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The anti-obesity effects of the aqueous and ethanolic leaf extracts of *Blumea balsamifera* on diet-induced obese Sprague-Dawley rats

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Previous *in vitro* study conducted on *Blumea balsamifera* leaf extract proved that it has a strong anti-obesity potential by inhibiting adipogenesis in 3T3-L1 adipocytes. This study aims to evaluate the effectiveness of *Blumea balsamifera* aqueous (BBAE) and ethanolic (BBEE) leaf extracts in managing obesity of diet-induced obese Sprague-Dawley rats. Induction of obesity was done by feeding the groups with a high fat diet (HFD) for 21 days with the exception of one group that received a standard diet (SD). Administration of the treatment was given for 24 days via oral gavage with the following doses: 300 mg/kg BBAE and BBEE, 600 mg/kg BBAE and BBEE and 21.6 mg/kg Orlistat. The Lee's index and lipid profile of the groups were compared during the post induction and post treatment period. 600 mg/kg dose of BBAE and BBEE had greatly lowered the Lee's index among the other doses. 300 mg/Kg dose BBEE, 600 mg/Kg BBAE and 300 mg/kg BBAE lowered the total cholesterol level, LDL level and VLDL and total triglyceride level respectively. The extracts, however, lowered the HDL level which was also exhibited by the standard drug, Orlistat.

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Antioxidant potential, physicochemical and sensory attributes of rice bran extract supplemented pizza base

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The current work was an attempt to explore antioxidant potential of rice bran extract and its impact on the physicochemical and sensory attributes of pizza base. In this study, rice bran extracts were obtained using solvent extraction and supercritical fluid extraction techniques. Three treatments of pizza base were prepared; control (T0), pizza base with solvent extract of rice bran (T1) and with supercritical fluid extract of rice bran (T2). The developed pizza bases were evaluated for their antioxidant potential by assessing their total phenolic contents and free radical scavenging ability by DPPH assay followed by physicochemical analysis and sensory evaluation during 96 hours storage. Results showed significant differences in L* a* and b* value as a function of storage period whereas non-significant for treatment except b* value. Texture changed non-significantly for treatments whereas significantly for storage interval. Maximum total phenolic contents (77.36±3.11 mg GAE/100 g) and DPPH activity (26.71±0.98%) were noted for T2 at 0 day. Pizza base with supercritical fluid extract (T2) scored higher on 9 point hedonic scale for different sensory parameters. Concussively, Pizza base with SFE was better as compared to pizza base with CSE in antioxidant potential and sensory attributes owing to its high oryzanol content.

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