

# “Work upon feedbacks to excel in personal and professional lives”

...says **Satish Varma**, Managing Director, Fermenta Biotech Ltd. A visionary who switched to bio-based manufacturing during its early genesis in India took an unusual route with opening a biotech plant at an odd location and yet tasted success. Here, he discusses his journey, vision and future prospects of his brainchild, Fermenta Biotech Ltd.



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**From a small biotech set up to being the pioneer supplier of immobilised NPGA and Vitamin D3 manufacturer; how has FBL's journey been so far?**

The journey so far has been in equal measures eventful, challenging and rewarding. From our starting point as the first Penicillin G Acylase (PGA) enzyme supplier in the Indian market, FBL has become, largely through its efforts on proprietary research, a diversified and multifaceted enterprise. We can claim to be among the few leading global enzyme suppliers that can cater to varied beta lactam applications as well as having enzymatic products for applications in the manufacturing of other pharmaceuticals and fine chemicals. Building on our heritage in the enzyme field, we are also developing an enzymatic platform to address the challenges of water treatment in a number of specialised areas including lakes, ponds, sewage and effluent treatment plants. In the field of enzymatic conversion, we are proud to be one of the companies leading from the front to power the switch over of the current chemical processes to efficient and effective green technologies. Finally, we are also an important player in the global market for Vitamin D3 API and produce a limited range of other speciality pharma-based APIs.

**Do you agree that the Indian pharma sector is apprehensive in switching to green manufacturing?**

I do not agree with that as we see increasing number of companies showing willingness to invest in the transformation from chemical processes to more eco-friendly biotech processes. Typically, the solutions one looks for should give benefits over the current technologies and this is becoming increasingly possible with the advanced technologies being developed and delivered in this field.

**Tell us about the research collaboration you have in India or**

**abroad to bring and develop the novel enzyme technology in the market.**

We have always looked forward for R&D collaboration to strengthen our product pipeline and portfolio. Indeed, our very first research collaboration was with the Czech Institute of Sciences way back in 1986, which continues to the present day. Apart from our own internal research we have also developed collaborations with a number of pre-eminent Indian Institutes such as IISc Bangalore, Anna University Chennai, NCL Pune and more. I must say that these collaborative efforts help us bring in expertise from different fields to deliver the desired results.

**What are the valuable APIs or formulations processes, which can be accessed through green/enzymatic routes, FBL is currently targeting?**

Currently, FBL's proprietary PGA-based enzymes platform is aimed at, integrated, scalable and economic green manufacturing routes for some of the world's most widely used antibiotics such as amoxicillin, ampicillin and cephalosporins like cephalexin, cefprozil, cefaclor, cefadroxil, to mention a few. In addition, our generic CALB lipase is targeted to be used in variety of applications ranging from chiral synthesis/chiral resolution in novel drugs, fine chemicals, to biodiesel, bio lubricants and biopolymer applications. CALB lipase is a versatile enzyme with a broader application spectrum.

**You are among the major producer of Vitamin D3 in India; how do you find the market prospects for this product in India as well as abroad?**

We see the usage of Vitamin D3 increasing rapidly in the near future. This is driven by a number of factors but principally underpinned by the growing consensus on its importance as a vital nutritional and clinical supplement. This profile is in turn built on the results of increasing number of studies linking Vitamin D3 deficiency to a broad range of ailments. In addition, many epidemiological studies indicate severe Vitamin D3 deficiency prevalent across major sections of the populations across

the globe. We feel there is much to be done in bridging this gap and responsible institutions worldwide, both private and public players, are taking several initiatives towards this objective.

**What are unique features of your immobilised NPGA enzyme catalyst that keeps you ahead in the market?**

Our proprietary immobilised NPGA is designed to be faster on synthesis, slower on hydrolysis, technically known as S/H ratio. As in most of the enzymatic synthesis process, the use of side chain ratio will be main driver for the process economics and NPGA offers advantage of using the lowest ratio possible. We have a large basket of immobilisation technologies and this helps us in offering a stable product for long term repeated use.

**You are getting an overwhelming response from overseas markets; do you believe that decade long seeding through sincere R&D and marketing efforts are now delivering fruitful results?**

Yes. Ultimately one needs to be able to deliver a cost-effective quality product and service. Focussing on sincere research efforts helps us to bring in continuous improvements in our manufacturing and product quality. Moreover, we put in a significant part of our research efforts into enzymes for new applications, which helps us expand our offerings to customers.

**Apart from the focus on pharmaceutical products, you are also foraying into environmental projects in different Indian states? Please share the response from government and private organisations.**

We have recently entered this segment and it is too early to comment in detail. We have started offering services and products in lake bio-remediation and bringing in significant efficiencies into the sewage and effluent treatment plants in terms of plant performance and energy conservation. We believe that there is much work to be done in this area in India and FBL would like to play a pivotal role in this field.

**Tell us about any important learning from your life.**

Lessons have been plenty but their relevance can only be realised by bringing a positive change in your life. Accept criticism with an open mind and work upon feedbacks to excel in personal and professional lives.

**What is the source of your motivation?**

The results of earlier efforts and the belief that I play a part in the pioneering work continuously executed by FBL is a major source of motivation and inspiration for me.

**What is your success mantra?**

One individual cannot bring organisational success. It happens when you have faith in your colleagues, and I am equally blessed with their unconditional trust in me, which together has translated into the impressive growth that FBL have registered in the last six years.

**What rejuvenation activities you generally follow to beat the stress?**

I find that 20 to 30 minutes of yoga everyday helps a lot in balancing the daily work stress. During free hours I restrict myself within the boundary of my house to spend quality time with family or read some soothing content available around.

**Where do you see Fermenta in the near future?**

I see us evolving as an R&D-based pioneer in speciality and niche segments where we can bring differentiated products and services of value to the market. While I see FBL continuing to play an important role in the evolving Vitamin D3 market, both in bringing up the awareness and ensuring availability, I believe FBL will be one of the pioneering companies in the transformation of current chemical processes to biocatalytic processes. It would be personally satisfying for me if we are successful in playing a meaningful role in helping rejuvenate the condition of contaminated water bodies, oil dumps etc and ensuring that technologies are implemented to reduce or eliminate further pollution of our environment. **MR**