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## Conjugation Technology – Current Trends and Impact in Vaccine Industry

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Bacterial diseases are the leading cause for children deaths accounting more than 1.5 million per annum, which could be prevented by vaccines. The introduction of conjugate vaccines against bacterial pathogens such as *Haemophilus influenzae* type b (Hib), *Streptococcus pneumoniae* and *Neisseria meningitidis* lead to a substantial reduction in mortality rate and incidence of diseases. The impact of conjugate vaccines is considerable and covers vaccination with either monovalent conjugate or in combination with other vaccines.

The preparation of conjugate vaccines is an art of science involving preparation of suitable candidate antigen (polysaccharides) which are covalently bound to a carrier protein that ultimately induces long-term immunity by evoking T-cell responses. The preparations of polysaccharides, selection of carrier protein and conjugation techniques are the major imperative factors for the development of conjugate vaccines. The range of conjugation technology is ever expanding using different carriers/ antigens and conjugation methodologies in manufacturing high-quality conjugate vaccines which ultimately provides a significant protection against infectious diseases.

The World Health Organization (WHO) has recommended the widespread immunization of Hib, pneumococcal and meningococcal vaccines in epidemic disease areas/countries. Such initiatives along with continuous development of quality conjugate vaccines will significantly contribute in reducing childhood mortality. Knowing the importance of conjugate vaccines improving global health, BravoVax Co. Ltd. (China) is focusing on the development of conjugate vaccines for various diseases as per international regulations at affordable prices.

### Biography:

Dr. Srikanth, a proficient with fifteen years of industrial experience in downstream processing, conjugation and formulation research of vaccines and currently working as a Research Scientist, Pilot Research department, BravoVax Co. Ltd., Wuhan, China. Did Master's in Biotechnology, Doctorate degree (PhD) in Human Genetics and MBA (project management) from India's reputed universities (Perriyar, Osmania and Manipal Universities) and also authored for ten manuscripts in various journals. During last fifteen years involved in process development, technology transfer and manufacturing of various vaccines (HPV, rHBsAg, Pneumococcal, Haemophilus, Typhoid, Cholera Vaccines etc) in Biotech vaccine industries viz. Shantha A SANOFI company, Indian Immunological and Unique Biotechnics Limited.