

TITLE: ANTIFUNGAL ACTIVITY OF THE HYDROALCOHOLIC EXTRACT OF *Terminalia catappa* LEAVES AGAINST *Candida albicans* ISOLATES

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ABSTRACT:

Terminalia catappa, popularly known in Brazil as “amendoeira”, belongs to Combretaceae family and is widely distributed in countries with tropic and subtropical climates. Studies with the *Terminalia catappa* plant extract have showed the following biological activities: anti-metastatic, anti-oxidant, anti-inflammatory, hepatoprotective and gastroprotective effects, besides antimicrobial activity. This study aimed to evaluate the antifungal activity and the cytotoxic potential of *T.catappa* leaf extract. Antifungal activity was evaluated through diffusion and microdilution methods. The minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) were determined using 117mg/mL as initial concentration. Cytotoxicity test was performed on peripheral blood mononuclear cells (PBMC) with hydro-alcoholic crude extract from an initial concentration of 10mg /mL. *Candida albicans* strains used in tests were isolated from oral mucosa of AIDS patients (n=4) and from vaginal smears of patients with candidiasis (n=4). Also, a *C. albicans* ATCC 90028 and a wild type SC5314 strains were used. An antifungal activity of the extract was observed for all strains tested. Oral mucosa samples have shown inhibition halos between 16,6 and 18,3 mm, and those from vaginal secretion, halos between 16,6 and 19,6mm. *C. albicans* ATCC 90028 and wild type SC5314 have shown inhibition halos of 20.3 and 17,6mm, respectively. CIM values were 0,45mg /mL for all strains, except for two samples of vaginal secretion that showed CIM of 0.22mg /mL. CFM values have ranged from 58,5 to 3,6 mg/mL. Cell viability decrease was seen at concentrations of 10 and 5 mg/mL and no significant reduction was evidenced from 1 mg to 0,001 mg/mL. Thus, *T. catappa* hydro-acholic leaves extract has a great antifungal potential, since it has not showed cellular cytotoxicity for CIM values, property that can be further explored in further studies.

Keywords: *Candida albicans*; *Terminalia catappa*; Antifungal; Synergism.

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