

8th Indo Global summit and Expo on
Vaccines, Therapeutics & Healthcare
November 02-04, 2015 HICC, Hyderabad, India

Pentavalent heat killed *Salmonella enterica* immunogen induce adaptive immune response and protective efficacy in passive suckling mice model

Debaki Ranjan Howlader, Ritam Sinha, Priyadarshini Mukherjee, Dhrubajyoti Nag and Hemanta Koley
National Institute of Cholera and Enteric Diseases, India

Typhoidal and non-typhoidal diseases are a global burden which is a major cause of morbidity and mortality both in adults and children of developed and developing countries every year. Typhoid fever and non-typhoidal salmonellosis occur due to infection of *Salmonella typhi* and various species of non-typhoidal *Salmonella*, respectively. No such single vaccine is currently available in market which protects together against typhoidal and non-typhoidal *Salmonella*. Due to the development of multi-drug resistance, it is difficult to combat against *Salmonella*. For these reasons, in the present study, we have developed a pentavalent heat-killed immunogen which include *Salmonella enteric* serotype Typhi, *Typhimurium*, *Paratyphi A*, *Enteritidis* and *Weltevreden*. In this study, after three successive doses of oral immunization with Heat Killed Multi-Serotype *Salmonella* (HKMSS) induces long lasting serum IgG, IgA, IgM as well as mucosal IgA against serotype-specific LPS and WCL. Also, serotype-specific bactericidal response was observed. Moreover, HKMSS-immunized adult female mice's off-springs were significantly protected from heterologous challenge with wild type of *Salmonella enterica*. HKMSS could be exploited for the development of a vaccine against circulating Salmonellosis and fever in the near future.

Biography

Debaki Ranjan Howlader has joined National Institute for Cholera and Enteric Diseases (NICED) to possess PhD under the guidance of Dr. Hemanta Koley. Currently he is working on outer membrane vesicles of *Salmonella* and its immunomodulatory roles on the immune system. He was an active volunteer in checking the bacterial contamination in municipality water during a local outbreak in 2014. He had presented posters on biology in many science fairs organized by local organizations.

debaki.r.howlader@gmail.com

Notes: