



**AUARG-**  
**UoA MEETING**  
**8<sup>TH</sup> DECEMBER 2014**

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**APPENDIX A** *The Potential of Humane Teaching Methods within Veterinary and Other Biomedical Education*, Andrew Knight, Oxford Centre for Animal Ethics, Oxford, UK

**APPENDIX B** *The use of animals in higher education, problems, alternatives & recommendations*, by Jonathan Balcombe, Ph.D.

# DISCUSSION OF PROPOSALS

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We are pleased you have agreed to this first meeting and are confident that we can achieve a satisfactory result in the best interests of the university and its students over a period of time.

We have compacted our original four proposals to these two.

1. The implementation of a comprehensive conscientious objection policy
  2. AT LEAST 20% reduction of animals killed annually by end of 2015.
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## 1. IMPLEMENTATION OF A COMPREHENSIVE CONSCIENTIOUS OBJECTION POLICY

The effectiveness of this policy will be ensured by implementing these three requirements:

1. no effect on students' grades if they opt for the alternative
  2. effective and comprehensive alternatives to be in place at all times in order to guarantee complete dissociation with the dissection exercise
    - a. attend different exercise / do not have to work with / observe dissecting partner and thus still be involved in the animal's death
  3. consistent decisions for students and student rights in this area to be clear, easily accessible, and made known to all students enrolling in a paper, Student Services and faculty members
    - a. E.g. put the Policy into the Course Outline for relevant papers, give a verbal briefing to all students, and send out a reminder that there is a choice to opt for an alternative before labs involving animals.
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This first proposal is obviously based on the distress suffered by students whose ethical beliefs conflict with the animal use required by their degrees. We would therefore like to start by drawing your attention to the ten student statements we have collected from students about their experiences with animal use during their degrees, which can be found on pages 6-11.

As you can see, three common themes arise in these student statements which are relevant to both our proposals:

1. students feel some of the procedures were not worthwhile either because they did not continue in that line of study or because alternative procedures or actual alternatives could easily be used in many of the procedures and would be just as effective
2. students feel there is a lack of knowledge within the student ranks as to how to deal with and treat both the bodies and live beings
3. students have felt distressed, anxious and concerned due to their uncertainty of their rights as a student in terms of opting out (and the impact this may have on their grades), and the nature of the procedures in terms of the treatment of the creatures and the way in which this conflicts with their beliefs.

In addressing these three themes, we believe:

1. Alternatives should be readily available for students as many feel as though their dissection experience did not further their education. Alternatives are just as effective; see the Knight study extract, attached at

Appendix A. It is reasonable for students to want alternatives given that the exercises may conflict with their beliefs, and considering many students may not continue due to an insufficient grade or may simply change their mind regarding their career path. Available alternatives currently include multimedia computer simulations and virtual reality, prosections, ethically-sourced cadavers, preserved anatomical specimens, mannequins, supervised clinical experiences, models and simulators, film and video, student self-experimentation, and in vitro labs; see pages 12-14 for InterNICHE's current list. See the InterNICHE website for more details.

2. The lack of effort put into the demonstration to students as to how to correctly deal with live and dead animals speaks to the general lack of importance and value placed on the lives of animals; live animals suffer and the bodies of those killed are wasted. This reinforces the need for a policy so that students are able to completely avoid all callous and unethical procedures.
3. The morality of the situation is important because students' mental health and general psychological wellbeing is obviously a prime concern for the university. As is common knowledge, and as is reflected by the presence of university counsellors, a student's life is incredibly stressful; high expectations are placed on them by others and themselves, they endure heavy workloads over extended periods of time, and study costs are extremely high. Thus if students are also becoming distressed due to the requirements of their papers this should be urgently and efficiently addressed.

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The psychological impact of dissection exercises on students has been researched and documented; see Appendix B for Balcombe's studies in this area.

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Students deserve the right to decide for themselves whether they want to take part in dissection, and this choice should not be undermined. It is not good enough that a student who opts out of a dissection is still implicated in the death of the animal by having to be partnered with a dissecting student. This demonstrates disrespect for the autonomy and personal choices of students and makes their choice redundant.

Furthermore, disallowing students' opting out of activities which have required the killing of animals suggests to students that compassion and ethical beliefs are unimportant and irrelevant. This is particularly relevant in the case of medical students who, if they complete their degrees, may go on to become professionals such as general practitioners who need to have respect for life and compassion and sensitivity towards others who are in pain.

Insensitive handling of these issues generally may also leave the student with a lasting negative association with education.

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Conscientious objection policies are prevalent overseas— all the major institutions in America and Australia have them. As an example of what such a policy would entail, we have included on page 15 Murdoch University's policy which allows students to choose alternative exercises across all faculties. This has been in place since 1998. Massey University's vet school also has one.

On pages 16-19 you will also find lists of tertiary institutions which have Conscientious Objection policies in place, and those which allow conscientious objections. As you can see, this is common practice overseas, not just in vet schools but in medical schools – we have underlined in green the 23 med schools in America which have a conscientious objection policy – these include such prestigious schools as Harvard, Yale, Tufts, and Stanford.

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Ultimately, for students, having a comprehensive and accessible conscientious objection policy will provide them with personal autonomy and control over their own education while allowing them to align their actions with their ethical beliefs. Thus no choice need be made between ethics and education.

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## 2. AT LEAST 20% REDUCTION OF ANIMALS KILLED ANNUALLY BY END OF 2015

Our first suggestion to aid in this reduction is a general restructuring of the University's teaching and research methods; this could include

- fewer animals being shared between students during dissection exercises, and / or lecturers performing / demonstrating the procedures (prosection exercises)
  - o e.g. one animal between a group of five students; each student participates to the level that they are capable of / comfortable with
  - o e.g. lecturer performs dissection using live video projection or recordings of previous dissections; CPIT have stopped first year dissections in their veterinary nursing course, and now use recordings of the last dissection they did. The whole class is able to observe clearly; smaller classes students may gather around the demonstration. Lecturers are more competent with procedures and less wasteful.
- removal of dissections in first-year papers
  - o attrition rates are notoriously high after first year; for example approximately 17% of first-year medical students will go on to Part II; all of these students will have participated in dissection exercises
- Reduction of research and testing which is currently performed via the Liggins Institute and in conjunction with other companies
  - o It would be the University's choice as to how to approach this; we do not have enough information about the facilities and practices to suggest specific ways in which this could be done. If the institute is competent they will be able to take the initiative in this regard.
- Implementation of alternatives to dissection and other animal use in some or all courses
  - o See the previously mentioned statement from Otago Polytechnic's Jeanette O'Fee, cited on page 20 as to the institution's choice to remove dissections from their vet course.

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Alternatives in RTT have been proven time and again to be just as effective as – and in some cases more beneficial than – traditional, inhumane methods involving animals. See the previously referenced Appendix A.

There are alternatives in the NAEAC Good Practice Guide, see page 30 of the guide:

European Commission – “Tracking system for Alternative test methods Review, Validation and Approval (TSAR)”  
[ihcp.jrc.ec.europa.eu/tsar](http://ihcp.jrc.ec.europa.eu/tsar)

[www.go3r.org/](http://www.go3r.org/) – search engines for finding alternatives to animal use in research, testing and teaching

NORINA Database (contains information on audiovisuals and other alternatives/supplements to the use of animals in teaching) [oslovet.veths.no/NORINA/](http://oslovet.veths.no/NORINA/)

Other excellent resources include InterNICHE (teaching information) and Humane Society International (research and testing information).

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Our second suggestion to aid in this reduction is to ensure that the Animal Ethics Committee is performing their obligations under the University's Code of Ethical Conduct to the best of their ability.

When approving protocols the Committee should be acting in accordance with its own criteria in section 5 of the Code of Ethical Conduct.

We believe that in respect of sections 5i a), b), and i) and sections 5iii b) and c) this is not being adhered to.

*5i a) stipulates that approval should only be given if the use of animals is desirable and there are no practical alternative approaches which avoid the use of animals, yet achieve the identical goal.*

- As we will see in our discussion of our third proposal, many practical alternative approaches to traditional RTT methods exist and have been proven to yield the same results.

*5i b) stipulates that the species must be appropriate on scientific, technical, humanitarian and educational grounds for the procedures proposed to allow extension of the body of knowledge in the case of a research proposal or provide the desired educational aim in the case of a teaching proposal.*

- In a humanitarian vein, using animals for human endeavours – for example the university's research on rats for diabetes research is irresponsible.

*5i i) stipulates that suitably qualified persons will be engaged in supervising and undertaking the research or teaching.*

- An implicit corollary of this is that students will be effectively taught how to handle their living and dead subjects so as to be as humane and efficient as possible. As we saw earlier in the student statements, this is not consistently done throughout all papers.

*5iii b) stipulates that the AEC requires to be satisfied that the number of animals to be used is the minimum compatible with the educational objective.*

- This is clearly not the case as alternatives or alternative methods could easily reduce the numbers of animals used. Students themselves say that one rat between two partners is unnecessary for their learning.

*5iii c) stipulates that there is a commitment to report to the AEC the results of a student questionnaire on the ethical use of animals in teaching.*

- As you can see from the second section of the STUDENT STATEMENTS which detail the frequency, quality, and specificity of student questionnaires regarding papers which use animals, this is not properly adhered to.

The NAEAC Good Practice Guide is also relevant. *Section 7 dictates that in teaching, animals should only be used for teaching activities when there are no suitable alternatives for achieving all of the educational objectives. Students should be given the opportunity to discuss the ethical, legal, social and scientific issues involved in the use of animals for scientific purposes, including teaching.*

- The first part of this reinforces the stipulations in s 5i i) in the university's CEC.
- The second part of this, as shown in many of the student statements, is not being adhered to as students feel as though their concerns will not be heard or their ethical beliefs will not be respected.

*Section 7.1 c) states that the three Rs; replacement, reduction and refinement should be incorporated into proposed activities with the use of animals provided they are compatible with the educational objectives*

- Otago Vet Nursing School has implemented alternatives and reduced animal use according to their duties to abide by the three Rs – see page 20 for the statement of Jeanette O'Fee as to their choice in this matter.

Section 7.1 f) states that there should be close, competent supervision of all students.

- This reinforces the same point as s 5i i) in the university's CEC.

Overall, the Committee should endeavour to adhere to its own code, which will aid the reduction of animal deaths. While currently the definition of 'manipulation' in the Animal Welfare Act does not extend to animals killed for the purposes of the use of their body or tissues in RTT, the Animal Welfare Amendment Bill, expected to pass early 2015, will change this – see page 21 for a copy of the relevant section. The committee will from then on be required by law to consider the purposes and sections of Part 6 of the Act in relation to all animal use. Therefore, the pragmatic approach would be to begin to apply these regulations to dissections and other non-live procedures before the University is inevitably required to do so by law.

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Our third suggestion in aiding this reduction is, as you know, the rehoming of 30 rats, coordinated by AUARG. We are still willing to cooperate on this initiative if the University would like to accept this suggestion; however as you can

see since our original lodging of the petition many more effective ways to reduce animal deaths have been brought to our attention.

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## **CONCLUSION:**

In any case, it is always desirable for a tertiary institution such as the University of Auckland to be at the forefront of innovation, positive progress, and ethical considerations. University of Auckland could be the institution to lead the way for New Zealand by implementing effective alternatives for all facets of RTT in order to reduce animal cruelty. In terms of conscientious objection policies, as we have previously mentioned, Massey University's vet school has already implemented such a policy, but thus far no NZ med school has done the same (bearing in mind Harvard, Yale, Stanford, and Tufts have all actually completely eliminated animal use from their med schools). The University of Auckland could be the first university in New Zealand to introduce a truly comprehensive and effective policy which would cover all faculties and thus completely protect its students' ethical concerns, and so doing so would bring us into line with international best practice. This would be extremely valuable to the University's brand and public image and would be a positive media opportunity. This could also encourage prospective students to enrol at the University of Auckland due not only to the lessening of animal deaths but the advancement of the technologies and protocols.

The implementation of a comprehensive conscientious objection policy and a reduction by at least 20% of annual animal fatalities are very reasonable demands. Ideally, you would go further, and reduce animal use as much as possible. The removal of dissection in first-year papers would be an excellent start, and an easily achievable one, but an entire re-design of the currently wasteful mindset of the tertiary institution would be the ideal outcome of these meetings.

## **STUDENT STATEMENTS**

Statements from UoA students regarding their experiences with animal use on campus: all statements gathered November / December 2014 from current or recently graduated students.

STUDENT STATEMENTS 1-8 are from UOA students.

STUDENT STATEMENTS 9 & 10 are from Massey University, NZ and Maharaja Sayajirao University, India, respectively.

All emphases added.

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### **STATEMENT 1**

Dissection is something I often think about. I did biology and have a few stand-out experiences that I'd like to share. In my first year I took BIOSCI103 which required me to dissect a rat. There were a lot of other dissections in the paper, but the rat was the one I was most worried about. ***I didn't know whether my concerns about the dissection would be taken seriously by UoA, as in the course guide it was clear the dissection was necessary to pass the practical area of the paper. I wondered if I could tell them I didn't want to do it, that the rat would live.***

Unfortunately, as a naïve first year, I eventually did the dissection anyway. The rats were 'reused' from a diabetes study in the medical school, so they were very big. Honestly, I thought the dissection was incredibly interesting. However, ***I don't feel I ever used that knowledge in later bio papers as UoA has very little emphasis on vertebrate biology.***

My next experience isn't about dissection, but is still relevant to animal use on campus. In third year we were required in BIOSCI330 to douse insects in ethanol, but there was one animal that created an air bubble so that it could survive a little longer. Unfortunately, this meant the animal died very slowly. ***I felt horrible killing this animal when all we were doing was drawing them, and don't feel that this at all enhanced my knowledge or was even very interesting. I think UoA needs to be more sensitive to the values of students, and have more open and clearer ways that students can express and resolve such issues.***

- Hannah Orpin, Double Major BSc Psychology and Biological Sciences

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### **STATEMENT 2**

I had to do a rat dissection 3 years ago in my first semester of university, for BIOSCI103. I was worried about this all semester, and the experience was definitely worse than I expected. ***I could have asked to be excused from the lab, but I'd had friends who had done this in the past and it'd meant that they'd forfeited their marks for the lab, which was worth 4% of our overall grade.***

We had one rat per two students, and ***the lab demonstrators gave us a little talk before we started. This included one of them saying "Don't worry about these rats, they were used in diabetes research, so they had a purpose." This disgusted me, as not only were we unnecessarily dissecting these animals, we knew that they'd lived a life of misery, hardly what I would call "purposeful".*** Since they had been used for diabetes research, they'd been fed so much fatty food until they actually developed diabetes, and this was obvious since they were twice the size of any normal rat, and upon dissecting them we found that their insides were completely saturated with fat. ***I sat back and let my lab partner dissect the rat, as I didn't feel comfortable doing so, but even watching was horrible.***

This experience hasn't changed my degree path, as I was pursuing an ecology major and I knew I wouldn't have to take another paper that involved a dissection. ***I feel that this experience was not worthwhile and taught me nothing, our lab guides had the full anatomy of the rats and the pictures were much easier to interpret and learn from than looking at the animals' insides.***

- Anonymous, Bachelor of Science majoring in Biological Sciences

### **Questionnaires for papers:**

I had one after the BIOSCI335 crab lab where we heated up crabs and monitored their heart rates (it was distressing them), about how we felt about different aspects from a scale of completely disagree to completely agree, parts about if we found it comfortable, useful, or if we'd prefer to do something else.



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### STATEMENT 3

BIOSCI207 was animal behaviour so I shouldn't have been surprised at the involvement of animals for that paper. There was actually just one lab, and it was all observation. There were shrimp with their statoliths – their gravity sensors in their tails – removed. ***The worst part of that lab was that we were looking at slaters' response to light / movement, and by the end of the lab they were just still and unresponsive to touch because they had been overworked and stressed in the light etc. When you poked them with a paintbrush they wouldn't even move because they'd endured two hours of moving/prodding*** – some people were also quite cruel with the bugs and the prodding instruments.

BIOSCI329 is biology of fish; I knew there was a dissection but I took the paper anyway. The fish had been speared and we were dissecting 2-4 in pairs. Part of the lab was a drawing exercise using preserved specimens. We were made to feel better about the fresh specimens because their data was all to be put into management statistics that would help fisheries management guidelines for sustainable catch limits etc. I saw it as a lesser of two evils in a way, obviously I didn't actually feel better about it but that was how they worded it – as if all the data would help them 'help' the fish. It was actually a really useful lab because I had no anatomy experience especially in fish, so it was good to see in real life, but in saying that ***I was really bad at the cutting part and my friend did 90% of it (having experience with cutting chicken in a deli). We were given a demonstration of how to cut the fish but it was not enough to ensure I was confident or competent when doing it. What would have been better would have been to have demonstrators do the dissections in small groups or have it shown on a camera so you could see it happen.***

BIOSCI330 required us to kill and draw crustaceans and I have since spoken with my professor about that lab, as ***the way they were killed – by ethanol – was ineffective, prolonged and cruel.*** There was also a day trip for that paper where we counted specimens at Waiwera estuary. ***We were given no instruction as to how to humanely handle the specimens. I think it would be very helpful to have a briefing on how to treat animals when handling them (in all papers actually) – for example being careful and putting them back once they're counted. Because of the lack of instruction some people seemed to be a bit careless, and I seemed to be the only one putting the crabs back straight away. No one was deliberately hurting the crabs, but some might have been hurt by the sifting process, by people rummaging in the sediment we collected, or from the mud/rocks that were in the tray with them. Not much could be done about that since that was the method we had to use, but we could at least have been told to be careful about it and return them to the tide straight after counting.***

The most useful paper of the ones mentioned above was BIOSCI329; the others seemed a bit pointless, but this is exacerbated by the fact that I haven't continued animal behaviour or freshwater papers. ***The marine animals that we observed/manipulated could absolutely have been done by video.***

***The most disturbing thing about biology/science is the amount of animal products used in labs – not in actual dissections but for example, foetal bovine serum, broth/growth media with milk products, animal derived enzymes and antibodies. All of that, and seeing how integrated those products are into the papers, makes me feel conflicted about my degree the most.***

- Dharini Marinkovich, BSc in Biological Sciences

### Questionnaires for papers:

I had questionnaires for 329 and 207 which asked if you had found it useful, and for 207 it also asked how you felt about the use of the animals on some kind of scale / agree or disagree structure. I don't think I ever did one specifically for animal use, just on course reviews.

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### STATEMENT 4

My experiences of animal dissection in the Biological Sciences department at the University of Auckland have been mainly positive, however I believe a few improvements could be made. Throughout my three-year Biological Sciences degree I have participated in dissections in many classes, some of which I found to be more ethical than others:

- BIOSCI 329 (Biology of Fish) I found to be highly ethical, with fish being caught from the Leigh Marine reserve by Professor Clements himself. These fish have lived in the safety of the reserve for a large part of their lives, have contributed to the ecosystem, are not farmed, and were taken at sustainable rates. Students shared one fish between two, and body parts such as otoliths that were not involved in the dissection were used for other means eg. aging databases. I found this dissection to be very valuable to my learning, as it was worth 25%, and have nothing but praise for Kendall Clements and the system in place.
- BIOSCI 205 (adaptive design) involved a rat dissection, in which I did not want to participate due to my beliefs around breeding animals with diseases (in this case diabetes) for dissection. I contacted Dr. Brendon Dunphey who was very understanding about my stance and allowed me to just watch my partner doing the dissection. ***I firmly believe that dissections only require one animal between at least two students, and that any more is a waste.***
- BIOSCI 208 (invertebrate diversity) used live invertebrates (e.g. worm, mussel) in dissections which I am strongly against. ***Even though they have different nervous and sensory systems, I find the use of live animals extremely inhumane and criticise this paper for it. There was no need to use live animals (i.e. no requirement to observe live muscle actions etc) and I was very uncomfortable with this.***

Overall, I believe that the University has a satisfactory ethics board and protocols however believe there is room for improvement in terms of dissections. ***There is no need for students have one animal each in my experience, and I found many students to be very disrespectful with the corpses which was distressing.*** I praise said individual lecturers for their actions regarding dissections, but ***believe that supplementary learning aides would be able to portray information of a similar quality to students while decreasing dissection demands and wastage of the lives of sentient animals. I certainly think that saving dissection for students in second year might be a valid option as many first years don't take things seriously - this happens in biology a lot regarding field trips, for example.***

- Beckie Calder-Flynn, BSc majoring in Biological Sciences

#### Questionnaires for papers:

Questionnaires given in BIOSCI 208 and 329; scales of 1-10 about usage and responsibility etc.

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#### STATEMENT 5

I took MEDSCI142 and BIOSCI107. ***I feel the dissections and animal slides were unnecessary and I could've learned just as well without them. It was awful and frustrating to not be given the option to not pay for something I was completely morally opposed to. As someone opposed to animal use it was a defeating experience to effectively be forced into animal use and have no say in terms of a reasonable alternative.***

- Anonymous, Bachelor of Biomedical Science
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#### STATEMENT 6

***Having a compulsory dissection made me feel as if I had been stripped of my rights to follow my own beliefs.*** As someone who has lived a vegan way of life for 6 years, over a quarter of my life, I found it immensely difficult to put aside my belief that every sentient life form has equal value and to perform a dissection on an animal I knew had been bred for the purpose of being killed for dissection (specifically, the rat lab in MEDSCI142). However, in order to pursue the career I want, in a field where an understanding of vegan health is essential, this was necessary. ***I felt that my beliefs, which are my own personal form of religion, were being placed at a lower priority than another individuals' religion, simply because I had no name for it.*** I had heard of others being excused from dissections based on religious grounds, however no one I knew had been granted this. ***It was made clear that we were expected to complete the dissection, or forfeit the marks, and in a paper where almost every lab involved dissections of some sort, and a 50% mark in the lab is required to pass the course, this was not a possibility. I think it is wasteful to have the rat dissection lab in a first year paper, as so many of my peers, who performed this dissection, went on to do completely different degrees, making the loss of these lives completely pointless. I can see that the dissection does have educational value, but there are other ways of teaching anatomy, which perhaps might be more appropriate for first year.***

By overriding my moral code to perform this dissection in particular, ***I have had nightmares about white labrats. I am not pleased that I performed the dissection, however I still feel that it was unavoidable and I would not have been able to pursue a career I am incredibly passionate about, if I had not given in.*** My way of coping, due to the fact that there were no alternatives available to me, and in order to keep myself sane, was to approach it in a way

that ensured that I got the maximum possible information out of the dissection so that the life had not been completely pointlessly lost.

***For me the most chilling thing was to see in the lab guide that the animals were 'killed humanely' by CO2 poisoning, at which point my immediate thought was to the way the Jewish people had been gassed in Nazi Germany - a melodramatic comparison, I am aware, for someone who does not see the life of a sentient being as equal to that of a human, but this is a philosophy I choose to live my life by. I understand that not everyone has the same approach to life as myself, however I feel that I should be entitled to my own beliefs and have the option to opt out of something I feel compromises the ethical code that I choose to live my life by.***

- Anonymous, BSc in Food Science and Nutrition

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#### STATEMENT 7

***Put simply, I just don't think the dissections we were required to do actually assisted our learning. The theory behind many dissections we did, for example that in MEDSCI312 I found I understood more from reading rather than the dissection itself. In the case of teaching anatomy, I understand that the university doesn't yet use other computer based teaching methods and thus dissections are the way this is most effectively taught at the moment, however I really think that this could be done in groups to minimise the number of animals used and that having one animal per person is often unnecessary – this could be done, for instance, in MEDSCI142.***

- Nicola Gillies, BSc majoring in Nutrition

#### Questionnaires for papers:

I generally just write a comment in the general course review. There's usually a section on how labs were useful to your learning or something along those lines where you can write, but nothing specific to the labs for either of my papers.

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#### STATEMENT 8

I've had a number of experiences with both the use and dissection of animals during my three year BSc in biology (BioSci 103, 207, 208, 335, 333, 337, 328). It is hard to remain objective in a discipline that involves the direct study of such beings. ***I do believe this kind of interaction is necessary for students in some capacity, however minimising their use seems logical.*** It is my understanding that students can opt out of labs without their marks being affected, and I remember hearing that as many as possible of the animals used for dissection have not been killed solely for us.

- Anonymous, BSc in Biology

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#### STATEMENT 9

I am a student who is currently completing an undergrad at Massey.

When I started my BSc in nutrition I had the same first year schedule as vet students. I completed a generic first year of Bio; ***the papers at Massey are largely analogous to the material completed by first year Bio students at Auckland.*** I called Massey ahead of time and said that due to ethical objections I would not want to be dissecting animals and enquired about how prolific this would be. It is fair to say the extent of animal use was not clearly conveyed. Staff from the University said I could possibly opt-out or just observe, on that basis I paid my fees. However when it came time to participate, it was generally up to the lecturer.

Lecturers had their own feelings on the ethics and were generally not keen on students to opt-out for obvious reasons. I was unable to opt out of labs as the majority of the first year labs in some papers contained dissection and labs were compulsory. ***I was teamed with a partner so 'observing' didn't make any difference to the number of animals used – though in reality if dissection was absolutely necessary there could have been as little as one***

***animal per table or one animal per class. We were told the animals were all by-products of industry but that can't have been the case for some of the smaller animals that are not used by any industry that I know of.***

My experience:

***1) Hands-on dissection was mostly needless in the first year. There was nothing we could have learned from poking around inside of bodies that couldn't be learned by watching a video of somebody poking around. Another option would have been projecting a demonstration of one dissection onto a screen. This was definitely technologically possible in our labs as it was done more than once. At other times the tutor dissected an animal and we were invited to investigate on that single body after the dissection was conducted.*** Most of the diagrams used in the exams and in lab content were drawings - not photos - of tissue. Everyone knows that drawings are remarkably different to the appearance of internal structures, and students often asked what the point of dissection is when all lesson and exam material relies on drawings that look so different.

***2) Most of the students will not be dealing with bodies in their work. It seemed that the best place for dissection - if required - would be in the final years for students who will definitely contact bodies. The same would apply for students of human biology. Most of the first year students would not progress into professions with excision of bodies.***

***3) It was unhygienic. Bodies and body parts were pinned onto wooden boards with cut marks – grooves– that held blood and tissue in them. There was an unpleasant stench and felt very unsafe from a hygiene position. Proper lab protocols were poorly adhered to. Most labs in New Zealand Universities are widely reputed to be unsafe by students across many institutions. It is something that is joked about, even by lab staff.***

***4) I was pregnant in the beginning of the year and heavily pregnant at the end. I was excluded from some labs due to chemicals used during preservation. During one lab the stench from pig foetuses was so powerful I had to be excused to vomit. Contact with chemicals that are not safe for pregnant people should be avoided. The environment should be safe for all to remain accessible, and concerns like stench should be considered. Nausea in a pungent environment is less than ideal for many students and is a health and well-being concern.***

***5) Live animals were used and this was obviously traumatic for them. The teenagers in the class were not responsible with the live animals - crabs – in one instance. We were told to be respectful but this didn't occur. Crabs were brought out of ice cream containers into the obviously unfamiliar, bright environment with loud humans. This can only have been terrifying for them. One crab escaped from the humans, scrambled around and vomited in front of us in panic. People picked up live crabs and chased each other with them.***

***6) It is not culturally sensitive. Many people in New Zealand are vegetarian and pure veg for religious reasons. Maori in NZ would say that any 'food item' must not be played with as this is not respectful. Muslims also have very strong beliefs about animal use and harm as do Seventh Day Adventists and also Mormons.***

***7) Practicum is more useful: students can gain more out of hands-on learning and observation in-situ. In the case of health this includes learning on human subjects, and in the case of vet – which I understand is not held by Auckland – learning on animals in a clinical environment.***

***8) It is not ethically sensitive. People with strong ethics about animal care and animal use should be able to complete degrees without any goading from staff, or any requirement to act outside of their ethics. Ethical disagreement is arguably as important if not more important than religious concerns.*** I was often treated as though I am squeamish. I am not in the slightest. I was told I just had to 'touch' the animal once to gain my marks for lab which didn't feel acceptable to me. It felt like teasing/bullying.

***9) It encouraged a callous environment toward body parts, rather than beings.***

***10) We were told the animals used were by-products from industry, however live crabs and locus and rats/mice are unlikely to be industry by-products.***

11) As a vegan I participate in nutrition studies – veganism is well supported by educational institutions and research – however I had to contend with the barrier of dissection **and financially supporting an institution that carries out lots of animal testing, which is against my ethics**. Much of this animal use is arguably needless. This issue excludes many vegans who would like to study; they talk about it often. Most universities now have many vegans in their philosophy departments, their bio departments, studying ecology and the environment, studying health, nutrition and more.

I understand that one of the barriers to changing course content is the amount of money invested in the laboratory environment, and the issue of changing staff practises is large, however **I think there is a good argument to be made for ultimate cost reduction, for creating a more ethical environment, a more culturally sensitive environment and a more hygienic environment by massively reducing the scope of laboratory dissection. This would be in line with some overseas trends and will probably become a point of focus for the public at some stage.**

Related to harm reduction is the issue of animal testing. We know that in regards to animal testing a good deal of tests can be carried out without using animals which has been the subject of many discussions and a lot of work done by the Humane Society International (HSI). I had the opportunity to meet with Troy Seidle, the director of research and toxicology from the HIS who reported that one of the reasons so many animals are still used in testing because of the preferred conventions of researchers – it is fiddly for them to learn new methods. The HSI audited popular testing methods and determined that a good percentage of them can be dispatched with.

**It may be worthwhile forming a relationship with the HSI who reportedly hold educational programs for research staff in other countries; they train staff on technology that does not require animal use. It would be good to see Auckland University leading the way in terms of training members and implementing technology that drastically reduces animal use. To start utilising more ethical technology sooner rather than later is arguably best practice.**

- Jessie Hume, BSc in Nutrition

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## STATEMENT 10

I would like to share my experience of using animals in dissection, as I had to dissect earthworms and cockroaches as a part of my school practicals and undergraduate program back in India. Needless to say, **it was a traumatic and horrific experience, and I had even lost my appetite for lunch on those days.**

In school, (year 11) I had to study the nerve cells of a goat and muscles of cockroaches. That was the first time I had come in touch with a dead animal and it really upset me.

At university, the people in the lab who were in charge of handling the earthworms simply dumped them into a bucket full of a soapy chemical solution while they were still alive. It must have been a slow and painful death for the poor creatures, and I remember seeing them suffer in agony. We were then asked to cut them open despite the fact that they hadn't completely died. In the exam, the dissection was compulsory, and when I did the procedure incorrectly my professor asked me to start over using another earthworm. I was so nauseated by the whole experience, that **I refused to kill yet another animal for the sake of a good grade and told my professor that I wouldn't do it, thus forfeiting the mark for that procedure.**

Fortunately, that has been the only time I've had to do something so cruel and selfish. I can say that dissections in my school and undergrad program have been COMPLETELY irrelevant, especially since they aren't optional and do not consider the fact that not every student who opts for the course will go on to become a neurosurgeon.

- Arpana Taunk, Bachelors in Science (majoring in Environmental Science)

## **Conscientious Objection**

Many students from the life sciences have deeply held beliefs and valid feelings regarding the use of animals in practical courses. Where humane alternatives are already the norm or where official student choice policies exist, respect has already been granted, and the situation is conducive to good learning. In some universities, however, such students are discriminated against and their freedom of conscience violated. While a few may drop out or be forced to change discipline, others are encouraged or coerced into performing dissection and other animal experiments. Conscientious objection is the only option left within such an environment.

The number of students who conscientiously object and publicly disagree with harmful animal use is often low. This is understandable considering the social and academic pressures of being a student, and the psychological and academic penalty often threatened to those who question the status quo. But the situation is misleading, and the literature shows that when the inherent ethical issues surrounding animal use are discussed openly, many more students will object and ask for alternatives. Occasionally whole classes may object, giving teachers the opportunity to exercise their academic freedom and develop new and progressive ways to meet the teaching objectives.

Conscientiously objecting students have usually thought about the issues in a determined and critical way, and researched the literature on knowledge and skills acquisition. Some have written comprehensive proposals to their university, and have arranged extra-curricular training, for example with private veterinarians. They aspire to best practice. In other words, as well as the high level of motivation and commitment to their education, they are prepared to challenge the orthodoxy if it can't be sustained, and to use the rigour of critical thought whilst never losing the heart that must inform even the most objective of decisions. They comprise some of the best scientists, individuals who will continue to help shape the future long after graduation.

Healthy emotions and clear minds are needed when new proposals and challenges are made; dialogue and mutual respect are needed too, because a win-win solution benefiting the student and the institute can usually be found from a perceived conflict. The role that conscientiously objecting students play in this process is often one of bringing in new ideas and new energy. They could be welcomed as partners with the teaching establishment in helping to modernise and make humane the current practice, and recognised as catalysts for the resolution of existing and often unspoken tension. It is up to teachers to respond appropriately.

The evidence of a ground-shift is becoming more and more apparent: the new veterinary college at Western University of Health Sciences in California, now closer to opening its doors to students, has all its courses being designed to be zero-animal consumptive, with a 'reverence for life' philosophy. Its director of surgery and clinical studies, Dr Lara Rasmussen, is herself a former conscientious objector, and she was head-hunted for the post. So there is already a new generation of revolutionary teachers, using in their courses a wide range of alternative tools and approaches consciously chosen for a top-quality education, and with full rights granted to both students and animals.

## **Alternatives**

### **Models and simulators**

These range from inexpensive models and surgical training devices, right up to computerised mannequins. Basic models can contribute to the study of anatomy or facilitate the learning of good animal handling without animal stress and student anxiety. The diversity of surgical training devices available include models of skin, internal organs and limbs which can provide opportunities for students to master basic skills such as eye-hand co-ordination, the use of instruments, and techniques such as suturing. Waste organ training devices allow for the use of real tissue in the process. More complex products include mannekins used to train IV skills, intubation and catheterisation of animals, and critical care from resuscitation to thoracentesis. Computerised mannequins add another level of complexity and support to the effective training of students.

### **Film and video**

Passive but effective as one part of the educational process, film and video can give good background and provide a quality visual alternative. Videos of professionally-performed dissections, for example, can often impart much more information to students than dissections performed by the students themselves, and can be used to train those students who need such skills in their careers before they do real dissections on ethically-sourced cadavers.

#### Multimedia computer simulation and virtual reality (VR)

The opportunities associated with the development of computer software in contributing to effective life science education have grown exponentially within the last few years. From virtual dissections that students can perform on-screen, to full virtual reality simulations of clinical technique with 3D and tactile facilities, the possibilities are limited only by technical and imaginative boundaries. Computer-assisted learning can also offer much greater depth and breadth to the learning experience. For example, morphology between species can be compared at the click of the computer mouse, or histology and other fields introduced to the practical lesson. An image can be easily magnified or reduced, circulatory or nervous systems dissolved away or highlighted in 3-D, muscles activated, and even qualities such as the opacity of organs controlled in order to more fully appreciate structure and structural relationship. The increased sensory experience and level of control in new software supports effective, quality learning. Some programmes include virtual laboratories with options for working through different experiments, and others can be customised by teachers to adapt them to the location and to specific teaching objectives. Students can also work at their own pace, repeat parts of the exercise and use the support material until they are confident with knowledge and technique, and be as self-directed as the structure of the course allows. The innovative nature of new technological developments can be exciting, which adds to the learning experience for students and is an important part of their informal training for professions where IT and computer skills will continue to play a major role. Wherever possible, however, computer simulation should be used in tandem with experience of living people or non-human animals so that technology is kept as a powerful tool, not an alternative to reality.

#### Student self-experimentation

For zoologists and medical and veterinary students the importance of practical work with the living body cannot be over-emphasised. Effective understanding of physiological processes can only be gained with at least some experience of the living body. The consenting student is an excellent experimental animal, and student self-experimentation is a non-invasive, humane alternative. The human body is of course the relevant reference object for medical students, and self-experimentation is used in many institutions as part of normal practice. But the human body can be used in all the life sciences. Such practicals range from simple experiments such as ingestion of a diuretic or performing exercise and then monitoring physiological and biochemical changes, to more complex tests such as nerve conduction velocity measurements with self-experimentation apparatus linked to appropriate computer software. The intense involvement and self-reference of such experiments make them highly memorable, as well as enjoyable.

#### Ethically sourced animal cadavers

For many zoology students and all future veterinarians, the study of anatomy would not be complete without some degree of hands-on experience of animals and animal tissue. Similarly for surgery, training would not be sufficient if actual experience of real tissue was absent. Ethical alternatives to the killing and harming of animals do of course exist for such requirements: specifically, the use of ethically-sourced animal cadavers. 'Ethically sourced' means that the animals are not bred or killed to provide cadavers or tissue for the practical, nor that a market is created or supported for such acquisition. Examples of ethical sourcing include free-living animals that have died naturally or in accidents, or have been euthanised for good medical reasons. Veterinary clinics are a good potential source, and some veterinary colleges already have associated clinics from which cadavers are sourced. The large number of private practices also offers much potential in terms of ethically sourced cadavers; the increase in the number of Body Donation Programs is testament to the common sense of making good use of a wasted resource. The challenge for institutes is to make the right connections and build sustainable organisational structures in order to utilise these resources effectively. It also requires that institutes can demonstrate they will respect and use ethically the bodies of former companion animals that are entrusted to them for educational purposes.

## Clinical practice

It is expected that the training of medical students will involve experience with real patients, and the more experience - at the right level and the right time - the better the training. From physiology to pathology and surgery, education involving patients can offer realistic and appropriate apprenticeship. 'Problem-based learning', related to real clinical cases, is also recognised as a powerful educational approach. This message is especially important for those institutes where laboratory animal experimentation is still used for human medical training. For veterinary education, where animals are the appropriate reference object, clinical practice is again a humane alternative to animal experiments. Many veterinary colleges are already linked to veterinary clinics, providing an element of such training. This approach offers an education much closer in nature to the professional clinical practice that the student will enter into after graduation. Once students have mastered animal handling and basic clinical skills, they may be gradually apprenticed into surgical practice by a qualified veterinarian. An increasing level of involvement in operations such as castration and spaying - two of the most common operations that graduate vets will face - can provide the experience, confidence and competence required. The neutering of stray and other animals is a social need which provides opportunities for 'service learning' like this. Students can also be granted involvement in other beneficial operations. Crucially, clinical practice as an approach within education secures student participation in the whole process: from the operation itself through to post-operative care and the animal's recovery. It keeps the focus on benefiting animals - on healing rather than harming.

### in vitro labs

The rapid development and uptake of in vitro technology in research and testing needs to be supported by undergraduate student familiarity with the techniques. in vitro rather than in vivo practicals can provide this experience, and animal tissue used for such work can be sourced ethically. Moreover, the use of animal tissue in some practicals can be replaced directly with plant material: for studying cell respiration or electron transport, mitochondria can be sourced either from yeast, potato or beet instead of the traditional rat liver, for example.



## **MURDOCH UNIVERSITY CONSCIENTIOUS OBJECTION POLICY:**

1. The University recognises that some students may have a conscientious belief which is in conflict with learning activities, including those for assessment, in one or more units in which they enrol. The University shall endeavour to make reasonable accommodations to meet such beliefs.

Notwithstanding the provisions of this policy, the University will not act in any way that violates Commonwealth or State law and the University is not obliged to accommodate a conscientious belief which puts it at risk of violating a law (e.g. a belief based on racism).

2. In considering such cases, the University accepts that conscientious belief is a genuine and sustained conviction of what may be morally right or wrong that is uninfluenced by any consideration of personal advantage or disadvantage to either the student themselves or others in pursuit of their course of study. This conviction can be based on religious reasons, belief in the sanctity of life, environmental concerns, or other reasons that the student deems central to their belief system.
3. The onus is on the student to take the initiative in identifying a conscientious difficulty with a learning activity, including those for assessment 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 course, the student should discuss this with the Academic 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 met the course learning outcomes and basic professional competencies. This requires a careful consideration of whether or not the learning activity or assessment 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.
6. Students with a conscientious objection to a particular learning activity, including those for assessment, should not simply be excused from an activity, but instead be given an alternative that meets the same learning outcomes. 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 and approved a student case of conscientious objection must advise the Enrolments and Fees of this, giving details of the nature of the conscientious belief and the alternative arrangements made for loading into the student record system.
8. Unit Coordinators should ensure that the alternative arrangements made for similar conscientious objections are consistent.
9. A student who is dissatisfied with the decision of the Unit Coordinator may request the School Dean to review the decision and thereafter appeal to the Student Appeals Committee.

## INTERNATIONAL CONSCIENTIOUS OBJECTION INFORMATION

*The following American schools have set policies regarding alternatives.*

1. Auburn U. - vet. school that offers alternatives in core and elective courses
2. Colorado State U. – vet. school that offers alternatives in core and elective courses
3. [Columbia, New York](#) - med. school that eliminated use of animals for training doctors
4. Cornell U. – vet. school that eliminated terminal surgeries or invasive procedures in core courses
5. [Duke Medical School, Durham, NC](#) – 919-684-0831 – physiology course involving live pigs is strictly optional
6. [Hahnemann U., Philadelphia, PA](#) – med. school that doesn't use animals
7. [Harvard U.](#) – med. school that eliminated use of animals for training doctors
8. [Johns Hopkins U.](#) – med school that has eliminated live animal laboratories
9. Kansas State U. – vet. school that offers alternatives in core and elective courses
10. [Louisiana State U., Shreveport, LA](#) – med. school that doesn't use animals
11. Louisiana State U. – vet. school that offers alternatives in core courses
12. [Mercer U., Macon, GA](#) – med. school that doesn't use animals
13. [Michigan State U., East Lansing, MI](#) – med. school that doesn't use animals
14. Michigan State U. - vet. school that offers alternatives in core classes
15. Mississippi State U. – vet. school that offers alternatives in core courses
16. [New York U., New York, NY](#) – med. school that doesn't use animals
17. [Ohio State U. Med. School, Columbus, OH](#) - doesn't use animals
18. Ohio State U. – vet. student sues over terminal labs in 1991 - student wins – settled out of court – vet. school offers alternatives in core courses
19. [Oregon Health Sciences U.](#) – med. school canceled their live animal labs
20. PIMA Medical Institute, Colorado Springs, CO – professor used alt. for veterinary course Fall 2002
21. Purdue U., Indiana – vet. school that offers alternatives in core and elective courses
22. [Robert Wood Johnson Medical School, Newark, NJ](#) – no longer uses animals as teaching tools
23. Saint Lawrence College – has student choice policy
24. [Stanford – CA](#) - med. school that eliminated use of animals for training doctors
25. [Tufts U., Boston, MA](#) – med. school that doesn't use animals
26. Tufts U., Boston, MA – vet. school where term. labs were discontinued Feb. '00, no invasive procedures are performed and where client-donated, rather than purpose-bred animals are used in anatomy classes
27. [Tulane U. School of Medicine, New Orleans, LA](#) – 504-588-5295 – curriculum contains no required courses involving live animal laboratories
28. U. Of California, Davis, CA – vet. school that eliminated terminal labs in core courses (March 2001) and offers alternatives in core and elective courses
29. U. of Florida – vet. school that no longer has terminal labs or invasive procedures in core courses
30. U. of Georgia – vet. school that offers alternatives in core courses
31. U. Of Illinois, Champaign, IL – vet. school that offers alternatives in core courses
32. [U. Of Maryland, Baltimore, MD](#) – med. school that doesn't use animals
33. [U. Of Michigan, Ann Arbor, MI](#) - med. school that doesn't use animals
34. U. of Missouri – vet. school that offers alternatives in core courses

35. [U. Of New England Coll. of Osteopathic Medicine, Biddeford, ME](#) – med. School that doesn't use animals
36. U. of Pennsylvania – vet. school that eliminated terminal labs from all courses – Aug. 2002
37. [U. of Pittsburgh](#) – med. school that cancelled their live animal labs
38. U. of Tennessee – vet. school that allows alternatives in core and elective courses
39. [U. Of Washington, Seattle, WA](#) – med. school that doesn't use animals
40. U. of Wisconsin – vet. school that eliminated terminal labs and invasive procedures in core courses
41. Washington State U., Pullman, WA – vet. school offers a non-detrimental to animals surgery laboratory course and offers alternatives in core and elective courses – vet. student used cat alternative Fall 2002
42. [Washington University, St. Louis, MO](#) – med. school cancelled live animal labs
43. [Western University, Pomona, CA](#) – 909-623-6116 – www.westernu.edu - has a "reverence for life" philosophy and has degrees in health sciences such as veterinary medicine, osteopathic medicine, nursing, physical therapy, etc. Vet. school has no terminal laboratories.
44. [Yale U.](#) – med. school that eliminated use of animals for training doctors

#### **OTHER UNIVERSITIES THAT ALLOW STUDENT CHOICE**

1. *Massey University Veterinary School, New Zealand* – has student choice policy
2. Medical Academy of Warsaw, Poland - have banned the use of dog labs to train medical students
3. Montreal – Canada – vet. school that offers alternatives in core courses
4. Murdoch U., Perth, Western Australia – alternatives granted to individual conscientious objectors, but a conscientious objection policy introduced in 1998 allows students to request alternatives in all faculties
5. Royal Veterinary College (part of the U. of London and the oldest vet. School in the English-speaking world) – plus 5 other vet schools in the UK have not performed terminal surgeries to train students for over 50 years
6. University of British Columbia School of Medicine, Canada – will discontinue using live animals in classes in September 2003
7. University of Melbourne, Australia – alternatives have been granted to individual conscientious objectors as of December 2002
8. University of Poznan, Poland - have banned the use of dog labs to train medical students
9. U. of Prince Edward Island – vet. school that offers alternatives in core courses and has eliminated terminal surgeries
10. Uni. Of Sydney Vet. School, Australia – eliminated terminal surgeries in 2000 and replaced with humane alternatives, awards 2 prizes each year for students' efforts in animal welfare and has a student choice policy
11. University Of Queensland, Australia – alternatives have been granted to individual conscientious objectors
12. The University of Wollongong, Australia – Implemented a Policy on Ethical Objection in March 2003

For years, all six of the UK veterinary colleges have had, by traditional US standards, an alternative system. Instead of practicing 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. Every Australian veterinary school now allows conscientious objection to terminal surgery labs. The University of Sydney eliminated terminal surgeries in 2000, Murdoch University offered alternative surgery in the same year, the University of Queensland introduced its first surgical alternatives in 2002 and the University of Melbourne first offered alternatives in December 2002.

#### **AMERICAN UNDERGRADUATE UNIVERSITIES THAT ALLOW CONSCIENTIOUS OBJECTION**

\* not an exhaustive list.

1. American University, Washington, DC – student used alt. Fall 2001 in bio. class
2. Binghamton University, Binghamton, NY – has created alternatives
3. Birmingham Southern College, Birmingham, AL – student used alt. Spring 2001
4. California State University of Los Angeles – student used alt. Spring 2001
5. Cincinnati State Technical College, OH – student allowed to use alt.
6. Colby Community College, Colby, KS – Vet. technician major used alt. to cat dissection Spring 2003
7. College of the Atlantic, Bar Harbor, ME – Private 4 year college that uses road kill instead of specimens
8. College of DuPage, Glen Ellyn, IL – Student used alt. to fetal pig dissection Fall 2001
9. Corning Community College, Corning, NY – Nursing student used alt. to cat, frog and sheep brain Winter 2002
10. County College of Morris, Randolph, NJ – Student used alt. to fetal pig dissection Winter 2003
11. Durham Technical Community College, Durham, NC – Student used human alt. to cat dissection in a Human Anatomy Course Winter 2003
12. Finger Lakes Community College, NY – Student used alt. to fetal pig dissection Winter 2003
13. Front Range Community College, Longmont, CO – Nursing student used alt. to cat dissection Winter 2003
14. Glendale Community College, Glendale, AZ – student used alt. to fetal pig dissection Fall 2002
15. Grayson County Community College, Denison, TX – Para-medicine major used alt. to cat dissection in her human anatomy course and received the highest grade in the lab and lecture Spring 2002
16. Harper College, Palatine, IL – student used alternative to fetal pig dissection Fall 2002
17. Hofstra University, Long Island, NY – student used alt. to cat dissection in human anat. course Summer 2003
18. Humboldt State University, Arcata, CA – pre-vet. student used alt. Spring 2002
19. Keystone College, LaPlume, PA – student used alt. Fall 2001
20. Lane Community College, Eugene, OR – Science professor uses alternatives to fetal pig dissection
21. Long Beach City College, Long Beach, CA – student used alt. Fall 2001
22. Long Island University, C.W. Post Campus, Brookville, NY – 516-299-2481 – Dept. of Biology is looking to implement a student choice policy 12-00
23. Loyola University, Chicago, IL – student used alt.
24. Madison Area Technical College, Madison, WI - student used alt. Winter 2001
25. Maric College, San Diego, CA – student used alt. Fall 2001
26. Massachusetts College of Liberal Arts, North Adams, MA – biology dept. professor borrowed and used human anatomy alternatives Jan. 2002
27. Monroe Community College, Rochester, NY – Dietetics major used alt. to cat dissection May 2001
28. Moorpark College, Moorpark, CA – Biochemistry major used alt. to various species and received the highest grade in class (100%) Fall 2002
29. Naugatuck Valley Comm. & Technical Coll., Waterbury, CT – student used alt.
30. North Hennepin Community College, Brooklyn Park, MN – student used alt. March 2001
31. Northern State University, Aberdeen, SD – Student used alt. to fetal pig dissection Nov. 2002
32. Northwestern State University, Natchitoches, LA – pre-vet. major used alt. to cat dissection Fall 2002
33. Northwestern University, Evanston, IL – NW's Associated Student Government passed a bill in February 2003 backing the creation of a standardized dissection alternatives policy.
34. Nova Southeastern University, Dania Beach, FL – 954-262-3674 – uses human cadavers
35. PIMA Medical Institute, Colorado Springs, CO – professor

36. Rhode Island College – Professor used alt. to cat dissection Winter 2002 and student used frog alt. Fall 2002
37. San Francisco State University, San Francisco, CA – 2 separate students used alt. Fall 2002
38. Santa Rosa Junior College – Santa Rosa, CA – student used alt. Winter 2002
39. Sarah Lawrence College, Bronxville, NY – has student choice policy
40. Schenectady Community College, Schenectady, NY – student used alt. Fall 2001
41. St. Joseph’s College, Hartford, CT – private school where student used alt.
42. Stockton College of New Jersey, Pomona – student used alt. Fall 2001
43. Temple University, Philadelphia, PA – student used alternative Nov. 2001
44. Touro College, Bayshore, NY – Physician’s assistant major used alt. to cat dissection April 2003
45. Truman College, Chicago, IL – student used alternative after a struggle Aug. 2002
46. University of Colorado, Denver – biology dept. professor borrowed and used alt. to fetal pig dissection Jan. 2002
47. University of Illinois, Urbana-Champaign – passed an official Dissection Alternatives Policy May 2003
48. University of Kent State, Canton, OH – conservation major used alt. to fetal pig dissection Feb. 2002
49. University of Massachusetts, Amherst - Organismic and Evolutionary Biology instructor uses alt. to rat dissection
50. University of Pennsylvania, Philadelphia – allowing students to use alternatives Dec. 2002
51. University of South Florida, Tampa – Student used alt. and received 3rd highest grade in class Apr. 2002
52. University of Wisconsin, Sheboygan – Professor borrowed and used alt. to fetal pig dissection Feb. 2002
53. Virginia Polytechnic Institute, Blacksburg, VA – Professor offers alt. in her biology lab (Winter 2003) and the school has a conscientious objection policy
54. Washington State University Vet. School, Pullman – Vet. student used alt. to cat dissection Fall 2002
55. Washtenaw Community College, Ann Arbor, MI – Nursing major used human and pig alt. to pig dissection in Human Anatomy and Physiology course Winter 2003
56. William Paterson University, Wayne, NJ – 973-720-2000 – Student used alt.
57. Wilson College, Chambersburg, PA – Pre-vet. student used alt. to cat dissection Winter 2001
58. Wright State University, Dayton, OH – Biology Professor uses alternatives
59. Xavier University, Cincinnati, OH – Implemented a course on the morality of animal use - starting 2003

Please note: this document was compiled a number of years ago, thus many more alternatives and policies have been implemented at tertiary institutions since its creation.

## **STATEMENT: JEANETTE O'FEE - HEAD OF SCHOOL VETERINARY NURSING, OTAGO POLYTECHNIC**

Yearly we reflect on all animals used within our teaching practices using the 3Rs (reduce, refine, replace) and as a consequence have made the following changes since 2006 until now, to what we do here at the School of Veterinary Nursing at Otago Polytechnic.

Examples:

1) Video completed of post mortem (2006) to completely reduce to "nil" the number of animals used in dissection. This video is now the resource for demonstrating the post mortem process and standard procedure. No animals used for dissection.

2) If organs are required for practical teaching we source kidneys, hearts, lungs, bones from the local butchers or meat works. No animals sourced or used for practical teaching.

3) 2013 saw the closing of our animal room here on-site. This (2006) used to be open 52 weeks of the year; 2007 changed to only having animals on-site for 17 weeks of the year, and animals we sourced (rabbits, rats, mice, birds, guinea pigs) are from students, staff within the Polytechnic (i.e. Lesley's guinea pigs come and stay for a couple of days and are then returned to her), from the SPCA, or local pet-shops. These animals were then returned to their owners or adopted by the students. 2013 saw all animals sourced as above and no animals held on-site for more than two-four days.

4) We have a great stock of "stuffed animals" - (toys) dogs, cats, rabbits, guinea pigs, that we use in teaching to support student learning, where the practical skill is shown on a real animal i.e. a bandaging technique and then students practice on one of the "models".

We have also managed to source many different types and sizes of stuffed animals to enable the students to learn the correct handling techniques for injections etc... This reduces the stress on live animals when students are learning the correct handling techniques and enables the staff to give feedback to improve performance and using the models they can practice over and over again until the student feels confident and competent, whereas live animals cannot be used over and over again.

5) We have purchased models - i.e. cat model in below photograph– again to reduce to nil dissections.

I hope this information helps and if you require any further information please do not hesitate to contact me.

Jeanette O'Fee (Mrs) BSc, BAppMgt(BusEx), Cert An Tech, NDAEdT, Cert Mata Maori  
Head of School Veterinary Nursing  
School of Veterinary Nursing, Otago Polytechnic



## RELEVANT SECTION OF THE ANIMAL WELFARE AMENDMENT BILL

### 5Section 3 amended (Definition of manipulation)

- (1) In section 3(1), replace “subsections (2) and (3)” with “subsections **(1A)** to (3)”.  
(2) After section 3(1), insert:
  - “(1A) The term defined by subsection (1) includes the killing of an animal (other than an animal in a wild state) ~~by or on behalf of a code holder~~ for the purpose of interfering with the animal's body or its tissues in a manner specified in that subsection.
  - “(1B) The term defined by subsection (1) also includes the breeding or production of an animal using any breeding technique (including genetic modification) that may result in the birth or production of an animal that is ~~susceptible to pain or distress during its life~~ more susceptible to, or at greater risk of, pain or distress during its life as a result of the breeding or production.”  
(2A) After section 3(2), insert:
    - “(2A) **Subsection (1A)** does not apply to any killing of an animal that is carried out by any person—
      - “(a) while exercising powers under the Biosecurity Act 1993 for the purposes specified in section 121(1A) of that Act; or
      - “(b) while exercising powers or performing functions for the purposes of a response activity carried out under the Biosecurity Act 1993, being an activity undertaken after any event described in **subsection (2B)** and for any purpose described in **subsection (2C).**
    - “(2B) The events concerned are—
      - “(a) the detection of an unwanted organism not previously known to be present in New Zealand;
      - “(b) the appearance of different effects of an unwanted organism known to be present in New Zealand and capable of being eradicated.
    - “(2C) The purposes concerned are—
      - “(a) to investigate the unwanted organism;
      - “(b) to minimise the impact of the unwanted organism on natural and physical resources, human health, and overseas market access for New Zealand products;
      - “(c) to control the spread of the unwanted organism;
      - “(d) to reduce the geographical distribution of the unwanted organism;
      - “(e) to eradicate the unwanted organism.”
- (3) Repeal section 3(2)(c).