

Title: Antimicrobial Activity in vitro of endophytic fungi extracts from medicinal plants collected in Pantanal.

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Abstract:

The resistance of pathogenic microorganisms to antibiotics has become a global problem that has intensified studies of effective new antimicrobials compounds. Endophytes are an important source for prospecting of bioactive secondary metabolites. Our goal is screening endophytic fungi extracts with antimicrobial activity for prospecting antibacterial compounds. We have tested different fungi extracts prepared with ethyl acetate and stored at -20°C. These fungi have been isolated from medicinal plant species collected on Pantanal Forty extracts were evaluated in the concentration 5 mg/mL against pathogenic bacteria: *Staphylococcus aureus* (ATCC 25923) (P1), *Escherichia coli* (ATCC 25928) (P2), *Pseudomonas aeruginosa* (ATCC 9027) (P3), *Escherichia coli* (resistant) (P4) and *Staphylococcus aureus* (resistant) (P5). Determination of the Minimum Inhibitory Concentration (MIC) was evaluated by micro-dilution method. The plates were incubated at 33°C and D.O₆₀₀ readings were made after 24 hours. Minimum Concentration Death (MCD) was evaluated by inoculating the contents of the wells on Miller Hilton medium. The P1, P2 and P4 were more sensitive to extracts evaluated. The *Thielavia terrestres* extract showed the lowest MIC values for P1 (0,625 mg/ml), P4 (0,03 mg/mL) and P5 (1,25 mg/mL) with bacteriolytic activity. This fungi was isolated from roots *Cyperus esculentus*. The next step will be the purification and identification of the antibacterial substance from *Thielavia terrestres* extract.

Key Words: metabolites, growth control, resistant bacteria.

Agencies promotion: CNPq, INAU