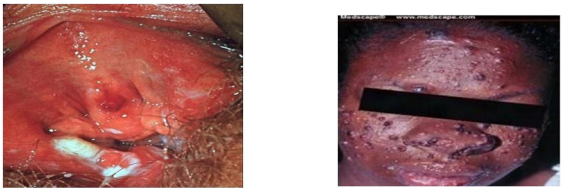
IN VITRO ANTIFUNGAL ACTIVITY OF EXTRACT FROM THREE CAMEROONIAN PLANT OF ANNONACEAE FAMILY

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Abstract

Statement of the Problem: Fungal infections are facing therapeutic failure due to the emergence of antifungal drug resistance pathogens, in an environment where immunocompromised people are increasing in number. Therefore, there is an urgent need for the development of new antifungal drugs. The aim of this work was to evaluate the antifungal activity of extracts of three Annonaceae Cameroonian plants: *Artabotrys lastourvillensis*, *Artabotrys rufus* and *Uvaria comperei*. **Methodology & Theoretical Orientation:** In a search for plants-derived antifungal agents, methanolic extracts from leaves, twigs and stem of *Artabotrys lastourvillensis*, *Artabotrys rufus* and *Uvaria comperei* (Annonaceae) were investigated for their antifungal activity against yeasts strains (*Candida albicans* ATCC P37039 and *Candida albicans* ATCC L26) and isolates (*Candida glabrata*, *Candida parapsilosis* and *Cryptococcus neoformans*), using broth microdilution method. The most active crude extracts were subjected to fractionation with increasing gradient polarity of organic solvents and their antifungal activity was also evaluated. Extracts and fractions obtained were screened for their phytochemical content. **Results:** The extraction yield ranged from 5.05 % to 19.14 %. Extracts from leaves and twigs of Artabotrys rufus and extract from twigs of Artabotrys lastourvillensis inhibited the growth of Candida glabrata and Cryptoccocus neoformans with MIC value ranged from 10 to 20 mg/mL. The hexanic fraction of Artabotrys rufus leaves exhibit highest potency with MIC value of 2.5 mg/mL against Candida albicans ATCC P37039, 5 mg/mL against Candida albicans isolate and 10 mg/mL against Candida glabrata, Candida parapsilosis and Cryptococcus neoformans isolate. The tannins, phenol, flavonoids and saponins were commonly present in extract from leaves and twigs of Artabotrys rufus and extract from twigs of Artabotrys lastourvillensis whereas, flavonoids, tannins, glycosides, phenols and steroids were found in hexanic fraction of Artabotrys rufus leaves. **Conclusion & Significance:** The results achieved support further investigation of this fraction for identification of antifungal compounds.

Image



a b

Figure 1: some manifestations of fungal infections. a) Vaginal candidiasis; b) cutaneous cryptococosis

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2. R.Keumoe *, M.S. Nguembou, F.P.V. Tsouh, D.V.F. Donkeng, D. Darline, Y.L.R. Tchokouaha, M.C.D. Jiatsa, F.R.D. Youmsi, B. Ngameni, B.F. Fekam (2016). Antimycobacterial activity of medicinal plants against the causative agent of Buruli ulcer: Mycobacterium ulcerans. International Journal of Mycobacteriology, 5: S105,.
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Biography

I'm PhD Student in Biochemistry at the University of Yaounde I. I perform my PhD research work in the Antimicrobial and Biocontrol Agents Unit for the Laboratory of Phytobiochemistry and Medicinal Plants Studies. My main research goal is antimicrobial drug discovery including fungal, bacteria, mycobacteria and protozoan parasites, based on natural products investigation. I have an expertise on Drug Susceptibily Test, mammalian cell culture, cytotoxicity and toxicity assays and some fractionation techniques.

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