BioSpectrum the business of Bio & Health Sciences

Minds meet to fuel India's bioeconomy

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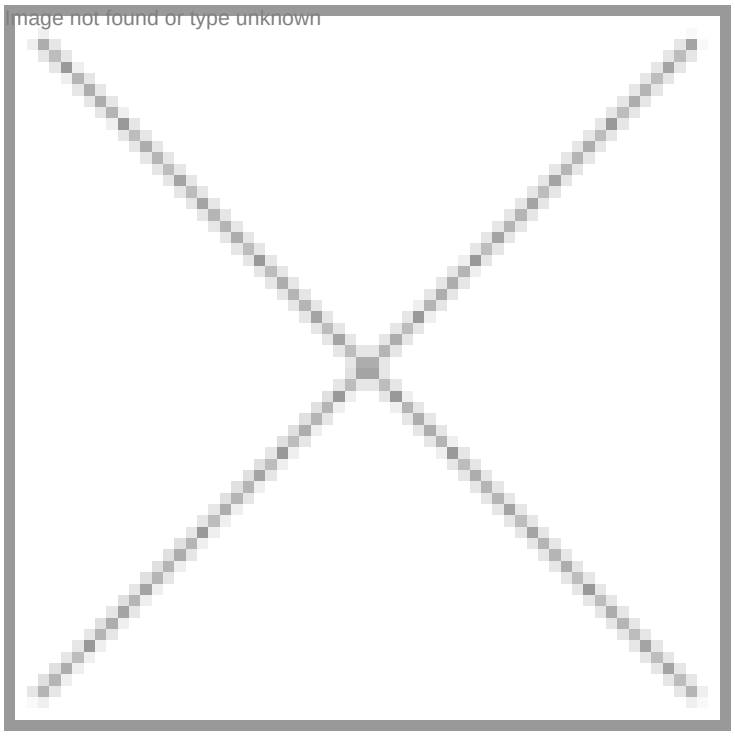


The annual flagship event of the biotechnology industry in India reveals ways to promote the growth of country's emerging bioeconomy

The 12th edition of the Bangalore India Bio held at The Lalit Ashok in Bangalore focused on the theme 'India - the emerging bioeconomy'. Over 400 delegates from 250 of the top biotech companies across 24 countries participated at the event to address their partnering and networking needs.

The three-day event (Feb 6-8, 2012) witnessed several biotechnology and life sciences companies from North America, Europe and Asia share a common platform to meet and explore business opportunities with India's life sciences sector. The event was organized jointly by the Department of Information Technology, Bio-Technology, and Science and Technology, Government of Karnataka, the Vision Group on Biotechnology and MM Activ Sci-Tech Communications.

Panel discussions @ Bangalore India BIO 2012

Day 1: The track on bio business focussed on discussions such as 'Biosimilar oppurtunities and regulatory harmonization'; and 'Trigerring investments in innovation and fostering entrepreneurship'; the track on bio nations was an 'Indo-German healthcare dialogue' and presentations by European Business and

Technology Centre, the State of Pennsylvania, US, and APIICL. The CEO conclave was chaired by Dr Vijay Chandru, president, ABLE, and chairman & CEO, Strand Life Sciences, and was co-chaired by Mr Narayanan Suresh, group editor-Technology Review India and BioSpectrum, CyberMedia.

Day 2: The event comprised tracks on diagonostics (Next generation genomics and making sense of complexity; Clinical and contract research-building capabilities through strategic partnerships; and Transforming healthcare through companion diagnostics) and on healthcare (Stem cells and regenerative medicine; Medical technology, devices and biomedical instrumentation; and Scientific evidence-based natural and traditional knowledge in healthcare).

Day 3: The discussions were on transformational technologies (Role of high performance computing in accelerating innovation in biotechnology; Synthetic biology: How India should leverage on synthetic biology and Creating healthcare accessibility through mobile technologies) and agri and industrial biotech (Biotechnology for sustainable agriculture & food security and Biofuels and green chemicals). The discussions highlighted interesting research that is being done by the participating scientists. Dr Pawan K Dhar, director, Center for Biodesign, Symbiosis International University, shared how he had pioneered the field of Junkomics by making genes out of junk DNA.

Speaking at the inaugural ceremony, Mr Ghulam Nabi Azad, minister of health and family welfare, Government of India, said, â€œOur regulatory system is still inadequate. A new system to address the complexities in this emerging field is required. A task force has been constituited in this regard.â€? Speaking about the increasing opportunities in this sector, he said, â€œWe provide pharmaceuticals to about 115 countries and vaccines to about 150 countries. I hope the biotech industry seizes the emerging â€œopportunitiesâ€?.

Mr D V Sadananda Gowda, chief minister of Karnataka, who presided over the multi-track conference program, released the â€œIndustry Report for the biotechnology sector in Karnatakaâ€? brought out by BioSpectrum on the occasion.

In the presence of late Dr V S Acharya, minister for higher education, planning and statistics, muzrai, and information technology and biotechnology, Government of Karnataka, a memorandum of understanding was signed between the Pennslyvania state, US, and Karnataka Biotechnology and Information Technology Services (KBITS), Government of Karnataka, for collaboration in the biotech sector.

Recognizing talent @ Bangalore India BIO 2012

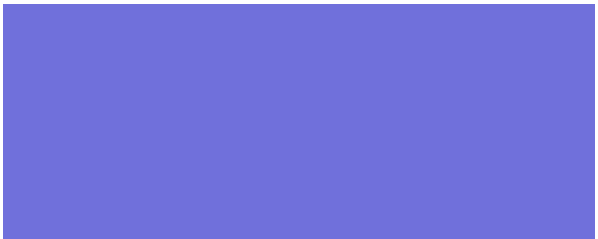
Bangalore BIO 2012 also served as a fitting platform to honor those who excelled in the biotechnology industry in the last year as well as those who showed great potential and were emerging entities in the biotechnology space. This year two awards were given in each vertical, one to an established company and another to an emerging one in the same category. The awards selection process was carried out by ABLE, led by a jury comprising many industry stalwarts.

The Bioexcellence Award in the Biopharma & Healthcare vertical was given to Serum Institute of India for its pioneering role in the vaccine industry and the Emerging Company of the Year award in the same category was given to Embrace, a company producing low cost infant warmer designed for developing countries. Similarly, Mahyco won the Bioexcellence Award in the BioAgri vertical. Quintiles and Semler Research Centre were awarded the Bioexcellence Award and the Emerging Company of the Year award respectively in the BioServices category.

The BioIndustrial vertical recognized those companies actively researching ways to find environmentally safe and sustainable solution to the energy problems. PRAJ Industries was given the Bioexcellence Award while Sea6 Energy, a young start-up, was adjudged the Emerging Company of the Year. Ocimum Biosolutions was given the Bioexcellence Award in the Bioinformatics & Systems Biology space and the Emerging company award was shared by Ganit Labs & Xcelris Labs.

Additionally, poster awards were given to students from Enterovirus Research Centre, ICMR, Mumbai; Centre for DNA Fingerprinting and Diagnostics, Hyderabad; and The Energy and Resources Institute - TERI, New Delhi. Exhibitor awards were given based on design, biocontent and the interactive nature of the different exhibitors at this event.

US-India Business Council (USBIC) President Mr Ron Somers, delivering the inaugural keynote address, said, â€œWe are facing great challenges in our global economies, but innovation will enable us to overcome these obstacles and achieve success in the 21st century. With Karnataka's youthful demography, a dizzing array of educational instituitions, R&D taking place in virtually every industry, and a perfect climate, the only elements requiring further attention are the need to develop world-class infrastructure and putting in place a welcoming policy.â€?



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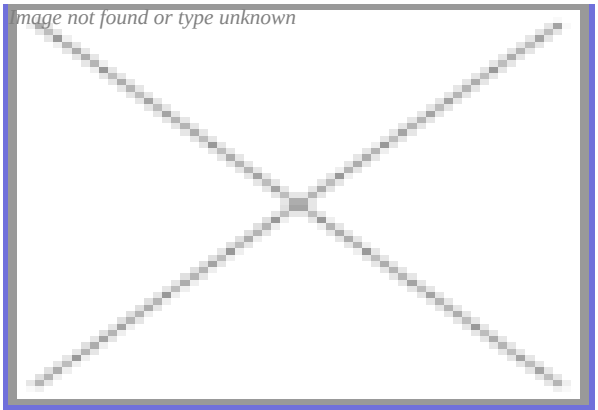

Release of the BioSpectrum 'Industry Report for the biotechnology sector in Karnataka': (L-R)Mr Chakravarthi Mohan, MD, KBITS, and director of Karnataka Department of IT/BT; Mr Ron Somers, president, US India Business Council; Late Dr VS Acharya, minister for higher education, planning and statistics, muzrai and IT & BT, Government of Karnataka; Mr DV Sadananda Gowda, chief minister, Karnataka; Mr Ghulam Nabi Azad; minister, health and family welfare, Government of India; Dr Kiran Mazumdar-Shaw, chairperson, Karnataka Vision Group on Biotechnology; and CMD, Biocon; Dr M K Bhan, secretary, DBT, Ministry of Science and Technology, Government of India; Mr M N Vidyashankar, principal secretary, Department of IT, BT and Science and Technology, Government of Karnataka.

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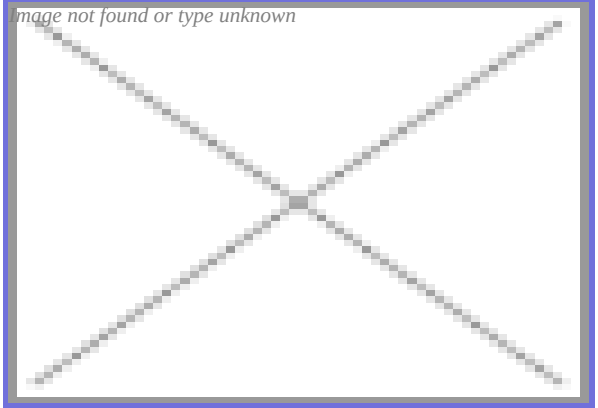

Panel at the CEO Conclave: (L-R) Dr Suri Venkatachalam, CEO and MD, Connexios Life Sciences; Dr Rashmi H Barbhaiya, CEO and MD, Advinus Therapeutics; Mr K V Subramaniam, president and CEO, Reliance Life Sciences;Mr Narayanan Suresh, group editor - Technology Review India and BioSpectrum, CyberMedia; Dr Vijay Chandru, president, ABLE, and chairman and CEO, Strand Life Sciences; Mr Sridhar Mosur, CEO and president, global discovery and development, Jubilant Life Sciences; Mr D A Prasanna, CMD, Ecron Acunova; Mr Jignesh Bhate, founder and CEO, Molecular Connections.

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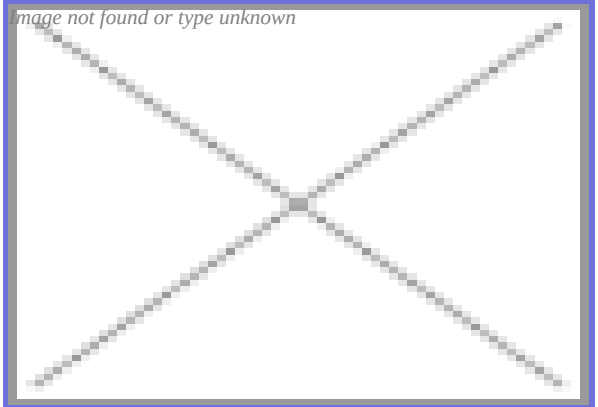

Policy makers: Mr Ghulam Nabi Azad; minister, health and family welfare, Government of India; having a chat with Mr DV

Sadananda Gowda, Chief Minister, Karnataka

Dr M K Bhan, secretary, Department of Biotechnology, Ministry of Science and Technology, Government of India, said biotech is an instrument to fulfill human needs and called for nurturing innovation. â€œScientific manpower will be increased by 80 percent in the next five years,â€? he said.

Delivering the biotech industry's perspective, Dr Kiran Mazumdar-Shaw, chairperson, Karnataka Vision Group on Biotechnology, and CMD, Biocon, elaborated on the importance of biotechnology with its all-pervading impact on all aspects of life. â€œKarnataka has taken huge strides in biotechnology. We have diversity and innovativeness,â€? she said.

Mr M N Vidyashankar, principal secretary, Department of Information Technology, Biotechnology and Science and Technology, Government of Karnataka, in his welcome address said, â€œBioeconomy has the blueprint to change the way the world functions and Karnataka has a healthy mix of desirable elements to promote biotech.â€?

The event also provided an excellent platform for the BT Finishing School students to interact with industry representatives. This Bangalore India BIO was the first event that saw workshops being conducted for the students of the BT Finishing Schools. Mr Raghavendra B T, a student from JSS College, Mysore, said, â€œThe event helped us meet people from the industry and was instumental in generating new ideas in our minds. The sessions on biofuels, stem cells and traditional knowledge were particularly thought provoking. Moreover, the workshops on soft skills and drafting grant applications will certainly help us in the future.â€?

The three-day event included multi-track conferences, vison leadership series, bioexcellence awards, international tradeshow, CEO conclave, bioquiz, biopartnering and poster presentation. The event highlighted the willingness of the international pharmaceutical and biotechnology companies to work with Indian companies and also pointed out the measures that India needs to take in order to fuel its growth in the life sciences sector.

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Distinguished members of the audience at Bangalore India Bio 2012

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Signing the MoU: Mr Chakravarthi Mohan, MD, KBITS, and director of Karnataka Department of IT/BT (L); and Mr Christopher P Molineaux, president, Pennsylvania Biotechnology Association (R)

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Innovation must meet investments

Dr MK Bhan, secretary, DBT, shared his thoughts on building India's biotech industry. â€œThe growth of bioeconomy is dependent to a large extent on public policy and other external factors. The next 20-25 years are going to be really exciting for the biotech field. However, there needs to be an improvement in our university system where 80 percent of our scientific investments do not produce any invention. The institutional framework and the educational system should ideally be such that innovation is clearly absorbed by the industry and that is not the case presently. It is not just about budget but about engagement, as the Government of India is eager to provide funds for biotechnology. The greatest challenge in innovation in biotechnology is how to champion this understanding and experience that we have to create a value chain that can benefit people.â€?

Getting past regulatory hurdles

Many Indian manufacturers are developing strategies for increasing their market share in the biosimilar space. However, India still lacks a comprehensive list of guidelines for approval of biosimilar drugs. Mr Hareesh Parandhaman, assistant director - Business Development, Lupin (Biotech Division), spoke about two strategies. â€œCompanies can adopt a bottom up approach which involves identifying the regulatory pathway to the first market and then to generate data as required for the first market which could reduce time in clinical trials. The other top down approach involves first identifying the potential markets and then pooling the data required for each market into groups. The next step would be to evaluate the harmonized requirements of the majority markets and to plan the clinical trials in the local markets,â€? he said.

Dr V K Vinayak, chief scientific officer, Biologicals, Panacea Biotec, highlighted the regulatory challenges involved. â€œAccording to the US Healthcare Bill 2010, biosimilar producers should provide full dossiers and details of the manufacturing processes to the reference competitor if the application is through a biologics license application. This would make it very difficult for biosimilars manufacturers to enter the market. The other option would be to go through the lengthy regulatory process, as an entirely new product.â€?

Collaborations are the way forward

CROs are forming strategic partnerships in order to have sustained flow of contracts from biotech and pharma companies. One such example happens to be the partnership between Ecron Acunova and Boehringer Ingelheim India. Dr Partha Gokhale, head - Clinical Operations India, Boehringer Ingelheim India, said, â€œThere is a tremendous opportunity to market drugs in Asia due to availability of a fast growing market, research frequency and time saving due to huge population, high disease incidence and increasing life expectancy that allow us to develop knowledge and capability through alliances and partnerships but challenges like unavailability of ready sites for clinical trials and difficulties in importing drug samples do remain.â€?

Dr Surinder Kher, chief executive officer, Asia, Ecron Acunova, seconded the advantages of working through partnerships. â€œIt is important to be patient with regulatory challenges when we are working in Asia. It is always better to work in collaboration so that we can be leaders in specific sectors of contract research. India needs to focus on capability building for phase I trials and the idea of a school for regulators, mooted by Dr M K Bhan, is a positive step in this direction,â€? he added.

The Germany-India Year

Dr Ingo Karsten, consul general of the Federal Republic of Germany, Bangalore, said as part of the celebrations for the Germany-India year 2012, several events are being organized in the different German centers across India. He revealed that the events would be held in Bangalore from June 22 to July 1, 2012.

Pharmerging Andhra Pradesh

Mr K Praveen Kumar, VP, marketing and investment promotion, Andhra Pradesh Industrial Infrastructure Corporation, said Andhra Pradesh is emerging as the new hub of life science in India. He said the Government of Andhra Pradesh has made significant investments in the state resulting in the setting up of several state-of-the-art biotech parks in Hyderabad, Vizag and Nellore and others. He further revealed that new biotech parks and special economic zones are coming up.

High hopes: Stem cell therapies

A recent Frost and Sullivan report presents a positive picture and says opportunities for stem cell-based therapies are estimated to be at $1.5billion in Asia Pacific countries and India. Stempeutics is hopeful of launching its product, Stempeucel, by 2015. Mr B N Manohar, CEO of the company, said regulatory challenges were the major stumbling block in India and there is a need for the different committees to approve clinical trials for stem cell drugs. The academia too are heavily involved in stem cell research. Institutions such as the Centre for Stem Cell Research, Christian Medical College, NCRM and Nichi-In Centre for Regenerative Medicine are carrying out cutting edge research in developing stem cell therapies.

Future of Junkomics

People are scared to throw away raw data obtained from genome sequencing as the data is obtained painstakingly. These data, which do not mean much at the moment, may emerge to be of critical importance in the future with the advent of new algorithms. Dr Pawan K Dhar, professor, Symbiosis School of Biomedical Sciences director, Center for Biodesign, Symbiosis International University, has started to explore possibilities of finding functions of non-coding intron regions of the gene (also called as junk DNA). Humorously labeling his research as â€œJunkomicsâ€?, Dr Dhar said he found that when certain introns of cancer coding genes were activated in a cell line, it led to the death of the cells.

The funding issue

Entrepreneurs, academicians and investment bankers gathered were all of the opinion that innovation needs to be rewarded in India to be truly encouraged. In a bid to create an engaging environment to foster innovation, Dr Kiran Mazumdar-Shaw, CMD of Biocon, has suggested that an alternative stock exchange be created that can create value for companies based on innovation.

Dr Shaw elaborated, â€œThere is a need for true innovation to be appropriately valued so that it can be efficiently translated into a product. Stock exchanges, such as NASDAQ, are truly a great example that can be emulated in India to facilitate funding for smaller companies. We are already in talks with SEBI regarding this idea and hope for it to become a reality soon.â€?

Dr Vijay Chandru, CEO Strand Life Sciences who co-founded the company, seconded this idea when he said, â€œThere is tremendous potential in biotech start-ups to actually make it big, if given the right kind of funding at the right time. Genentech, which was started based on just an innovative idea is a perfect example of this. Today, various networks, TDP, CSIR and government bodies, such as DBT, make small and large-scale investments that can help entrepreneurs convert an an idea to a product.â€? Mr Utkarsh Palnitkar, MD, Pluripotent Capital, Executive Director, Centrum Capital, pointed out that few in the investors community who valued innovation â€œwhich makes it tough for start-ups to get any funding from themâ€?. â€œIncentives like tax breaks for investing in start-ups that have already been given some ignition grants from the DBT and thus have established their credibility can encourage venture capitalists,â€? he said.

"QUOTE UNQUOTE"

knowledge.

***- Mr Asoke K Talukder**, CSO, Geschickten Biosciences, Bangalore*

Are members of the Gujarati community in Houston, US, (whose genome had been sequenced and data used for various genome research projects) representative enough of the whole of India? Is India trying to create a standard Indian genome?

***- Dr Vijay Chandru**, president, ABLE chairman & CEO, Strand Life Sciences*

The applications of recombinant DNA technologies have revolutionized the way one can incorporate valuable traits in the important crops. India should, without any hesitation, adopt modern technologies for increased sustainability and food security in the country. Future of GM crops is bright and political expediency must not be allowed to sacrifice a good technology. The success of Bt cotton has demonstrated that our farmers are wise and not led by controversies.

***- Dr M Mahadevappa**, former VC, UAS Dharwad*

Today consumers demand more than just safe food. They want food that is wholesome and of high quality. And to meet these demands, food processing technolgoies such as thermal processes, novel processes making use of alternate heating media as well as non thermal processes have evolved and which India should start adopting.

- Dr Hosahalli S Ramaswamy*, professor, Department of Food Science, McGill University, Canada*

Manasi Vaidya, Saptarshi Chaudhuri, Uma Kelath & Vipul Murarka