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ANTIFUNGAL ACTIVITY OF *Psidium guava (L), Syzygiumcumini (L)* AND *Borasuss flabelifer (L)* PLANT EXTRACTS AGAINST CLINICAL ISOLATES OF *Candida*

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Plants are used to derive antimicrobial agents as they possess several secondary metabolites that are active against many pathogens. Fungal pathogens adopt different mechanisms to circumvent the inhibitory actions of antifungal agents. Plant-derived natural products may offer potential new therapeutic antifungal agents which could act on *Candida* species. The objective of the study was to identify potential anti-candidal agents using *Psidium guava (L), Syzygiumcumini (L) and Borasussflabelifer (L).*

The activity of the plant extracts were evaluated using the well diffusion assay. 20ml of molten agar was poured onto a 90mm Petri dish. 9mm wells were cut using a cork borer after seeding the plates with *Candida* species. Wells were loaded with 180 to 200µl of the extracts and incubated overnight for the observation of inhibitory zones.

These plants showed activity against *Candida* species with *C. albicans* showing extreme resistance to *B. flabelifer* seed shoot extract than the rest of the isolates (MIC > 12.8 x 10^3µg/ml). However, it was sensitive to *P. guava* stem bark (MIC = 0.4 x 10^3µg/ml). Further, *C. dubliniensis* and *C. Sake* showed resistance to extract of *Syzygiumcumini* with a MIC value of 6.4 x 10^3µg/ml. However, they were highly sensitive to *B. flabelifer* seed shoot extract with MIC values of 0.1 x10^3µg/ml and 0.4 x 10^3µg/ml, respectively. *C. rugosa* showed extreme resistance to stem bark extract of *S. cumini* with a MIC value of > 12.8 x 10^3µg/ml. However, it was highly sensitive to the seed shoot extract of *B. flabelifer* (MIC = 1.6 x 10^3µg/ml). *C. guilliermondii* showed resistance to seed shoot extract of *B. flabelifer* (MIC = 6.4 x 10^3µg/ml) and was highly sensitive to *P. guava* stem bark extract (MIC = 0.8 x 10^3µg/ml). *C. parapsilosis* demonstrated sensitivity to extract of *P. guava* stem bark and seed shoot of *B. flabelifer* (MIC = 0.4 x 10^3µg/ml). *P. ohmeri* was highly sensitive to the extracts of seed shoot of *B. flabelifer* (MIC = 0.1 x 10^3µg/ml). For the first time, the current study revealed a moderate anti-candidal activity of water extract of *B. flabelifer* obtained at room temperature.

In conclusion it can be stated that *Psidium guava* stem bark, *Syzygiumcumini* stem bark and *Borasussflabelifer* seed shoot extracts have considerable inhibitory activity against *C. albicans* and non-albicans species.