"Biotech Is the Best Batsman in My Team" - KAPIL SIBAL

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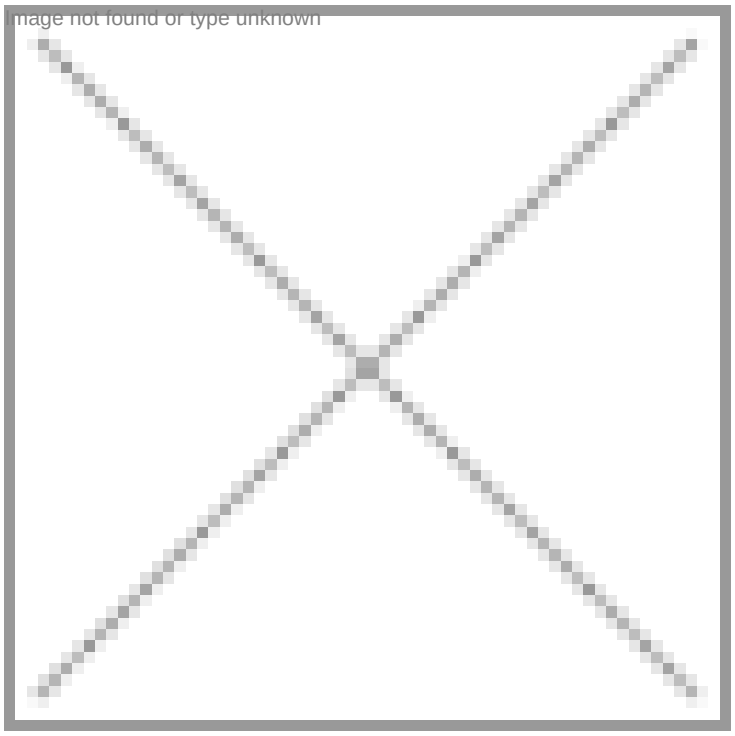

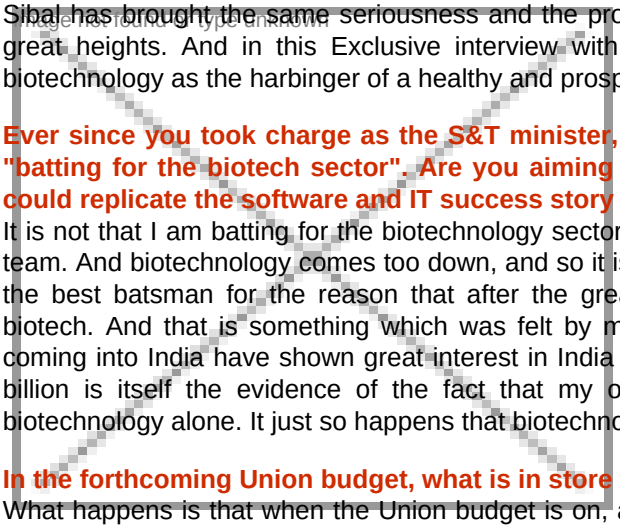

Sibal has brought the same seriousness and the professionalism of a celebrated lawyer to take Indian technology sector to great heights. And in this Exclusive interview with BioSpectrum's Rolly Dureha and N Suresh, he defends his faith in biotechnology as the harbinger of a healthy and prosperous tomorrow for India.

Ever since you took charge as the S&T minister, biotechnology has been one of your focus areas. You seem to be "batting for the biotech sector". Are you aiming to become a champion and an evangelist of biotech so that India could replicate the software and IT success story in this sunrise sector?

It is not that I am batting for the biotechnology sector but it happens that the science and technology ministry is like a cricket team. And biotechnology comes too down, and so it is the best batsman. I bat for everybody but biotechnology happens to be the best batsman for the reason that after the great success of information technology, the next great success story is biotech. And that is something which was felt by me and it seemed that I was right because a lot of biotech companies coming into India have shown great interest in India and the fact that the turnover of the biotech sector has increased to $1 billion is itself the evidence of the fact that my original perception was accurate. I bat for everybody, I don't bat for biotechnology alone. It just so happens that biotechnology is going to be the next success story.

In the forthcoming Union budget, what is in store for the biotech industry?

What happens is that when the Union budget is on, all that we are left with as a minister are our powers of persuasion. And how far anybody is persuaded is a matter for others to decide. Before the budget is announced or known, we will exercise those powers to the best of our abilities.

What is your vision for India with reference to the biotech/life sciences sector? How do you envisage the Indian biotechnology industry five years from now?

The growth in biotechnology and life sciences sector will be driven by the activities in the sectors of services, manufacturing and creation of new value added products. We should capitalize on our growth strength in research and development and IPR generation in the areas of vaccines, diagnostics, new medicines derived from utilization of traditional knowledge, value added products through application of food biotechnology, increased productivity through pest and disease resistant genetically modified crops and eco-friendly technologies. The biotechnology industry has already started showing encouraging trends and recorded an annual growth of 40 percent over the last 4-5 years. We envisage an annual turnover of $5 billion from the biotechnology and life sciences sector by 2010.

In the current year's Padma Awards list, an unprecedented five out of seven industry leaders are from the life sciences sector. Is this a signal of the UPA (United Progressive Alliance) government's increased emphasis on biotechnology as another major tool in ushering in a new social and economic order in the country?

The government recognizes the huge potential of biotechnology sector for ameliorating diseases, increasing food production and food quality, eco-friendly biopesticides and biofertilizers and improving the overall quality of life. This is a sector that has the potential for achieving economic development while meeting the social objectives. Research and development in industry has shown impressive growth and demonstrated the social commitment. Many individual scientists and entrepreneurs have made substantial contribution to the progress in this sector in the last few years. The government appreciates their contribution and expresses confidence in the strength of the scientists and entrepreneurs of the country.

When will the National Biotechnology Policy be unveiled? What are its unique features? Will there be any clarity on ushering in a predictable regulatory environment and a definitive statement on allowing transgenic foods?

The draft policy is ready. In fact, the document prepared is more than a mere policy statement. It addresses the strategies in different cross cutting issues and defines sectoral road maps. The National Task Force on formulation of the policy is meeting on February 25 to discuss the draft and make its suggestions. Thereafter it is proposed to be put up on the DBT website inviting public suggestions and views. The idea is to make the process as participative as possible. The whole process is likely to take 2-3 months more.

Has the government identified a specific sector - BioPharma, BioAgri, BioServices or BioInformatics - to focus upon and give it a special thrust in India?

All the four sectors are important and require proper thrust. BioPharma has the potential of providing affordable drugs for the masses, fighting diseases and improving the quality of life. We need BioAgri for improving productivity and quality of food. BioServices has the potential of providing substantial employment and India could emerge as a global leader in this sector. BioInformatics is a key tool to modern biology and this is absolutely essential for handling the large volumes for life sciences and genomic data which can be exploited for developing useful products.

Would you be refashioning the DBT's charter to make it play a more pro-active role in catalyzing the growth of the fledgling biotech sector? What are the steps taken by the DBT to strengthen this industry?

The DBT has made an excellent contribution in developing human resources and infrastructure, a contribution acknowledged by all. The DBT is strengthening its capacity; focusing its role in catalyzing research and development in the industry through public-private partnership and is working towards improvements in regulations, trans-boundary flow of biologicals, attracting FDI (foreign direct investment), promoting biotechnology industry by developing more biotech parks, making universities and R&D institutions more responsive to industry needs and providing scientists with enabling circumstances for cooperating with industry. DBT will keep itself fully abreast of the goals and plans of biotechnology companies and through an interactive approach and will act as a facilitator in the fulfillment of these goals.

Biotech entrepreneurs are finding it difficult to source the initial seed fund. Are there plans to set up a National Venture Fund?

The government is seized of the need for initial seed fund for promotion of biotech enterprises. Serious discussions are going on and various proposals are under consideration. Emphasis will be on pre-proof-of-concept funding for small and medium enterprises. The government will act as a pro-active partner in the effort to develop innovative products and processes for eventual commercialization.

How are they being addressed? When will the recommendations of the M S Swaminathan and Mashelkar Task Forces on setting up a comprehensive regulatory framework for biotech be implemented?

I expect the recommendations of M S Swaminathan and Mashelkar Task Forces to be implemented soon for defining clear science based protocols. An inter-ministerial group will seriously explore the feasibility of a single regulatory authority for biotechnology products.

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Although India has joined the Product Patent regime, many Indian and multinational biotech companies are not clear about how stringent will be IP (intellectual property) enforcement in India. How can the confidence of the industry be boosted ? for the country.

A number of steps have been taken to professionalize our ability in IPR protection. The Patent offices are being updated by recruitment of new staff and improvement in work efficiency supported by better equipment. IPR administration is proposed to be improved through creation of Patent Courts and adequate availability of patent attorneys. Science graduates will be encouraged to take up IPR related studies. Scientists and technology transfer professionals will be trained in IP protection relating to assessment of patentability, patent examination and technology transfer issues.

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Generation of specialized human resources is key to the growth of the biotech industry. How is it being strengthened and supplemented to cater to the future needs?

We recognize that adequate capacity in terms of number has been created for training in biotechnology and life sciences at the Masters level. However, the emphasis at the Masters level will be on improvement in quality by increasing hands on training and industry exposure. Quality of teachers will be improved through a substantive teachers training program. Additional post-graduate teaching capacity, will, however, be created in certain niche areas where there are deficits. The number of Ph.D and Post Doctoral fellowships will be increased for creating high end professionals who would act as leaders in research and enterprise development. Emphasis will be given on training of technicians to meet the industry needs. Special technician training schools are proposed to be created for addressing this key requirement.

Some of the biotech tools can provide the capability to transform India's barren landscape with salt-tolerant crops, drought resistant plants and also help in quick development of mangroves and other natural barriers on our vast coast line and reduce the impact of natural disasters like tsunami, cyclones and drought. Will you give priority to some of these areas?

You have rightly identified the country's need in this important sector which provides livelihood to 70 percent of the country's population. Research focus in agriculture technology will be on salt-tolerant, drought resistant crops that are resistant to pests and diseases. The approach will be to address both biotic and abiotic stresses. There will be a special focus on marine biotechnology considering the long coastline and huge potential of this country in this sector.

You had recently gone to Antarctica. What are the growth possibilities for biotechnology/science and technology in that region?

We are doing many experiments in Antarctica. Antarctica is a no man's land. The only three things that survive in Antarctica are lichens, mosses and a particular species of spider. There is no other life in Antarctica. Of course, we are discovering some microbes in Antarctica. Of the 120 microbes discovered there, 20 were discovered by Indian scientists. But it is a long way to go. It is not something that will happen overnight. But we have continued to maintain our experimental station in Antarctica. For us it is the land untouched by human beings and we would like it to remain like that. Just as we would like to find out about our roots, likewise we would like to know what are the roots of the universe. And Antarctica is the best place to

start discovering.

How do you perceive biotechnology in the interest of the common man?

Oh! Fundamentally. Science must never bypass the common man. I have been saying this for a long time. Biotechnology in particular is of interest to the common man because essentially it deals with three things: agriculture, which is of great interest to the common man, health, which is fundamental for his survival and the environment, which is fundamental to the survival of the humanity. And all these three things touch the common man in a big way.

What is your opinion about BioSpectrum?

It is an outstanding magazine. It needs to, like science and technology in this country, give itself greater exposure. The more you reach out the more successful you will be.

Rolly Dureha and N Suresh