



Workshop report

Alternatives to the Use of Animals in Research, Education and Testing

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The workshop on Alternatives to the Use of Animals in Research, Education and Testing, themed *From Animals to Alternatives*, was held at Egerton University on November 25 and 26, 2015. The two workshop sessions were organized jointly by Africa Network for Animal Welfare (ANAW) and Egerton University's Faculty of Veterinary Medicine and Surgery and were complemented with a half day students' workshop.

The meeting was officially opened by Prof. **Njenga Munene** (Deputy Vice Chancellor Administration and Finance). He was accompanied by Prof. **John Mwangi**, (Deputy Vice Chancellor Research & Extension) and Prof. **Charles Muleke** (Dean Veterinary Medicine and Surgery). ANAW was represented by **Samuel Theuri** (Director of Programs). Dr **Joan Magero**, Deputy Director of Veterinary Services from Kenya Veterinary Board (KVB), was also in attendance.

Forty participants from different education and government institutions as well as civil society organizations attended the first session of the workshop. Participants were drawn from Egerton University, University of Nairobi, Maasai Mara University, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Cairo University, Baraton University, Animal Health and Industry Training Institute (AHITI) – Kabete and Ndomba, the State Department of Veterinary Service, Africa Network for Animal Welfare (ANAW), Pan African Animal Welfare Alliance (PAAWA) and InterNICHE. The workshop provided a platform for participants to learn about existing alternatives and to develop a framework for further awareness and adoption of the same.

The second session of the workshop, attended by 38 participants that included 21 veterinary students, nine faculty members, facilitators, and the organizers also aimed at raising awareness in the learners, particularly the veterinary students, and the faculty staff, on the availability of alternatives and to demonstrate that alternatives provide research and education institutions with authentic, affordable and ethical training resources that reduce the demand for live animals otherwise needed to deliver the same lessons.

Egerton University Faculty hosted the workshop while funding was received from the LUSH 2014 Award to ANAW, an award that recognized ANAW's outstanding involvement in training related to non-animal alternative methods and advocat-

ing for replacement of the use of animals in research and education. Additional support was received from InterNICHE and ALTEX Edition.

Objectives

The overall objective of the workshop was to raise awareness, provide skills and knowledge, and adopt the use of alternatives to animals in education and training.

Specific objectives were:

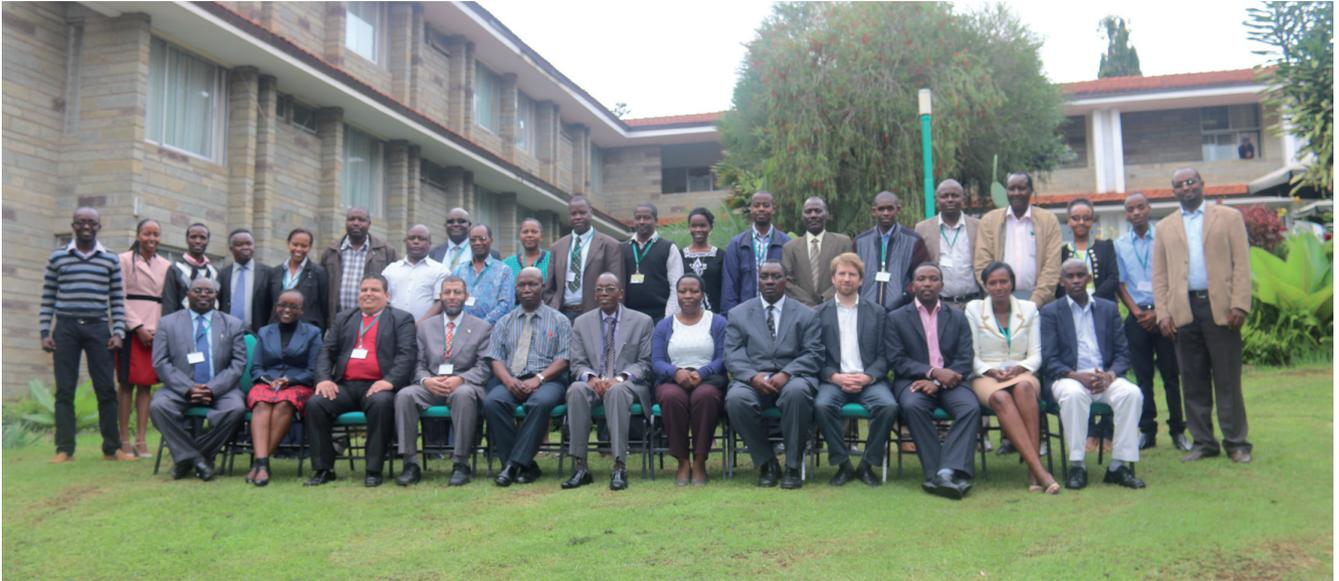
- To provide a platform for participants to learn new, humane alternative innovations and techniques;
- To share experiences, ideas and lessons on the use of alternatives;
- To formulate a roadmap and a platform for adoption of alternatives.

Topics

Topics on the agenda included:

- Overview of the use of animals in research and education; a case of the University of Nairobi
- A legal perspective on use of animals in research and education in Kenya
- Ethics, standards and protocols required in institutions for use of animals in education and research
- Classification and effectiveness of alternative methods, techniques and approaches in education and training
- Case studies and strategies for successful replacement from across the world
- Elnady preservation technique
- Training of Upper Respiratory Endoscopy in the horse using preserved head and neck
- Multimedia alternatives and repository
- InterNICHE technologies and alternatives

Following fruitful deliberations, the workshop witnessed a change of attitude from pessimistic reservations of "Is it possible to use alternatives in education and training and achieve the same results?" to high optimism and a call for immediate adoption of alternatives. Prof. Munene (DVC, Egerton University) said, "From the workshop, I now believe that replacement of harmful use of animals in education and training is possible up to 99% if not 100%."



The Dean, Prof. Muleke and the Deputy Vice Chancellor Prof. Mwangi committed their institution to supporting the adoption of alternatives and the creation of a model faculty that uses alternatives to the harmful use of animals in education and training. They called upon ANAW to enhance awareness and give demonstrations, initiate research on alternatives, motivate the development of innovations, and enhance development of alternatives in the learning institutions.

Dr Magero, who is also the Chairperson of Animal Welfare Action Kenya (AWAKE), thanked the organizers and the participants for their commitment to heeding the call to safeguard the life of all animals, in terms of animal health and animal welfare. She commended the organizing committee for their wisdom in involving the State Department of Livestock Services from the initial stages of promoting alternatives in education and training. This would make policy change and adoption easier as the departmental (government) staff would also be knowledgeable.

The ANAW expressed its commitment to catalyzing the resolutions of the workshop and to providing and coordinating the adoption of the alternatives in the learning institutions.

Actions and way forward

During group sessions, participants discussed key actions and a path to achieving adoption of alternatives to the harmful use of animals in education, research and testing.

1. Form an inter-institution working group that can steer the adoption of the alternatives named KeNIA – Kenya Network of Implementation Alternatives.
2. Some of the proposed tasks for KeNIA will be to conduct an audit of the current curricula to determine which available alternatives can be adopted in the short term, mid-term and long term.
3. Advise on which alternatives can be developed locally versus which need to be procured.
4. Organize knowledge and skills training on the use of alter-

natives for the implementers including lecturers and heads of departments in specific institutions.

5. Organize students' seminars and workshops to create demand for alternatives by making the students aware of alternatives.
6. Provide online training and alternatives including webinar.
7. Ensure engagement and involvement with the Kenya Veterinary Board (KVB) since they influence curriculum reviews and guidelines.
8. Create a resource center (physical and virtual) where alternatives can be developed, people can be trained, alternatives can be loaned, and an open library where people can access a database with a variety of alternatives.
9. Identify and document animal welfare issues affecting animals used in education and research in Kenyan institutions. This will inform further development of interventions that address animal welfare, development of alternatives specific to various animal welfare issues, and development of guidelines for use of animals in education and research.
10. Pool alternatives in a centralized place for accessibility for the member institutions.
11. Create institutional fora for information sharing for ease of dissemination.
12. Enhance awareness creation.
13. Encourage and support relevant research on alternatives.
14. Invest in the development of video clips on alternatives for sharing on YouTube.
15. Document and share success stories on the adoption of alternatives in institutions.
16. Secure formal commitments from the institutions for the adoption of alternatives to harmful use of animals in education and training.
17. Enhance outreach in learning institutions locally and in neighboring countries.
18. Support higher institutions in the development of ethical



standards and ethical committees for use of animals in education and research.

19. Make the workshop an annual event.

Students' workshop

The program for the session included discussions on topical issues such as:

- Classification and effectiveness of alternative methods, techniques and approaches in education and training
- Teaching objectives
- Elnady preservation technique
- Training of Upper Respiratory Endoscopy in the horse using preserved head and neck
- Multimedia alternatives and repository
- InterNICHE technologies and alternatives

Appreciation

The participants of the workshop are grateful to the workshop sponsors and partners, LUSH and InterNICHE, for their support in putting together the workshop. Many thanks also goes to Egerton University, the Government of Kenya, ANAW and other institutions represented at the workshop. Special thanks go to the facilitators for the workshop and chairs of sessions that included:

- Prof. Fawzy Elnady, Professor of Anatomy and Embryology in the Department of Anatomy and Embryology, Faculty of Veterinary Medicine, Cairo University, Egypt

- Prof. Njenga Munene, DVC Administration and Finance Egerton
- Prof. John Mwangi, DVC Research & Extension
- Prof. Charles Muleke, Dean, Faculty of Veterinary Science and Medicine
- Dr Ashour K. Khalifa, Ministry of Interior, Equine Department of Police General Security, Tripoli, Libya
- Dr Rodi O. Ojoo, Faculty of Veterinary Medicine, University of Nairobi
- Dr Kirui Gilbert, Lecturer, University of Nairobi
- Dr Joan Magero, State Department of Livestock Services
- Dr Francis Njonge, JKUAT
- Nick Jukes, Coordinator, InterNICHE
- Mr Wachira Kariuki, PAAWA
- Dr Kisipan, Dr Eva Mwhia and Dr Jesse Thuo (Lecturers, Egerton University)
- Samuel Theuri, Director of Programs, ANAW
- Dr Maryanne Wangari, Program Manager, ANAW

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Workshop report

3Rs in Education

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¹University of Agricultural Sciences and Veterinary Medicine, Romanian Center for Alternative Test Methods (ROCAM), Cluj-Napoca, Romania; ²BIOTOX Srl, Cluj-Napoca, Romania; ³Douglas Connect GmbH, Zeiningen, Switzerland; ⁴CREA, Food & Nutrition Research Center, Rome, Italy; ⁵Istituto Superiore di Sanità, ISS, Department of Environment and Primary Prevention, Rome, Italy; ⁶Università degli Studi di Milano, Department of Health, Animal Science and Food Safety (VESPA), Milan, Italy

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On November 25, 2015 a meeting was held at the University of Agricultural Sciences and Veterinary Medicine (USAMV) in Cluj-Napoca, Romania, with representatives of the Romanian Center for Alternative Test Methods (ROCAM), the Italian Platform on Alternative Methods (IPAM) and the Italian Association of *in vitro* Toxicology (CELLTOX).

Promoting and adopting the 3Rs (Replacement, Reduction and Refinement) in education is an issue of great importance and it is necessary to find common European strategies to involve experts, university professors and students sensitive to this topic (Daneshian, 2011; Sachana, 2014). The main objective of the meeting was to implement, develop and promote alternative



methods in the area of toxicology in Romania and to identify opportunities for future projects and collaborations. The event was attended by students, veterinary toxicologists, biochemists and other members of the academic staff of the host institution.

Lectures on alternative testing methods and other aspects of veterinary toxicology were presented by Prof. **Francesca Caloni**, University of Milan, and focused on major international trends in the area of the 3Rs and on *in vitro* toxicology in veterinary science. Recent activities of CELLTOX were also presented, including two meetings to disseminate novel alternative methods in the field of liver toxicology and on integrated testing strategies in toxicology. CELLTOX is very active in organizing courses, meetings and workshops on recent advances in *in vitro* toxicology, especially directed at young researchers.

Dr **Isabella De Angelis**, in video-conference, reviewed IPAM's activities in 3Rs education. Since its establishment, IPAM has always considered the dissemination of the model and the culture of 3Rs a priority, particularly among young people, promoting educational and training initiatives and disseminating information on scientific progresses of alternative approaches. Recently IPAM organized a didactic exhibition project, "Science and Awareness: a journey inside the 3Rs", in which about 40 posters guided the visitor through the theoretical and practical evolution of research methods based on 3Rs principles in different biomedical research areas. This exhibition was presented in Rome last September but was designed and set up as an itinerant exhibition and will be on display in many universities and research institutes in Italy.

Prof. **Carmen Socaciu** (University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, ROCAM), Prof. **Adrian Nechita Oros** (University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, ROCAM), Prof. **Adela Pinte**a (University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, ROCAM), Dr **Lucian Farc**al (BIOTOX Srl/ Douglas Connect GmbH, ROCAM) and Dr **Andras-Laszlo Nagy** (University of Agricultural Sciences and Veterinary

Medicine, Cluj-Napoca, ROCAM) presented the present status of ROCAM and the situation of alternative test methods in the area of the 3Rs in the host institution and in Romania, and presented further plans of the ROCAM Center and of its working groups. The ROCAM Center will continue to promote alternative methods and the 3Rs approaches in Romania and will pursue the involvement of representatives from the chemical and pharmaceutical industry as well as the regulators.

After the presentations, the three organizations along with the host institution representatives established future directions of collaboration, such as different training sessions in the area of alternative methods, and planned the start of collaborative research projects and of scientific disseminating activities.

References

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