DEVIN SINDELDECKER#, and JOSEPH HORZEMPA, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. **The role of FTL_0129 in the invasion of erythrocytes by Francisella tularensis.**

Francisella tularensis is a bacterium that can infect humans with fewer than ten bacteria and is the causative agent of tularemia. If untreated, tularemia causes mortality in approximately 60% of those infected. Due to the ability of this bacterium to be aerosolized and the high mortality rate, F. tularensis has the potential to be used as a bioterrorism agent. During infection, F. tularensis invades erythrocytes, a phenomenon that enhances subsequent colonization of ticks following acquisition of a blood meal. Gaining more information regarding the pathogenesis and transmission of this organism will help us to develop new vaccines and therapeutics. We hypothesized that transcription of F. tularensis genes important for erythrocyte invasion would be induced in the presence of erythrocytes. An RNAseq analysis indicated that ~7% of F. tularensis genes were upregulated when exposed to erythrocytes. Of these, FTL_0129 was the most highly induced non-essential gene. Therefore, we generated an

FTL_0129 null mutant. This mutant is currently being tested for its ability to invade human erythrocytes.