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Bharat Biotech Launches Typbar-TCV™, world's first clinically proven typhoid conjugate vaccine for infants 6 months & older and Adults

The new vaccine brings hope to millions of adults and infants older than 6 months, by protecting against typhoid fever caused by Salmonella typhi, a highly virulent and invasive enteric bacterium

Hyderabad, India, August 26, 2013: Bharat Biotech (www.bharatbiotech.com) today announced the launch of World's first clinically proven typhoid conjugate vaccine Typbar-TCV™, a fourth generation vaccine against typhoid disease, proven to provide long term protection to adults and infants 6 months & older. Currently available Typhoid vaccines fall short in two major characteristics, namely long term protection and protection for children below 2 years of age, the population that needs it the most.

During its development since 2005 **Typbar-TCV™** was evaluated in ~1200 healthy subjects at 9 clinical sites. In the pivotal ph III clinical study, **Typbar-TCV™** presented 98% seroconversion in infants aged 6 months to 24 months, 99% in children between 2 to 15 years of age, and 92% in the 15 to 45 year age group, as measured by 4 fold increase in serum IgG responses. It proved to be superior to the Vi polysaccharide typhoid vaccines. **Typbar-TCV™** was also safe and well tolerated in all tested age groups.

"Typhoid fever remains an important public health challenge in many countries of the world mainly because of poor diagnostics and increasing resistance to antibiotics. At present fundamental prevention strategies like improved sanitation, good hygienic practices and access to clean water are still out of reach for many impoverished communities. One of the most cost effective approaches to prevent infectious diseases, are vaccines which are available now and could help control the disease resulting in reduction of unnecessary suffering and adverse financial consequences." **Dr. Christian Loucq, M.D., Director-General of the International Vaccine Institute (IVI) said.**

Typhoid fever is a life threatening illness caused by the bacterium *Salmonella typhi*, which is transmitted through food or drink contaminated by the faeces or urine of infected people. Symptoms include high fever, malaise, headache, constipation, diarrhoea, etc. Healthy carrier state may follow acute illness. It causes between 250,000 to 600,000 deaths and 20 million illnesses per year, affecting mostly school-age children. The World Health Organization reports 90 percent of typhoid deaths occur in Asia and persists mainly in children under 5 years of age. In India, Typhoid fever is observed throughout the year and a greater number of cases coincide with the rainy season. While typhoid fever can be cured by antibiotics, resistance to antimicrobials is widespread along with poor diagnostics, hence prevention of typhoid fever is better than the cure.

Acknowledging the effort of his team of scientists that led to this innovation Dr. Krishna M. Ella, Chairman and Managing Director of Bharat Biotech said "Bharat Biotech's Typbar-TCV™ induces 'T' cell dependent response with much higher antibody levels providing a very high rate of immunity. We hope this vaccine will reach millions of people and help reduce the burden of this devastating disease in infants and children." Dr. Ella added.

Bharat Biotech has commenced commercial production of Typbar-TCV™ in pre-filled syringes in its world class vaccine production facility in Genome Valley. The plant has capacity to produce 10 million doses each year, expandable to 50 million doses per year in the future. Bharat Biotech is the largest producer and supplier of Vi typhoid vaccine in the world having distributed over 50 million doses globally. **Typbar-TCV™** is available for supplies to global markets such as South East Asia, South America, Africa, Central Asia, and South Asia.

Bharat Biotech is an active member in the Coalition against Typhoid (CaT) a global forum of scientists and immunization experts working to save lives and reduce suffering by advancing typhoid vaccination in high burden communities. http://www.coalitionagainsttyphoid.org

About Bharat Biotech

Based in Genome Valley India, Bharat Biotech (www.bharatbiotech.com) is a multidimensional Innovation- oriented biotechnology company specializing in R&D, Manufacturing and Distribution of vaccines and biotherapeutics with a focus on developing novel vaccines for region-specific neglected diseases in compliance with Global IPR. Built with an investment of over USD 100 million, Bharat Biotech is the first bio-pharma facility in India to be approved by Korean Food & Drugs administration (KFDA). Innovation at Bharat Biotech has resulted in products such as Revac-B^{+®}, REGEN-D[®], HNVAC[®], etc, and vaccine candidates against rotavirus, Japanese encephalitis, chikungunya etc. The company has pioneered the development of a novel rotavirus vaccine, the first in India catering to the requirements of developing world populations. Bharat Biotech holds a portfolio of 50 patents and has delivered more than two billion doses of vaccines to over 65 countries.

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