

Infosys Science Awards

(Press Conference to
Announce Infosys Science Awards)

Points for Address by

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Hon'ble Union Minister
of
Human Resource Development

on

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(Through Teleconferencing)
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1. I consider it both an honour and a privilege to participate in this morning's media event, announcing the first of Infosys Science Foundation's annual science research prizes. At the outset, I wish to thank Infosys for inviting me to take part in this path setting event. Infosys has, as an enlightened global player, pioneered several initiatives to fulfil its corporate social responsibility, inter alia, in the field of healthcare, education, social and rural upliftment, art and culture. The present initiative to recognise, reward and salute our achievers, in the domain of science and technology is truly commendable.

2. First, my heartiest congratulations to the awardees. You are the 'Navratnas' of India, our symbols of excellence. I believe that the Infosys Prize will be regarded in the future as India's Nobel Prize on several counts: first, it carries the highest prize money, second, the jury for each prize is chaired by the most eminent individuals/scientists of Indian origin in their respective fields of expertise, thus carrying the assurance of independence and a disconnect from the 'Indian science coterie ' that has dominated Indian awards for half-a-century and lastly the diversity and comprehensive coverage of the five prizes.

3. At this juncture, I would like to raise a question for consideration. The prize is for an Indian for his research work, done in India. I feel that while technology is locale specific, science is universal and in the present context of globalisation of a seemingly flat world, of which Infosys is the embodiment, science collaboration has transcended national boundaries and increasingly the best cited papers are the culmination of such collaborations. I thus feel that the prize stipulations could be modified with the condition that the work was 'primarily done in India'.

4. Most of us are under the impression that Nobel Prize winning discoveries are associated with fundamental knowledge, like the Raman Effect, and are outside the realm of intellectual property protection. Consider the example of this year's Nobel Prize awardee in Chemistry, Prof Venkatraman Ramakrishnan, who holds two very important US patents that have the possibility for use in the rational design and modelling of inhibitors for the 30S ribosome, as antibiotics. Let me cite a few other examples to buttress my point. Prof Alan Heeger of the University of California, one of three researchers who shared the Nobel Prize in Chemistry for the year 2000 for the discovery and development of conductive polymer, has to his credit more than 150 patents. Dr. Paul Lauterbur and Sir Peter Mansfield, recipients of the 2003 Nobel Prize in Medicine for their work on magnetic resonance imaging (MRI) hold some 30 patents which have given rise to a whole new medical diagnostics system. Similarly, Prof Stanley B

Prusiner of the University of California, who was awarded the 1997 Nobel Prize in Physiology for his discovery of a new biological principle of infection caused by a new type of infectious agent called 'prion', has several patents to his credit. I thus would like to reach out to young Indian scientists. In the process of arriving at your research, basic or otherwise, there will definitely be intermediate findings, big or small, which may be inventive and novel in themselves to qualify for grant of patents and they might have commercial value in their own right. Scientists and researchers, must be alert to spot such inventions early enough and seek intellectual property protection.

5. A study done a couple of years ago had shown that from Bengaluru, our Silicon Valley, 90% of US patents granted were owned by foreign firms and only 10% by Indian entities : a sad commentary of our Indian 'multinationals' and our prestigious publicly funded research institutions.
6. In order to encourage and motivate our research community in the public sector to be more IPR conscious, I had a year ago as minister for Science and Technology proposed a legislation for 'the Protection and Utilisation of Public Intellectual Property'. It was to provide our scientists and researchers an incentive and means to protect their inventions and also enable them to have a share in the monies realized by the transfer and commercialization of their intellectual property.
7. Prof Venkatraman Ramakrishnan, has in a recent

interview commented that Indian universities are underfunded in research programmes. I too recognised this shortcoming when I took over as Minister for HRD, and am doing my best to overcome it. We are set to improve and expand our university system. Fourteen world class universities will be established. They will have world class infrastructure and world class faculty. At the same time we must also recognise that higher education worldwide is in a state of flux. It needs to address a series of challenges that confront us all. We must respond to emerging societal demands, diversify and enhance revenue streams, improve and demonstrate quality and while controlling costs, compete with new providers and capitalize on emerging technologies. This means that institutions of higher learning can no longer afford to operate in the familiar ways they are used to and conduct business as usual. Most of our universities will thus need to undergo vital changes in the manner in which they work, in the type of education and research they deliver, and in the ways they contribute to the local, regional and global communities and economies. These challenges demand a new conceptualization of activities and new approaches to teaching and research, not merely confined to new programmatic offerings or devising different curricula, or new pedagogical approaches, or even innovative budgeting models and funding formulas, but to bundles of several of these and other fundamental elements and processes put together.

8. As you are aware, annually nearly one hundred thousand students from India go to the USA for higher studies. Once we open the doors to allow reputed foreign universities to India, not only will our young men and women benefit, but it will also help improve quality of our education providers. Even foreign Universities will be benefitted – this is truly a win-win situation. I hope to introduce the Foreign Education Providers Bill in this session of Parliament. But as you know, there is resistance to this initiative from some quarters. I will endeavour to build a national consensus on this. I feel that we have to open up and become competitive; the same way as we have opened our manufacturing and business sectors, and Infosys is a shining example of the outcome of such a policy. Opening up the education sector is a national imperative.

9. At the same time I am also convinced that despite the remarkable progress of our science and the achievements of our technologists, along with the success of our service sector, asymmetry in the distribution of wealth, health, comfort and safety has in fact increased in India.

A new social contract of science with society, especially in India is called for, with the intent and determination to address and solve the unbearable and seemingly insurmountable problems of our people. I feel this can be done by the collaborative effort and partnership of the scientific community with the business community and their beneficiaries. I would thus like to plead with my young scientist friends to develop more research projects which allow direct users/beneficiaries to influence the

choice of research problems and technology developments, though they may not be 'scientifically glamorous'. It is only such collaborative efforts that will realise a higher cost-benefit outcome. It is only then that science and technology will directly help our people to live with greater dignity and comfort.