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Anti-protozoal and anti-helminthic Naphthoquinones from *Diospyros crumenata*

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The genus *Diospyros* is a rich source for napthols and naphthoquinones. During the study, we have chemically examined the roots of three unexplored species of *Diospyros crumenata* for their chemical profile and biological activities. The plant materials collected from Ramghat of India. On conventional extractions with organic solvents and sequential chromatography yielded seven naphthoquinone derivatives, habibone (1), 8'-Hydroxyisodiospyrin (2), diospyrin (3), 4-Hydroxy-5methoxy-2-naphthaldehyde (4), 5-Hydroxy-4-methoxy-2-naphthaldehyde (5), 4-Hydroxy-3,5-dimethoxy-2-naphthaldehyde (6), and 2-Methyl anthraquinone (7). These isolates were characterized by spectral data (2D NMR, 1H-1H COSY and 13C-1H COSY). In addition, these compounds were evaluated for their potential to inhibit parasitic protozoa belonging to the genera *Trypanosoma*, *Leishmania* and *Plasmodium* using *in vitro* antiprotozoal assay and anthelmintic activity against adult earth worms, Pheritima posthuma. The study showed that the isolates enjoy significant anthelmintic and antiprotozoal activity and supports its use in folk medicine. Further, three isolates were incorporated into mouth dissolving tablets. The tablets were prepared by wet granulation technique using different ratios of binder, super disintegrant Florite R, sweeteners, Instacoat® mango flavour. The developed tablets were evaluated for various quality control parameters like appearance, taste, weight variation, thickness, hardness, *in vitro* disintegration time and friability. Results indicated successful formulation of mouth dissolving tablets with pleasant taste and satisfactory mouth feel with optimum physicochemical properties.

Biography

Rajarajeshwari N is an Assistant Professor at Visveswarapura Institute of Pharmaceutical Sciences, Bangalore-70, India. Presently she is a Principal investigator for two major research projects.

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