

Characterization and Identification of *Isaria fumosorosea* metabolite

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The fungi in the genus *Isaria* produce a variety of inhibitory metabolites. Typically, *Isaria* are known as entomopathogenic fungi. However, we have isolated a strain of this fungus that produces a metabolite that inhibits the growth of other fungi. The metabolite was produced during growth in potato dextrose broth. The filtered broth was analyzed to quantify the antifungal activity of the metabolite. Using a panel of fungal plant pathogens, we determined the minimal inhibitory concentration (MIC) of the *Isaria* metabolite with the XTT assay. The fungal spores of the test organisms were grown with and without the *Isaria* metabolite. The MIC of the metabolite was then compared to other known antifungal agents (ex. boric acid). Depending on the species tested, the metabolite demonstrated a higher or lower MIC in comparison to boric acid. TLC analysis was also done in order to identify how many (or if any) chemical components were made up of the metabolite in order to determine whether or not the metabolite was a protein or a molecule. Current studies are focused on characterizing the metabolite by examining the effects of temperature, pH, and light exposure on activity. Future studies will be concentrated on continuing to isolate and identify the metabolite.

Keywords: Isaria, XTT assay, TLC, metabolite