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PRELIMINARY CHARACTERIZATION OF HYDROPHOBINS FROM A *BJERKANDERA* SP.

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Hydrophobins are fungal proteins that have the ability to change the hydrophobic or hydrophilic nature of a surface once they self-assemble into an amphipathic membrane at the surface interface. Their potential for industrial applications is high and since their discovery in a *Schizophyllum commune* isolate, hydrophobins from different species have been isolated and sequenced.

As a general characteristic they present similar hydropathy patterns, high percentage of cysteine residues but low sequence homology even within same genera.

Three strains, two fungal unidentified isolates and *Bjerkandera* sp. BOS55 from the laboratory collection were tested for hydrophobin production. Fungal ITS amplification and sequencing allowed the identification to species of the isolates, respectively, *Mucor circinelloides* and *Trichoderma harzianum*. Hydrophobins from all three strains were produced, extracted and preliminarily characterized.

A never described antimicrobial activity, as well as biofilm formation inhibition for *Candida albicans* was detected for hydrophobin solutions. Further more, isolation and preliminary characterization of hydrophobins from *Bjerkandera* sp. is also described for the first time. Purification and isolation of these proteins was performed by HPLC and MALDI-TOF sequence characterization is under way.