

## Getting Aggressive

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With an objective to establish commercially viable biotech processes with applications in medicine, agriculture and industry, Krebs Biochemicals & Industries, a BioSpectrum Top 20 company, has made pioneering efforts in exploiting traditional microbial technology over the last decade.

Fermentation technology has been central to the growth of Krebs Biochemicals & Industries (KBIL). Its expertise in the fermentation process has led the company to manufacture a broad range of products in three categories-anti asthmatic drugs, nutraceuticals and statins.

Dr RT Ravi, managing director, KBIL, floated the company after his 14-year stint in this field. He gained valuable insights in a step-by-step process by first working as a scientist, then joining the industry as a researcher and later joining the corporate sector as a manager. After acquiring enough knowledge on how an industry runs, he jumped the bandwagon to start KBIL in 1991 and since then there has been no looking back.

### Biochemical origins

The company went public in March 1994 and started the commercial production of Pseudoephedrine in 1994 at its Nellore facility. During the past ten years, the plant has been upgraded to manufacture about 300 tons per annum of Ephedrine, Pseudoephedrine and their salts. Consolidating its portfolio as a bulk drug manufacturer, Krebs later set another facility in

Visakhapatnam for manufacturing cholesterol-reducing drugs like Lovastatin, Simvastatin and vitamin C. Another powerful statin, Pravastatin, is in the pipeline.

## **"We are planning to enter the branded formulations market by next year"**



Dr RT Ravi is an experienced technocrat with over 20 years of experience in industrial management and consultancy. A postgraduate in science with specialization in biochemistry, he has worked as project development manager with an IFC assisted organization founded by Aga Khan Foundation viz. Industrial Promotion Services (K) Ltd., Kenya. His industrial experience covered stints with Alembic Chemicals, Jagajit Industries and EID Parry. In an exclusive chat he shares the future vision and growth strategies of the company.

### **What is the overall vision of the company?**

Krebs should be recognized as a bioenergy, biopharmaceutical and R&D center. For this, we need good technical expertise and capital inflow. We are also heading towards such places where good biochemical markets are available.

### **What are the current happenings at your R&D center at the ICICI Knowledge Park in Hyderabad?**

Basically, we do not have an R&D center that can support development of a new product or process, which may significantly alter the scientific knowledge and escalate the industry status. However, we try to take advantage of this center to improve our processes in a small way, by bringing out process or product variations to increase the company's product range or reduce the cost of production.

But as the size of the company grows bigger, we would want to be an R&D based company. Today what we are doing production outsourcing to technology companies elsewhere, which have big R&D centers. Talks are on with a UK-based company and we may start production for them in September. But precisely, our focus would on the R&D of new bio molecules and genetically engineered products by synthetic and biological approaches.

### **Is the company planning to diversify further in the health care segment after antiasthmatic drugs and statins? What are the new products in the pipeline?**

The company's experience in active pharmaceutical ingredients over the past decade has set a definite platform for venturing into the most significant and high margins segment of formulations. We are proposing to enter the branded formulations or outsourcing to US generic companies by the end of March 2005. The initial target is to venture into manufacturing of formulation for existing product range. On consolidation, the company has plans to enter therapeutic groups-both generic and patented drugs thereby increasing the topline and bottomlines.

To expand in the pharmaceutical segment it is important for us to have good manufacturing facilities and thereby we can license out the patent. So setting up of production base in India is vital. This way we can make the most of the indigenously available raw material and equally yield foreign exchange.

The latest product in the pipeline is Pravastatin. This is prescribed to patients who have elevated levels of cholesterol that cannot be controlled through diet and exercise alone. The trial production is on and latest by next year, this would be out in the market.

### **Krebs has recently ventured into biofuels. How does the company foresee future growth in this segment?**

Sugarcane cultivation is an efficient method of converting solar energy into stored energy. We have chosen sugarcane, the renewable source of energy, to produce food ingredients (sweeteners), fuels and industrial products (ethanol), animal nutrition (feed ingredients) and human nutrition (soluble fiber, natural antioxidant) products.

It is a totally unexplored area in our country and we are investing around Rs 70 crore on this project. We are optimistic about the outputs that this industry can reap.

### **What has been the total biotech investment in the company till date and its plans for the future?**

The total biotech investment involved so far is around Rs 150 crore. And the turnover for the year 2003-04 stood at Rs 101.23 crore. We are targeting an aggressive growth rate to reach the Rs 500 crore mark in the next five to six years.

KBIL exports its products to about 30 countries including the US and Germany. Last year the company obtained US FDA approval for three of its API (Active Pharmaceutical Ingredient) drugs-Pseudoephedrine HCl, l-Ephedrine HCl and Pseudoephedrine Sulphate, which will add further thrust to its exports. During the fiscal year 2003-04 Krebs grossed a total turnover of Rs 101.23 crore, of which the biotech revenues were to the tune of Rs 56.89 crore.

The company has a strong R&D focus. Presently its research center located at the ICICI knowledge park at Hyderabad aims at improving the product range and quality and developing alternate cost effective ways of manufacturing the existing products. Later as Krebs grows and diversifies its operations, it aims to focus on new biomolecules and genetically engineered products.

## **A wider canvas**

While the company continues its pioneering efforts to be a significant international player in the bulk drugs product range, it also has identified other related growth areas of manufacturing in the post WTO regime. Thus, food processing, bio energy are major areas identified to develop as separate divisions of the company.

### **Biofuels**

Leveraging its core competency in fermentation technology, KBIL is diversifying into the bioagri segment. It has chosen biofuels and its downstream products to catalyze growth. Krebs chose sugarcane as over other sources like maize or potato for biofuel production due to the availability of bagasse, which enables cheap power, a critical cost component in the fermentation process. Elaborating further Dr Ravi said, "India despite being the second largest grower of sugarcane has not been able to leverage sugarcane crop as source of carbon due to not only the government restrictions but also because of the high complexity of fermentation technology. A mastery over fermentation technology is a must for extracting the carbon source or any other derivative from these agricultural crops which can substitute any other synthetically produced product or fossil fuel with industrial application".

To gain foothold in the sugar industry, it has participated in the privatization bid of Nannapaneni Venkat Rao Co-operative Sugars Ltd. Jampani, Andhra Pradesh and gained possession in December 2003. It has successfully completed the crushing season 2003-04 by crushing 69,690 million tonnes of sugarcane. And in the current season, it aims at 2,00,000 million tonnes of sugarcane and plans to increase it further to 8,00,000 million tonnes by 2005-06. Talking about the expansion plans, Ravi said, "The present capacity of 1300 TCD (Tonnes Cane per Day) of sugar crushing is slated to expand to 5000 TCD by 2005-06 generating 2,25,000 million tons of bagasse to suit the requirement for 22.5 MW power plant."

The total cost envisaged for the expansion program is Rs 44 crore. The company is planning to adopt various possible measures for cane management and bring in trust among the farmers for growing sugarcane.

### **Ethanol Production**

Equally, KBIL is also planning to manufacture ethanol by fermentation from sugar bearing or scratch substrates using yeast. Ethanol could be blended in various proportions in petrol. KBIL is foreseeing a definite and assured market for utilization of ethanol as a fuel and it is proposing to invest about Rs 9 crore.

### **Setting up of 22.5 MW co-generation power plant:**

The viability of sugar industry is linked with the setting up of the co-generation power plant. This will run on bagasse, a sugarcane byproduct produced at the sugar plant. The power generation will be partially used for captive consumption and the balance will be sold to the third party, which happens to be AP Transco. The capital expenditure envisaged for this plant is Rs 6 crore.

## **Future outlook**

As part of diversification, the company is also foraying into food industry. It has set up a plant in Gaganpahad Village, Rajendra

Nagar, Hyderabad, to manufacture stackable fabricated potato chips with a capital outlay of Rs 22.2 crore with a capacity of 300 kgs per hour. The plant has a capacity to manufacture 2500 million tons chips per annum. "The prospects from the project are lucrative with a projected turnover of Rs 80 crore per annum," admitted Ravi.

"The trial productions are through, and we are looking for a suitable marketing agency. We might be in the market anywhere between November 2004 to January 2005. The final product would be sold domestically and also exported," he added.

