Veterinary Microbiology
SEMINAR SERIES

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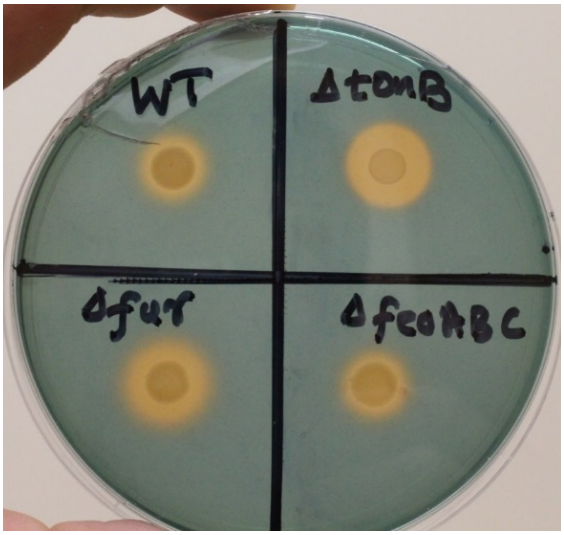

Detection of secreted Fe3+ chelators (siderophores) using CAS agar plates. Yellow halo indicates the catecholate type siderophore production and the diameter correlates to the amount. **WT;** *S. Enteritidis Wild-type strain,* ***Δfur;*** ferric uptake regulator mutant *strain,* ***ΔtonB;*** phage T1 resistant gene B mutant strain, ***ΔfeoABC;*** ferrous iron uptake permease mutant strain

Role of Iron Regulated Genes of *Salmonella* Enteritidis in Colonizing *Gallus gallus*

Salmonella Enteritidis (SEn) is a more host generalized strain of *Salmonella* colonizing (and infecting) a wide range of species including reptiles, mammals and birds. It is one of the leading bacteria causing diarrheal disease in humans globally. The bacterium utilizes various iron uptake systems to thrive in the environment. It is not known how these various iron uptake systems are utilized while colonizing the domestic chicken (*Gallus gallus domesticus*) which acts as a major reservoir for SEn. In this presentation, we will discuss current knowledge related to iron uptake and its role in SEn pathogenesis in a chicken model, how that differs from mammalian models and future directions in deciphering the role related to evolutionary aspects.

Iron uptake systems are potential candidates for developing vaccines and novel antimicrobials. Deciphering their role in chicken, will pave the pathway to develop novel therapeutics to be utilized in poultry industry to minimize contamination with *Salmonella* Enteritidis.

Friday, January 10, 2020
3:30 p.m.
Room 2104, WCVM