

## Biotech Gathers Critical Mass

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**Shaw**

### Biotech Gathers Critical Mass

The Indian biotechnology industry is gathering momentum. With revenues of over \$ 700 million (Rs 3,265 crore) in 2003-04, the fledgling biotech industry, despite all the hurdles in its path is on the way to cross the psychological barrier of \$ 1 billion in the current year. And if the momentum continues, the industry will reach its goal of \$ 5 billion in 2010, comments Kiran Mazumdar-Shaw, CMD, Biocon and President, Association of Biotechnology-Led Enterprises (ABLE).

The demise of Sir Francis Crick on 29th July 2004 calls for a final tribute to a man who discovered "The secret of life" along with James Watson in 1953. Five decades later, the promise of this discovery has led to new paradigms in the way we research new drugs, diagnose and manage diseases, meet global environmental challenges and address the nutritional and food needs of both the developed and developing worlds.

Biotechnology is recognized the world over as the technology of the future. India has addressed this segment over the last decade by leveraging its low cost scientific skill base in an imitative manner with which to build its capabilities. Today, the Indian biotech sector has attained critical mass in manufacturing as well as research services and has slowly built a market for biotech products and services estimated at \$ 700 million well on its way to reach its targeted \$ 1 billion market size by 2005 and \$ 5 billion by 2010. Indian Biotechnology is now poised to leverage its scientific skills and technical experience to make a global impact on a strong innovation led platform.

### **Follow On Biologics**

The biotechnology sector is witnessing an impressive 40 percent annual growth realized through incremental revenues and the addition of new companies. India can today boast of being the world's largest producer of recombinant Hepatitis B vaccine thanks to the combined strength of Shantha Biotechnics, Bharat Biotech, Panacea Biotech, Wockhardt and Serum Institute. India is also emerging as a global player in recombinant Human Insulin where companies like Biocon and Wockhardt are the lead runners. Follow on Biologics like Streptokinase, GCSF, Interferon, EPO and others are all set to gain market share in the near future.

### **Research Services**

Clinical services are now a global opportunity for India with a strong competitive edge based on speed and quality of clinical development. J.P. Garnier, CEO of GSK has recently announced that GSK will shift 30 percent of its clinical trials to countries like India and China in order to slash its clinical research budgets and stretch its current spending to more and larger trials.

The CRO (contract research organization) segment is hence witnessing greater investment and is realizing faster growth than previously seen. CROs like Quintiles, Siro Clinpharm, Bharat Immunologicals, Clinigene, Lotus Labs, etc., are all enthusiastic of the bright prospects that lie ahead where India has a real potential to capture a significant slice of the global CRO pie. It is this potential that has prompted Covance, a US based CRO to sign a collaboration agreement with Siro Clinpharm in July 2003. Siro has reportedly conducted 20 Phase III trials since 1998 in head and neck cancer, tetanus and rheumatoid arthritis. Quintiles has conducted over 90 Phase II and III trials in India, including a trial for Eli Lilly for a combination drug, Symbyax (A combination of Zyprexa and Prozac) for the treatment of Bipolar depression, based on which, USFDA has given approval in December, 2003.

Research services is another fast growing segment where companies like Syngene, Aurigene, Avesthagen and others have tapped into this global opportunity by offering to develop compound libraries, cGMP synthesis of drug molecules for clinical evaluation, process development and process optimization and contract research projects. Recently, a German biotech firm, MWG has established its operations in Bangalore to develop Oligonucleotides for its Asia Pacific clients and later plans to offer its sequencing products and its hybridization services the world over. This model is expected to see other overseas biotech companies follow suit.

Combining the strengths in clinical development with those of process development offers a powerful partnering opportunity for Indian biotech companies which can dramatically shrink time to market timelines as well as de-risk and augment valuations of International biotech companies.

### **Diagnostics**

X-cyton, a Bangalore-based biotech company which has struggled to develop and market its novel HIV-HCV diagnostic kit is now well on the road to success and plans to launch PCR based diagnostic products for TB, Meningitis and Dengue Virus.

Reamatrix, a young Bangalore-based Start-up is also well on the road to be a provider of novel diagnostic products based on a proprietary quantum dot technology platform to International bioinstrumentation and diagnostic companies.

### **Bioinformatics**

The two success stories of this segment are Strand Genomics and TCS (Tata Consultancy Services). The latter recently launched Biosuite at BIO, San Francisco. Biosuite is a comprehensive software for computational biology that will compete with the likes of Accelrys and others. Strand Genomics has rolled out yet another proprietary product, Avadis, a powerful visualization bioinformatics tool and TruPK, ADME prediction software. Strand has successfully licensed Avadis to Abgenix and has signed up a co-distribution agreement with Japanese company, Kurabo.

### **Agri Biotech**

Although little has happened after the approval of Bt cotton, the recently constituted M.S. Swaminathan Task Force promises to facilitate the regulatory process that is likely to see the roll out of a number of GM ( genetically modified) crops. Companies like Metahelix and Avesthagen continue to make progress on the research front.

It is also important to highlight the importance that Bt cotton is gaining in the country being steered by Mahyco-Monsanto but closely followed by Nath Seeds, Ankur Seeds, Ajeet Seeds, Raasi Seeds, Krishi Dhan and Nuziveedu Seeds who are all at various stages of preparing to release their Bt cotton hybrids for commercialization by 2006.

I would like to conclude on an optimistic note by drawing attention to India's rapidly growing strengths and capabilities in biotechnology which provides us with a new sense of confidence that Indian biotechnology can and will deliver a great economic growth sector of global standing in the foreseeable future.