Slowly, but steadily the Indian pharma and biotech companies are carving a niche for themselves. Not just that, they are now becoming an important destination to source vaccines worldwide too.

**INDIA'S SHARE**

"Many developed countries are no longer interested in producing vaccines for various infectious and communicable diseases as their production has become uneconomical due to drastic reduction in prices and less access to markets in the developing countries. India along with other developing countries such as Indonesia, Cuba, Brazil supplies 60 per cent of UNICEF's global requirement for EPI vaccines. This is a remarkable achievement. We (India) are now self-sufficient for DTP group of vaccines (DTP, DT, TT)," informed Dr Krishna Ella, CMD, Bharat Biotech, Hyderabad.

The initial costs of vaccine manufacturing are still high. But indigenous manufacturing holds the key. "When Bharat said it would manufacture Hepatitis-B vaccine in 1995 for less than a dollar nobody believed us. But we have gone on to prove that this could be done. so long term planning is really the key," observed Dr Ella.

**Bharat Biotech**

The pinch hitter

Bharat crossed its first milestone in October 1998, by developing and manufacturing Revac-B, a vaccine for Hepatitis-B using a Recombinant DNA technology route. The company claims to have pioneered the manufacture of the world's first Cesium Chloride free Hepatitis-B vaccine with the discovery of HIMAX technology, a novel purification matrix. Over 35 million doses of Revac-B have been sold so far in India, Africa and Latin America. Further, its facility for Hepatitis-B is the second largest in the Asia-Pacific, with a capacity of 100 million doses per annum.

In May 2003, Bharat launched TYPBAR, a new generation typhoid vaccine. It is a highly purified Vi Capsular Polysaccharide Typhoid vaccine manufactured as per WHO guidelines. Bharat's manufacturing facility has a prefabricated typhoid vaccine plant with a capacity of over 30 million doses per annum, added Dr Krishna Ella, CMD, Bharat, "We are the first Indian company to manufacture a vaccine, HibTITER for Wyeth Lederle, a giant health care products company through contract manufacturing." Besides, the company has been awarded research grants from the Bill & Melinda Gates Foundation. Coming to vaccine manufacturing in India, innovation is the key. The outside view is that we are capable of making only conventional vaccines using older technologies unencumbered by intellectual property and that we have no capability to develop new products and are depending on technology transfers from large MNCs. But companies like Bharat has proven that by innovation, we can aim to make vaccines affordable to every human being in this country. Dr Ella added, "Bharat is right now working on commercially developing a vaccine for Rotavirus. We are working with CDC Atlanta, All India Institute of Medical Sciences and Indian Institute of Sciences, Bangalore. Standford and the National Institute of Health are supporting this effort. Funded through CVP-PATH by Bill & Melinda Gates Foundation, the project is progressing as per its milestones and we will give it for clinical trials by the end of this year. Rotavirus vaccine would be a tremendous achievement."