

Dr R A Mashelkar: India is capital-starved

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A highly respected name in the Indian bioscience industry, Dr Raghunath Anant Mashelkar has been known for his critical role in shaping India's science and technology policies. He has been propagating a culture of innovation and balanced intellectual property rights regime for over a decade.

He was the director general of India's flagship public science organization, the Council of Scientific and Industrial Research (CSIR), and also a member of the Scientific Advisory Committee to the various cabinets that were set up by successive governments in India. Presently, he is the president of Global Research Alliance, a network of publicly funded research and development institutes from Asia Pacific, South Africa, Europe and the US, with over 60,000 scientists.

As India is observing 'India decade of innovations 2010-20', *BioSpectrum* spoke to Dr Mashelkar about challenges before the bioscience industry of India, the innovations that are needed by the country and much more. Excerpts of the interview:

What does innovation mean to you? How relevant is it to today's India?

In a simple language, innovation is creating ideas and then turning them into something that benefits large sections of society. India being a capital-starved country faces challenges apart from sustainable growth. Therefore, given the scarcity of funds in the present context, I would say "less from less" is not the answer but "more from less" is the solution. Unfortunately, we don't have those extra millions to spend on various initiatives of importance.

There is need for the work flow changes to adapt to new requirements. One may ask what is common between selling a burger or an eye-care treatment. It is the sharing of expertise that matters and that make the industries grow. Moreover, the essence of education is to mix multidisciplinary aspects to create something new and useful.

What initiatives does India require for the improvement of drug development?

With modern science we can find completely different way of doing things. I think doing things differently in the domain of drug discovery is the way. To be able to create a discovery process that leads to world class molecules, including new drugs within the existing funds, is a challenge. One has to do things uniquely.

The Open Source Drug Discovery (OSDD) initiative of the Council for Scientific and Industrial Research (CSIR) saw participation from 130 countries, which were looking to innovate for product development at a minimal cost. Creating new incubators and having more partnerships will certainly lead to more outcomes.

You spoke about the relevance of translational research. How effective is this in present context in India?

How do we move forward on a very challenging path ahead, is clearly the question. In biopharma, translational research is the key. Yet, choosing our own model for translation is necessary. The Department of Biotechnology (DBT) headed by Dr MK Bhan is doing a great job. They are creating new institutions and mechanisms for research. It will take time but I am sure the results will be long term.

What is your opinion on the efforts to streamline regulatory affairs especially the Biotechnology Regulatory Authority of India (BRAI) bill?

It is very unfortunate that the BRAI bill is still pending before the parliament despite it being a very important step for the growth and benefits of the industry. It looks like that the government is keen to move forward in this regard.

During my recent interaction, the health minister Mr Ghulam Nabi Azad expressed his deep concern on the pending of the bill due to various other issues. However, one has to understand that sometimes there are delays in policy procedures. Yet, I am quite hopeful of its early implementation.

Are you satisfied with the implementation of various reports submitted by the panels headed by you?

Fortunately, I was provided with an opportunity to head many committees to recommend key policy initiatives. The first one on R&D investments in drug discovery in the year 2000, was for creating a fund of \$27.2 million (Rs150 crore). Its successful implementation has benefited many deserving entities.

Similarly in the other numerous reports, the recommendations were made keeping in view the welfare of the various stakeholders at large. I am happy that one part of my report on tackling of spurious drugs was implemented. However, the second part on the drug regulatory system is still pending. I sincerely believe that the government implements them too.