

## Bio News November

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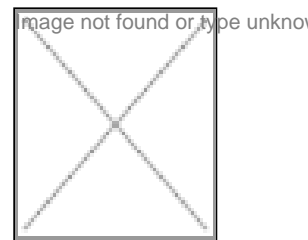
### Biocon's H1 revenues soar

Biocon India Ltd has announced a very impressive first-half results for the period ended 30 September. Biocon recorded a total sales of Rs 259 crore, up from Rs 128 crore in the corresponding period during 2002-03. Its Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA) stood at Rs 87 crore up by 172 percent. It may be recalled that the company was the #1 company according to BioSpectrum-ABLE Top20 Survey with recorded sales of Rs 255 crore, and a profit after tax of Rs 36 crore.

Kiran Mazumdar-Shaw, chairman and managing director, Biocon said, "These results demonstrate the enormous progress the company has made over the past year. With our strong links with high-quality customers, and substantial increase in capacity coming on stream next year, I am confident that the future will achieve tremendous growth." After a careful review of opportunities for the remainder of the year, the Board is of the view that the results for the 12 months ending 31 March 2004 shall have sales in excess of Rs 520 crore and profit after tax of Rs 130 crore.

One of the key reasons for the growth of during the first half has been on account of increased exports. Exports in the current half-year period have shown a sharp increase of 189 percent over the corresponding period in 2002-03, largely driven by exports of Lovastatin and Simvastatin to USA and Europe. Biocon's total exports in 2002-03 stood at Rs 108 crore.

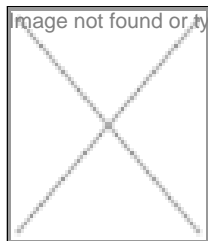
The company is on a major expansion drive developing additional capacity to meet the demand for its products. This includes the development of the newly acquired 50 acre site in Bangalore where expansion of capacity of Syngene International



Limited (a Biocon subsidiary), quadrupling of fermentation capacity and the new biologicals plant are all proceeding as on schedule. It plans to invest close to Rs 500 crore in the next three years. The plant for the production of r-human insulin is also on track and expects to launch the product in the Indian market by March 2004.

The Board has also agreed to proceed with the preparatory work for an IPO planned for the first quarter of 2004. Existing advisors have been retained. DSP Merrill Lynch and Kotak Mahindra Capital company will be the book running lead managers, while HSBC Securities & Capital Markets will be the co-book running lead manager. The Board will review progress to confirm the IPO timetable by the year-end.

### **DBT to act as nodal agency for Asian Biotech Consortium**



The Department of Biotechnology (DBT) will act as a nodal agency for a proposed Asian Biotechnology Consortium to be set up in New Delhi, under the aegis of the Ministry of External Affairs (MEA). Twenty-two Asian countries will come together for this under the Asia Cooperation Dialogue (ACD) launched in Cha-am Thailand in June, last year. India agreed to take the lead in establishing the consortium to foster greater cooperation among the ACD countries in biotechnology.

The ACD member countries are: Bahrain, Bangladesh, Brunei Darussalam, Cambodia, China, Indonesia, India, Japan, Kazakhstan, Kuwait, Laos (PDR), Malaysia, Myanmar, Oman, Pakistan, Philippines, Qatar, Singapore, Sri Lanka, South Korea, Thailand and Vietnam.

A two-day meeting of the ACD countries concluded in New Delhi recently after considering the concept paper on setting up of the consortium and the modalities of going about it, which were prepared by India. The meeting called by the MEA, in association with DBT, ended with a number of recommendations on setting up of a core fund, membership and launching of an ACD biotech website to network the countries for exchange of information and collective action.

The meeting agreed to collectively address issues related to the development of biotech infrastructure and expertise, bio-safety, IPR issues as well as technology access, transfer and commercialization for the socio-economic progress of the region.

Matters pertaining to the modalities of setting up of the fund such as membership and other technical issues would be taken up at the first meeting of the Apex Governing body which is planned to be held in China soon.

In his opening remarks, Dr RM Abhayankar, secretary MEA, underscored the need for a consensus among ACD member countries to work together for the socio-economic development of the region, exploiting the full potential of biotechnology. Dr Manju Sharma, secretary DBT, said that the dialogue should also address institutional framework, biodiversity utilization, capacity building and regulatory guidelines.

### **Study confirms better results of Bt cotton**

A study conducted by the University of Agricultural Sciences, Dharwad, at the University's Regional Agricultural Research Station (RARS) farm and Nelahal village in Raichur district, Karnataka, has confirmed that the cultivation of Bt cotton will reduce the use of pesticides and bring a substantial reduction in costs to the farmer while improving his profit margins.

Commenting on the findings, Dr BV Patil, associate director of research and head Entomology department, RARS Raichur, who led the study team said, "For a long time now there has been a debate on the Bt cotton issue. For us, this was a fact-finding mission and we are confident of the veracity of our research and are convinced that Bt cotton does play a significant role in reducing the farmer's worries. Our study clearly establishes the fact that if maximum benefit has to be derived from cultivating Bt cotton, then it is important to isolate the crop from normal cotton or other hybrids and cultivate it separately. This would ensure pest resistance and better yields."

The study revealed that more bollworm damage was recorded in conventional cotton and NHH-44 hybrids (the commonly used local hybrid) in both locations as compared to the lesser damage to Bt cotton. It further reported that Bt cotton required only three to four applications of pesticide for bollworm control, where as the conventional cotton and NHH-44 hybrids required four to nine sprayings in both locations.

Dr Patil noted that the Bt cotton plots accounted for an expenditure of only Rs 750 and Rs 1,210 on plant protection input

costs per acre, as opposed to Rs 1180 and Rs 3310 on conventional cotton in the RARS farm and Nelahal locations respectively. At the end of the study, it was found that the Bt cotton plots recorded a net profit of Rs 13,998 and Rs 13,521 per acre in the RARS farm and Nelahal village which added up to a 31.12 percent and a 42.18 percent increase respectively, in net profit over NHHâ€“44, at the same locations, under irrigated conditions. It was also found that sucking pest incidence, particularly 'thrips' in the early stage and 'aphids' in the later stage was equal in all the cotton plots in both locations.

The study, which was conducted in 2002-03 involved the actual trials and collation of primary data to study the behavior of pests and their impact on cotton. At each location, three hybrids and a local popular hybrid were cultivated on one acre and after taking into account the input cost in each location, the economic benefits were calculated.

### **DBT to spend Rs 90 crore on bioinformatics**

DBT is planning to spend about Rs 90 crore on the bioinformatics sector in the next five years. "The Department of Scientific and Industrial Research is also eager to spend on this sector as the bioinformatics market is seen at \$5-6 billion by 2007," said Prof Ashok S Kolaskar, vice chancellor, University of Pune.

Speaking at the first anniversary celebrations of SciNova Informatics at Pune recently, he said that industryâ€“institute partnership is a must for the growth of the biotech industry. If they work together it is win-win situation and both will be benefited. "Many companies in bioinformatics are making inroads both in the local and international arena. One such example is Bangalore-based Strand Genomics. The time is right to push ahead. But the companies have to concentrate on IPR issue, niche areas. Then the growth will be higher," he added.

Pratima Kirloskar, president, Pune chapter of The Indus Entrepreneur (TiE), noted that innovation and risk taking are essential for success of any organization. In this regard the small and medium entrepreneurs should also look at strategic alliance with other companies. The entrepreneurs should support the innovators by taking risks so that the dreams of the innovators come true, she added.

On November 14, TiE is organizing a conference at Pune where in 10-15 new technologies will be showcased besides two overseas technologies. One is from Israel and other is from Finland.

### **Praj looks at alternatives for ethanol fuel production**

With the imminent introduction of ethanol fuel in many countries including India, Thailand, Australia and enhancement in ethanol usage in North America, Canada, and Europe, Pune-based Praj Industries, an ISO 9002 company, is planning to introduce tropical sugar beet in India and other tropical countries. Sugar beet is an alternative for sugarcane as a source of ethanol production.

Praj has already taken a lead in this field and is working with Syngenta. Praj says that sugar beet is not only economically viable, but it is also environmental friendly to process. It will allow farmers to rotate crops and better manage fertility of the soil.

Praj has been working to make ethanol a sustainable energy source by bringing in reliable and cost-effective technology for its production. Having entered into a technical collaboration with Delta T of the US, Praj has already commissioned India's first (and probably South East Asia's first) Molecular Sieve Dehydration technology (MSDH) ethanol fuel plant in India. Delta T is a leader in MSDH technology for ethanol fuel production. This plant adheres to international standards and produces anhydrous ethanol.

At Praj, innovation has always held center stage in any developmental activity. In continuation of its quest to bring "value added technologies" to the industry, it has expanded its R&D facility, which it called Matrixâ€“The Innovation Center. Biotechnology led solutions for converting agro molecules into bio-products is the central theme of Matrix. Matrix is equipped with state of the art facilities for conducting extensive trials. It has taken up the challenge of making biofuels from a variety of feedstocks. Some of the programs, which have been undertaken by Matrix, include enhancing sugarcane to ethanol economics, energy crops for ethanol production and more. Some of the identified crops include tropical sugar beet, sweet sorghum and tapioca. Biomass is another futuristic feedstock identified by Matrix. With the help of Matrix, Praj will continue to promote technological solutions for better yields and newer production methods combined with low energy costs.

Established in 1985, Praj focused upon alcohol technology and engineering of alcohol plants and became a key player in cane molasses based alcohol technology with a number of processes and systems for alcohol production to its credit. Today,

it has over 250 references in 25 countries across five continents. From being an Indian Engineering Company, Praj has acquired an international repute and has its own offices in Singapore and Bogota, Colombia (South America).

### **SIIIL to launch combination vaccine by 2004**

Serum Institute of India Ltd (SIIIL), a Pune-based vaccine manufacturer is making good progress on developing new combination vaccines. It is working on quadra valent combination vaccine (Hepatitis B-DPT). Dr SD Ravetkar, senior director, SIIIL, informed, "This vaccine will reduce the number of injections required for children, by one. We are developing this indigenously as we have all the four components with us to develop the vaccine. Serum will be the only company after GlaxoSmithKline to launch such a combination vaccine in the world, which it will launch before the end of first quarter of next year. Once we launch the vaccine in India we will look forward to launch it in other countries after conducting trials."

Companies like Shantha Biotechnics and Panacea Biotec are also working on the same project. But these companies are dependent for components like DPT. Serum is a pioneer in manufacturing DPT vaccines in India. Serum has been working on this vaccine since the last three years. Explaining about the other projects, Dr Ravetkar, who pioneered the DPT vaccine project in SIIIL said, "the next in pipeline is Haemophilusâ€B vaccine. We are co-developing this with a European company, since the last one year. We have done this to strengthen the strategic alliance and enhance economies on both sides. The research on this vaccine has already commenced and we will be able to launch it by 2005. "

He added, "Another one in the pipeline is a pentavalent vaccine. It is tricky thing to balance all the five components (ie combination of Hepatitis B-DPT-Haemophilusâ€B vaccines). We are at the lab study stage."

Asked about the investments made by SIIIL in developing vaccines, Dr Ravetkar informed, "capital investment in vaccine development is high, as we have to do research under facilities of international repute, carry out multicenter clinical trials and have to meet the GMP standards."

SIIIL, a flagship company of the Poonawalla Group of Companies, is supplying the vaccines at subsidized price to the Indian customers. Dr Ravetkar, recipient of many awards including the outstanding Achievement Medal by the International Biographical Center, Cambridge UK, says, " it is mainly because of our chairman Dr C S Poonawalla, a techno-commercial man with a philanthropic mind, who believes in providing quality products at cheaper price to the Indian customers."

### **SciNova to see four-fold increase in its turnover**

Pune-based SciNova Informatics, a discovery informatics company, is set to increase its turnover by four fold by the end of this financial year. In its first year the company was able to generate revenue of about Rs 25 lakh.

Speaking to BioSpectrum, at the first anniversary celebrations of the company, on October 14 at Pune, Rajeev Gangal of SciNova said, "We have made good inroads in the domestic market with our products. The first version of Prometheus is already under trail. Once the trail is over we will go in for IPR for this product. Meanwhile, we are now working on a NMR project for Astra Zeneca and it will be completed by March next year. Discussions are also on with other major biotech and pharmaceutical companies."

When asked about SciNova's entry into global market, he said, "First we want to concentrate on the local market. However few European generic companies have approached us for the drug discovery process. We are also showcasing our product technologies in all major events."

SciNova is interested in tapping the huge database available with scientists, hospitals etc. In this regard it is also interacting with some scientists based outside Pune. With its experienced IT professionals who are capable of implementing IT solutions for bio and chemoinformatics, it is offering services in the form of customized literature database curation and customized IT support for bio/chemo-informatics groups.

**Spurious Bt cottonseeds - Is it the right way?**

The use of spurious/fake things has become a part of everyday life in India. In anything that we buy, electronic goods, drugs, pesticides, fertilizers, healthcare products, we find bogus products. Now it is time for bogus seeds

Some of the seed companies in Gujarat have been involved in selling spurious Bt cotton seeds at a much lower price against

the Mahycoâ€Monsanto's Bollgard. Till date only Mahycoâ€Monsanto Biotech Ltd (MMB) has the official approval for the commercial production of Bt cotton from the Genetic Engineering Approval Committee (GEAC) of the Ministry of Environment and Forestry (MoEF). Reports say that the farmers in Gujarat are earning big profits by using spurious seeds.

The farmers are using hybrid Bt cotton seeds sold under brand names like Raksha, Virat, Captain F-1 Hybrid Cotton Seeds, Research Hybrid cotton F-1 (Tilak), Trishul (F1), Kavach F-1, hybrid Kapas-151, Suraksha-hybrid cotton seeds, Research hybrid cotton F-1, Krushi-357, Sarathi. These are sold at a lesser price than Bollgard (Rs 1600 per packet), which is marketed by MMB. Ahmedabad-based Navbharat Seeds owned by Dr DB Desai, a former Ministry of Environment and Forests seeds containing the same Cry1AC gene, incorporated in Bollgard, even when GEAC had MoEF has approved to MMB

The Central Institute Cotton Research (CICR), Nagpur has carried out PCR and ELISA tests on these cotton seeds and confirmed that the above brands have tested positive for the presence of Cry 1 Ac gene. The above hybrids have not been approved by the GEAC and therefore production/sale of the above hybrids is a clear violation of the 1986 and liable for punitive action under the Environment (Protection) Act 1986.

MMB had filed a complaint with the Government of India against the sale of spurious Bt cotton last year. Accordingly the MoEF has asked the Gujarat government to take appropriate steps to curb the sales of spurious Bt cotton seeds in the state. But the state government has failed to take steps against the companies. It is an irony that on the other side, Department of Science and Technology (DST) and Gujarat government are promoting biotechnology in a big way by organizing programs, seminars and exhibitions showcasing the strengths of Gujarat. When BioSpec-trum contacted Rajesh Kishore, member, DST for his comments on the issue, he informed, "it is not appropriate for me to say anything at this moment. I am waiting for the information from agriculture department, which is planning to organize a conference on agribio-technology this November, after the success of pharma-biotech event held on September 29."

### Good rains, more acreage

According to Vishwa Nath, chairman and managing director, Cotton Corporation of India, Indian cotton cultivation during the 2003-04 season (October-September) is expected to increase by 12 percent, to around 85 lakh hectares. This is mainly due to the good and favorable monsoon during the initial two months and the farmers are reported to have bought more certified seeds as compared to previous year. Area under Bt cotton has also increased to around 1.25 lakh hectares compared to 40,000 hectares in the previous season. As against the last year's sale of about 72,000 packets, MMB was able to sell over 2,00,000 packets this season. In Gujarat alone, the company has sold over 1,00,000 packets this season. However industry sources say that there is a large quantity of illegal Bt cotton available in Gujarat, but there are no figures available for these illegal plantings.

Ranjana Smetacek, director (corporate affairs), Monsanto India said, "Any spurious product brings a bad name to the genuine product. Clearly, any negatives from illegal Bt cotton would lend a bad name to the technology and therefore damage our interests and those of other seed companies working within the regulatory system to market Bt cotton seeds."

C Kameswara Rao, founder, Foundation for Biotechnology Awareness and Education, Bangalore, said that the unauthorized cultivation of Bt cotton in Gujarat is bad for the future of GM crops in the country on at least three counts. First, it will encourage similar misadventure in other parts of the country. Second, it gives a new whip for the NGOs to ridicule the regulatory measures and GM crops and lastly it will further delay the introduction of other GM crops in India by generating fresh controversies.

Ironically it is Monsanto's technology that is encouraging companies to produce and sell fake hybrid seeds as the technology is not patent-protected. There are a number of co-licensees with whom MMB has signed agreements and they are all working within the regulatory system to introduce Monsanto's Bt gene into their hybrids. Spurious seed sale may result in poor investments in R&D from the private participants who really want to sell quality seeds.

According to reports, companies like Nath seeds, Ankur seeds, Ajeet seeds, Krishidam, Mahendra and Nuziveedu seeds are already working on Bt cotton trials and are expected to release their products by 2006. If the state governments fail to take action against the sale of spurious Bt cotton, the scientists working on such projects may be demoralized of taking up research work.

**Then what next....**

The companies, which are doing research should take up the initiative to bring in awareness about spurious Bt seeds by organizing one to one farmer meeting, group farmer meetings etc. Even the state governments should actively participate in promoting the technology by initiating stringent steps against the lawbreakers. MMB is already working in this regard by conducting field days where in its field staff visits the villages at the time of crop harvesting, sending mailers, print materials like posters, banners, etc. to farmers. In the past, MMB and the government have put out messages for farmers, warning them against the products of spurious seed sellers.

Narayan Kulkarni