



Figure 1.

series of interaction meetings among respective PAC members/outside experts and prospective PIs around a preliminary proposal, to ensure value addition in terms of science, presentation and discussion<sup>5</sup>. Such meetings were organized around a known authority on the subject. Preliminary proposals were invited from the interested research workers. These proposals were screened and if found suitable were chosen for inviting the PIs for detailed presentation before a panel of experts, including the PAC members. All prospective PIs also participated in the discussion that took place during the

presentation and afterwards. It was expected that the PIs would emerge wiser and formulate better R&D proposals<sup>6</sup>. Finally, only promising PIs, with workable research problems, were approached to write detailed proposal to DST<sup>7</sup>. These proposals, processed through usual peer-review system, received favourable technical comments and therefore were generally recommended for approval, with few exceptions.

Four such meetings have already been organized on subjects such as chromosome and evolution, mammalian ecology, herpetological ecology and marine

invertebrates: reproduction and early development. In the past five years, 114 preliminary proposals have been examined, out of which 63 were invited for detailed presentation and finally 34 (29.82%) were found suitable for recommending to make proposals to DST (Figure 1). There have been three positive developments due to these interaction meetings; (a) the total number of proposals being submitted to PAC on animal sciences has gone up two-fold, i.e. in fifties from 1998 onward; (b) approval rate of the proposals was up from 20% in 1996 to 40% in 2000; and (c) coverage of the subjects has been increased.

1. Lakhota, S. C., *Curr. Sci.*, 2000, **78**, 1414–1415.
2. Balaram, P., *Curr. Sci.*, 1999, **77**, 1005–1006.
3. Report, Department of Science and Technology, 2000.
4. Report, Department of Science and Technology, 2000.
5. Iyer Sridhar, D. and Mukhopadhyaya, Ranadhir, *Curr. Sci.*, 2000, **79**, 1518–1519.
6. Sitaramam, V., *Curr. Sci.*, 2000, **79**, 136–137.
7. Gupta, Y. K., *Curr. Sci.*, 2000, **78**, 9.

**Bhanu Pratap Singh**, Department of Science and Technology, Technology Bhavan, New Delhi 110 016, India.

## FROM THE ARCHIVES



Vol. IV] APRIL 1936 [No. 10]

### Progress of science in India

In the course of his address welcoming the delegates to the Joint Session of the Scientific Societies held at Bangalore (10th–14th April), Sir C. V. Raman, Kt., F.R.S., N.L., pointed to three ideals which should guide research workers to secure for India a prominent place in the scientific map of the world. A fastidious attention to a high standard of quality in scientific research constitutes the first ideal; weeds shall have no place in the

garden of science and, to ensure a steady and wholesome growth and development, the weeds must be scrupulously kept out. The second ideal is to recognise the essential unity of knowledge. Science should not be conceived in terms of water-tight compartments even as a matter of administrative expediency. Administrative separatism leads to intellectual separatism and eliminates that essential factor which makes for intellectual co-operation among scientists pursuing different branches of knowledge, a co-operation which is necessary for the fruitful progress of science. Many of the outstanding discoveries have been made in laboratories which have stood for such an ideal, and where several scientific subjects are studied in close juxtaposition. To cite one instance, the discovery by von Laue, of the diffraction of X-ray, was made possible in the favourable environment provided by the Munich Laboratory where such stalwarts like Prof. Sommerfeld, the eminent mathe-

matical physicist, and Prof. Granz, the famous mineralogist and crystallographer, were working. Lastly, it is necessary to recognise the leadership which mathematical thought possesses in the progress of science. It is utterly futile to evaluate science on the gold standard. There is an amazing contempt for scientific work which does not bring an immediate monetary return. 'With all the emphasis I can command, I sound a note of warning of the dangers of this attitude' said Sir C. V. Raman. 'The deeper and fundamental aspects of science appeal to but a few who possess a disciplined attitude of mind. No progress can be achieved in any branch of science if we lose our respect for, or withhold support to, the fundamental science of Mathematics and Philosophy; the more we neglect these the less we advance.' Research, not founded on fundamental mathematical concepts, is like food devoid of vitamin, that entity which makes all the difference between calories and nutriment.