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Antifungal activity of some Tanzanian plants used traditionally for the treatment of fungal infections

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Abstract

Using the ethnobotanical approach, some Tanzanian plants reported to be used by traditional healers for the treatment of oral candidiasis and fungal infections of the skin were collected and screened for their antifungal activity against *Candida albicans*, *Candida glabrata*, *Candida tropicalis*, *Candida parapsilosis*, *Candida krusei* and *Cryptococcus neoformans*.

A total of 65 crude methanol extracts belonging to 56 plant species and 38 families were screened using the broth microdilution method, according to the guidelines of the Clinical and Laboratory Standard Institute (CLSI) (formerly, National Committee for Clinical and Laboratory Standards) [National Committee for Clinical Laboratory Standards, 2002. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Yeasts. Approved Standard-2nd Edition M27-A2, National Committee for Clinical Laboratory Standards, Wayne, PA, USA]. Among the tested plant species, 45% (25 species) showed antifungal activity against one or more of the test fungi. The most susceptible yeasts were *Cryptococcus neoformans*, followed by *Candida krusei*, *Candida tropicalis*, and *Candida parapsilosis*. The least susceptible were *Candida albicans* and *Candida glabrata*. Strong antifungal activity was exhibited by extracts of *Clausena anisata* Oliv., *Sclerocarya birrea* Sond, *Turraea holstii* Gurk, *Sterculia africana* (Lour) Fiori, *Acacia robusta* subsp. *Usambarensis* (Taub) Brenan, *Cyphosterma hildebrandti* (Gilg), Desc, *Elaeodendron buchannanii* (Lows), *Acacia nilotica* (L.) Wild ex Del, *Jatropha multifida* L., and *Pteridium aquilinum* (L.) Kuhn.