

# "Last one decade has been astounding�

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# Q: How do you look at the importance of having international collaborations and your take especially on the Indo-Japanese one?

There are various aspects that we have to look into. Indian science in itself needs to invest substantially more in international collaborations. Because fundamentally India has many challenges. If you want to excel in science and set an example but have centers of excellence somewhere else in the world, no matter how much money you invest, you would never become a world leader rapidly. It will take you a hundred years. If we want to do it faster, we must collaborate with the best internationally. We must invest in these collaborations in a big way. Second point is that the money is not enough. There needs to be culture of friendship and a desire to interact.

The nice thing about our interactions with Japan over last 30-40 years, we have built a friendship. So it is not that we are arbitrarily interacting with them. We are infact interacting with our friends. Our collaboration with Tokyo on important programs in various areas is just an outcome of that. With so many of those now, we must push them in a big way. We must really make sure that Japan is the best destination for Indian students and post docs and vice versa.

# Q: You recently talked about finding indigenous solutions for fixing our own problems. What did you actually mean by that?

I think it is a complex situation. Lets take the example of antibiotic resistance. In the west where primary healthcare is accessible, where one can test every infection to see whether there is variety of bacteria or not and then administrator an antibiotic. These kinds of solutions for antibiotic misuse are very different from the way regulations happen in India. We have the antibiotics needed to cure widespread infections, yet have to rely on collaborations with the world. What I meant was that India can be a world leader, not only in science and technology but in other areas as well but we also need to look at how we deal with such problems. So, our values will be important in defining solutions to produce world class science and in any other context.

### Q: DBT had sought comments on revised national biotech policy draft. What is the latest on that?

We have received very interesting suggestions and comments, and have closed the same as per the deadline few days ago. Based on the valuable inputs, we are hopeful of formulating a much improved version of the policy.

#### Q: In a talk you mentioned that postponing decisions is hurting the sector. Could you please explain?

I think this is a very important area and all of us need to improve. Our regulatory system for example is under criticism. Let us take the example of GM crops. The discussion moved from safe or not to a level where people are talking at cross purposes. Scientists can demonstrate that GM crops are safe and it is perfectly safe to use them. The regulatory system which is required for further introduction of the crops has to be replaced. It has been criticized by activists and that it needs to be overhauled and implemented in a sensible manner, is not difficult to understand and agree upon. However, it is not to be confused with market forces that many activists are against. But that is a separate kind of debate. If you have complex regulations, then the only people who can go implement them are big companies, who the activists themselves criticize.

If you have correct regulations, then you stimulate local and international collaborations, academic and industry interactions. In our context, a regulatory system must be accessible to the public, and not be so impossible that only the very rich and those who have the capital can go through. So that is an aspect which we must fix soon. And I think it will be fixed.

Similarly clinical trials are facing the same situation. We cannot say that we will not have them because a regulatory system is not there. Therefore, we will import drugs from everywhere else. It is important that to place drugs in a corporate system, they have to be manufactured in India. But the other side is that the comparison must be in a responsible manner and conducting clinical research in a fair manner. That is very important. The industry needs to convey that clinical trials are for the public good. There is a perception that industry wants to do research for profit. So the industry must say that the profits are a consequence of doing public good, in terms of doing research and drug discovery.

#### Q: How do you look at the last decade? What do you think of the progress?

It has been extraordinary for the following reasons. A decade ago, we would never have thought that the Indian generics industry would have such a role in biosimilars. No one thought that the vaccine industry will shape up in this fashion. We should not be despondent when we find problems. Because India has got all the components for doing superbly well but it is just that the components are not coming together. It would be easier to put them together than invent new ones. So there is no question that we cannot produce the best, just that this last decade has been astounding. In this decade, what we are going to see is the change in academia-industry interaction in innovation research, transforming world class generics and vaccines of relatively standard kind. It's going to happen.

# Q: DBT has started working in areas such as re-inventing the toilet programme and women empowerment. Critics say that its diversion from core agenda?

It is right and wrong. I will tell you how! The issue of sanitation has a core aspect which is related to biotech in terms of infection, diseases and waste management. So, DBT can decide on the core areas of interest as well as on this issue, whether DBT will just focus only on biotech part and leave it at that. The challenge in our country is not just to invent a solution but interact with other ministries to make it happen.

So, DBT is not getting into this area in a big way. It is a necessary step because S&T is key to sanitation and waste treatment. Similarly if you look at women and child health, there are all sorts of solutions that can be offered by other ministries but it requires each of us to have an understanding of science and technology. And DBT does not pretend that it can bring about the magic but it can bring a scientific understanding and implementation of each of these steps. It is an important point both in sanitation and maternal health. It is becoming increasingly clear that it is important for DBT not withdraw from these areas for the following reasons: We have a large young population that needs better nutrition and sanitation. It is important for the development of a country like India. Indians from 0-5 years of age have got more stunted growth than even sub Saharan Africans. Understanding the biology of that and treating people who have grown up under those conditions and see whether the reasoning is possible is a fundamental and very important question. We need to partner with ICMR and other important departments. It is a matter which DBT could not have ignored and would say that it would have been a crime to do so.

#### Q: How has your tenure been and what are the priorities here?

Well, I have been here over more than a year ago and it is not about me or anybody else. It is important to understand that Dr Bhan who was there for eight years did a great job. My job is to work with an excellent team to take that forward. The last two years have been difficult because we have got an extra-ordinary high allocation but a small release of funds. So our job now is to ensure that our allocated funds are released in next three years of plan to match. So there is a huge challenge there. But I don't see my role apart from being a facilitator. We have an extra ordinary team and DBT performing extra-ordinary duties.

### Q Are you satisfied with the fund allocations that have been made for the DBT?

We need to have doubled allocations if we have to catch up with the planned allocation. We have been getting roughly about Rs 1,500 crore a year and allocated is Rs 1,800. We need to go upto Rs 2,500 crore a year and make case for few exciting programs that we can spend well. We can spend a lot more and thus partner with other ministries to spend money more wisely. Money is not a problem but it is more about inter-ministerial meetings.