

COLTON THOMAS & JOSEPH HORZEMPA. Department of Biological Sciences, West Liberty University, West Liberty, WV USA. Characterization and isolation of a fungal secondary metabolite that inhibits the growth of Methicillin-resistant *Staphylococcus aureus*.

Antibiotic resistant bacteria pose a major worldwide health risk underscoring the need for the development of new antimicrobial therapies. Historically, secondary metabolites from soil-derived fungi have served as important sources of antibiotic compounds. Previous work from our laboratory characterized and identified fungal isolates capable of inhibiting the growth of Methicillin-Resistant *Staphylococcus aureus* (MRSA). In this study we sought to isolate and characterize the antimicrobial compounds responsible for this inhibition. From one of the fungal isolates, cell-free samples were obtained and secondary metabolites were extracted with ethyl acetate. This solvent was removed, and the extract was concentrated by rotary evaporation. The concentrated fungal extract inhibited the growth of MRSA bacteria in broth culture and in a disk diffusion assay. Chromatographic isolation to isolate the antimicrobial compound is ongoing. [This work was supported by the National Institutes of Health, National Heart Lung and Blood Institute (1R15HL147135) and an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences (P20GM103434) which funds the WV-INBRE program].

## References

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