**Attenuated Salmonella strains have showed great potential as live vectors with broad applications in veterinary medicine**

**Luciana Helena Antoniassi da Silva, University of Campinas - UNICAMP**

*Salmonella* belong to the Enterobacteriaceae family are enteric Gram-negative and facultatively anaerobic bacteria that comprises pathogens of worldwide economic and health importance. The symptoms range from gastroenteritis to severe systemic fevers they cause disease in several animals such as mammals, birds and reptiles. Attenuated Salmonella strains have been developed as live vaccines for humans and animals to prevent disease caused by *Salmonella* infections. By introduction of mutations in the genes or deletions of genes that are essential for metabolism, virulence or survival in the host organism. Live vaccine vehicles offer a powerful approach for inducing protective immunity against pathogenic microorganisms. Genetically engineered and attenuated agents provide a method for delivering heterologous antigens derived from other pathogens. Main objective was: characterization the *ΔihfA* and *ΔihfAB* mutants constructed from *S. enterica* Typhimurium strains marked with luminescence by introducing the *luxCDABE operon* using bioluminescence imaging technique, in which we assessed the dynamics of colonization of these mutants compared to the wild-type strain, confirming the attenuation profile our mutants. Methodology: One-day-old chicks and mice were orally immunized through crop of 0.1 mL with *Salmonella* Typhimurium wild-type group, single mutant *ΔihfA* group and double mutant *ΔihfAB* group. The control group was kept as nomimmunized control and was given 0.1 mL sterile PBS group. We compare the attenuation of serotype Typhimurium IHF mutants in two different animal models. Ours results show the attenuation after oral infection in these two animal models chickens and murine. Our findings suggest that future studies of both the chick and murine are needed to determine the role of this important microbial community in the differential development of gastrointestinal disease caused by *Salmonella,* and on containing systemic spread of these organisms in different host species.

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Biography

Luciana Helena Antoniassi da Silva has her PhD in Genetics and Molecular Biology. She has her expertise in molecular biology and strong experience in microbiology with emphasis on Virology working mainly with human and animal respiratory viruses. She has knowledge in biotechnology and genetic modification of microorganism like *Salmonella*.

Email:luantoni@unicamp.br




- Full Name: Luciana Helena Antoniassi da Silva
- Personal Email: lucianaantoniassi@yahoo.com.br
- Mobile Number: +55 19-99977-8826
- Linked In:
- Facebook:
- Session Name/ number:
- Category: (Oral presentation/ Poster presentation) Oral presentation
- Date of Birth: 09/26/1977
- Postal Address: Avenida Marechal Carmona, 461 apto 71 Vila João Jorge, Campinas – São Paulo, CEP: 13041-311.