

## The New global order

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*BioSpectrum brings you technologies, trends and challenges that are ahead for the industry in 2008.*

The Asia Pacific biotech sector continues to grow aggressively. Fueled by an increased focus on the sector by regional governments and investors, and growing numbers of cross-border collaborations, biotech companies never had it so good. In spite of its impressive growth, the region faces considerable challenges as it tries to take its biotech sector to the next level.

The industry, at the end of 2007, is at crossroads. On one hand, the region is being increasingly seen as a bio-manufacturing hub leveraging the advantages that accrue from operating in this geography. On the other hand, the domestic industries are rapidly scaling up to participate in the global opportunities. Asia's history of moving from a low-cost manufacturing hub to a high-value player in several industries provides some indication of the future evolution of its biotech sector.

### **The new global order**

Today's biotechnology industry is truly global. The trends in the global industry have had their repercussions in the Sino-India region, and have influenced the state of the industry in this region. Prominent among these trends is the growing cost of drug development and the ever-increasing pressures on containment of prices. India is playing a key role in today's integrated business environment, with companies and the government seeking to leverage the talent pool in the region, which is available at very competitive costs. With the alignment of intellectual property protection legislation and a growing focus on state-of-the-art infrastructure, the region is quickly emerging as a destination of choice.

As a result of the growing biotech industry strengths, governments and companies in various Asian economies have identified specific competitive niches. In some cases, these niches are areas where many western countries have been unable to invest because of political or other limitations-examples include stem cells, gene therapy, and traditional medicinal systems. For the most part, though, these areas of specialization are driven by another factor-cost competitiveness. The common thread across many of the niches emerging in the Asian biotech sector-from contract research and contract manufacturing, to vaccines, generics, and bioinformatics-is the ability of Asian companies to compete in these segments in the west at a fraction of cost.

The emergence of China and India is also the biggest story in the Asian biotech sector. Increased outsourcing of research and development (R&D) to these two countries could have a revolutionary impact on the cost of drug development in the west. But these developments are also reshaping the domestic industries in both nations. While western drug companies are attracted to China and India because of the huge markets for their products as well as tapping the domestic advantages, they have long been frustrated by the issue of intellectual property (IP) protection. The arrival of stronger IP protection has changed the rules of the game. The question facing companies is on the enforcement side of the IP debate.

Driven by these changes, companies in the two countries, China and India, need to develop innovative pipelines. Encouraging signs are emerging, including a reverse brain-drain of western educated Chinese and Indian nationals who are building a new generation of biotech startups in their home country. But much of this activity is in its infancy, and bringing products to market will require patient investments and experienced venture capital.

### **Challenges**

The three major challenges that can affect the Asian biotech dream relate to manpower issues, counterfeits and early stage funding.

Manpower training in the biotech industry is emerging as a high investment cost issue and the following ways can be adopted by biotech companies and regional governments when dealing with the human resource issue:

- Educational institutions, when preparing their curricula and syllabi, can seek inputs from industries in their area and incorporate relevant courses or materials into their programs, wherever possible.
- A second approach would be to invite people from industry to lecture at institutions on specific topics, which are academically relevant, and of interest to the industry.

In recent years, investors have shown a clear preference for later-stage financing rounds. A slight improvement in early-stage financing might reflect the first returns from various government initiatives to motivate seed- and early-stage funding. Nevertheless, funding of early-stage startups remains a serious issue for the sustainable development of the industry. One source of capital that has been tried in some countries is from large industrial houses looking to diversify. A second source of funding is government money. To some extent, this is nothing new. Governments are actively helping grow the industry, getting involved in everything from developing human capital to providing essential infrastructure.

## **Outlook**

Industry insiders consider a negation of the cost advantage within the next 10 to 15 years and are preparing for the next logical step in the evolutionary ladder: progression up the value curve. The enabling environment for innovation being put in place, with a proactive government doing its utmost to promote this sector and the sheer entrepreneurial spirit, has formed a unique spiraling effect.

In 2008, the Asian biotechnology sector is poised for faster growth as the region enters the new product patent regime. In the years to come, the focus will be on developing proprietary products, building global capacities for global markets, and increased cross-border partnering across the biotech value chain.