



# Alternatives to Animal Testing in Veterinary Education in Mexico

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## Summary

*The implementation of humane alternatives to animal experiments is rapidly gaining momentum in education and training. However, for future life science professionals studying at some universities, the use of non-human animals remains a common method to obtain knowledge and psychomotor skills. The National Autonomous University of Mexico (UNAM) is no exception, and non-human animals are used in this way at the Faculty of Veterinary Medicine. Both animal experimentation and the dissection of purpose-killed animals cause harm, and these methods are limited in terms of what they teach. They also send the wrong message to students: through them they learn speciesist values, i.e., “intolerance or discrimination on the basis of species.” In Mexico in recent years, many students and teachers have questioned the way veterinary medicine is taught. Some students and teachers have begun to promote and implement alternatives. These ethical educational tools have the potential to completely replace the harmful use of non-human animals and to achieve the educational objectives.*

*Keywords: veterinary medicine, animal experiments, alternatives, humane education, Mexico*

## 1 Introduction

The National Autonomous University of Mexico (UNAM) is considered the best university in Mexico, and it has the largest enrollment among universities in Latin America. The university currently produces 60% of all scientific publications in the country and can claim three Nobel Prize laureates among its alumni (UNAM, 2011).

At the UNAM there are 30,000 students in life sciences, all of whom use animals in their laboratories, mostly in a harmful way. There are 7,000 students of veterinary medicine, and an estimated 700 animals are used for dissection and animal experiments per year. Although faculties are obligated to report to the authorities the number animals used, this information is not published, nor is it available on the internet.

The majority of professors in Mexico believe that the only effective way to learn is by harming and killing animals, whereas most of the students disagree. Few express it publicly, but in recent years some students in Mexico have refused to learn by the traditional method and have questioned the effectiveness of these experiments that do not contribute anything new to science. They are looking for new methods of learning.

## 2 Student rights and conscientious objection

The profession of veterinary medicine requires trained professionals with a strong base of theoretical knowledge and

clinical skills for the well being of animals and society. It is also expected that they have the ability to feel empathy and compassion for their patients in order to provide better care (Martinsen, 2008).

The harmful use of animals in disciplines such as anatomy, physiology, pharmacology, virology, surgery, etc. gives students a negative message from the *hidden curriculum* (Capaldo, 2005). They learn anthropocentric values and *speciesism* – “that only human animals are subject to moral consideration, that life is disposable, and non-human animals can be used at will.”

Consciously or unconsciously, teachers denigrate the qualities of empathy and compassion, and they sometimes make these attributes look like weakness. Through animal experiments, students’ rights also are compromised, as their sensitivity and their ethical or religious principles – and therefore their integrity – are violated (Pedersen, 2002). They may also suffer trauma (Capaldo, 2004).

At the UNAM, a limited number of students, including the author of this paper, have conscientiously objected. While the number of students who object often seems small, this is understandable considering the social and academic pressures of being a student (Jukes and Chiuiia, 2003). In Mexico there is no explicit law that gives students the right to refuse to participate in practical classes where animals are harmed. In Mexico City there is a law that protects student rights, but it is rarely enforced and its strength has not been sufficiently tested in relation to this issue.



### 3 Student initiatives and strategies for replacement

In recent years, the use of animals in education in Mexico has increasingly been questioned by students, teachers, and NGOs (Ponce and Jukes, 2009). Some students began to explore alternative methods. In April 2007, on the initiative of students, several teachers, and InterNICHE, the First National Congress on Alternatives Methods in Education was organized at the UNAM.

This event was attended by 250 people including students, teachers, and researchers from various disciplines of the life sciences, as well as representatives of NGOs. It lasted 3 days, with oral presentations about animal rights, student rights, criticism of traditional teaching methods, bioethics, the benefits of using ethically sourced animal cadavers and tissue, clinical work with animal patients and volunteers, and conscientious objection.

The congress also included workshops and the exhibition of alternatives, demonstrations of different types of alternatives, such as models and manikins, multimedia computer simulation, and student self-experimentation for different disciplines. Although there is resistance to change from some teachers, information on alternatives, humane education, and conscientious objection began to spread through the academic system at UNAM.

One year later, a 6-week series of seminars addressing replacement of harmful animal use in education and training was held across Latin America. The outreach tour was titled: The 1st Latin American Tour “Alternative Methods for a Humane Education: Best Practice and Innovation in the Life Sciences.” These events were organized by InterNICHE, local partner organizations, and volunteers in Monterrey, San Luis Potosí, Guadalajara, and Mexico City. In Mexico City, 400 people attended the seminars, one of which was hosted by the Faculty of Medicine at the UNAM.

Nick Jukes, the Coordinator of InterNICHE, attended as a co-organizer and speaker. The events included spoken presentations and demonstrations, plus a free trial of a wide range of alternatives brought from the InterNICHE Alternatives Loan System, a library of learning tools. The tour was considered a great success.

In May 2011, hosted by the Department of Surgical Education of the Faculty of Medicine at the UNAM, InterNICHE organized the first demonstration of the POP (Pulsating Organ Perfusion) Trainer, a laparoscopy training device. Professors of the Faculty of Veterinary Medicine also participated. The demonstration earned very positive feedback and displayed the effectiveness of the simulation device for laparoscopic surgical skills acquisition.

### 4 Impact and discussion

After these three successful events at the UNAM and much background campaigning in Mexico City and across the coun-

try, teachers are more interested in using alternative methods, and an increasing number of students are opposed to harming and killing animals.

Until 2010, the Faculty of Veterinary Medicine used pound dogs. The animal protection societies began pressuring universities to comply with the Official Mexican Norm: NOM-042-SSA2-2006 (Ministry of Health, 2008), which prohibits animal control centers from donating or selling animals to research or educational institutions. However, rats, mice, rabbits, chickens, and chick embryos are still being used in laboratories.

Since it is forbidden to use dogs sourced from pounds, the Faculty of Veterinary Medicine began to buy models and manikins, based on information provided by InterNICHE. In addition, the Faculty now allows low-income members of the public to bring in their dogs and cats so beneficial surgeries can be provided. This is to the advantage of the animals, their guardians, and the students.

Numerous teachers across Mexico have contacted the InterNICHE National Contact and the author of this paper seeking personalized advice on changing from the traditional methods used in their laboratories to alternative methods. Students have also made contact, seeking information regarding the right to conscientious objection.

### 5 Future plans

There are growing opportunities for stakeholders to progress curricular transformation in Mexico. The following projects are being considered:

- To organize conferences and workshops on alternatives in all the life science faculties at the UNAM and to promote interchange with other contacts across the country.
- To continue working in key areas to replace animal experiments where they are still being used, such as in the Faculty of Veterinary Medicine at the UNAM.
- To create agreements between veterinary teaching hospitals, veterinary clinics, and animal protection societies to establish a body donation program using ethically sourced animal cadavers and to provide more clinical learning opportunities for students.
- To offer information to students of all Mexican universities about how to exercise their right to conscientious objection.
- To expand the country’s existing small plastination laboratory to diversify the range of potential alternatives.

### 6 Conclusion

The InterNICHE work in the National Autonomous University of Mexico is playing an important role in the process of implementing alternative methods across Mexico. Workshops and conferences are an effective way to spread information about humane education and to train in alternatives. It is im-



portant to maintain the atmosphere of collaboration between students, teachers, and university administrations.

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