

## It's in their DNA

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ClipBHARAT Biotech International (BBIL) is today one of the few Indian bio-generic companies to have broken away from the mould of merely manufacturing generic products at a low cost. It got there by finding new ways to use recombinant DNA (rDNA) technology on which manufacturing of bio-pharmaceuticals is based. Says Krishna Ella, CMD, BBIL: "The model comes from pharma companies in India who innovated in the process and in marketing, but not in the product. We chose to look at the products knowing there was opportunity there."

When BBIL decided to manufacture the Hepatitis B vaccine, Revac-B+, in 2002, it had a paltry Rs 12 crore as capital; close to Rs 5 crore would go in for a method called ultracentrifugation. A centrifuge is a device for separating particles from a solution according to their size, shape, density and viscosity of the medium. BBIL created a new technology called Himax that doesn't need ultra-centrifugation.

Revac-B+ is cheaper than its rival MNC products by at least three times. But costs weren't the only benefits. The protein yield (the higher the protein yield, the lower the cost per unit) is in the range of 12-15 per cent with ultracentrifugation. With Himax, it is higher than 80 per cent. The Himax process also eliminated the need to use heavy metals like cesium chloride.

Next came recombinant Streptokinase, a product used in a cardiac condition called myocardial infarction. Where earlier products led to internal bleeding, BBIL's version didn't. Then came the epidermal growth factor (EGF). The EGF molecule had been around for 32 years but a different formulation ensured that it could be used to successfully treat ulcers caused by advanced diabetes and burns. BBIL's REGEN-D is the only such product that is indigenously developed, manufactured and marketed.

In 2000, it decided to focus on vaccines for the malaria virus and rotavirus. Sums up Krishna Mohan, president BBIL and a key member of the research team: "Innovation is not just about low cost of production."