Shailendra Tallapaka, Ph.D.
Postdoctoral Researcher
Higuchi Biosciences Center
University of Kansas
Lawrence, KS

Abstract:

“Salmonella”

Salmonella enterica causes gastroenteritis in a broad spectrum of animals including humans and in livestock. While millions of research dollars have been spent to develop a broadly protective vaccine, none have been developed with serotype specific vaccines against S. Typhi being the licensed human vaccine. Vaccines for livestock use are available, but again they are limited to protection against one or two serotypes. We use a different approach and target the tip complex of the type III secretion apparatus, a nanomachine that subverts the host cells. These proteins are highly conserved within S. enterica allowing for protection against all serotypes. We have fused the tip complex proteins and have demonstrated protection in mice. I will discuss this protection.

Bio-Summary:

Dr. Shailendra Tallapaka received a BS in Pharmacy from Birla Institute of Technology and Science-Pilani in India and a PhD in Pharmaceutical Sciences from University of Nebraska Medical Center, where he worked on developing biodegradable polymeric nanoparticles for delivery of vaccines against infectious diseases and cancer. Currently, he is a Postdoctoral Researcher in the Picking lab at the University of Kansas where he is working on developing subunit vaccines against gram-negative bacteria using the type III secretion apparatus (T3SA) fusion protein platform developed by the Picking group.