

Anti-Candida Effect of Leaf Extract of *Diospyrus Atrata*

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The genus *Candida* belongs to the kingdom fungi that causes superficial and systemic infections in humans as well as animals including pigs, cattle and chicken. Candidiasis is treated with antifungals while antifungal resistance has been documented. *Diospyrus atrata* belongs to the family Ebenaceae which has many floral species with medicinal values. However, studies on anti-*Candida* effect of *D. atrata* are lacking. Objective of this study was to investigate the effect of the leaf extract of *D. atrata* against three medically important *Candida* species; *Candida albicans*, *Candida parapsilosis*, and *Candida tropicalis*. The extract of *D. atrata* leaves was prepared with 99% ethanol using the ground tender leaves followed by rotary evaporation. Then 0.1g of the rotary evaporated product was dissolved in 10ml of 99% ethanol for testing the anti-*candida* effect. Further, 99% ethanol was used as a negative control. Agar well diffusion assay was performed using Muller Hinton Agar plates in triplicate. The readings were taken by subtracting the diameter of the zone of inhibition given by the control from the diameter of the inhibition zone of the plant extract. The mean zone of inhibition against *C. albicans* was 10.67±0.58mm, *C. parapsilosis* was 4.33±1.53mm and *C. tropicalis* was 9.33 ±1.15mm. Above results indicate that the anti-candida activity of *D. atrata* leaf extract was higher against *C. albicans* and *C. tropicalis* compared to *C. parapsilosis*. As the conclusion, ethanolic extract of *D. atrata* leaves demonstrated anti-*Candida* effect against *C. albicans*, *C. tropicalis* and *C. parapsilosis*, indicating the potential of ethanolic extracts of *D. atrata* leaves to be developed as an anticandidal agent.

Keywords: *Candida*, *Diospyrus*, Antifungal, Anticandidal