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The unique formulation derived from the ongoing research will not only bring down the cost of the vaccine, but will also provide a scalable platform for commercial manufacturing. This break-through research is another milestone achievement for Hilleman Laboratories with a vision to bridge the immunization gap.

Speaking on this new development Dr Davinder Gill, CEO, Hilleman Laboratories mentioned, "Capsular polysaccharide conjugates of Hib are important components of several mono-or multivalent vaccines for children. However, the access to needy people is limited due to the relative high cost of the Hib vaccine. This new formulation will be a step towards developing a cost-effective and a more immunogenic vaccine. It is an encouraging breakthrough in bridging the gap and making Hib vaccine accessible and affordable."

"A strategic three-step approach was used to identify the efficacy of polysaccharide in preparing a vaccine for Hib. Our original research published in the journal Vaccine shows that when the length of the polysaccharide was optimized, it dramatically improved immunogenicity in preclinical models, thus making it more powerful and effective. It was also found that the new formulation was 4 to 10 times more potent when compared to the existing licensed vaccines," added Dr Manoj Kumar Chhikara, Head of the Conjugate Vaccines R&D program at Hilleman Labs.

Hib is a deadly bacterium that causes severe diseases like pneumonia and meningitis, which are the leading causes of child deaths in India, accounting for nearly 20% of the global death figures. Hib capsular polysaccharides (Hib-PRP) are poorly immunogenic in children less than two years of age and require conjugation to a protein carrier. Moreover the Hib conjugate vaccine, which plays a vital role in national immunization programs and also forms a main part of the pentavalent vaccine, is the costliest component and hence developing countries such as India can benefit from more cost effective formulations.

The new conjugate vaccine developed by Hilleman Laboratories is a more immunogenic preparation of Hib capsular polysaccharide (PRP)-tetanustoxoid (TT) conjugates using optimized PRP chain length and conjugation conditions. This new and unique cost-effective formulation developed by the company will significantly reduce the cost of Hibvaccine, which in turn, will help in reducing the market price of the pentavalent vaccine, thus making it accessible to a larger number of people. This will definitely have a larger economic impact on the public health system and subsequently bring down the expenditure in the system.

"We have already completed the preclinical immunogenicity trial phase which has shown predictive results. Our next step now would be to look at collaboration with like-minded stakeholders who can work together towards cost effective solutions with the aim of bridging existing gaps in a significant way" said Dr. Gill.