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Zebra fish as an efficient model for study of *Salmonella* infection, transmission and vaccine efficacy

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Salmonella-induced diarrhea is one of the deadliest diseases of mankind and live-stocks. Here, we have selected a natural animal model of *Salmonella*-infection, zebra-fish. Zebra-fishes are indigenous to the Himalayan region and the rate of occurrence of the diseases relating to *Salmonella* is high in that area, especially in developing countries. Exposure of the zebra-fishes with *Salmonella enterica* causes infection in the fishes without any manipulation and transmits the pathogen into the naive fishes from one to another. After successive triple oral bath vaccination with heat killed single serotype of *S. typhimurium immunogen* in zebra-fishes showed protective efficacy against lethal dose of heterologous strain of *S. typhimurium* and also blocks the transmission. This study provides a natural infection model of *Salmonella enterica* for the study of *Salmonella enteric* colonization, transmission and protective efficacy.

Biography

Poushali Ghosh obtained her Bachelors of Technology in Biotechnology from West Bengal University of Technology and Masters of Technology in Biotechnology from Vellore Institute of Technology, Tamil Nadu. She has been working as a summer project trainee in National Institute of Cholera and Enteric Diseases, Kolkata.

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