M. S. Valiathan at the helm of affairs at INSA

On 1 January 2002, M. S. Valiathan, eminent cardiologist and Honorary Advisor, Manipal Academy of Higher Education (MAHE), Manipal took over as the 33rd President of the Indian National Science Academy. He succeeds Goverdhan Mehta, Director, Indian Institute of Science, Bangalore who had held the position since 1999.

When asked about his future action plan as President, Valiathan unveiled some of his priorities. Among these would be enhancing science in higher education. A process, he said, that had already begun but which he would like to take forward. This would involve the participation of all the Academies, including INSA, through an Inter-Academy Panel and the support of the University Grants Commission (UGC).

Another area of priority is in the realm of inter-country agreements. Here, he felt that it is necessary to further strengthen scientific activity and collaboration. He was of the opinion that collaborations between partner countries should be more through institutional linkages rather than linkages through individual scientists. He cited the Indo-French collaboration as one such example. As President, he said he would like to see INSA play a catalytic role along with the support of the Government of India, to bring together academically, wherever possible, collaborating institutions of partner countries to achieve the aim.

INSA’s National Commission for the History of Science would be another subject of priority for Valiathan. According to the INSA Year Book the Commission, since its inception in 1965, has contributed to the publication of a journal, Indian Journal of History of Science (IJHS), with the work of the Commission co-ordinated by three advisory committees for ancient, medieval and modern periods. The programme includes the organization of research, systematic collection of sources, interpretation, critical evaluation of facts and the study of ‘History of Science’ from an international perspective. All this would be further strengthened, according to Valiathan.

Valiathan would also like to see more being done to bring science and the media closer together. For this, he would like to initiate new projects to bolster the interaction. With what looks like many plans up his sleeve, Valiathan smilingly said INSA would now take up most of his time.

Nirupa Sen

New links in co-operation between India and China

The Chinese Prime Minister Zhu Rongji’s visit to India saw the signing of a Memorandum of Understanding (MOU) between India and China in Science and Technology (S&T) on 14 January 2002. Co-operation between the two countries was through a S&T Agreement signed by both countries in 1988. This was limited to exchange visits of scientists in areas such as advanced materials, biotechnology, medical research, astronomy and astrophysics, etc.

For furthering co-operation between the two countries, it is proposed to have joint research projects, seminars, etc. on a regular basis. A Joint Working Group is to be established under the agreement between the Department of Science and Technology (DST), Government of India and the Chinese Academy of Sciences (CAS). Also, there would be exchange of S&T personnel in infrastructure development through a structured arrangement to be mooted by the DST and the State Administration of Foreign Expert Affairs (SAFEA). This would involve generation of a database of experts in various fields and opportunities for training young scientists at advanced facilities in both countries.

Nirupa Sen

Indo-US symposium on ‘Brain research’*

The Agreement for the establishment of the Indo-US Science and Technology (S&T) Forum had earlier been signed in New Delhi on 21 March 2000. The Forum constitutes a new phase in Indo-US bilateral collaborations in S&T. In November 2001 the Forum had organized its first workshop on ‘Nanotechnology’, at the University of California at Santa Barbara, USA. The symposium on ‘Brain research’ was an inaugural event here in India under the auspices of the Forum.

On this occasion, the Hon’ble Minister for Human Resource Development, Science and Technology and Ocean Development, Murli Manohar Joshi spoke of the long history of S&T cooperation between the two countries. The Indo-US S&T Forum is a ‘new chapter in the new millennium’ of cooperation, he added. Joshi described neurosciences as a frontier area and stated that neuropsychiatric disorders constituted a third of the disease burden.


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in developing countries. He emphasized the necessity for training health workers to recognize psychiatric diseases and treat them and for increasing research efforts in the area of brain disorders. Some part of these efforts should be for understanding the effects of yogic postures on the brain and the benefits of Ayurveda, he felt. Most importantly, he stressed that science must reach the doorstep of the common man and brain research could be used as a tool to bring happiness to humankind.

Albert Thibouti, Deputy Chief of Mission, US Embassy, New Delhi said that the Forum holds great promise. He called the Indo-US relationship as deep and broad, and growing rapidly. He said that the Forum would help forge the future of collaborations, as equal partners in research frontiers that would shape the field in decades to come. He looked forward with anticipation to the fruits of collaboration in brain research between the two countries.

Marco Di Capua, Counsellor for Scientific Affairs, US Embassy spoke of the valuable co-operation in Indo-US relations. He said that the world belongs to young people and we must invest in the young. He was happy to note that the average age of the audience was in the twenties.

V. S. Ramamurthy, Secretary, Department of Science and Technology called it a major scientific event that was taking place in India under the Indo-US S&T Forum. With this new beginning for S&T co-operation under the Forum, he hoped for a larger participation of youngsters who would play a catalytic role. He also called for feedback and welcomed suggestions through the Forum’s website.

The three-day workshop covered areas such as developmental neurobiology, neurogenetics, computational neuroscience, neuroimaging, neurophysiology, chemistry, pharmacology and toxicology, and a discussion on funding opportunities in brain research. About ten US scientists attended the symposium. The symposium was organized by the National Brain Research Centre (NBRC), Gurgaon. The NBRC is an autonomous institute of the Department of Biotechnology.

Surprisingly, the scientific programme distributed among participants while having the names of speakers and their affiliations, however, did not carry the title of the talks! This had to be gathered from the ‘Abstracts’ that in turn did not have a page of contents. Privately, some scientists felt that several talks by Indian scientists had the content of research work done in the US and did not reflect the true status of neuroscience research carried out in the country. It was also hoped that issues such as ‘animal experiments’, etc. would be taken up by institutes such as the NBRC for the benefit of neuroscience researchers in the country. Or else, neuroscience would lag behind, scientists felt. One American researcher was surprised that vital issues such as animal experiments, were not brought up in committees and that he was unaware that such problems existed for researchers in India, who used animals for their experiments. A bone of contention among some participants was the time allotted for talks. American scientists delivered talks for about 40 min and the Indian scientists were allotted only about 25 min.

Charles Gardener, Science Attaché, US Embassy said: ‘The Indo-US S&T Forum has made a great start with this event. Our hope is that the symposium will not only provide an opportunity for our scientists to share their expertise and to expose young students to the best researchers from our two countries, but that this symposium on brain research will stimulate new proposals for collaborative research in areas of mutual interest’.

Nirupa Sen

The seabed reveals artifacts. Will India now hone its skills and tools for diving into the realm of marine archaeology?

The Department of Ocean Development (DOD) has stumbled on a treasure trove of artifacts, at a depth of 40 m below sea level in the Gulf of Cambay. It was a chance finding. Scientists from the National Institute of Ocean Technology (NIOT), Chennai on a routine multipurpose marine survey came upon interesting finds at the bottom of the sea. The unusual collection of artifacts and the presence of structures, spurred the scientists to investigate the area further. Finding these objects in the ocean could well be the start for asking several questions (Figure 1).

The NIOT, using the Coastal Research Vessel (CRV) Sagar Paschimi found evidence for ‘riverside settlement, pottery and use of wood’. A 9 km long ‘palaeoriver bed’ has been tracked running in an E-W direction, in the Gulf of Cambay. The entire Cambay area might have sunk taking down with it the then existing part of the river sections and the ancient settlement, according to scientists. This could probably have resulted from some geological processes and tectonic events.

Earlier surveys undertaken by NIOT have revealed ‘the existence of Harappan-like ruins below the seabed. Some of the structures include tanks of sizes 40 m × 40 m and 45 m × 20 m, with steps. Also seen were groups of construction in an area of approximately 97 m × 24 m resembling ‘Acropolis’ in the Harappan culture’. The underwater archaeological site that yielded the artifacts has been looked at using side scan sonar images. In addition, the presence of wall-like structures protruding from the seabed has been found with the use of an acoustic sub-bottom profiler (Figure 2). Working in the sea off the coast of Gujarat is no easy task. Tidal fluctuations, according to scientists, can be up to 10 m in height, and high velocity currents up to 6 knots. Added to this is the shallowness of the sea and mixing of the water to produce a shade of chocolate brown. This mudliness makes...