

## “We are one among the few to produce next generation enzymes”

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"Things are changing globally and chemicals are being replaced by the biological products," says Mr Satish Verma, managing director, Fermenta Biotech, who feels that the prevailing work culture in India is much different when compared to other nations. Adding further he calls for a strong introspection. "We know that we are not leading the conversation in the biotech space as Europe and the US are more proactive. Also, in this sector, the awareness at policy making level is certainly lacking. The regulations are very complex here. So we have to do a lot of thinking here."

Mentioning about the unique operations of Fermenta Biotech, which has filed national and patent co-operation treaty applications for novel products and processes in a number of countries, Mr Verma commented, "We are among few in the world to produce next-generation enzymes with patented applications. The company enjoys a research led competitiveness in the development of enzymes, demonstrated in its domain insight, developmental capability, stabilization competence, operational discipline and successful commercialization,"

Headquartered at Thane (Maharashtra), Fermenta Biotech is a globally oriented, discovery and development driven, biopharmaceutical company operating across a diverse and specialized range of product and service platforms. The company is a subsidiary of DIL (formerly, Duphar Interfran), and was established in 1986 to exploit novel and patented technology related to producing enzymatic products. With 350 employees across different locations in the country and abroad, Fermenta operates in the fields of, vitamin D3 manufacturing, specialist enzymatic biotechnology products, specialist pharmaceutical API's and biotechnology-based solutions to environmental pollution.

#### **Effective business model**

Asked about the utility of the biotechnological applications in enzyme business and his company's role, Mr Verma mentioned, "Fermenta's biotech division comprises two significant product lines namely enzymes and immobilization enzymes (supports on which enzymes are mounted). Fermenta discovers and develops biotechnology solutions derived from a robust domain

understanding; the company pioneered the manufacture of Penicillin G Acylase enzyme biocatalyst in India in 1987. Over the years, the company reinforced its position as a cost-effective manufacturer of Penicillin G Acylase biocatalysts for onward application in the manufacture of betalactam intermediates. The company developed and implemented enzymes (FERMASE NA 150, Penicillin G Acylase) for challenging conversion of 6-aminopenicillanic acid (6-APA) into amoxicillin (semi-synthetic penicillin)."

Fermenta has tried hard to address the demanding customer needs pertaining to higher product activity, increasing mechanical stability and quality standard. "There was an urgency to shrink the learning curve in this newly developed area on the one hand and scale from grams to kilograms in shortest time," revealed Mr Verma under whom the company responded by developing enzymes on a polymer platform from lab to plant level in 60 days. "One of the shortest such tenures has been achieved through the company's rich domain knowledge in enzyme and immobilization capabilities. The neutralized biological contamination detected by leading contamination experts, made significant manufacturing improvements to reduce contamination and demonstrate superior cleaning methodologies, which reduced contamination and strengthened overall marketing. Apart from that we demonstrated new enzyme properties at the lab, plant and customer levels across the world, strengthening the order book," he added further.

### **Saving the environment!**

Fermenta's environmental solutions cover three segments including sewage treatment plant, lake and pond remediation as well as oil remediation. The company has developed a bioenzymatic product called Fermsept, to treat organic waste sewage treatment plant, septic tanks and sugar distilleries. Speaking further on that, Mr Verma added, "We have been engaged in various projects for municipal corporations in Nagpur, Pune, Hyderabad, Bellary and Bangalore. Our ultimate aim is to help cleaning the dirty surroundings and help the country go clean and green."

### **Impressive progress**

During the year 2012-13, the company was successful in commercializing and validating the new product - FERMASE NA 150, a new platform for the enzymatic manufacture of Amoxicillin. "We also demonstrated the new product across different platforms to enhance product visibility. Demonstrated stable technology transfer to customers, which helped to reduce their production cycle time and costs. We also identified new enzyme molecules for cephalosporins," said Mr Verma

The company has recorded a turnover of Rs 105 crore during the FY 2012-13. Out of that, about 10 percent constitutes the biotech revenue of the company. In the current fiscal, the company is expecting 20 percent growth in the overall business. "We are expecting close to Rs 200 crore revenue by 2015. And the interesting point is that we expect the share of biotech revenue to go upto 50 percent by then," says Mr Verma.

### **Aiming high!**

"Keeping in line with the market expectations and in order to consolidate the position of NPGA, new and improved next generation NPGA will be launched. As a strategic extension, new type of enzyme catalyst AEH for application in cephalosporins will be test evaluated. In order to expand our presence in other biotech application moving from antibiotic space, versatile Cal B lipase enzyme will be launched for food and pharma application. In the same lines, other enzymes of high relevance like Phospholipase which are useful in food industry will be developed. Fermenta is a leading innovative company in this area and we want to be a company with global impact," he concludes.