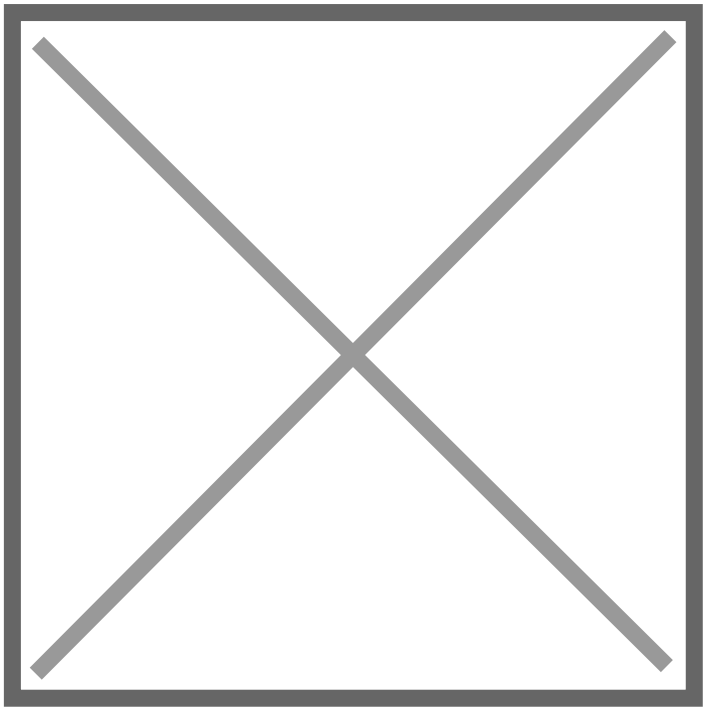
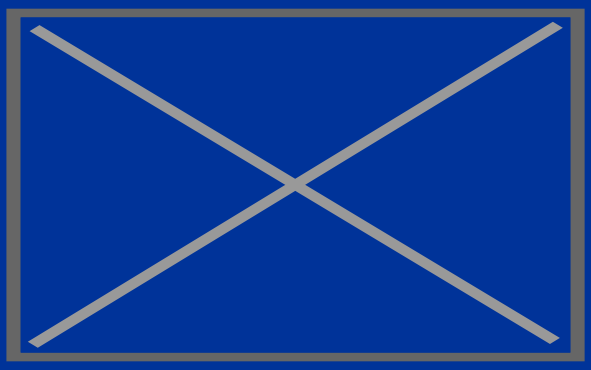
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Dr Kalam inaugurates NPIL

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Dr Kalam inaugurates NPIL's state-of-the-art R&D facility



Seen in picture from (L-R) are Mrinalini Sarabhai, Mallika Sarabhai (dancers from Darpana), Dr Swati Piramal, director, Nicholas Piramal India Ltd and Dr APJ Abdul Kalam, President of India.

Dr APJ Abdul Kalam, President of India inaugurated the high-tech and most modern research and development facility of Nicholas Piramal India Ltd - "Nicholas Piramal Research Centre (NPRC)". Constructed within a year and at an investment of Rs 100 crore, the 300,000-sq.ft, the NPRC contains the state-of-the-art technology, designed to focus on discovery research and drug development by over 400 scientists.

This research center will specialize in three critical areas such as development of anti cancer drug, inflammation inhibitor and drug for type 2 diabetes by overcoming insulin resistance.

Some of the strengths of the NPRC include housing a unique collection of over 50,000 strains and 3000 plant species reflecting India's biodiversity, medicinal chemistry, molecular biology, toxicology, formulation research, new drug delivery

systems, phytomedicines, natural products chemistry and chemical process development. Also present will be a strong patent cell that will assist scientists in establishing intellectual property. The activities of the company are multicentric and all the functions undertake independent as well as collaborative research projects in their areas of expertise. Internal core teams guide the activities of the research functions with inputs from external consultants Ã¢â?¬â?? both national and international.

"India should become a working partner in proteomics project of gene characterization"

"India missed the great opportunity in partnering the human genome project and thereby lost the utility of tremendous data. Now the Indian biomedical community has to take up the initiative to become a working partner in the proteomics project of gene characterization, "noted Dr APJ Abdul Kalam, President of India.

Speaking after inaugurating the Nicholas Piramal Research Centre in Mumbai, Dr Kalam said, " Department of Biotechnology in partnership with R&D, academia and industry has already launched a national program on proteomics. This should be pursued as a mission mode project. This will lead to our being invited to participate in the global proteomics program."

Commenting on the WTO regime he observed that on January 1, 2005, the Indian pharmaceutical industry would face a challenge of demanding indigenous design of drugs, which will have a profound impact on global competitiveness and business viability. As India comes into compliance with the TRIPS protocol mandated by the WTO, a new IPR regime will be enacted that will extend patent protection to new product inventions. The new product patent regime will affect a sea change in the way Indian pharmaceutical companies think and do business.

He further said, "We have biotechnology and information technology. When they converge, we get bioinformatics and the important science of proteomics emerged has revolutionized the drug design. Now with the emergence of nanotechnology we have an excellent opportunity to be a global leader in the development of drug delivery systems and medical diagnostics."

"Information technology has become very relevant to areas like pharmaceutical research because of the enormous amount of data, which has to be mined and analyzed to arrive at definite conclusions. The results of proteomics program will unravel the genomic mystery leading to the bio-medical community to create a new evolutionary future for the human race. As the volume of data generated grows, so does the demand for faster data processing technologies. Thus, to arrive at some destination in the area of 'bio-informatics', it is very necessary to deploy powerful information and communication technologies so as to be able to get a hold on gene sequences, expressions, protein structure delineation and population genetics etc.," said Dr Kalam.

Maharashtra observes third Biotechnology Day

Amidst a change of guard in the government and festive mood, the government of Maharashtra was successful in organizing the third Maharashtra Biotechnology Day on November 10.



Seen in picture (L-R) Banmali Agrawala, vice chairman, CII Maharashtra state, Dr SR Rao, adviser to Minister of Science & Technology & Ocean Development, Government of India, Dr Swati Piramal, director, Nicholas Piramal India Ltd, Vishwas Dhumal, principal secretary, Department of Industries, Government of Maharashtra and Virendra Gupta, Director, CII, Mumbai.

"Based on the discussions with the industries, academicians, consumers, and agriculturists, the government of India would soon announce the National Biotech Policy. The policy would also look at avenues for public-private partnerships, " said Dr SR Rao, adviser to Minister of Science & Technology & Ocean Development, Government of India. Dr Rao further said, "the government is all geared up for public-private partnerships to solve the issue in the area of research and discovery and it is

open to the views and suggestion in new partnerships and alliances, which would make India a leader in biotechnology industry and become globally competitive."

Speaking at a conference to celebrate the third Maharashtra Biotechnology Day in Mumbai, he observed, "There is a need for networking, public-private partnership and alliances with achievable goals from time to time in the area of research and development".

"In agriculture sector about 20 trangenics are at various stages of development. Bt cotton has been sublicensed to as many as 16 organizations. Even the big pharmaceutical companies like Nicholas Piramal, Panacea Biotech, Wockhardt, Zydus Cadila, have diversified their activities and investing on research and development in biotechnology space. Considering the potential in biotechnology, the Council for Scientific and Industrial Research labs are also working on many biotechnology products," he said. However, expressing concern he noted that the public sector labs are able to develop the products at pilot scale.

Talking about the state government's initiative, Vishwas Dhumal, principal secretary, Department of Industries, Government of Maharashtra, said that the government is committed to the rapid growth of the biotech sector through public-private partnerships. He highlighted three key areas for the same. First, private sector, public hospitals and research institutes are being encouraged to work in the area of clinical trials. "The government has constituted an ethics committee to formulize the same", added Dhumal. Second, the government along with the Chatterjee Group has set up the International Biotechnology Park at Hinjwadi near Pune for biotechnology start-ups and thirdly, the government is actively promoting agri based biotechnology park at Jalna near Aurangabad, the seed capital of India.
Dr Swati Piramal, director, Nicholas Piramal India Ltd, briefly explained the opportunities India had in clinical research, R&D, custom manufacturing over any other countries in the world. The costs of clinical trials in India are 40-60 percent lower compared to the developed world. She also briefed the challenges before Indian biotechnology industry when the patent regime comes into force from January 2005.

Commenting on the Venture Capital funding Anand Dikshit, director, Rabo India, which is working closely with the government of Maharashtra for the development of the biotechnology in the state, said, "biotechnology is the future and government has to take the initiative in promoting and developing this industry." "The industry will receive about $100- 150 million in the next three years," he observed.

To overcome the lack of skilled and pool of talents, which is the need of the hour for biotechnology industry, Dr Vidita Vaidya of Tata Institute of Fundamental Research (TIFR) suggested, "teaching at the research organizations. In this regard TIFR, a premier fundamental research organization and deemed university has already taken up an initiative. She also suggested for filling the gap that exits over the years between the industry and basic researchers/scientists.

Other speakers who addressed the conference on the theme "Bio business opportunities in India" included Balaji Rao, director, TCG Urban Infrastructure Development Ltd, Vipul Mankand, president, SIDBI Venture Capital Ltd, Dr Kiran Marthak, VP-Medical Affairs & Clinical Research, GSK Pharmaceutical Ltd, Dr SPS Khanuja, director, Central Institute of Medicinal and Aromatic Plants, Dr SS Mahajani, Head of the Department of Pharmacology, Haffkine Institute, Dr Satish Bhatia, advisor, Clinical Operations & Quality, Ranbaxy Research Laboratories, Usha Thakur, corporate communications officer, SYGENIS Corporation, Dr M Vidyasagar, executive vice president, Advanced Technology Centre, Tata Consultancy Services.

IKMC- 2004 meet stresses on bridging science and community

The three-day International Knowledge Millennium Conference (IKMC 2004), held between October 31-November 2 in Hyderabad saw 15 speakers of repute from the US and 16 experts from India talking on technology transfer and entrepreneurship and building successful collaborations, processes and practices to achieve excellence in areas of industrial biotechnology, cell processing technology and metabolic engineering of medicinal plants.

In his inaugural address, RA Mashelkar, director general, Council of Scientific and Industrial Research (CSIR), stated that the Indian biotech industry has touched a whopping $700 million and is growing at 39 percent. He added that the industry is undeterred by the myths engulfing the prospects and the Indian biotech industry is getting into strategic partnerships, making its foray into capital markets and evolving newer markets.

Citing countries as Innovative Development Centers (IDCs), the indicators, Mashelkar said that India has got 31 scientific publications and 77 citations much ahead of countries like China, the US, UK, and Germany. He also noted that lot of innovative thinking is taking place among entrepreneurs and educational institutions.

Highlighting the evolution of technology transfer practices in the new millennium, Stephen M Sammut, Venture Partner, Burrill & Company, remarked that the style of activity has changed tremendously. The Bay-Dole Act, a sponsored legislation that allowed universities rather than government ownership of government-funded research is now considered a successful piece of legislation after 25 years. Universities are also moving from academic administrators to experienced industry professionals. This can be seen as a great insight for venture capitalists, he asserted, and urged start-up of the venture capital firms.

Joydeep Goswami, director, corporate development, head of licensing, Invitrogen Corporation, USA, said, "Commercializing innovation would benefit science, provide royalty, create further economic incentives for innovation, and fund additional research. Licensing can thereby enhance the benefits of commercialization by allowing institutions to maintain the focus on science, reducing costs by tapping the existing infrastructure and eventually improves the speed to market."

He also laid stress on the key bottlenecks like lack of understanding of the market practices, business-product economics, customs and materials transfer, and suggested to implement single point accountability in terms of material transfer, flexibility in understanding partners point of view and quick turnaround of communications as few key best practices that can greatly improve the licensing process.

Addressing the gathering, Kiran Mazumdar-Shaw, chairman and managing director, Biocon Ltd, said, "Being one of the three odd companies to have revenues in excess of $21 million, as of today seed capital was an important struggle for me. A lot of current day entrepreneurs also face that. Also, investing in research and intellectual property is very expensive."

Dr Mani V Subramanian, group technology manager, Millipore Corporation, USA, speaking about the efficient bioprocess, said, "Numerous things right form scalability from a microtiter plate to recovery in various forms, and reproducibility of the process at the manufacturing level, needs to be taken care of. Equally, the process must be compliant, and yield consistent. Funding authorities are not kind to bioprocess research; the question always looms large on the priority of developing process technology ahead of the product candidate. Many bioprocess are developed with tight timeline, economics and regulatory constraints. Despite this, the bioprocess has enabled new biotherapeutics business to become a big industry at around $ 30 billion and is growing at 15 per cent.

Dr J Sambasiva Rao, general manager, Novozymes South Asia Pvt. Ltd., India, presenting on enzymatic processing of Oils & Fats, said, "Enzymes help to improve quality, reduce cost and reduce waste in industrial processes. Industrial enzymes are the tools of nature meant to solve industrial problems replacing traditional chemicals, thereby improving quality and reducing cost of production. These biodegradable enzymes help to bring natural products to consumers creating a balance between business, environment and better lives.

Various factors influence the manufacturing costs like process design and plant capacity, operating strategy, equipment and facilities costs, material costs and so on. Laying emphasis on various optimization strategies, Howard L Levine, Ph.D. BioProcess Technology Consultants, Inc., Acton, MA, concluded that increasing expression level decreases manufacturing cost and facility requirements. Intrinsic and extrinsic methods too help in increasing expression levels thus helping in process optimization.

Earlier, during the valedictory session, Andhra Pradesh Chief Minister Dr Y S RajaShekara Reddy assured that the government would extend all possible support for the biotech companies to start up new ventures. He also urged venture capitalists and the foreign delegates to overlook the possibilities of exploring newer dimensions.

M V Kamath, MD & CEO, ICICI Bank Ltd., in his welcome address stressed the fact that the presence of ICICI Knowledge Park in Hyderabad was not with an intention of making use of the cheaper resources but to reach out to the global requirements as a whole.

Sunitha Natti, *CyberMedia News, Hyderabad*