

MADELYN LOGAN, STUART CANTLAY, & JOSEPH HORZEMPA. Department of Biomedical Sciences, West Liberty University, WV. The Identification of Fungal Isolates Capable of Inhibiting Growth of Methicillin-Resistant *Staphylococcus aureus*.

With antibiotic resistance on the rise, it is important that the scientific community continues to advance our understanding of antibiotics and grow our medicinal arsenal of treatments. The potential exists for many novel compounds to be discovered from fungal extracts that can save lives, following suit of the one of the earliest characterized antibiotics, penicillin. These fungal-derived compounds can be used as new therapeutics to treat infections that have developed resistance to current antibiotics. A variety of types of fungi can produce secondary metabolites that are useful for medical purposes, so it is worthwhile to screen a wide range of environmental isolates. Dozens of environmental fungi were isolated from West Liberty soil, water, and dust. Seven different species were able to kill or inhibit Methicillin-Resistant *Staphylococcus aureus* (MRSA) on a Tryptic Soy Agar (TSA) plate. Sequencing of the 18S rRNA gene was used to identify three isolated fungi. Ongoing investigations seek to extract and purify their antibiotic secondary metabolites.