ANTIFUNGAL ACTIVITY OF ORGANIC EXTRACTS FROM FRUITS AND LEAVES MEDICINAL PLANT SPONDIAS TUBEROsa

Cordeiro, B.M.P.C.; Gomes, N.F.M.; Lima, S.J.; Uchôa, A.D.; Lima, S.E.S.; Silva, A.G.; Napoleão, T.H.; Correia, M.T.S.; Silva, M.V.; Paiva, P.M.G.

1Departamento de Bioquímica, Centro de Ciências Biológicas, Universidade Federal de Pernambuco, Recife, Brazil; 2Faculdade Integrada de Pernambuco, Recife, Brazil.

Introduction: The antimicrobial activity of plant secondary metabolites has been reported. Spondias tuberosa, popularly known as “umbuzeiro”, is a species used by people for treatment of diseases caused by microorganisms. This fact stimulates the investigation of S. tuberosa extracts for antifungal activity. Objective: This study evaluated the antifungal effect of organic extracts from fruits and leaves of S. tuberosa against Candida albicans. Methods: Metabolites from the powders of fruits and leaves were separately extracted using a Soxhlet apparatus and the following eluotropic series: hexane, ethyl acetate, and methanol. After drying using a rotary evaporator, the extracts were evaluated for antifungal activity against C. albicans according the microdilution method of Clinical and Laboratory Standards Institute (CLSI). The minimal inhibitory (MIC) and minimal fungicidal (MFC) concentrations were determined. The assays were performed in 96-well microplates and using the Sabouraud-Dextrose medium. The plates were incubated at 30°C for 18 h. The MIC corresponded to the lowest concentration that inhibited 50% of growth. The MFC corresponded to the lowest concentration that reduced 99.9% of fungal growth. Results and discussion: Only the methanol and ethyl acetate extracts from fruits and leaves inhibited the growth with MIC of 2000 µg/mL, but did not show fungicidal activity. Conclusion: Organic extracts from S. tuberosa fruits and leaves were inhibitory agents against C. albicans. Studies aiming to identify the active principles are in progress.

Key words: Antifungal activity, medicinal plant, organic extracts.

Financial support: CAPES, CNPq, FACEPE, PPSUS/MS.