

## Antioxidant capacity and constituents of the methanolic extract of *Phyllanthus maderaspatensis* L.

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The present investigation was done to evaluate the antioxidant capacity of the methanolic extract of the plant, *Phyllanthus maderaspatensis* (Family Phyllanthaceae) and to identify the major constituents in it. Methanolic extract of *P. maderaspatensis* was found to possess anti-hypercholesterolemic activity on rat model. Hypercholesterolemia can increase oxidative stress in human body. Plant antioxidants are known to reduce oxidative stress by quenching free radicals. Therefore, in order to support to the anti-hypercholesterolemic effect of the methanolic extract *P. maderaspatensis*, antioxidant capacity was assessed by FRAP (Ferric Reducing Antioxidant Power) and ABTS (2,2-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) assays. According to the FRAP assay, antioxidant capacity of the extract was  $1.61 \pm 0.00$  mM Fe<sup>2+</sup> per gram of dry weight of the extract while it was  $84.46 \pm 0.09$  mM Trolox Equivalents per gram of dry weight according to ABTS assay. Analysis of the methanolic extract of *P. maderaspatensis* by LC-HRESIMS and dereplication with SciFinder and Dictionary of Natural Products, revealed the presence of chelonanthoside, chlorantholide E, erythrinacinate C, calocedimer A and methyl-6-O-[2,3,4-tris-O-(2,2-dimethylpropanoyl)-6-methyl-β-D-glucopyranuronosyl]-β-D-galactopyranoside as some major constituents in it.

**Keywords:** Phyllanthaceae, *Phyllanthus maderaspatensis*, antioxidant capacity, anti-hypercholesterolemic activity and LC-HRESIMS

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