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## Indian Biotechnology Sector – Overview

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### Market Size and the Key Opportunity Segments

The Indian biotechnology sector is one of the fastest growing knowledge-based sectors in India and is expected to play a key role in shaping India's rapidly developing economy. With numerous comparative advantages in terms of research and development (R&D) facilities, knowledge, skills, and cost effectiveness, the biotechnology industry in India has immense potential to emerge as a global key player.

The Indian biotech industry grew threefold in just five years to report revenues of US\$ 3 billion in 2009-10, a rise of 17 per cent over the previous year, according to the eighth annual survey conducted by the Association of Biotechnology-Led Enterprises (ABLE) and a monthly journal, BioSpectrum, based on inputs from over 150 biotech companies.

The biopharma sector contributed nearly three-fifth to the industry's revenues at US\$ 1.9 billion, a rise of 12 per cent, followed by bioservices at US\$ 573 million and bioagri at US\$ 420.4 million. The remaining revenue came from the bioindustrials US\$ 122.5 million and bioinformatics US\$ 50.2 million segments.

Biopharma and bioservices sectors contributed 63 per cent and 33 per cent, respectively, to the total biotech exports. The bioagriculture, bioindustrials and bioinformatics sectors remained focussed on domestic operations, bringing in nearly 90 per cent of their revenues from India.

While the industry, spanning bio-pharma and agri-biotech, accounted for US\$ 3 billion, the equipment and ancillary segment contributed around US\$ 1 billion.

Moreover, as per Kiran Mazumdar-Shaw who is also the chairman and managing director of Biocon, which has topped the list of biotech companies in India in the ABLE survey, India is looking forward to achieve US\$ 5 billion in revenue this fiscal (2010-11).

India is also gaining importance as a clinical trial destination. According to a joint study by an industry body and Ernst and Young (E&Y) released in August 2009, the industry-sponsored Phase II, Phase III clinical trial sites in India have grown by 116 per cent during June 2008 and August 2009, with the country moving from rank 18 to 12 across the 60 most active countries.

India participates in 7 per cent of the global Phase III trials and 3.2 per cent in the Phase II trials with industry-sponsored trials having grown by 39 per cent CAGR during 2004-08.

### Major investments

Investments, along with outsourcing activities and exports, are key drivers for growth in the biotech sector.

According to data released by the Department of Industrial Policy and Promotion (DIPP), the drugs and pharmaceuticals sector has attracted foreign direct investment (FDI) worth US\$ 1.67 billion between April 2000 and March 2010.

Some of the major investments in the sector are as follows:

- Panacea Biotech Ltd has bagged a three-year contract worth over US\$ 222.37 million from UNICEF to provide the agency with EasyFive vaccine, a protection against a set of paediatric diseases for 2010, 2011 and 2012.
- Alexandria Real Estate, the US\$ 5.2 billion US-based company which provides solutions to life science industry, has decided to set up a biotech research and development (R&D) and incubation facility in Gujarat. It plans to spend around US\$ 107 million for the project.
- The Defence Research and Development Organisation (DRDO), which caters primarily to the armed forces, plans to spend US\$ 63.5 million to upgrade and custom-make its existing line of biotech products for civilian use.
- Biotechnology major Biocon has fully acquired the joint venture Biocon Biopharmaceuticals from its Cuban partner CIMAB. Under the business restructuring plan, Biocon will pick up CIMAB's 49 per cent stake and will make Biocon Biopharmaceuticals (BBPL) a wholly owned subsidiary of Biocon.

### **Tie-ups**

Avesthagen, a Bangalore-based life sciences firm, has announced the formation of a JV with Limagrain, a French international cooperative group. Limagrain will hold the majority 51 per cent in the JV, Atash Seeds Pvt. Ltd, to build an agri-biotech business model for field crops.

Bayer CropScience AG, a subsidiary of Germany-based global crop sciences major Bayer AG, and GVK Biosciences Private Limited (GVK Bio) of Hyderabad have entered into a research cooperation agreement in the area of early discovery chemistry.

Moreover, GVK Biosciences has also partnered with ResearchPoint Global, the US-based clinical organisation. Together, the two companies which are full-service contract research organisations (CROs) will offer access to medical writing, clinical data management and biostatistics, as well as quicker patient recruitment.

Biocon Limited, the country's second largest biotechnology firm has signed a Memorandum of Understanding (MoU) with Malaysia's Biotechnology Corporation (BiotechCorp) to explore collaboration and potential investment in Malaysia's biotechnology industry.

Moreover, Syngene International, the custom research subsidiary of Biocon Ltd, has entered into a discovery and development collaboration with Endo Pharmaceuticals of the United States to develop biological therapeutic molecules against cancer.

### **Government Initiatives**

In recognition of the need of training and education for generating interdisciplinary human resource relevant to biotechnology, the Government of India and UNESCO, have taken a joint decision to establish the Regional Centre for research, training and education in biotechnology under the

auspices of UNESCO. The UNESCO Regional Centre for Biotechnology is scheduled to come up in Faridabad, Haryana by the end of 2010.

Further, the Department of Biotechnology (DBT), Government of India, has also decided to set up a unique Health Biotech Science Cluster (HBSC) at Faridabad.

Moreover, the government will fast forward the process of setting up a National Biotechnology Regulatory Authority, to stimulate public and private investment in biotechnology.

Besides the central government initiatives, individual states are also doing their bit to promote the biotechnology industry. Karnataka takes the lead and the state's revised biotech policy offers many fiscal incentives and concession to prospective investors in the industry.

According to the Mr B S Yeddurappa, Chief Minister of Karnataka, a bio-venture fund with a seed capital of US\$ 10 million will be set up to incubate start-ups by young entrepreneurs.

Moreover, the state government is setting up 10 biotech finishing schools in association with the industry and academia to create a steady talent pool. Sector specific biotech parks are expected to be set up at Mysore, Mangalore, Dharwad and Bidar in north Karnataka. Similarly, a bio-cluster will be set up in the Bangalore Biotech Park on a public-private partnership mode.

### **Looking ahead**

India is already being globally recognised as a manufacturer of economical, high-quality bulk drugs and formulations. With a huge base of talented, skilled and cost-competitive manpower, and a well-developed scientific infrastructure, India has great potential to become a leading global player in biotechnology.

According to Kiran Mazumdar Shaw, CEO of Biotechnology Company, Biocon, and Chairman of the Karnataka Vision Group on Biotechnology, the next goalpost that the domestic biotechnology sector has set for itself, is to reach a turnover of US\$ 10 billion by 2015.

Exchange rate used: 1 USD = 46.06 INR (as on June 2010)



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