A High-Throughput Screen of a Natural Extract Library for the Identification of Novel Antibiotics against *Burkholderia cepacia*. Joseph A. Ierulli and Joseph Horzempa. Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV

Burkholderia cepacia is an opportunistic pathogen that is responsible for infecting many individuals with underlying lung disorders such as cystic fibrosis or chronic granulomatous disease. *B. cepacia* is naturally drug resistant to numerous antibiotics; because of this, it is imperative that new antimicrobial agents are developed to combat this bacterium. Therefore, to potentially identify novel antibiotics that inhibit the growth of *B*. *cepacia*, we screened a library of nearly 4000 extracts of plants, marine life, and fungi from the National Center for Natural Product Research. Here, bacteria were cultured in microtiter plates containing a rich bacterial growth medium. Library extracts were added to each well and optical density (600 nm) was measured at 24 and 48 hours to measure bacterial growth. After 48 hours, a total of 24 natural products exhibited inhibition of growth similar to that of the antibiotic control, gentamicin. These 24 extracts were then further tested using a disk diffusion assay to validate their antimicrobial efficacy. (***Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence***)