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SHORT COMMUNICATION

Polyphenolic characteristics, antimicrobial and antioxidant activity of *Zingiber neesanum* (Graham) Ramamoorthy rhizomes and identification of volatile metabolites by GC-MS analysis

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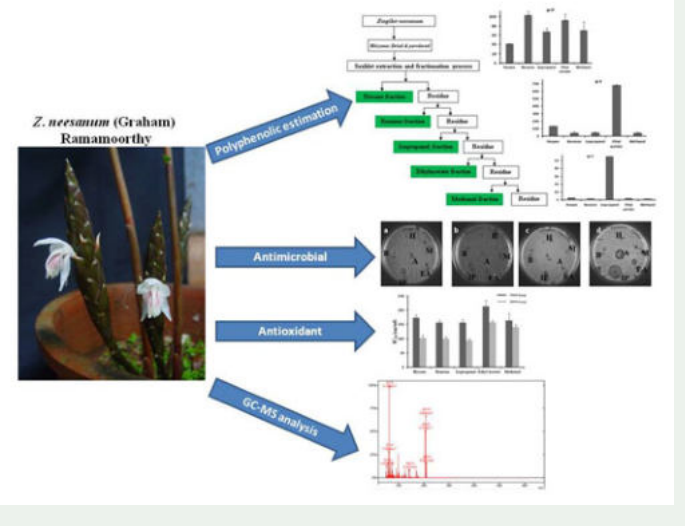
ABSTRACT

Rhizomes of *Zingiber neesanum* (Graham) Ramamoorthy, endemic to Western Ghats and subject to few studies, were analysed for bioactivity and phytochemical composition. High total tannin (TT) content in isopropanol extract [55.261 ± 6.623 mg TAE.100 g^{-1} DW] contributed to antimicrobial activity against gram negative *Enterococcus fecalis* (21.7 ± 0.6 cm) while high total flavonoid (TF) content in ethyl acetate extract [681.94 ± 33.87 mg CE.100 g^{-1} DW] accounted for the antifungal activity against *Mucor rouxii* (9.7 ± 0.6). Isopropanol extracts also showed high anti-oxidant activity as determined by DPPH and FRAP assays. Major bioactive phytochemical constituents in *Z. neesanum* rhizome identified by GC-MS analysis included 2-Methyl-7-nonadecene (13.99%; antimicrobial), Actinomycin C2 (8.57%; antineoplastic) and Deoxyspergualin (12.55%; immunosuppressive).



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