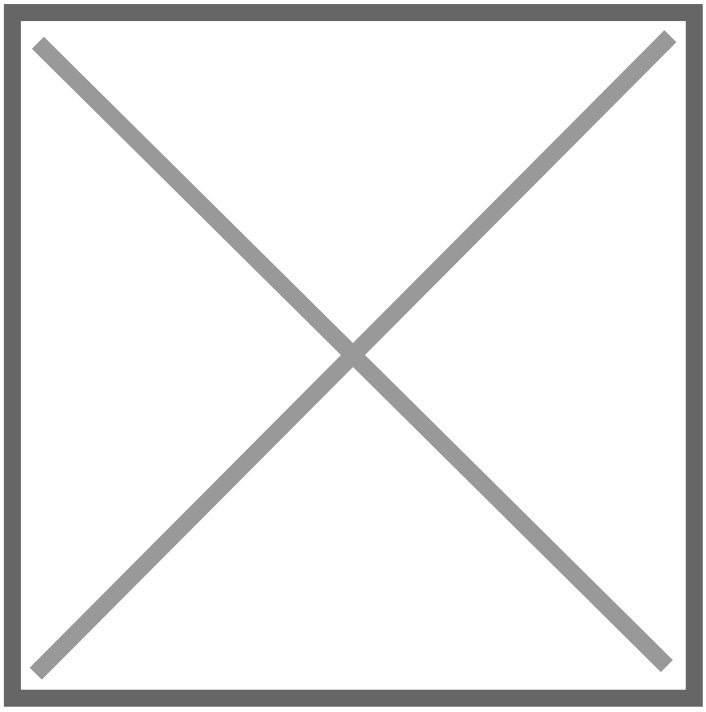


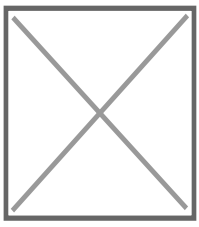
The biotech community speaks...

12 May 2004 | News



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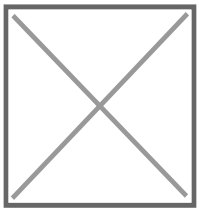
Future prospects of biotechnology in India



"There are several segments, which have good prospects for the growth of biotechnology in the country. Health and agriculture are two promising areas. In the last two to three years, we have had good signs of growth in these segments. But the next five years will be crucial for the biotech industry. There are some societal aspects that require proper attention. Areas like vaccines, bio therapeutics and diagnosis hold good potential for the development of the entire biotech industry. There are some areas that are yet to be explored even though we have expertise in those areas. Among these, immunotherapeutics offers a great opportunity for development. We, as a nation, need to focus on this area and come up with something good."

Dr MK Bhan
Secretary, Department of Biotechnology

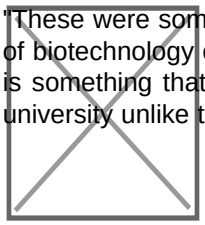
On the need of a clinical data management course



"India can become a major hub for clinical trials in the world. We have enough biodiversity available here. We have a very good hospital system. Many hospitals are interested to have a tie up with research organizations of the western world and many people are exposed to newer drugs and they want to do the clinical trials. What we require is a proper channel for collecting the data, organizing and analyzing the same. The problem we are facing is collection of data and how to organize it. Today if we see, clinical data management is not included in any syllabus. It needs to be put in an organized way."

Prof. AS Kolaskar,
Vice Chancellor, University of Pune

On biotech education in India

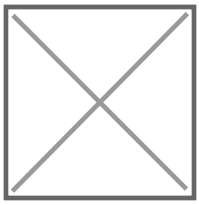


'These were some government initiatives, which have served the country very well. But now the tendency is a mushrooming of biotechnology courses in the country without proper quality and infrastructure, because the name biotechnology sells. This is something that has to be attended to. I think that we do not have quality control on many of the courses started by the university unlike the DBT courses. Indian scientists and researchers are a very large reservoir of trained manpower but in the

name crass commercialization we are systematically destroying the system that has helped them evolve. This is a matter of grave concern."

Prof. M Vijayan,
Associate Director, IISc, Bangalore

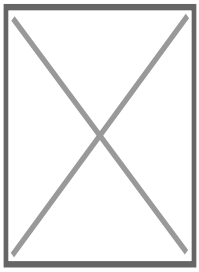
Potential of biotech industry



"The beauty of the biotechnology industry is that it has multifaceted requirement unlike software industry, which needs only homogenous skill. A company like ours has biologists, chemists, genetic scientists, microbiologists, mechanical, chemical, electrical engineers, regulatory people, doctors, lawyers and so on. This shows the huge potential of the industry in generating various kinds of jobs."

Ms Kiran Mazumdar-Shaw
Chairman and Managing Director, Biocon

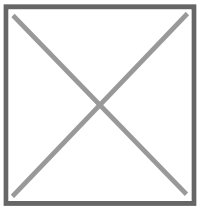
Human resource development in food biotech



"CFRTI offers a masters course (MSc) in food technology, which teaches a lot of biotechnology. The course incorporates investigational problems, which are biotech oriented. This degree program gives a tremendous amount of input to the students so that they go back to industry, work there and introduce the concept of biotechnology. The institute also has PhD students working in the different departments and about 1/3 of them (100 plus) are working on biotechnology in one-way or the other. We also have short-term courses, where we have the industries and entrepreneurs coming in. But, I would like to emphasize on their quality. Quality is nothing but knowledge and skill combined with the art of doing things with innovation. The quality of education at CFTRI should be a good benchmark for others to follow. Our food technology graduates are # 1in the country, and perhaps in the SouthEast Asia region also."

Dr V Prakash
Director, CFTRI, Mysore

Government research institutes vs the private sector?

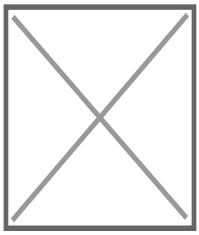


"Government institutes and the Indian private sector establishments span a wide range in terms of facilities. But the best government organizations offer facilities superior to the best private sector establishments at present. Moreover, government organizations like CSIR have a large network, which enables optimal utilization of pooled resources. Growth prospects have traditionally been better in private organizations but with the increasing trend to break out of time bound promotion patterns; the trend is likely to change. Salaries are relatively lower in government organizations but the freedom and creativity nurtured, factors, which are very critical in research, by the environment in a young and growing research institute like IGIB still attracts the best talent."

Dr SK Brahmachari,

Director Institute of Genomics and Integrative Biology (IGIB), New Delhi

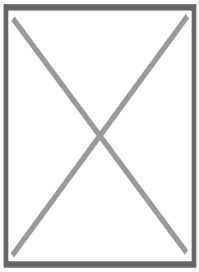
About current generation biotech researchers



"Though there is a general feeling that Indian science is going down but in modern biology and biotechnology first class research is going on in India. Researchers are publishing papers in high impact international journals. Thanks to government support especially the Department of Biotechnology that has promoted research by establishing centers, infrastructure and national facilities all over India. This is showing up today. Excellent science is going on."

Prof G Padmanabhan
Distinguished biotechnologist, Honorary professor, Indian Institute of Science, Bangalore

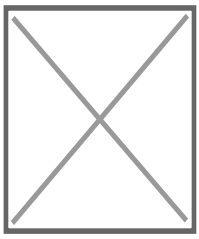
Synergy between government research institutes and the private sector



"The concept of R&D based pharma sector is fast picking up and private sector has invested in basic research for the discovery and development of new drugs. However, only a few disease areas are covered by these pharma companies as their selection is directed solely by the market size and business opportunities. The priorities of government institutions especially a drug research laboratory are driven more by societal welfare and knowledge contribution. Such institutions are therefore not only centers of excellence but also provide centralized infrastructure to cater to the practical skill development of students and mid-career professionals."

Dr CM Gupta
Director Central Drug research Institute (CDRI), Lucknow

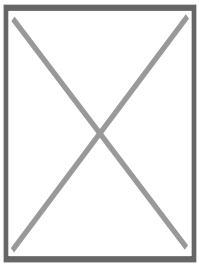
Future of BioPharma



"A biotech drug has no chemical substitute. Biotechnological drugs are in a much better position to establish the kind of therapeutics that are required. There is no treatment in those areas. When I started it appeared to me that in 10-15 years it is going to become more and more important. That is what is happening now."

Habil Khorakiwala
Chairman and Managing Director, Wockhardt Ltd

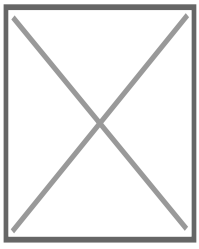
Opportunities in the clinical trials area



"The job categories could be multifaceted like coordinator, monitor, research associate, clinical research physician, trial materials manager, project manager, medical writers, data managers, data entry persons, lab technicians etc. The field requires postgraduates in the relevant field with a scientific background and bent of mind for clinical trials."

Rajiv Gulati
Managing director and chairman, Eli Lilly and Company (India) Pvt Ltd, Gurgoan

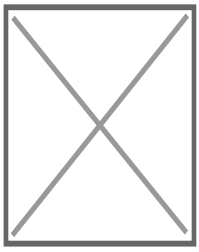
On human resource



"The biotech industry is a highly knowledge-intensive one and human resource is its prime asset and strength. Quite like the IT sector was in the early 90's, the biotech sector too is witnessing a lot of hype leading to expectations and is definitely a sunrise sector for any job-seeker. Hence, there is demand for qualified and experienced personnel. For the R&D job seeker, what is needed is the right exposure to the scientific way of working and the mindset to experiment and innovate. And patience to see R&D translate into commercial success."

Varaprasad Reddy
Managing Director, Shantha Biotech, Hyderabad

New entrants in this field should haveÃ¢â?¬Â¦



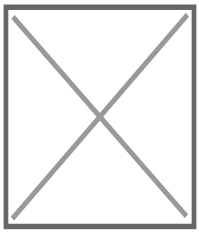
"We look for scientific performance, novel ideas, integrity, ability to provide leadership, ability to work in a team, desire to achieve goals in shortest-time possible and desire to apply the scientific knowledge into human cause."

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Dr Lalji Singh
Director Center for Cellular and Molecular Biology (CCMB), Hyderabad

Fusion of ancient wisdom and modern sciences



"India can develop world-class products by fusing ancient wisdom and modern sciences because new products cannot compete with products, which have only tradition and empirical observation as the knowledge base. The knowledge to be integrated into the traditional products has to emerge from modern science, especially modern biology and chemistry. Such fusion will lead to better definition of existing products, improved understanding of the mechanism of their action, modified composition at molecular level and better understanding of interactions amongst various molecules."

Dr RA Mashelkar
Director General, CSIR

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