

The Science Ambassador

14 December 2006 | News



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Kapil Sibal has brought the same seriousness and the professionalism of a celebrated lawyer to take the Indian technology sector to newer heights. He strongly believes biotechnology will be the harbinger of a healthy and prosperous tomorrow for India.

Such thoughts have greatly endeared him to the biotechnology industry and industry leaders feel that he is the most articulate spokesperson of the Indian life sciences sector. He has spearheaded numerous initiatives for the biotech segment, like setting the roadmap for the biotech industry through the National Biotech Draft Strategy; simplifying the regulation for biotech drugs via the Mashlekar Committee report on recombinant pharma; encouraging SMEs through the Small Business Innovation Research Initiative (SIBRI) scheme and a legislation on the lines of the Bayh-Dole Act is in the pipeline. BioSpectrum jury members unanimously decided to acknowledge the contributions of Sibal with a Special Award for his leadership.

Kapil Sibal is largely known as a brilliant lawyer; one of the most articulate faces in the Congress party and the current Cabinet Minister for S&T, but what rarely comes to the fore is the incredible energy and passion with which he takes up every enterprise.

The dynamic minister has always risen beyond the call of duty and given a moral and strategic boost to the science sector. He became the first Indian minister to visit the glacial continent of Antarctica in early 2005. Leading an eight-member team, the minister trudged across the deep snow and ice in which Indian scientists have toiled for the past 23 years and worked on a plan for strengthening the Indian Antarctic program.

During the past two years of his tenure, he has not only acted as the "Science Ambassador" of the country but has also brought a unique professionalism to the science and technology portfolio. Championing the skill of Indian scientists, the competitive Indian industry and the vast natural resources, he has made luminaries sit up and take notice of "Brand India" at international forums. As a result many joint cooperation programs have taken off and numerous bilateral agreements signed. For example, under his leadership, the Indo-US S&T Cooperation has reached new heights. The Inter Governmental S&T Cooperation Agreement, which could not be signed over the last 15 years due to non agreement on sharing of intellectual property, was signed last year.

Prior to his current stint as a minister, he was a leading lawyer and an expert on constitutional law. A lesser known fact is that before Sibal embarked on a career in law, he was offered appointment to the Indian Administrative Service, but he declined to accept the offer. After completing his LLM from Harvard Law School, US, he joined the Bar in 1972 and became a senior advocate in 1983. As proof of his leadership skills, he was elected president of Supreme Court Bar association twice in 1995 and 1997. He hit the national limelight when he put up a successful 10-hour marathon defense of Justice V Ramaswamy, then a sitting Supreme Court judge, during an impeachment motion in the Parliament. He has represented one party or the other in almost all landmark decisions given by the Indian Supreme Court in the last 20 years. In 1998, he was elected to the Rajya Sabha and later in 2004 he made a grand entry to the lower house of Parliament by defeating one of India's highly popular television actress, Smriti Irani from Delhi's Chandni Chowk constituency.

Predicting that biotechnology is going to be the next success story, he opined, "India is today being perceived as a major player in the biotech sector contributing increasingly to the share of global biotech products, both in the pharma and agriculture sector. India is also a major destination for clinical trials today. With the increasing thrust on promotion of innovation in both public and private laboratories and an enabling environment created by the government to promote public-private partnership, India is today being seen as major collaborator by nearly all developed countries."

Recognizing his efforts in the scientific arena, he was elevated from Minister of State with independent charge of Science and Technology and Ocean Development to Cabinet Minister for science and Technology and Earth Sciences in the Union Cabinet in January this year.

In spite of being a prominent public figure and an inspiration to many in the law fraternity, he modestly maintains, "I do not know if I am an inspiration to young lawyers because I think that there is no recipe for success. Aspiring lawyers may look at me as somebody who has achieved some success in the profession. But inspiration is something that they must draw from themselves; their own commitment to law, to society, a passion for law, desire to vindicate the rule of law and to embrace it. That should be their inspiration." When asked about his role models, he replied, "I cannot say that I have any role models but I have been certainly influenced by the levels of excellence achieved by some members of the legal profession, who I greatly admire. And, perhaps, the man who inspired me most was Nana Palkhivala, for a variety of reasons. One, his intellectual capacity was phenomenal and so was his humility. A man who could reduce the most complex issue to its simplest form which can be understood by a layman is an art that I have seen none other to possess."

A family man to the core, in a rare glimpse of his personal life, he said, "My family is and has been very dear to me. My

children, in a sense, give the kind of joy that makes life worth living. My first wife, Nina, died in 2000 and that loss has impacted me and made me understand how precious life is and how precious love and relationships are. My present wife, Promila, is a woman of extraordinary love and a true partner. My family, I think, is largely responsible for what I am today."

On assuming that his whirlwind activity schedule would be leaving him no time for leisure, he clarifies, "I believe that every man has enough time for leisure and those who say that they have no time are certainly bad managers of time. If you have a clear objective, a clean conscience, your decision-making processes are easy. At the heart of every complex problem is a simple solution based on equity. If you follow this path, then decision making is not time-consuming and leisure helps you to sit back and absorb yourself in an environment which brings you joy and happiness."

"Music brings me joy, reading is a constant source of happiness and cooking to satisfy my more mundane needs. And cooking of the family is the most joyful experience," he says with a smile.

Voicing his dream for the sector, he said, "Globally it has been well recognized that the Indian biotech sector is today moving at an accelerated pace, as never before. Our country has enormous strength in terms of a large pool of human resource, rich biodiversity and adequate infrastructure. Coupled with the government support and initiatives to promote the biotech sector, there is a distinct advantage available to make India a super global player in this sunrise sector. I think this sector will take the country forward and achieve the growth rate of 8 percent GDP that we have been talking about."

Rolly Dureha

Leadership Award

Kapil Sibal

Position: Cabinet Minister for Science and Technology, Ocean Development and Earth Sciences

Date of Birth: August 8, 1948

Academics: MA (History) from St. Stephen's College, University of Delhi and LLM from Harvard law School, USA

"We need to have a Team India spirit"

From a brilliant lawyer to an outstanding S&T minister, how do you trace this journey?

I can talk of my journey from a lawyer to a minister. I cannot either comment on the 'brilliance' or the 'outstanding'-the expressions that you have used in your question. I think that it has been a fascinating rollercoaster ride. A lawyer's journey is an opportunity to absorb knowledge as one moves along. That is the most fascinating thing about the legal profession. One deals with different societal issues encapsulated in a dispute, so one gets a microcosm of societal tensions in the form of litigation. Thus, one understands society much better in the profession of law than in any other profession. And, science is all about society. Science is also all about learning, about absorption of knowledge, and about understanding.

As a lawyer one must have patience to understand issues and empathize with them. I think that science is just the same thing. A lawyer, as he or she goes up the appellate structure, faces many failures before he or she succeeds. In other words, a failure becomes a stepping stone for an increasing endeavor to succeed; same is the case with a scientist. A scientist must also build on his failure because success cannot come without failure. So this journey has been exciting and the wonderful thing about the journey is that it has led me from the microcosm of a dispute to solutions at the macro level; from solutions involving individuals to solutions impacting society. And that is what is exciting about this journey.

What do you consider your significant achievements, especially in the life sciences segment, since taking charge?

In the last two years the biotechnology sector has seen a tremendous boost especially in terms of promotion of innovation both in the public and private sector (especially SMEs), human resource development, public-private partnership, creation of specialized centers of excellence and creating an enabling environment for product development and commercialization. The biosafety procedures have been simplified. The Mashelkar committee report in recombinant pharma products has been accepted and it has come into force from April 1, 2006. The concept of a Single Regulatory Authority for clearance of biotech products has also been accepted in principle.

A National Biotechnology Development Strategy has been formulated, which gives a clear framework for implementation and operationalization of various schemes in order to accelerate the bioindustrial growth in this sector at a faster place. R&D in the small and medium enterprise is being encouraged and an enabling mechanism is being developed to build in-company

technology capabilities. A major initiative has been the launch of Small Business Industry Research Initiative (SBIRI), which provides grant/soft loan to SMEs for pre-proof of concept and late stage research. A special program for assisting industrial research and facilitating public partnership with large industries is on the anvil.

The rich human capital is a strong asset for this knowledge-based industry and through sustained support; the human resource development programs have generated a rich pool of scientific talent pool of nearly 4 million which is the second largest after the US. Approximately, 15,000 bioscientists are engaged in this sector. Initiatives are being taken to improve the quality of human resource to meet the specific needs of both industry and academia. There are specialized technical services, which are required and for this high quality training programs are being supported. It is imperative that the thrust is now more on quality than quantity.

The biotech industry is presently growing at an annual rate of approximately 40 percent with a market size of \$1.4 billion. The biopharma sector accounts for the largest share with increasing investment opportunities in vaccines, diagnostics and therapeutics. The bioindustrial and agri biotechnology sectors are also growing rapidly in addition to bioinformatics industry which offers opportunities for data mining, gene annotation and development of software. India is emerging as an important destination for biomarkers and validation services. This is mainly because the cost of technology development in our country is far cheaper than that in US, or other countries of the developed world. It is important for us to exploit this potential to its maximum.

Promotion of biotech parks and incubators has contributed significantly to this field. The state governments have also recognized the potential of this growing sector and are now coming forward for supporting infrastructure establishment in the form of biotech parks and incubators. Several states are setting up bioclusters, which help in promoting public-private partnership and forging links between the industry and academia particularly for up-scaling and validation of the research leads for product development and commercialization.

What is your further vision and plan for the life sciences arena in the country?

As envisaged in the biotech strategy, the opportunities in the biotech sector are enormous and the market trends indicate a potential for exponential growth in the next few years. The Indian biotechnology sector has large dreams and we look towards a \$9 billion industry by 2007-08. Our enormous strength in the R&D sector is an added advantage. There is a vast chain of well-equipped national laboratories, which have highly experienced human resource and world class infrastructure and skill human resource available. It is essential to have well structured enabling mechanisms put in place to promote the levels of innovations and ensure proper translation of knowledge to products and processes which can be effectively commercialized. To facilitate this, the policies on intellectual property and regulatory frame work are being streamlined within the existing rules and regulations. A major thrust is being laid on promoting industrial growth. The policy goal is to enable the biotechnology industry to achieve sustained growth in productivity, enhance employment generation, achieve international competitiveness and transform India into a major partner and player in the global arena. An enabling environment is being created for the industry to utilize India's potential and strength in manufacturing, contract research services and discovery based product development. Innovation in biotechnology occurs largely in small and medium companies. There is a need to synergize public sector creativity with private sector management excellence to create world class technologies through a variety of public-private partnership models. Improved availability of funding for early, pre-proof of concept research, including public support is critical.

Your message for the scientific fraternity...

It is to have a Team India spirit. We may work in different departments, we may be heads of institutions, but we must remember that we work for India and so our efforts, collaborative in nature, should address the problems of the common man. To solve them, you need passion, inspiration, excellence, and you need to move on even if you fail. The challenge is to convert failure to success. But the ultimate success lies in improving the lives of our fellow beings. A clouded hour of glorious life is worth an age without a name.

What they said...

As Science & Technology minister, his contributions in bonding ICMR with S&T departments has been immense. His sharp mind which can analyze things and reach to the core of the problem, has again helped move the capacity of the S&T departments as well as overall capacity of science in India. A large number of things happened during his time like setting up of a Earth Science Commission, seeds of the National Science Foundation, opening of new major institutes etc. Sibal has a rare innocence which permits him to strongly believe in his people and that has been another major reason for his success.

[Dr NK Ganguly, Director General, Indian Council of Medical Research](#)

Kapil Sibal was the best thing that could have happened to Indian science. He is unquestionably the best minister of S&T that we have had. His thinking is mercurial. His speed of thought and speed of action is something that I really marvel at. He has brought a new sense of dynamism and purpose to the ministry of S&T. He believes in openness, transparency and action. I must say that despite being a scientist over several decades, I learnt so much from him in terms of the way science and technology can potentially impact society and also the way S&T needs to be communicated to the society.

[Dr RA Mashelkar, Director General, Council of Scientific and Industrial Research](#)