

# On the Journey Toward Humane Education in Brazil: First Request for a Total Ban of Harmful Animal Use in Professional and Higher Education

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**Summary** — The Brazilian Network for Humane Education (RedEH) is an independent and self-managed group comprised of academics from ten different Brazilian states and a number of international collaborators. In 2016, in a concerted effort to change the educational field in Brazil and propagate humane education, RedEH sent a request to the Brazilian National Council for the Control of Animal Experimentation (CONCEA), asking that harmful animal use in education in professional and undergraduate courses be banned. This was the first formal request for a total replacement of harmful animal use in education in Brazil, and represented a major historic landmark in the advancement of Brazilian science education. This paper presents the full text of the request, as well as outlining its national and international repercussions. The request was supported by InterNICHE and representatives of 18 other international organisations. A major national impact of the request was its recognition by the Federal Council of Veterinary Medicine. With this action, academics and researchers took a potentially revolutionary step in the Brazilian education arena, with regard to advancing and supporting a higher quality, ethical and democratic educational system.

**Key words:** *alternatives, humane education, public policy, replacement, science education.*

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## Introduction

The last two decades have witnessed a collection of governmental initiatives for the promotion and encouragement of the Three Rs concept in Brazil, including the creation of the National Council for the Control of Animal Experimentation (CONCEA) in 2008, and the Brazilian Network for Alternative Methods in 2012 (1, 2). Both institutions are related to the Ministry of Science, Technology, Innovation and Communication. In addition, the Brazilian Center for the Validation of Alternative Methods, which was first proposed in 2007, is currently based at the National Institute

for Quality Control in Health, at the Oswaldo Cruz Foundation (INCQS/FIOCRUZ), which is related to the Ministry of Health (3, 4).

A group of Brazilian academics created the Brazilian Network for Humane Education (RedEH) in 2014, with the aim of better representing the field by bring together like-minded individuals, and strengthening advances toward the implementation of more egalitarian teaching–learning approaches (i.e. promoting a less-strict hierarchical culture between students and professors, which is crucial to critical thinking). This autonomous and non-hierarchical network currently totals 30 centres in higher education institutions in Brazil,

as well as contacts in several other countries in the Americas and Europe.

In 2016, an open request to the Brazilian government for a total ban of harmful animal use in professional and higher education represented a significant step in the advancement of humane education in the country. Even though humane education has been an academic topic in Brazil since the mid-1990s, it was only during the last decade that specific measures were adopted, with the creation of an organisational body (CONCEA) to oversee inter-institutional projects, screen local animal use applications and coordinate the development of new methods and proposals for public policies (3).

All these initiatives demonstrate governmental efforts toward the development of a more progressive science, where humane values and critical thinking prevail (5, 6). Furthermore, recent changes in Brazilian educational policy included recognition of a student's right to conscientiously object to practical classes that involve the harmful use of animals (6). To positively encourage these developments in Brazil, CONCEA promoted the *Symposium on Alternative Methods to Animal Use in Education*, on the 5–6 October 2016. On this occasion, members of RedEH requested that CONCEA consider implementing a total ban of harmful animal use in education. This was the first such formal request in Brazil, and is presented in full in this report.

## A Petition to End Harmful Animal Use in Education

The full text of the request sent by RedEH to CONCEA is given in Figure 1.

## Repercussions and Perspectives

This considered action for the ban of harmful animal use in education received initial support from the International Network for Humane Education (InterNICHE). This was followed by support statements from eight other prestigious international institutions in the field of alternative methods, namely: Humane Society International (HSI), European Society for Alternatives to Animal Testing (EUSAAT), Alternatives Research & Development Foundation (ARDF), the scientific journal *Alternatives to Animal Experimentation (ALTEX)*, the Portuguese Society for Humane Education (SPeDH), the Serbian Organisation for the Respect and Care of Animals (ORCA), People for the Ethical Treatment of Animals (PETA), and Kirkstall Ltd (a UK company focused on *in vitro* cell culture systems for the replacement of animal testing).

In addition, the RedEH action received personal support from a range of people of international academic and social standing, namely: In India, Mrs Maneka Sanjay Gandhi (Head of the Ministry of Women and Child Development of India) and Dr B.K. Sharma (Associate Professor and Head of the Department of Zoology, University of Rajasthan); in the USA, Professor Daniel Smeak (Chief of Surgery and Dentistry, College of Veterinary Medicine and Biomedical Sciences, Colorado State University), Professor Marc Bekoff (Ecology and Evolutionary Biology, University of Colorado), Dr Kumar (Professor of Anatomy, Cumming School of Veterinary Medicine, Tufts University) and Emad Aboud (Arkansas Neuroscience Institute); as well as Dr Gill Langley (Humane Science Consultant, UK), Dr Hans A. Braun (Professor of Physiology, Institute of Physiology and Pathophysiology, University of Marburg, Germany), Professor Dr Fawzy Elnady (Former Head of Anatomy and Embryology Department, Faculty of Veterinary Medicine, Cairo University, Egypt) and Dr Miluska Navarrete Zamora (Professor of Animal Anatomy, National University of San Marcos, Peru).

In Brazil, the most significant support for the petition came from the Federal Council of Veterinary Medicine (CFMV). This is the professional association responsible for the regulation, guidance and standardisation of veterinary practice in Brazil. Even though this council represents a single profession, among the several that might be involved with animal use in higher education, veterinarians have a direct role in animal welfare (7). In addition, they are perhaps the professionals more inclined to understand that animal welfare transcends animal health (8), and that it is also subject to social and ethical issues. Therefore, it is of utmost relevance for veterinary education to ensure the humane treatment of animals, and to observe the very ethos of the veterinary profession (9).

## Conclusion

With this action, academics and researchers took a step toward a potential revolutionary change in the Brazilian education system, with regard to it becoming higher quality, more ethical and more democratic.

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**Figure 1: A petition to end harmful animal use in education**

São Paulo, October 6, 2016  
Dr Monica Levy Andersen  
Coordinator of CONCEA

**End of harmful animal use in professional and higher education**

Dear Dr Andersen

In light of the ethical and scientific advances that necessarily encompass the promotion of humane education, and a change in the methods and techniques used in scientific education, we kindly request to the National Council for the Control of Animal Experimentation (CONCEA) for a legal provision to cover the full replacement of harmful animal use in higher education and professional courses.

The harmful use of animals comprises any action, deliberate or otherwise, detrimental to the present or future welfare of the animal, by denying or limiting its inherent freedoms, such as the freedom to live, express its natural behaviour, be part of a social structure or ecosystem, present autonomy to satisfy hunger or thirst, or escape from discomfort. In addition, harmful practices might also cause pain, injury, illness, fear, and suffering.<sup>1</sup>

We recognise that this issue has been discussed in a progressive manner by CONCEA and that views are converging towards this goal. CONCEA has recently expressed concerns, in the *Guidelines for Integrity and Good Practices for the Production, Maintenance and Use of Animals in Teaching Activities and Scientific Research*,<sup>2</sup> about the quality of scientific training associated with critical and ethical thinking based on humane values. Furthermore, the willingness to accept conscientious objection and the creation of an ombudsman to receive suggestions and complaints about the harmful use of animals demonstrates a collaborative interest in supporting and retaining students in academia who are interested in working on scientific subjects without having to resort to harmful animal use.<sup>3</sup>

Brazil has already made significant advances in the development and application of new teaching techniques, although these are often restricted to those institutions where the methods were developed. To disseminate the technologies and methods developed in Brazilian institutions, 1R Institute formed the Brazilian Humane Education Network (RedEH), which is an independent and self-managed group with a horizontal hierarchical structure. Today, RedEH is composed of 25 lecturers in more than 20 higher education institutions in Brazil (mostly state-run universities) spread across 10 different states, as well as four international collaborators from Spain, Portugal, and Colombia. These professionals develop and apply new teaching methods in different areas of the life sciences, including healthcare and agricultural sciences. Some members also work in the areas of product design, virtual game development, and science communication through digital media.<sup>4</sup>

In the first decade of the 21st century, several Brazilian institutions and university departments have taken a stance against the harmful use of animals in teaching and training, fully replacing this practice in their courses. One of them is the Catholic University of Pelotas (UCPel), which replaced the harmful use of live animals in their human medicine course and other health sciences courses. In 2008, the same institution replaced harmful animal use in practical classes of physiology and pharmacology. In 2007, the Federal University of Pelotas (UFPEL) completely banned the harmful use of live animals in all courses. In the same year, the Faculty of Medicine of the Federal University of Rio Grande do Sul (Famed/UFRGS) implemented the Laboratory Practice of Surgical Techniques and also promoted the full replacement of harmful animal use for medical training.

Also in 2007, as a result of an internal initiative, the Faculty of Medicine at the ABC Foundation (SP) prohibited the harmful use of live animals. The animals used in the practical classes of physiology and pharmacology were replaced with interactive software and ethically-obtained animal bodies.

The Federal Rural University of Pernambuco abolished the use of live animals in the subject of surgical technique, as part of veterinary medicine training, over 16 years ago. They have been using ethically-obtained preserved cadavers, synthetic models, simulators created in-house in the context of the course, and many other materials developed, on a regular basis. In 2009, the course of Veterinary Medicine of the University Center Monte Serrat (Unimonte) also abolished the harmful use of animals and was recognised with the Brás Cubas Merit Medal in April 2009 for this initiative. The University of Brasília (UNB) replaced the harmful use of animals with computer simulations in practical classes back in 1998. The training in microsurgical techniques was replaced with simulators that use a PVC mouse attached to the computer simulator as a teaching interface.<sup>5</sup>

The team of Prof. Julia Matera, at the Faculty of Veterinary Medicine and Animal Science at USP, achieved an important milestone in the expansion of humane education. They gained international recognition for the development of a preservation technique that employed a modified Larssen solution where a higher concentration of glycerin and low concentration of formaldehyde allows the preservation of ethically-obtained cadavers for up to one year, and which can be thawed between six and ten times without loss of characteristics. The reduced concentration of formaldehyde makes it less toxic, which benefits students, technicians, and teachers, and the preserved material retains adequate colour and texture, which is ideal for practical classes in anatomy, surgical techniques and other specific disciplines such as orthopaedics.<sup>6</sup>

The Higher Education Center of Campos Gerais (CESCAGE) has, since 2006, involved students of veterinary medicine in the development of models as part of physiology classes, in order to further knowledge and help with problem-solving skills. In 2015, 27 low-cost models were presented that simulate the renal circulation, respiratory homeostasis, the digestive system of ruminants and non-ruminants, ovulation, spermatogenesis and synapse models. In 1990, the Federal Fluminense University (UFF) replaced harmful animal use in physiology of biomedical classes.

Under the guidance of Prof. Alexandro Aluisio Rocha, in 2013, the Federal University of Jequitinhonha and Mucuri Valleys (UFVJM) implemented the development of alternative methods in animal anatomy and physiology classes in the agricultural science course at Diamantina. Similarly, Prof. Simone Tostes has also been working with students and researchers on the development of models for veterinary medicine training at the Federal University of Paraná (UFPR). They have been using mannequins as a scaffold for training models of different systems, such as for cystocentesis, blood collection in dogs and cats, and prostatic palpation. In 2015, Prof. Luciano Alonso supervised a project to implement and develop humane teaching techniques for veterinary and biology courses at the Rural Federal University of Rio de Janeiro (UFRRJ), by using ethically obtained animal bodies, developing models, and interacting with local state schools for the dissemination of humane education and scientific communication. This inclusive approach in the search for replacements to animal experimentation is seen as a challenge to students, as the teachers consider it to be part of the academic and vocational training.

Souza (2014)<sup>5</sup> described the evolution of moral and social thinking about the status of animals in Brazil, especially addressing the use of animals as a scientific instrument, including their use in practical classes. After a detailed analysis of the papers published on humane education and animal use in education, and of the students' opinion faced with the views of the teachers, the author concluded that the use of animals in teaching could not be accepted for ethical, legal or pedagogic reasons:

*The use of animals in teaching practices, when characterized as harmful, and in which they are used as mere "tools", especially for the benefit of humans, without regard to their lives, needs, and interests, being subjected to procedures that threaten their well-being and cause suffering, injury and*

*death is not acceptable from an ethical point of view, educational, legal and in view of potential biological hazards. From an ethical perspective, the harmful use of animals in teaching is contrary to fundamental values such as beneficence, non-maleficence, respect, justice, equal consideration of interests and protection of the vulnerable. As stated in Singer (2002a), we have no right to ignore the interests of the animals or treat them without regard for their pain or their suffering simply to serve our own interests or because they are not of our species. An ethical being reflects on his actions and is concerned with their effects on others, regardless of race, sex or species, of their situation or the skills they possess. As for the pedagogical aspect, studies show that the practice has a negative impact on learning, damaging progress because of the stress and emotional conflicts experienced during classes with animals, as well as delaying the development of appropriate skills. In addition, frequent instigation of suffering in animals can lead to a process of “desensitization” in which the students develop attitudes of banality and indifference to the suffering of others while prioritizing personal interests. This is not what you would expect from a professional health worker. Regarding the legal issue, under the current environmental law (Federal Law No. 9.605 / 98), it is a criminal offense to use animals in cruel and painful procedures, for teaching or research, when alternative methods exist. Studies show that in the United States and Europe these methods have been sidelined, since the end of the last century or beginning of the current one, and were replaced with other techniques such as artificial models, interactive videos, computer simulations, observations in the field, among many others, without prejudice to learning. Regarding the aspect of biological hazard, students pointed it out as one of the reasons for replacing the use of animals as a teaching tool, since the handling of living beings can cause accidents (bites, scratches, etc.) and transmit diseases (especially zoonoses) (Souza, 2014).*

Therefore, to promote and accelerate the paradigm change toward humane education and the creation of a modernised science that is critical and ethical, and the acquisition of knowledge through the students’ freedom and autonomy, we request and support:

1. legal provision for full replacement of harmful animal use in professional courses at high school level and higher education;
2. national development and promotion of methods and educational approaches without harmful use of animals.

To achieve these purposes, we also suggest that:

- a) a virtual national library of materials, software and videos is made available to the academic community;
- b) initiatives and projects in humane education and alternatives to harmful animal use in education are promoted and encouraged, as well as their improvement;
- c) an online course highlighting the importance of an all-encompassing and humane education, and educational development within the perspective of animal-free science, should be developed for all ethics committee members; and
- d) every institution with research activities in the healthcare sector should be responsible for providing learning spaces and opportunities for reflection on ethics, humane education and alternative methods to animal use.

We also note that the Symposium on Alternative Methods to Animal Use in Education organised by CONCEA supports the academic feasibility and the need to promote humane education in Brazil, with the aim to end the harmful use of animals in teaching.

### Footnotes to petition

<sup>1</sup> For more information about harmful animal use and alternatives, access the InterNICHE Policy on the Use of Animals and Alternatives in Education and Training. <http://www.interniche.org/en/about/policy>

<sup>2</sup> Resolução Normativa nº 32, de 06 de Setembro de 2016. Diário Oficial da União (08/09/2016), seção I. [http://www.mct.gov.br/upd\\_blob/0240/240120.pdf](http://www.mct.gov.br/upd_blob/0240/240120.pdf)

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<sup>4</sup>For more information on RedEH and its members visit <http://www.instituto1r.org#!/redeb/cn8r>

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