

ADAM BERT, JENNIFER MYERS, MACKENZIE JACOBS, THOMAS NAGY, THEUNIS VAN AARDT, ROGER SEEGER, AND JOSEPH HORZEMPA, Dept of Natural Sciences & Mathematics, West Liberty University, West Liberty, WV 26074. Immunostimulatory property of Goldenrod extracts to control intracellular growth of *Francisella tularensis* during *in vitro* infection.

*Francisella tularensis* causes a disease called tularemia. Moreover, due to the highly infectious nature of *F. tularensis*, this organism can be used in bioterrorism. Therefore, to combat this threat, the necessity for novel treatments is highly desired. *F. tularensis* replicates in macrophages (phagocytic cells of the immune system derived from monocytes) during infection. We identified that Nevada Goldenrod extract (*Salidago spectabilis*) inhibited the intracellular replication of *F. tularensis*, but did not alter bacterial growth in culture, suggesting that this plant had immuno-stimulatory properties. To see if a Goldenrod species indigenous to West Virginia (*S. canadensis*) recapitulated the previous results, extracts of various plant parts of *S. Canadensis* were obtained. Current investigations involve utilizing these extracts were subsequently to treat THP-1 cells (a human monocyte line) infected with *F. tularensis*.