, and those that do nearly always make them optional. PCRM is always glad to help students. We have booklets of alternatives and other detailed information. Call 202-686-2210.

Dr. Linnaea Stull DVM

University of Illinois College of Veterinary Medicine, Doctorate of Veterinary Medicine

1998 - 2002



When University of Illinois College of Veterinary Medicine student Linnaea Stull entered vet school in 1998 she was shocked at the scale of the killing she encountered. She led a group of students in pushing for alternatives to the terminal first year physiology laboratories. She presented an alternatives submission containing over 200 alternatives for the labs, presented 28 scientific studies showing that alternative students are at least as competent as those trained via harming animals, and organised a student survey which demonstrated that the majority of respondents believed that the labs were “not worth the resources used”. All of this was dismissed by her college.

As a last resort Linnaea went to the media, which resulted in a front page Chicago Tribune article and a dozen years of progress in the span of 10 days. Early in 2000 the labs were all cancelled, saving the lives of over 100 pigs, dogs, rats and rabbits annually, and an Animal Use Policy was passed formally allowing conscientious objection in the college.

Photo: Linnaea and her adopted shelter cat Sweetie.

Stull, L., Apr. 2000, “University of Illinois takes a positive step toward alternatives”, in “Veterinary Students Making a Difference”, *Alternatives in Veterinary Medical Education*, Issue 14, pp. 1-2.

Conscientious objection

Upon entering veterinary school in the fall of 1998, I naïvely expected that any animal subjects used in the curriculum would be treated humanely and would survive the experience. However, within the second week of school, I was told to terminate the life of a healthy pig in order to learn some very basic aspects of renal physiology. I soon discovered that over 100 animals' lives (pigs, dogs, rats, and rabbits) were taken each year in the first year physiology curriculum at the University of Illinois College of Veterinary Medicine, and that students requesting alternatives to the labs were denied them. I was shocked at the enormous scale of animal death, and disillusioned that my future profession promoted this. My experience in those first few weeks of vet school sparked a one and a half year long multi-student effort to find a solution for future students who objected to the labs.

I worked hard with other students to persuade the administration of the educational, cost-effective, and humane benefits of alternative educational tools. Our hard work paid off in recent months. Early in 2000 the terminal labs were suspended upon further investigation of their validity, and an official *Animal Use Policy* was passed which requires professors to provide alternatives for students with objections to terminal animal procedures or surgeries in the veterinary curriculum.

A scientific approach

When we started the push for alternatives, we soon found that the debate over animal use in veterinary medical education depends as much on scientific argument as ethics. To this end, I sought scientific research to support our push for the implementation of alternatives. Last December, I provided the physiology faculty with 28 largely peer-reviewed articles in journals that conclude alternatives provide

equal or superior teaching efficacy compared to terminal animal labs. These articles were from journals with stringent requirements for publication, including: the *Journal of the American Veterinary Medical Association*, the *Journal of the American Physiological Society*, and the *Journal of Veterinary Medical Education*.

Two other students and I also organized a survey of the Illinois veterinary students in the fall of 1999. With help from key faculty and administrators within the college, and professional survey composers from the university, we drafted an unbiased survey instrument. Of the 295 surveys returned, 13% of students reportedly did not participate in the terminal physiology labs, despite being offered no alternative. Of the students who *did* participate, only 20% felt they received "great benefit" from the labs in understanding physiology. A full 24% of the participating students stated they received "no benefit" from these labs in understanding physiology. Clearly, the labs were not effectively teaching principles of physiology - as reported by the students themselves!

A search for alternatives

Last semester, a group of first, second, and third year students decided to search the educational alternative databases ourselves. We used the Association of Veterinarians for Animal Rights (AVAR) *Alternatives in Education Database* (accessed through the AVAR's home page at AVAR.org), and the *NORINA Database* (oslovet.veths.no/NORINA) most extensively. We came up with over 200 alternatives that either met the learning objectives directly, or in concert with another alternative could address all of the learning objectives (and then some), without loss of animal life. This amazing compilation was given to Dr. Ted Valli, Dean of the College of Veterinary Medicine, and the physiology faculty in December 1999.

Unfortunately, the response to our research was very poor. Dr. David Gross, head of the Veterinary Biosciences Department, commented in our student daily newspaper, "*We don't think any of these so-called alternatives are of equal learning experiences.*" Dean Valli reflected the same attitude, "*There are no alternatives of equivalent teaching value.*" Clearly, after years of effort within the college and a more intense research effort in the past few months, this issue needed to be aired in the public forum in order to effect a lasting positive change in the curriculum.

Media coverage

I can tell you no one at the college was pleased to see the *Chicago Tribune* front-page article, "Vet Students Oppose U. of I. Animal Killings" (4th Jan. 2000). To me, it represented a failure on the part of our college to respond appropriately to students' concerns for alternatives to the terminal use of animals in the veterinary curriculum; ironically, the reasonable and scientifically sound arguments of the conscientiously objecting vet students were reduced to a sensationalistic news article. To many faculty, administrators, and students, this story's representation of the labs was very upsetting.

What resulted, however, was a dozen years of progress in the span of ten days. On January 14th, Dean Valli distributed a memo to the college detailing the events in progress at the college, including the suspension of the terminal animal labs, a halt on obtaining animals from Class B dealers, main campus allocation of funds for alternatives, the Courses and Curriculum Committee's sponsorship of an *Animal Usage Policy* allowing for conscientious objection in the veterinary curriculum, and a call for "zero-tolerance" of harassment. Dean Valli noted of the conscientious objectors, "*Their efforts have played an important role in the process of helping us reassess the best way to provide them with a quality education.*"

Articles and letters to the editor on this issue have been compiled at: www.cvm.uiuc.edu/~aehill/animaluse.

College policy allows for conscientious objection

In February 2000, with an overwhelming majority vote, the college faculty passed its *Animal Usage Policy*, which, for the first time, officially allows for student nonparticipation in "*demonstrations or invasive procedures performed solely for instructional purposes which conclude with the death or euthanasia for the animal.*" This policy further states, "*The instructor will provide alternatives that may be substituted for animal experiences for those students seeking alternatives.*" The passage of this college policy was an important step after years of effort on the part of multitudes of veterinary students seeking a more humane education. College faculty are being motivated to find noninvasive

and non-terminal methods of training veterinary students without forfeiting the "hands-on experience" necessary to make skilled veterinarians.

Hands-on experience

A common misconception of alternatives is that animal laboratories must be replaced only with computer programs or other technologies. Every veterinary student wants to gain as much hands-on experience as possible in vet school, so we faced some resentment from fellow students who felt their opportunity for hands-on experience had been taken away by our efforts. On the contrary, many alternative labs in veterinary schools can and *do* incorporate live animals. For example, physiological principles can be demonstrated on dogs with noninvasive (e.g., ultrasound) and non-terminal (e.g., chemistry blood panels) techniques. The students gain hands-on experience, and the dogs survive the day.

In addition, students have several opportunities to gain valuable hands-on experience through volunteer programs: Community Practice Services with Dr. Kent Davis, the Wildlife Medical Clinic, Equine ICU, and an extension program with the local humane society. Junior year includes small animal surgery (entirely "alternative"), large animal surgery, clinical laboratory practice, and interaction with hospitalized animals. Fourth year is 12 months of clinical rotations, as always. Clearly, concerns that Illinois students will graduate incompetent for lack of 18 hours (six three hour labs) of terminal animal labs are unfounded.

In conclusion

All in all, we've discovered that our voices and actions can make a valuable impact on our profession, our education, and the treatment of animals. I encourage all veterinary students to get involved in these issues *now*. Find an issue that instills passion within you, do your research, and present your arguments scientifically and professionally. You will learn a lot about expressing yourself in a political world; you will hopefully avoid disillusionment in your pursuits; and you will definitely make a difference for the animals.

Linnaea's alternatives submission and student survey both provide excellent examples other students might use. Many of the surveyed students' comments were very damning of the labs, as were the statistical survey results. These very valuable campaigning tools may be available on the InterNICHE web site or the web site associated with the AVARStudents email list (see Groups following).

- Editor.

WALES

Denise Humphries BSc., VN, Dip. CABT

University of Wales, Bachelor of Science (Zoology)

1991 - 1994

When University of Wales Zoology student Denise Humphries requested alternatives to dissections in 1991, she was met with hostility. No-one would employ her if she refused to dissect, she was told. So she wrote to 30 to 40 employers asking whether they would consider employing a zoology graduate who had not dissected. Each organisation, including the Institute of Zoology in London, replied that they would definitely consider employing such a graduate. After presenting these replies Denise was allowed not to dissect.

Humphries, D., 1998, “Denise Humphries”, in Jukes, N., (Ed.), *Conscientious Objection to Animal Use in Education: Testimonies From Twelve Students*, Leicester, England: EuroNICHE.

Before starting my degree course in zoology, I already had very strong views about dissection. Not having had an interview before entry, I was not aware of the university's policy and decided to broach the subject very soon after commencing the course.

At the end of one of my first practical classes, I approached the lecturer to discuss my wish not to carry out dissection classes. This was immediately met with hostility: “*What was I taking a zoology degree for if I did not wish to dissect?*” “*How could I expect anyone to employ me if I had no experience of dissection?*” After a long discussion I was advised, along with a fellow student, to go away and think about whether we felt a zoology degree was for us, or whether it would be better to change to a different course. Not all the lecturers, however, were unsympathetic; some were quite supportive of our right to our views.

Feeling that my view on dissection was not unreasonable, and not due to me being “squeamish”, I discussed the dissection classes with third year students who had taken part before, to assess their relevance. Most felt that they had not gained anything in particular from actually taking part in the dissections and that they would have benefited more from watching a video of a professionally performed dissection.

I then decided to follow up on the “fact” that nobody would employ me if I had no experience of dissection. I wrote to between 30 and 40 different organisations explaining that I was a university student under pressure to dissect and asking whether they as an organisation would consider employing a graduate who had not dissected whilst at university. Each organisation, including the Institute of Zoology in London, replied that, although they did not want to encourage me to go against the wishes of the university, they would definitely consider employing such a student. I decided to stay with the course I had chosen.

On presenting the above information to the lecturer, it was decided that we would not need to dissect after all, although no alternative was made available. This was not a problem in my first year as there was no dissection. However, in the second and third years there were practicals involving some kind of dissection or experimentation on live animals (eg chick embryos). During dissection practicals the students opting out had to write an essay. During the experiments on live animals, it was decided that we would observe the set up of the experiment, and as the instruction booklets were so precise we should then use the results and write up the experiments as if we had attended the class.

Although it's a shame we weren't offered alternatives, I am still glad that I stuck to my principles, and to my decision to stay in the course. I certainly didn't miss out on part of my education by opting out of the animal practicals - colleagues who did participate confirmed what students from previous years had said - they didn't really know what they were doing and learned little or nothing from the experience. Dissecting an animal corpse is certainly nothing like the work in the field I do now in my career. I believe that as students we deserved a better teaching approach.

OTHER RESOURCES

Between 1999 and 2001 I acquired and donated the following nine resources to 79 Australian and 10 New Zealand campus libraries, including all campuses considered likely to use animals in their teaching. As of March 2002 these were the world's best resources on alternatives and conscientious objection, other than internet sites. If you're in Australia or New Zealand they be available in your campus library or that of another campus not too far away. If you're in another country or can't locate them, ask to borrow them from national animal rights groups specialising in anti-vivisection or humane education issues, many of whom will also have them.

I am very grateful to the numerous groups and individuals who made my Tertiary Libraries Donation Project possible via the donation of these resources cheaply or for free, and of money for their purchase and postage. I urge others to consider similarly covering their own countries, states or regions to ensure that resources such as these are available to students etc. in the libraries of all campuses likely to use animals in teaching, and in the libraries of all relevant animal rights or humane education groups.

Book: Balcombe, J., 2000, *The Use of Animals in Higher Education: Problems, Alternatives, and Recommendations*, Washington, DC: Humane Society Press. 112 pp.

A fairly academic work with 350 citations. The evidence and arguments in favour of humane alternatives are presented very logically and dispassionately and are overwhelming.

Available online from the relevant Humane Society of the US web page (see Groups following).

Book: Francione, G., and Charlton, A., 1992, *Vivisection and Dissection in the Classroom: A Guide to Conscientious Objection*, Jenkintown, PA, USA: American Anti-Vivisection Society. 136 pp.

This was the book that taught me that it was possible to beat my university, and taught me how to do it. It includes advice on how to tackle your university, and provides counter arguments to common objections to alternatives. Most of the book is dedicated to describing the legal avenues available to US students. Although US legislation is involved, the general legal principles may also be applicable in other countries.

Ordering instructions are available through the Rutgers University School of Law Animal Rights Law Project web site (see Groups following).

Book: Hepner, L., 1994, *Animals in Education - The Facts, Issues and Implications*, Albuquerque, NM, US: Richmond Publishers. 311 pp. [Richmond Publishers has since closed, however this book can be obtained from the author via www.lisahepner.com].

Filled with facts and figures about the sources of animals used in teaching, numbers of animals used, and ways in which they are used, although the information primarily relates to the US. The author's story as a biology student successful in implementing alternatives on a wide scale at the University of New Mexico is given, along with detailed advice for other students in following in her footsteps.

Book: Zinko, U., Jukes, N., and Gericke, C., 1997, *From Guinea Pig to Computer Mouse*, Leicester, England: European Network of Individuals and Campaigns for Humane Education (EuroNICHE). 229 pp. [NB: EuroNICHE became the International Network for Humane Education (InterNICHE) in 2001].

This comprehensive guide lists nearly 400 alternatives for many classical teaching labs, listed by discipline. It is ideal for producing alternatives submissions. A second edition, due out in 2002, will be “updated, enlarged (loads of firms now have web sites), [have] lots more new alternatives with cutting edge technology, others discontinued. Extra chapters: self-experimentation, conscientious objection, laws, validation/assessment (topical), databases, InterNICHE, and more.”

The first edition is now difficult to acquire. The second edition will be available from InterNICHE and included on its website (see Groups following). You could also check the libraries of universities in your region or ask to borrow it from national animal rights groups specialising in anti-vivisection or humane education issues.

Booklet: Buyukmihci, N., 1989, *Alternatives to the Harmful Use of Nonhuman Animals in Veterinary Medical Education*, Davis, CA, US: Association of Veterinarians for Animal Rights (AVAR). 44 pp.

Lists examples of the alternatives available in various disciplines, includes Dr. Buyukmihci’s essay “Non-violence in surgical training”, a survey of the 1989 policies on alternatives and conscientious objection at the North American veterinary colleges, and a legal opinion supporting the rights of US students to alternatives.

Booklet: Carlson, P., (Ed.), (date unknown), *Alternatives in Medical Education*, Washington, DC, US: Physicians Committee for Responsible Medicine (PCRM). 23 pp.

Lists examples of the alternatives available in various disciplines.

Booklet: Larson, S., (Ed.), 1998, *Beyond Dissection: Innovative Teaching Tools for Biology Education*, (3rd Edn.), Boston, MA, US: New England Anti-Vivisection Society (NEAVS). Compiled by the Ethical Science Education Coalition. 80 pp.

Alternatives grouped by species, discipline and body system. Outstanding presentation.

Can order via email via the NEAVS web site (see Groups below).

Video: EuroNICHE, 1999, *Alternatives in Education: New Approaches for a New Millennium*, Leicester, England: EuroNICHE. 33 minutes. [EuroNICHE became InterNICHE in 2001.]

This outstanding video shows the state of the art of the alternatives available in 1999 in disciplines such as anatomy, physiology and surgery. It shows them being successfully used by students and academics, several of whom are interviewed. Particularly valuable are the statements by several very highly qualified academics completely supporting humane alternatives.

Video: PCRM, 1997, *Advances in Medical Education*. Washington, DC, US: PCRM. 18 minutes.

This extremely inspiring video is particularly relevant to medical students and relates the story of how students at Harvard medical school got a cardiovascular physiology dog vivisection lab replaced with operating room observation of real surgeries.

The following resource is not generally available in the Australian and New Zealand campus libraries but is highly recommended for veterinary students:

Booklet: NEAVS, 2000, *Viewpoints 2000 Series - Veterinary Medicine*, Boston, MA, US: NEAVS. 12 pp.

Outstanding personal stories of Holly Cheever DVM; Lara Rasmussen DVM, Diplomate, American College of Veterinary Surgeons; and Anne Ryelstone DVM, Ph.D; and other writings, illustrating the need for and the case for conscientious objection in veterinary education. Totally inspiring. A must read for anyone even partly interested in alternatives in veterinary medical education.

ALTERNATIVES DATABASES

Internet alternatives databases are excellent, and indeed the primary sources of alternatives, when compiling alternatives submissions. But they are not the only sources. Books such as *From Guinea Pig to Computer Mouse* (also available online – see following), and *Beyond Dissection: Innovative Teaching Tools for Biology Education* (see Resources previously), are also very good.

The most useful alternatives databases of which I am aware are listed below. Several more specialised databases can be found by searching the *Alternatives in Education Database* for 'database', and by following the links to 'Databases' from the *NORINA Database* homepage.

Alternatives in Education Database

avar.org

Contained around 9,400 entries by February 2002, making it the world's biggest alternatives database to the best of my knowledge.

Can search by discipline (e.g. anatomy or dissection), species (e.g. frog), or medium (e.g. software or computer). The policies of various North American veterinary medical schools on alternatives are found by searching for 'veterinary medical school record'. Various useful documents relating to alternatives and conscientious objection are found by searching for 'student rights'.

Produced by the AVAR (see Groups following).

CONVINCE Database

www.convince.org

A small database.

Can search via discipline, species or text string.

The Consortium of North American Interactive New Concept Education (CONVINCE) is a nonprofit organisation allied with the American Veterinary Medical Association. It was founded by faculty members from seven North American veterinary colleges, and membership consists of every veterinary college in the US and Canada. The primary purpose of CONVINCE is to encourage cooperative development and sharing of interactive video, CD, and hypermedia programs for veterinary medical education.

eurca Alternatives Database

www.eurca.org

Contained around 50 records by February 2002. It is expected that the database will contain 150 to 200 high quality products by 2004.

Can search via discipline or supplier.

Produced by EURCA (see Groups following).

From Guinea Pig to Computer Mouse (book)

Online at www.interniche.org

Printed form available from InterNICHE (see Groups following).

Described under Resources previously.

Contains around 500 records.

Alternatives listed under discipline, field, and medium.

NORINA Database

oslovet.veths.no/NORINA

Contained 3,600 records by February 2002, making it one of the world's biggest alternatives databases.

Can search via discipline and medium.

The *NORINA Database* (A Norwegian Inventory of Alternatives) is produced by the Laboratory Animal Unit, Norwegian School of Veterinary Science, in Oslo.

HUMANE EDUCATION EMAIL LISTS

The creation of humane education email lists has been one of the most exciting developments in the humane education field. On most campuses students campaigning for humane alternatives are either on their own or in a very small group, often in a fairly hostile environment. These email lists allow students to join a supportive community of their true peers, all going through very similar experiences around the world. As well as offering fantastic support, they are forums for news, information and advice. If you have questions of any kind, these lists are great places to ask them.

Subscription to these lists are a *must* for any student interested in humane alternatives, whether you're simply wanting to find out more, or whether you're waging a major alternatives campaign at your university. New lists will doubtless continue to be created, so look out for news about them on these existing email lists and on humane education web sites, etc.

The following details were correct as of February 2002. Check the relevant group web sites for updates.

AVARStudents@yahoogroups.com

Founded in 2001.

"A discussion group for the benefit of veterinary medical students, veterinary technician students, and pre-veterinary students to address issues that pertain to their education, particularly the use of nonhuman animals. However, other veterinary professionals are welcome to participate. We encourage the participation of all students and individuals involved in the veterinary profession and who are interested in an opportunity to discuss ways of improving it with respect to eliminating harmful and fatal use of animals."

Useful documents and links relating to alternatives and conscientious objection may be found on the associated AVARStudents web site.

Further information and subscription information is available from the AVAR web site (see Groups following).

HumaneEdAustNZ@coollist.com

The Humane Education email list for Australia & New Zealand.

Established by the Humane Education Division of Animals Australia in 2000, this list provides a forum for news and discussion of humane education issues relevant to Australia & New Zealand, including:

- Alternatives to harmful animal usage in education, such as vivisection and dissection.
- Conscientious objection by students to harmful animal usage in their education.
- Educational syllabi and materials that promote compassion and respect for all species and the Earth as a whole.

Subscribe and unsubscribe by following the links from www.coollist.com.

HumaneEdCanada@yahoogroups.com

The Humane Education email list for Canada.

"A discussion group and forum for news relevant to Canada addressing issues such as the replacement by alternatives of harmful animal use at the high school, university and professional levels, or the conscientious objection of students to harmful animal use in their education."

Subscribe via <http://groups.yahoo.com/group/HumaneEdCanada>.

interniche-l@interniche.org

(Nb: that's a lower case 'L' not a 'one' following the 'interniche').

The InterNICHE mailing list, founded in 2001.

For issues relating to animal use and alternatives in education (only).

Subscription is available from the InterNICHE web site.

GROUPS THAT CAN HELP STUDENTS

The following list is not intended to be exhaustive, but is simply a sample of humane education and animal rights groups that may be able to assist students and others in their campaigns. Alternatives suppliers (e.g. Rescue Critters, CLIVE) have not been listed. Further information about the following groups is normally available on their web sites. Contact details were correct as of February 2002. Internet searches, etc., may be of assistance if these are no longer correct, and may reveal additional groups not listed here.

Domestic phone numbers are given. To dial the same number from another country, remove the first '0' and prefix the number with the country code. See InterNICHE for an example.

International

International Network for Humane Education (InterNICHE)

www.interniche.org
coordinator@interniche.org
Intl: +44-116-210-9652
UK: 0116-210-9652
Nick Jukes
Coordinator
19 Brookhouse Ave.
Leicester LE2 0JE
England

By 2002 this international network of students and others interested in promoting humane education had representatives in over 30 countries. There may be an InterNICHE representative in your country who can help you - check with InterNICHE to find out.

As of March 2002 the InterNICHE web site was the **world's biggest humane education web site** and contained numerous useful alternatives and conscientious objection resources. Subscription/unsubscription to the *interniche-l@interniche.org* **Humane Education email list** is available from the web site.

Australia

Animals Australia - Humane Education Division

www.animalsaustralia.org
enquires@animalsaustralia.org
03-9329-6333
37 O'Connell Street
North Melbourne VIC 3051
Subscription/unsubscription to the HumaneEdAustNZ@coollist.com **Humane Education email list** is available by following the links from www.coollist.com.

Australian Association for Humane Research (AAHR)

www.aahr.asn.au
humane@aahr.asn.au
02-9360-1144
PO Box 779
Darlinghurst NSW 1300

Humane Society International (HSI) (Australia)

www.hsi.org.au
enquiry@hsi.org.au
02-9973-1728
PO Box 439
Avalon NSW 2107
Alternatives Library accessible from the web site.

NSW Young Lawyers Animal Rights Committee (YLARC)

www.lawsocnsw.asn.au/yl/committees/animal
ylarc@hotmail.com
02-9926-0270
Level 6, 170 Phillip Street
Sydney NSW 2000

Brazil

ARCA-Brasil (Brazil Ark Humane Society)

www.arcabrasil.org.br
arcabrasil@arcabrasil.org.br
11-3031-6991
Rua Pascoal Vita, 336
São Paulo - SP - CEP 05445-000

Rede Humanitária de Educação (RedeNICHE)
www.geocities.com/redeniche

Canada

The Centre for Compassionate Living

wpirg.org/ccl
info@wpirg.org
519-888-4882
University of Waterloo
Student Life Centre, Room 2139
200 University Avenue West
Waterloo ON N2L 3G1

Canadian Federation of Humane Societies

www.cfhs.ca
info@cfhs.ca
613-224-8072
1-888-678-CFHS toll free in Canada
102-30 Concourse Gate
Nepean ON K2E 7V7

Europe

Doctors & Lawyers for Responsible Medicine (DLRM)

www.dlrm.org
dlrm@gn.apc.org
0208-340-9813
PO BOX 302
London N8 9HD
England

European Resource Centre for Alternatives in Higher Education (EURCA)

www.eurca.org

The Netherlands:

Care of NCA (see following).

Scotland:

d.dewhurst@ed.ac.uk

0131-651-1564

David Dewhurst

Learning Technology Section

Faculty Group of Medicine & Veterinary Medicine

The University of Edinburgh, Hugh Robson Link Building

15 George Square

Edinburgh EH8 9XD

Scotland

EURCA promotes the use of alternatives to the use of animals in higher education and works to disseminate information about alternatives. *eurca Alternatives Database* accessible from the web site.

National Anti-Vivisection Society (NAVS)

www.cygnnet.co.uk/navs

info@navs.org.uk

020-8846-9777

261 Goldhawk Rd.

London W12 9PE

England

Netherlands Centre Alternatives to Animal Use (NCA)

prex.las.vet.uu.nl/nca

valk@las.vet.uu.nl

030-253-2163 / 2186

Jan van der Valk, Ph.D

Dept. of Animals & Society

Faculty of Veterinary Sciences

Utrecht University

Yalelaan 17

NL-3584 CL UTRECHT

The Netherlands

Japan

Japan Anti-Vivisection Association (JAVA)

www.java-animal.org

java@blue.ocn.ne.jp

03-5419-8106

4-9-18-411 Shibaura

Minato-ku

Tokyo 108-0023

New Zealand

Animal Rights Legal Advocacy Network (ARLAN)

contact@arlan.org.nz

PO Box 34-641

Birkenhead

Auckland

Mission Statement includes “*supporting students who wish to conscientiously object to dissection or vivisection in their courses*”.

New Zealand Anti-Vivisection Society (NZAVS)

www.nzavs.org.nz
phil@kiwimail.net.nz
03-379-0093
PO Box 9387
Christchurch

Save Animals From Exploitation (SAFE)

www.safe.org.nz
safe@chch.planet.co.nz
03-379-9711
PO Box 13 366
Christchurch

USA

American Anti-Vivisection Society (AAVS)

www.aavs.org
aavsonline@aol.com
215-887-0816
800-SAY-AAVS
801 Old York Road # 204
Jenkintown PA 19046-1685
Alternatives Library accessible from the web site.

Animal Legal Defense Fund (ALDF)

www.aldf.org
info@aldf.org
707-769-7771
127 Fourth Street
Petaluma CA 94952

Association of Veterinarians for Animal Rights (AVAR)

avar.org
info@avar.org
530-759-8106
P.O. Box 208
Davis CA 95617-0208
Alternatives in Education Database and **AVARStudents@yahoo.com Humane Education email list** accessible from the web site.

Doctors Against Dog Labs

www.doctorsagainstdoglabs.com/index.html
nlharrison@cox.net

Educators for Animal Rights and Humane Education

www.e4ars.org

Ethologists for the Ethical Treatment of Animal (EETA)

www.ethologicaethics.org
bekoffm@spot.colorado.edu
Prof. Marc Bekoff
EPO Biology, University of Colorado
Boulder CO 80309-0334

Educational Memorial Web Site

www.educationalmemorial.org
This HSUS web site provides a wealth of information about Educational Memorial Programs (EMPs), also known as 'Willed Body Donation Programs', 'Client Donation Programs', and 'Body Donation

Programs?. These are programs that acquire cadavers for anatomy, surgery or other teaching purposes from client-owned animals who died from natural causes or were euthanased for medical reasons.

Ethical Science and Education Coalition (ESEC)

www.neavs.org/esec/index

esec@ma.neavs.com

617-367-9143

333 Washington Street, Suite 850

Boston MA 02108-5100

(An affiliate of NEAVS)

Alternatives Library accessible from the web site.

Humane Society of the US (HSUS)

Animal Research Issues

www.hsus.org (follow the links to Animals in Research, Animals in Education)

ari@hsus.org

301-258-3042

2100 L Street, NW

Washington D.C. 20037

Alternatives Library ('Humane Education Loan Program – HELP') containing approximately 100 CDs, diskettes, videos, slides, charts and models by February 2002, accessible from the web site.

National Anti-Vivisection Society (NAVS)

www.navs.org

feedback@navs.org

1-800-888-NAVS

312-427-6065

53 W. Jackson Blvd., Suite 1552

Chicago IL 60604

Has an **Alternatives Library** accessible from the web site.

New England Anti-Vivisection Society (NEAVS)

www.neavs.org

Info@ma.neavs.com

617-523-6020

333 Washington St., Ste. 850

Boston MA 02108-5100

Has an **Alternatives Library** ('Resource Room') containing more than 400 books, 200 videos, and dozens of models and computer programs, as of February 2002. Further details may be available from the web site.

Physicians Committee for Responsible Medicine (PCRM)

www.pcrm.org

pcrm@pcrm.org

202-686-2210

5100 Washington Avenue, Suite 400

Washington DC 20016

People for the Ethical Treatment of Animals (PETA)

College Activist Network

www.peta.org

info@peta-online.org

757-622-PETA

501 Front St.

Norfolk VA 23510

Psychologists for the Ethical Treatment of Animals (PsyETA)

www.psyeta.org

fran@psyeta.org

301-963-4751

P.O. Box 1297
Washington Grove MD 20880-1297

Rutgers University School of Law Animal Rights Law Project

www.animal-law.org

director@animal-law.org

973-353-5989

Professor Gary L. Francione

Adjunct Professor Anna E. Charlton

Rutgers Law School

123 Washington Street

Newark New Jersey 07102

Web site has a summary of the legal avenues available to US students, and a description and ordering instructions for the book: Francione, G., and Charlton, A., 1992, *Vivisection and Dissection in the Classroom: A Guide to Conscientious Objection* (see Resources previously).