Analysis of BH31-1 Derivative's Effect on *Candida* Species (Poster)

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Candida species are the most common and arguably the most important causative agents of human fungal infections. Oropharyngeal, esophageal, vulvovaginal, and cutaneous candidiasis leads to significant morbidity while systemic infections in immunocompromised patients (patients with AIDS, tissue transplants, central venous catheters, or those undergoing chemotherapy) has a 35% mortality rate. During infection, it is essential that the dimorphic *Candida* species switch between different morphological states including transitions between budded or yeast-like cells and hyphal forms. The small molecule BH3I-1 has shown promising results at inhibiting hyphal formation in several *Candida* species. The goal of this study is to find a BH3I-1 derivative that inhibits hyphal formation in several Candida species at a lower minimum inhibitory concentration (MIC) than BH3I-1. A derivative with a low MIC that affects several *Candida* species may have a potential to be a broad-spectrum antifungal drug. The *Candida* species being tested against the BH3I-1 derivatives are: C. *albicans*, C. *glabrata*, C. *rugosa*, C. *krusei,* C. *tropicalis*, C. *lusitaniae*, C. *dubliniesis*, and C. *parapsilosis*. Currently, 36 BH3I-1 derivatives have been tested. Molecule 25 has an MIC about 4 times lower than BH3I-1 in *Candida* albicans and has also been shown to work in other *Candida* species at inhibiting hyphal formation. Other derivatives such as molecule #10 did not inhibit many of the tested *Candida* species, but showed a much lower MIC than molecule #25 in C. *rugosa*. Out of the 36 tested derivatives, molecule #25 has shown the promise for a broad-ranged antifungal drug.