JENNIFER MYERS, ELLIOT COLLINS, ROGER SEEBER, AND JOSEPH HORZEMPA. Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV 26074. *Aralia spinosa* Extract Produces an Immunostimulotory Response Diminishing Infection by *Francisella tularensis*.

Francisella tularensis is a highly infectious bacterium that causes the disease, tularemia. Due to the highly infectious nature of *F. tularensis*, the Centers for Disease Control and Prevention classified this bacterium as a category A bioterrorism agent. To combat this threat, novel treatments are highly desired. *F. tularensis* replicates in macrophages (phagocytic cells of the immune system derived from monocytes) during infection. In a previous study, we sought to identify extracts from natural products capable of inhibiting intracellular growth of *F. tularensis* during infection. From this study, we identified that *Aralia spinosa* (devil's walking stick) extract (ethanol extraction of stem) inhibits replication within cells of the THP-1 monocyte line, but does not alter bacterial growth in culture. The *Aralia spinosa* extract was separated by chromatography and bio-assay guided fractionation was used to isolate the compounds responsible for the aforementioned activity. Here, *Galleria mellonella* (waxworm) larvae as well as chicken embryos were infected with *F. tularensis* LVS (an attenuated type B strain) and were treated with fractions of the *Aralia spinosa* extract. To determine whether fractions of *Aralia spinosa* extract were directly antibacterial, an antibiotic disk-diffusion assay was used. None of the fractions tested inhibited the growth of bacteria outside the context of infection, indicating that this extract does not contain traditional antibiotic compounds. Investigations are ongoing to identify and isolate the active compound of the *Aralia spinosa* Extract ***(Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence and funding from the WV Research Challenge Fund [HEPC.dsr.14.13]).***