

## Collaborations to improve biotech industry in India

Biotechnology has created a wave around the world, set to sweep all aspects of life. The biotech sector is poised to create, arguably, the greatest revolution that the business world has seen, creating unprecedented opportunity and wealth. India occupies a unique position with respect to the world scenario. With our immense intellectual and human resource already in place and with investment in this sector bound to explode, post-2005 implementation of the new WTO regime, India is undoubtedly going to be a key partner in worldwide development of biotechnology-driven business. The fledgling biotech industry in India is making a strong pitch to attract global attention. The government is investing heavily in creating research infrastructure. The economy is growing at 8–9% annually and India is set to become the vaccine hub of the world. A silent transformation of institutions has been going on in India over the last 4–5 years. The government is taking several initiatives to create and facilitate an environment of innovation and research culture in the country. The government is committed to WTO and TRIPS for protection of intellectual property.

India has decided to enforce the product patent regime for pharma, biotech and agricultural products and the presence of the second largest number of medical professionals in the world will be the key to making the country a choice destination for clinical trials of new medicines. The future areas where investments are to be made include: discovery of new chemical molecules, infrastructure for clinical trials of novel chemical molecules and their products, and source for drug-delivery technology platforms. The achievements in the field of biotechnology will not be sustainable for long, if participation of private sector enterprises in the field is not encouraged. Emphasis is being laid on participation of internationally acclaimed biotech firms in joint ventures. With this in mind, a 25-member team of biotech-

nologists funded by the Confederation of Indian Industry (CII) visited San Francisco, USA on a Biotechnology Mission from 3 to 9 June 2004. The main objective of the delegation was to explore the possibility of partnerships and joint ventures with American companies and learn the latest techniques and developments in the biotechnology sector. The delegation attended the Annual Convention of the Biotechnology Industry Organization and visited various leading biotech companies in the US to strike collaborations.

M. K. Bhan (Department of Biotechnology, Government of India) made several points to emphasize India's strong position in biotechnology during the convention. 'There is indeed a lot that Indians can learn from the outside world, but I firmly believe that there is much more it can offer. Missions like these will make an impact to achieve a common goal – to see India on top of the biotechnology ladder.' CII coordinated an 'India Pavilion' at the exhibition of the Annual Convention of the Biotechnology Industry Organization. The Pavilion provided a good platform for overseas companies to meet and interact with Indian exhibitors, and also provided an opportunity for companies and organizations from India, including State Governments to showcase the unique strengths that India has in this arena. Some of the Indian companies which participated in the India Pavilion included Biocon Genome Valley, Government of Karnataka, International Biotechnology Park, International Crops Research Institute for the Semi-Arid Tropics, Kewaunee Scientific Corporation India Pvt Ltd, TICEL Bio Park Ltd, ICICI Knowledge Park, Chembiotech, and Bharat Biotech and BioSpectrum. All these companies showcased India's biotech strengths in different segments.

Many leading international biotech giants are ready to invest in India. The world's leading biotech company, the \$3.3 billion Genentech is open to alliances with In-

dian companies. Genentech alone accounts for more than half of the world's installed capacity in the biopharma manufacturing sector. Genentech is focusing on alliances and strategic investments, which will give it access to technologies that could enhance the drug-discovery process. The company is also interested in developing novel targets and lead molecules in immunology and oncology. 'We are a collaborative company. We welcome partners all the time,' said Joseph McCracken, Genentech, during the discussion. Genencor International, based in Palo Alto, is another company actively looking for partners. It is a major player in industrial enzymes and biofuels, and is enhancing its presence in India to tap the potential for biofuels. 'We have already had a date with a CII delegation two years ago. Now we are looking forward to some definite activity to start on the second date,' remarked Jay Shetty, Genencor. The company developed some promising technology platforms in the area of cancer therapy and is also looking for partners. Kiran Mazumdar-Shaw, Biocon, led the sales pitch high for Indian biotech firms. 'Our mission to the US this time has opened my eyes to the huge opportunities which are available to us by partnering with US companies'. There are real opportunities for India to collaborate and partner with US companies. India must, however, differentiate and identify niche areas where it has acknowledged expertise and would have a competitive advantage, and focus on those services and partnerships that lend themselves to be outsourced easily.

Overall, the Indian biotechnology industry made a determined pitch to its American counterparts.

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