

TITLE: ANTIFUNGAL, PHYTOCHEMICAL AND ANTIOXIDANT PROFILE EVALUATION OF THE ETHANOLIC EXTRACT OF *Handroanthus* sp. BARKS.

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ABSTRACT:

Over the years, the indiscriminate use of certain medications has led to an increasing selection of microorganisms resistant to conventional drugs. Therefore, it is necessary to conduct researches involving phytochemical studies of medicinal plants as an alternative source of antimicrobial compounds. *Handroanthus* is a native plant of tropical America, but it is in greater number in Brazil, being commonly known in the Northeast as, which it is used in popular medicine for the treatment of stomatitis and Dermatitis. The objective of this study was to evaluate the antifungal, phytochemical and antioxidant activity of the Ethanol Extract from *Handroanthus* sp. Bark (EEHB) against species of the genus *Candida*. For the determination of Minimum Inhibitory Concentration (MICs) and Minimal Fungicide Concentration (CFMs), the Broth Microdilution Method recommended by CLSI (Clinical Laboratory Standards Institute) was used. As a positive control, RPMI plus inoculum was used. The phytochemical test was carried out through chemical reactions corresponding to the variation of the coloration and/or the presence of precipitate to each class of substance. The method used to evaluate an antioxidant activity was the free radical scavenging 2,2-diphenyl-1-picrylhydrazyl -DPPH, of purple color. For yeast species, EEHB showed fungicidal activity in all concentrations tested against *Candida albicans* (ATCC 90028) and *Candida krusei* (URM 6391). However, for the *Candida parapsilosis* species (ATCC 22019), was observed a MICs at the concentration of 0.07 mg/ml and the MFCs of 0.15 mg/ml, for *Candida tropicalis* (LABMIC 0110), the observed MICs was 1,25 mg/ml and the MFCs 2.5 mg/ml. The phytochemical analysis of the EEHB showed the presence of tannins and phenols; however, the analyzed sample presented antioxidant activity at concentrations of 10 mg / ml and 5.0 mg / ml. Therefore, according to the results, it was observed that the ethanolic extract of *Handroanthus* sp. presents potentially important biological activities with high antifungal properties, forming a therapeutic alternative possibly associated to the secondary metabolites present in its constitution.

Keywords: Broth Microdilution, drugs, analysis, chemical reactions.