

RHIANNON MACOM and JOSEPH HORZEMPA, Department of Natural Sciences and Mathematics, West Liberty University, WV, 26074. The Role of FTL\_1228 in Erythrocyte Invasion by *Francisella tularensis*

*Francisella tularensis* is a gram-negative bacterium and is the causative agent of tularemia- a disease more commonly known as 'rabbit fever'. This microbe is extremely virulent as inhalation of fewer than ten bacteria can lead to a lethal infection. During infection, *F. tularensis* replicates in cells of the immune system, such as macrophages, as well as other non-phagocytes such as epithelial cells and hepatocytes. Moreover, this bacterium has been shown to invade erythrocytes – a process that enhances colonization of ticks (a major disease vector). Our laboratory previously showed that a locus encoding a hypothetical gene, FTL\_1228, was induced in the presence of erythrocytes. Therefore, we hypothesized that this gene may be responsible for invasion of these host cells. In this study, we mutated FTL\_1228 of *F. tularensis* LVS and studies are ongoing to determine the role of this gene in erythrocyte invasion.