CURRENT DILEMMAS

Animal Use in Education in India: Confusion Continues

Dinesh K. Badyal

*In India, there is an urgent need to get a single directive
on the appropriate and relevant use of animals in education
and research which is equally applicable in all institutions*

Assessing and regulating the extent of animal use in education in India continues to be complicated, in that there are multiple regulatory bodies, various institutions governed by different councils, and numerous state universities. In August 2014, the University Grants Commission (UGC) wrote to all colleges in India, requesting a compliance report stating that they are not using animals in either undergraduate (UG) or postgraduate (PG) education.[1] In 2011, the UGC wrote to the same colleges, urging that animals be replaced with alternatives in phased manner.[2] The recent notification was to ensure that this phased *replacement* has been carried out, and to ensure that there is currently no animal use in education, in either UG or PG courses. The Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) has asked all institutes that use animals in research to constitute an Institutional Animal Ethics Committee (IAEC) and to perform animal house registration every three years.[3]

However, the colleges in India are also governed by state regulations, and various colleges follow a course which is accepted by their respective professional councils — for example, medical colleges are affiliated to the Medical Council of India (MCI) and pharmacy colleges to the Pharmacy Council of India (PCI). Based on the UGC letter and efforts by PETA India, the Pharmacy Council has issued a directive to stop animal use in all pharmacy courses.[4] The recent MCI directive asks colleges to use alternatives in UG medical education, but is silent about PG courses.[5]

The result of this is that animal use has almost decreased to nil in UG courses, but not in PG courses. The PG courses also have a research component, in which animals are extensively used in research projects. Certain PG courses, such as those in pharmacology and physiology, are currently heavily dependent on animal use. Hence, to replace animal use, a major shift in the curriculum is needed. A news item[6] in the *Times of India* states that animal use in education and research is now banned in India, and that there can be a heavy fine and/or imprisonment, if these guidelines are not followed — however, there is no authentic government letter on which to base this claim.

Due to a number of guidelines and circulars being issued by the UGC, CPCSEA, MCI, and PCI, as well as the *Times of India* news item about a ban on animal use, it has become very confusing for staff or students working in the various institutions, and it is very difficult to draw any conclusions from this wide range of information. Hence, unfortunately, confusion about the use of animals in education prevails. Indeed, there are some institutions that are using some animals in education, although it is outlawed, and there are others that do not use animals at all. At present, if a member of staff or a student uses animals in education and research in an institution, he can be questioned by animal welfare organisations and other enforcement agencies about such animals, since the Government has banned animal use for these purposes in India — in fact, there have been police intervention and cases in court related to the use of animals.

In a recent notification, the MCI has said that there is no need to have an animal house servicing UG medical courses — but instead, has advised that an 'animal hold area' will be sufficient.[5] However, every college running PG courses cannot do away with an animal house, as the animal house is assessed during inspections by the MCI for running physiology and pharmacology PG courses. Animals cannot be bought for use in research projects or education, as prior permission of IAEC is needed for their purchase. However, as no projects involving animals are being carried out, animals cannot be bought just for the sake of an inspection.[3] But on the day of inspection, if there are no animals, then questions can be asked — and so this is a very confusing situation indeed.

The staff and researchers in these institutions also have differing views on animal use. Senior faculty, who have used animals during their initial years of education and training, believe that animal use is

essential in learning and research. However, most students and junior faculty do not agree with this view. The extrapolation of results from animals to humans is now being challenged. A number of organisations for the welfare of animals question the logic behind the use of animals in education, and even in research.[7] Hence, in the present scenario, there is a view that animals have equal rights and hence we should not subject them to the ill-effects of research. However, there is a feeling that there should not be a blanket ban on the use of animals, but that by keeping in view the '4Rs', there should not only be appropriate and relevant *replacement*, *reduction* and *refinement*,[8] but also the effective *rehabilitation* of animals used in education and in research experiments. This is a currently neglected area of concern.

We now have commercially-available software for computer-simulated experiments on animals, for use in educational institutions.[7] High-end manikins that can mimic various conditions are also now available.[9] These methods are initially costly, but are economical in the long run. An institution spends a huge amount of money buying animals and maintaining animal houses. However, in research, there are no better alternatives, except for cell lines and cell cultures, and cell culture techniques are also costly.[10]

However, in my view, even the cell culture phase should now be over, and we should move ahead through the use of simulations that are closer to real-life. If movies like *Avatar* can push toward extremes of simulation, then why can we not use such simulations in education and research? There is a trend to create animal simulations to replace live animal use for medical courses, as it is perceived that medical students object to being taught about the effects of drugs on blood pressure and heart rate, etc., by using live animals. So, to address this objection, we initially created computer simulations of animal models. But then an idea came to us — why not design human simulations instead of animal simulations? We now use computer-based animations of human models in our objective to teach medical students the effects of drugs in human beings.

Thus, in addition to multiple directives, these differing views of staff and students have added to already existing confusion about the use of animals in teaching and research. Hopefully, as awareness levels increase, there should be a change in the views of regulatory bodies, institutions, faculty, researchers and students. Here in India, the need of the hour is to get a *single* directive on the appropriate and relevant use of animals in education and research, which is equally applicable in *all* institutions in India.

Professor Dinesh K. Badyal
Department of Pharmacology
Christian Medical College
Ludhiana 141008
India
E-mail: dineshbadyal@gmail.com

References

1 UGC (2014). The UGC letter on dissection and animal experimentation in zoology/life sciences and allied disciplines in undergraduate, postgraduate and research programmes. New Delhi, India: University Grants Commission. Available at: http://www.ugc.ac.in/pdfnews/6819407_ugcletterzoology.pdf (Accessed 02.12.14).

2 UGC (2011). *Guidelines for Discontinuation of Dissection and Animal Experimentation in Zoology/Life Sciences in a Phased Manner*, 9pp. New Delhi, India: University Grants Commission. Available at: www.ugc.ac.in/pdfnews/6686154_guideline.pdf (Accessed 02.12.14).

3 Government of India (2014). *Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)*. New Delhi, India: Government of India, Ministry of Environment, Forests & Climate Change. Available at: http://envfor.nic.in/division/committee-purpose-control-and-supervision-experiments-animals-cpcsea (Accessed 02.12.14).

4 Pharmacy Council of India (2014). Notification, New Delhi, the 25 August 2014. No.10-1/2012-PCI (Pt-I). In *The Gazette of India, Part III, Section 4, No. 19.* New Delhi, India: Government of India Press. Available at: http://www.pci.nic.in/Circulars/gazette_animals.pdf (Accessed 02.12.14).

5 Medical Council of India (2014). Notification, New Delhi, the 18 March 2014. No. MCI-34(41)/2013-Med./64022. In *The Gazette of India, Part III, Section 4, No. 19.* New Delhi, India: Government of India Press. Available at: http://www.mciindia.org/Rules-and-Regulation/Gazette%20Notifications%20-%20Amendments/msr-50-100-150-200-250.pdf (Accessed 02.12.14).

6 Bigga, L. (2012). *Government bans use of live animals for education, research*. Gurgaon, India: The Times of India. Available at: http://timesofindia.indiatimes.com/india/Govt-bans-use-of-live-animals-for-education-research/articleshow/12696452.cms (Accessed 02.12.14).

7 Badyal, D.K., Modgill, V. & Kaur, J. (2009). Computer simulation models are implementable as replacements for animal experiments. *ATLA* **37**, 191–195.

8 Russell, W.M.S. & Burch, R.L. (1959). *The Principles of Humane Experimental Technique*, 238pp. London, UK: Methuen.

9 Anon. (2013). 2012 Lush Training Prize winner: InterNICHE, UK. *ATLA* **41**, 515–516.

10 Arora, T., Mehta, A.K., Joshi, V., Mehta, K.D., Rathor, N., Mediratta, P.K. & Sharma, K.K. (2011). Substitute of animals in drug research: An approach towards fulfillment of 4R's. *Indian Journal of Pharmaceutical Sciences* **73**, 1–6.