

News Details

Breaking the mould

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Krishna Ella, founder and CEO of Bharat Biotech, is considered to be among the country's pioneering bioentrepreneurs. Excerpts from an interview.

What would you count among your company's biggest achievements?

In 2004, Bharat Biotech became the first Indian company to be approved by Korean Food and Drugs Administration (KFDA). Until this time, most pharma companies were exporting formulations such as capsules and tablets to developed countries. We took this up as a challenge and established global quality standards that paved the way for our company to be audited and approved by the KFDA for vaccines to Korea. This is a milestone for the entire Indian pharma/biotech industry. Our first milestone was the discover of Himax technology. This process played a key role in bringing down the cost price of Revac-B (a vaccine for Hepatitis-B) to 28 cents. Thus, our company could achieve its mission of providing affordable health care products for the millions in this country and the world.

Could you take us through the development process of Revac-B, a feat that has achieved global recognition?

It was in the year 1995. Giving up my career in research and teaching in prestigious US institutions, Suchitra and I, migrated back to India, with our two children. I had decided to become a bioentrepreneur, but the path for bioentrepreneurs in 1995 was fraught with risks. Neither venture capital funds nor financial institutions were prepared to fund us. It was a decisive juncture and time for the proverbial 'leap of faith'. We sold our personal properties, brought together a team of like-minded, inspired individuals and with very little seed capital established Bharat Biotech International Limited at Genome Valley, Hyderabad in 1996.

We focused on constant innovation. It was tough to break the mindset prevalent at the time that scientists could not produce commercially viable and successful products. Such stumbling blocks inspired us to develop newer processes and facilitate technological break-throughs. Our discovery of the in-house patented process technology - Himax - changed this scenario. This technology eliminated the cost-intensive step of ultra centrifugation thereby increasing the recovery of the protein to the highest in the world! It also eliminated the conventional use of non-biodegradable and toxic chemical - cesium chloride and played a vital role in significantly lowering the cost of production of Revac-B.

How much more cost effective was your process?

The MNCs were selling the pediatric dose of Hepatitis B vaccine at Rs 1000 and another Indian company was selling for Rs 300, Bharat Biotech could manufacture and market Revac-B for Rs 20 per pediatric dose (0.5 ml). This was possible only because of technological innovation. More than 65 million doses of Revac-B have been dispensed and it is exported to 80 countries. Revac-B is a leading brand in Latin American and African countries.

What has been the impact of your two vaccines on the domestic market?

The impact has been very heart-warming. Revac-B and Typbar (anti-typhoid vaccine) are leading vaccines in India. We are selling Revac-B and Typbar in collaboration with many state governments such as Haryana, Delhi and Uttaranchal. Typhoid is a neglected disease in this country. It can be controlled more cost-effectively through vaccination. Nearly 11 million doses of Typbar have already been dispensed in our country.

How critical is the role of large pharma companies in the development of biotech in India?

The present trends suggest that more and more pharma companies in India are diversifying into the biotech sector. India is a key source and market for BioPharma. As several big drugs go off patent in the coming years, more and more pharma companies will use the biotech mode to get into this market. The biogeneric drugs are estimated to replace 70 per cent of the conventional therapies by 20025. The Indian pharma and biotech

sectors are poised for an explosive growth over the next decade. The combined size of these two can grow five-fold by the year 2010 to reach \$25 billion from the present \$5 billion. (Source: McKinsey & Co.)

The ever-increasing size of drug companies resulting from continuing merger proposals is giving rise to unprecedented R&D budgets for various multinationals. Mergers may lead them to outsource their R&D. Unfortunately, the biotech industry is small and fragmented and hence it is unable to match the R&D budgets. It is time that Indian pharma companies in the country invest in productive R&D partnerships with biotech companies where original discoveries become viable products. The vast potential of the Indian herbal drug industry languishes due to the disinterest shown by the Indian pharma companies.

Do you see more tie-ups between pharma and biotech companies in India?

Strategic tie-ups between big pharma companies and small biotech start-ups are already happening for contract research and manufacturing. With over 350 biotech drug products in the pipeline across the world, this is the chance for Indian pharma and biotech companies to come together. By 2005, the Indian market for recombinant medicine is also tipped to grow from Rs 535 crore to Rs 958 crore. Investments into bio-drugs are also expected to grow to Rs 500 crore. Currently, four companies are into making the Hepatitis-B vaccine and several pharma companies have active biotech plans. It would be wise for the pharma and biotech companies to team up to avoid cannibalization.

Are strategic alliances the way ahead for the biotech sector?

The synergy between small and medium biotech and large companies and VCs is certainly a good example to set. I've always advocated collaboration. That's really the key for progress. The vital point to remember in such relationships is complete transparency and honesty. Bharat Biotech has forged collaborative relationships with many major institutions such as CDC Atlanta, USA. Similarly, we're also working with Wyeth and Agennix for contract manufacturing the products.

What are your plans for the future, especially with respect to providing affordable vaccines for the domestic market?

Affordability is our key focus. We are working on many important vaccines. We are also working on therapeutics such as Recombinant Lysostaphin, Recombinant Insulin, and Recombinant Vascular Endothelial Growth Factor. We have several products in the pipeline and they all have a major social relevance. We are focused very strongly on the Indian market.