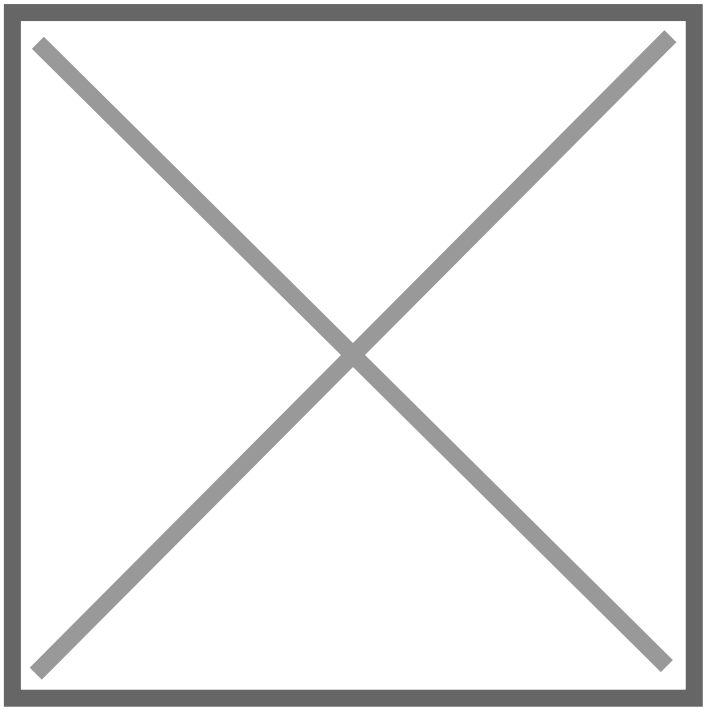
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Biotech Needs Leaders and PhDs

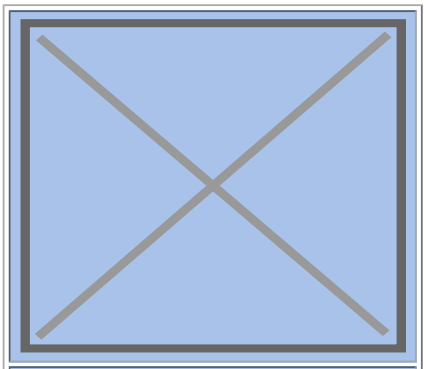
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Is biotech a hype? Where are the jobs? Will the industry absorb us? These are some of the questions that are crossing the minds of several students pursuing biotech education or wanting to study biotech. Dr MK Bhan, secretary, Department of Biotechnology (DBT) understands what is crossing the minds of the students and took an opportunity to address these issues with over 300 students who visited the BioAsia 2005 forum in Hyderabad from several colleges across the country.

Leadership is the key

Ã¢â?¬Å?There is lot of excitement being created among the people that biotechnology will solve their problems, especially in the areas of medicines and agriculture, which is



Dr MK Bhan, secretary, Department of Biotechnology (DBT), New Delhi

sometimes scary,Ã¢â?¬? addressed Dr Bhan. If the problems have to be solved, then research and innovation is the key. He reiterated that the department is incrementally adding components to function more efficiently, address the issues in the areas of intellectual property and implementation, adopt science-based regulation surrounded by public trust and good processes and finally a strategy in the area of innovation.Ã¢â?¬? These are being addressed by several people but once things are streamlined, India needs young people who can manage these issues and manage the changes, he emphasized..

Dr Bhan informed that a lot of measures will be taken to improve public-private-academia relations. His objective is that the regulatory and policy framework should inspire and motivate the industry to focus on discovery and innovation. Ã¢â?¬Å?The objective of the policy or strategies is to make this whole area innovative. The industry on its part should capitalize on the opportunities to create new ideas and concepts through R&D,Ã¢â?¬? he said.

Ã¢â?¬Å?There is a misconception that the country is lacking in skilled and qualified manpower. It is not the right kind of thinking since practical exposure in the industry is required for any qualified person to become skilled. What we are actually

lacking is scientific leadership. Without effective leadership, it is not possible to create successful enterprises,Ã¢â?¬? Dr Bhan noted. He suggested that universities and colleges should have programmes for students to imbibe leadership attributes. While the universities and colleges will do their bit, the students have to inculcate leadership qualities. Leadership cannot be created it has to be cultivated, he said.

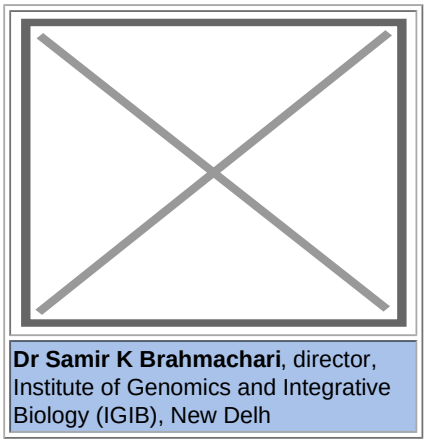
Dr Bhan cited the examples of Bharat Biotech International's director Dr Krishna Ella, Shantha Biotechnics managing director K Varaprasad Reddy, IGIB director Brahmachari and several other people who have pioneered biotech revolution through innovation and leadership qualities in the country. Quality education is a must and those with the minds to excel will be in high demand. He added that at this point of time the recruitment from campuses is low primarily because this industry is in a nascent stage and is maturing. Once this happens, scaling will be the issue for companies.

Ã¢â?¬Å?I would call upon you students to do PhDs. It will never be an issue to do PhDs. DBT has several scholarships and these will be given to you. My suggestion is keep yourself abreast with the developments in the industry. BioSpectrum is providing a lot of information on this sector and we would also make a lot of information available on the regulations, scope, IPR issues etc.,Ã¢â?¬? informed Dr Bhan.

Focus on innovation

Dr Samir K Brahmachari is the director of Institute of Genomics and Integrative Biology (IGIB). He studied from IISc. and was a professor there for a long time.

He was one of the first few persons who suggested that India has the skills to tap functional genomics and latch onto this opportunity



Dr Samir K Brahmachari, director, Institute of Genomics and Integrative Biology (IGIB), New Delh

as early as when human genome was being mapped. He has successfully transformed IGIB from an isolate biochemical research lab to a lab dedicated to genomics research, introducing innovative research collaboration models. Being a person, who according to Dr Bhan is very different, Brahmachari called on the student community to focus on innovation.

Dr Brahmachari stressed, Ã¢â?¬Å?Global biotech R&D needs to tap global talents as global R&D is increasingly becoming expensive. Biotech R&D also needs high capital investment and large pool of trained manpower in state-of-the-art technologies. Also the obsolescence of knowledge and expertise is very fast. Specialized manpower is in short supply and is very expensive. That is why India and Indian scientists and researchers have a great opportunity.Ã¢â?¬? Today, the success of Indian IT has attracted global attention and there is an inherent advantage for biotech and informatics. It is for the students to focus on whether they want to be in the back-end operations space or take up research. If they decide to go the research route, they have to work hard and focus on practical aspects.

So what should be the strategy for a career growth in biotechnology? He explained, Ã¢â?¬Å?Move from production centers to R&D centers. Focus on innovation than information. Take a path that is less chartered by others. Position your knowledge base in interphase science (interdisciplinary science). Researchers should patent, publish and prosper.Ã¢â?¬? He added that one should remember the underprivileged 800 million Indians while planning for a career. What is also important is the flexibility to take up new challenges and to utilize multidisciplinary expertise. He also called for reduced time cycle from concept to implementation, instantaneous building of skills to fill up the knowledge gap to compete for the future. He reasoned: Ã¢â?¬Å?the world has shifted from industrial age to knowledge age combined-with information technology. And the challenge is
multifold.Ã¢â?¬?

Ch. Srinivas Rao