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Isolation, characterisation, antifungal activity and validated UPLC/MS/MS method for quantification of novel compound from *Artemisia tournefortiana* Reichb

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ABSTRACT

Investigation into the chemical diversity of *Artemisia tournefortiana* resulted in isolation of one novel compound named tournefortin A and two known artemetin and tournefortin B bioactive compounds. Tournefortin B is first time obtained from natural source. The structure of all the isolated compounds were elucidated by detailed 1D and 2D NMR including HSQC, HMBC, ^{1}H-^{1}HOSY and NOESY spectroscopic techniques. Minimum inhibitory concentration (MIC) of all the tested compounds against tested fungal strains lies between 0.4 and 6.4 μg/mL and lowest MIC of 0.4 μg/mL of compound tournefortin A was found against *Alternaria alternate*. All the isolated compounds were quantified through UPLC/MS/MS and the developed method will serve as a first fingerprint method for the rapid determination of these phytomolecules in various plant extracts. Tournefortin B was found to be present in higher concentration. The higher antifungal effect of the isolated compounds suggests that this plant could act as potential source of antimicrobial agents.

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