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Comparative analysis of antioxidant and antiproliferative activities of *Rhodomyrtus tomentosa* extracts prepared with various solvents



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ABSTRACT

Rhodomyrtus tomentosa (Aiton) Hassk. has a wide spectrum of pharmacological effects and has been used to treat wounds, colic diarrhoea, heartburns, abscesses and gynaecopathy. The potential antiproliferative activities of *R. tomentosa* extracts from different solvents were evaluated in vitro on HepG2, MCF-7 and HT 29 cell lines while antioxidant activity was monitored by radical scavenging assay (DPPH), copper

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(IC₅₀ 2.68 ± 0.529 µg/mL) and HT 29 (IC₅₀ 16.18 ± 0.538 µg/mL) after 72 h of treatment. Bioassay guided fractionation of the ethyl acetate extract led to the isolation of lupeol. Methanol extracts show significant antioxidant activities in DPPH (EC₅₀ 110.25 ± 0.005 µg/ml), CUPRAC (EC₅₀ 53.84 ± 0.004) and β-carotene bleaching (EC₅₀ 58.62 ± 0.001) due to the presence of high total flavonoid and total phenolic content which were 110.822 ± 0.017 mg butylated hydroxytoluene (BHT)/g and 190.467 ± 0.009 mg gallic acid (GAE)/g respectively. Taken together, the results extracts show the *R. tomentosa* as a potential source of antioxidant and antiproliferative efficacy.

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