

part of biomedical research, especially in the testing of new drugs for clinical application. Moreover, in a country like India, where the facilities for animal cell culture are not available to all researchers, and many chemicals have to be imported at high cost, it will not be feasible to do such experiments regularly. Most of the animal experiments use laboratory mice and rats, which are bred and maintained under controlled conditions. These animals cannot survive in the wild. There are special strains available, like immune-deficient and transgenic mice, which are produced only for specific experimental purposes. Instead of imposing hard conditions on investigators, the committee can better insist that each institution conducting animal research should have an ethical committee which will be responsible for examining the working conditions and approving its research programmes. The institutional committee should see that the leader of each research group under it is responsible for the humane treatment of animals. The researchers should be made answerable to the institutional ethical committee and liable to appropriate action by the latter, if it is not satisfied with the ethical aspects of the studies. The CPCSEA can

invite reports from the institutional committees from time to time and conduct occasional inspections to the centres to ensure that the animal welfare conditions are properly observed. I feel that such a situation where each researcher and each institution is made accountable will be a more practicable approach to promote healthy animal research in the universities and other research laboratories.

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Whenever I read any article related to experimentation on animals, I think about my student days when we hated doing dissections. If one takes up science, there is no other option, and biology practical involves dissection. Frogs used to be victimized most since they were easily available. Each one of us had to boil the frog, remove the skeleton and show it in the class. I used to feel nauseated when the lab assistant would give us a

frog (sometimes live) to pin down in the wax tray.

I am working in the area of geological oceanography for the past sixteen years and wonder how, any of these experiments have helped me in my present profession? Very few students have got into professions where these experiments have helped them in any way in their present endeavour. I wonder how I could justify killing of a number of animals when I had to go for Geology.

There are thousands of students doing such experiments even now in lower classes. Such experiments can now easily be replaced by computers. Software such as Compufrog, Compurat series developed by The Blue Cross, Chennai is a remarkable example. In places where computer facility is not available yet, clay models may replace the live demonstration, because such experiments do not have far reaching importance in lower classes. Thus many animals can be saved from use in experiments.

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NEWS

Global warming and its consequences

The report from the Hadley Centre for Climate Change in Britain presented to the 170 countries which met at Buenos Aires to discuss global warming is very alarming. The scientists at the Centre state that they have used all the data and put in the necessary parameters into their supercomputer to make the following predictions:

- 1) Land temperature will go up by 6° by the end of the next century.
- 2) Sea levels throughout the world will raise by 21 cm by 2050. The coasts of the southern Mediterranean, Egypt, west and east Africa, south and south-east Asia are most vulnerable.
- 3) The number of people on the coast

subject to flooding each year will rise from about 5 million now to 100 million by 2050, and 200 million by 2080.

4) Another 30 million people will be hungry in 50 years from now because it will be too dry to grow crops in many parts of Africa.

5) Another 170 million people will live in countries with extreme water shortage.

6) Wheat and maize yields will drop by up to 10% in USA. Since the vast surplus of the US wheat belt is vital to the country's wealth and its hold on world food supplies, this prediction will be bad news for future US administrations. On the other hand, Canada will see its wheat production increase by 2.5%.

7) The Gulf stream which is important for warming Britain in the winter, will be 20% weaker in future, but Europe will still warm up considerably resulting in more extreme weather conditions.

8) Parts of Amazon rain forest will turn into desert by 2050, threatening the world with an unstoppable greenhouse effect.

9) Malaria, one of the world's most feared diseases, will threaten larger areas of the world, including Europe, by 2050. The disease is already endemic in many places and it is already spreading north—Italy had an outbreak last year—and malaria is expected to reach the Baltic by 2050.