

# “Vaccine delivery and affordability are major bottlenecks”



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Dr Davinder Gill,  
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**H**illeman Laboratories has recently entered into a collaboration with Imperial College London, Engineering and Physical Sciences Research Council (UK) and other premier international bodies to work towards low-cost vaccine manufacturing. This collaboration involves working with the Developing Countries Vaccine Manufacturing Network on manufacturing projects in India, Vietnam, Bangladesh, Uganda and China. Dr Manbeena Chawla from BioSpectrum spoke to Dr Davinder Gill, CEO, Hilleman Laboratories to find out more about such developments. ***Edited excerpts:***

## Besides international associations, what developments are taking place in India?

Very recently, Hilleman has signed a Memorandum of Understanding (MoU) with National Institute of Cholera and Enteric Diseases (NICED), an Indian Council of Medical Research (ICMR) organization for further development and commercialization of the Shigella vaccines and other enteric vaccines for diarrheal diseases. NICED comes with a variety of strengths in research and developing strategies for treatment, prevention and control of enteric infections. This will also be a strategic shift for Hilleman, since till now, our focus has been to optimise existing vaccines and address the gaps in low resource settings. We will now endeavour to develop an entirely new line of treatment and we look forward to jointly abating this fatal disease which threatens the nation's health. Besides this project, we are exploring some more options in India, which are yet to be developed. We are also working on a project for a vaccine on toxic E Coli. It is a new area since there is no approved product for that till now. In general, we have made some very good progress in the last couple of years in terms of business. Few of our vaccines have reached the late

stage clinical development. Both of our Rotavirus and Cholera vaccines are in phase 3 clinical trials. We are also looking into new product development to bring to our pipeline.

## What are the main challenges before the industry?

Vaccine R&D is capital intensive and a lot of time goes by in the research. It also depends on how much the government is willing to spend and on which all vaccines. But of course the industry will not be aware of the government scenario before it starts working on the research of a particular vaccine. So one has to be ready to take much bigger risks while conducting the vaccine R&D as compared to other pharma products. But more than that it is the vaccine delivery pipeline which is more challenging, especially in India. New vaccines get introduced into our immunization programme but the delivery pipeline is getting quite saturated. Since we have a heterogeneous population, we need to assure that whatever vaccines we have in our pipeline gets effectively delivered. Unless the delivery of vaccines is effective enough, there is no point adding new products to the existing pipeline. Many countries are facing this problem. We need to improve the total healthcare system. Vaccine delivery and affordability are the major bottlenecks.

## How is Hilleman addressing those?

At Hilleman, we pay attention if there are complications with regard to effective delivery. Another challenge we are looking into is that Instead of injectable vaccines, we are trying to explore possibilities of developing more of oral vaccines. For example, many groups are working on Shigella vaccine but we are planning to work towards developing an oral form of this vaccine. To conclude, one more challenge that needs to be addressed is the vaccine dosage. For our cholera vaccine, we are asking the question whether we can make a single dose vaccine. By reducing the vaccine dosages, a lot can be eased out.

## Do you think India is losing ground to China and South Korea with respect to vaccine export?

The scale at which vaccines are exported from India is quite unmatched. Countries like Korea cannot compete with that. Also, the cost of doing business in Korea and China are increasing now as compared to India. Besides, the recent scandal engulfing the vaccine industry in China has never been heard of in India. But of course, India will surely remain competitive in the long run. **BS**