STUART CANTLAY AND JOSEPH HORZEMPA, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. Localization of the key cell division determinant FtsZ in *Francisella tularensis*.

Francisella tularensis, the causative agent of tularemia, is a highly infectious gram-negative bacterium capable of replicating within macrophages, leukocytes, dendritic cells and epithelial cells. In addition, *F. tularensis* also invades erythrocytes. FtsZ, a homologue of eukaryotic tubulin, is an essential cell division protein in almost all bacteria. Polymerization of FtsZ into a contractile ring is a critical first step in division and the FtsZ ring acts in recruiting the cell wall synthesis machinery to the nascent septum. We have generated a recombinant fusion of *ftsZ*$_{ft}$ to *emgfp* (Emerald Green Fluorescent Protein) which can be expressed, *in trans*, under its presumed native promotor or a strong *Francisella* promoter (pGRP). As expected, FtsZ$_{ft}$-Emgfp can be seen localizing as rings in *F. tularensis*. Our aim is to utilize fluorescently tagged FtsZ to investigate replication of *F. tularensis* in a range of *in vitro* host cell invasion assays and as a marker for viability to study the morphological and physiological differentiation of *F. tularensis* as it transitions into a viable but non-culturable (VBNC) state. (This research was made possible by NASA West Virginia Space Grant Consortium Training Grant #NNX15A101H and by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence).