

they should be asked only to inform the Committee about their experimental facilities. If in case all the institutions/breeders/persons in this country apply for registration, one can imagine the number of applications that are to be scrutinized and the number of proposed animal facility premises to be inspected by the Committee. The persons chairing the committee are important officials who are always busy. Can the Committee visit all the proposed animal facility premises and grant registration quickly (that too in 30 days)? To avoid this, the Committee should have appointed sub-committees for each state comprising individuals from Universities, research institutions, etc., whose job would be to inspect the pro-

posed animal facility premises in that state and grant permission if necessary. Governmental institutions should be exempted from registration.

Coming to rules 6 (a) and (b) which have been already pointed by Ramalingaswami, it is said that the concerned establishment should obtain permission from the Committee for each and every animal experiment to be conducted. This is impractical. The Committee should frame a rule that every institution/establishment must have an Ethical Committee consisting of individuals from various professions and any animal experiment must be cleared by this committee.

These rules will definitely hamper the progress of medical research in India at

a time when it really needs a boost. Instead of framing a new set of rules, the existing rules should have been amended and the system further empowered to punish offenders. Ways of being humane to animals and taming them should be taught right from school days. It should be noted that animal experiments are done not only for the well being of humans but also for the well being of the animals.

Y. SURESH

*Department of Biochemistry,
L.V. Prasad Eye Institute,
Road No. 2, Banjara Hills,
Hyderabad 500 034, India*

Lopsided view on basic science

The editorial 'Funding basic science' (*Curr. Sci.* 1998, 75, 77) rather than making a convincing case for better funding of basic science seems to obliquely condemn the heavily funded defence research and development. I think the present Government and scientists like A. P. J. Abdul Kalam have good reasons to highlight the successful nuclear explosions and the development of the missile technology. In contrast, in the past on many occasions top scientists invariably cited accomplishments in the atomic energy and space research to counter the public criticisms pertaining to the malaise in Indian science, and blocked any move to enforce accountability. The reality about basic science done in our country is that even if no funding is provided to it, there will be hardly any impact on either the advancement of knowledge or any benefits accruing from it to the society. With reference to the editorial, let us ask: Is poor funding responsible for poverty of original research in India? Should we blame the bureaucracy and finance departments for inefficiency and mismanagement in utilizing the resources?

To answer the second question first, it is well known that most of the administrative positions in the funding agencies are held by scientists. In the Universities, Heads of Departments are Professors, and in many cases even Registrars come from the teaching profession. Therefore, it is

the bureaucratic mind-set of scientists and academics which has resulted in the degeneration of the system. And, it has not occurred as an aberration; policies since independence have cultivated this. Almost always parity of teachers/scientists with IAS officers (and now with CEO's) have been advocated, both by the policy makers and the media. The unsuccessful aspirants for IAS with no motivation for academic or research activity have entered into Universities and laboratories vitiating the whole system. It is a myth that higher salaries will attract talent into teaching or research; the only possible remedy is to reduce the retirement age to 55 years to get rid of the dead wood in due course of time, and drastically reform the process of fresh recruitments.

Once we understand this mind-set, it becomes easy to explain why original ideas or genuine basic research do not depend on funding alone, in fact, whatever little resources we have, are adequate to build a strong base for scientific talent. To give an example, the laboratory grants in the teaching departments are quite often misused and diverted to support other activities. Moreover, even a modest amount, say Rs 5000 per year to support experimentation with nature by curious young minds (say 50 in number) can induce a change in the environment, and create interest in basic science. Geometry and topology of the sphere, observing

the properties of the sun, experiments with light, simple design/assemble exercises with electronic circuits/devices, and studying complexities through fluid dynamical experiments are some illustrative examples in which the students will find excitement, and enthusiasm to try out some ideas. Unfortunately in the present system a routine $n+1$ th extension ($n \rightarrow \infty$) of an established work, which easily gets published in say *Physical Review* is given more credit than diligent innovative teaching work. This means that even the few good teachers do not take interest in this kind of work. If there is a will, funding is no problem: to forsake the privileges of air travel is not a big demand on Professors. The money so saved could be used for laboratories. We must not forget that imparting knowledge and understanding nature gives us immense joy, compared to which all forms of rewards and privileges are insignificant. Let those like IAS officers who are denied this happiness, avail other compensating pleasures. Let us not become the victims of the philosophy that money is everything.

S. C. TIWARI

*I Kusum Kutir,
Mahamanapuri,
Varanasi 221 005, India*