

Polyphenolic Profile And Biological Activity Of *Salvia Splendens* Leaves

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Abstract

Objectives: The aim of this study was to investigate a new flavone triglycoside, together with eleven phenolic metabolites from 80% aqueous methanol extract of *S. Splendens* leaves (AME) and assessment of its hypoglycemic and anti-inflammatory activities along with in vitro antioxidant effect.

Methods: The phenolic composition of *S. Splendens* leaves was analyzed using UV, 1D and 2D NMR and negative ESI-MS spectroscopy. Hypoglycemic activity of AME was assessed by measuring blood glucose in streptozotocin induced diabetic rats. **Key findings:** Twelve phenolic metabolites including three phenolic acids, namely caffeic acid 1, rosmarinic acid 2 and methyl rosmarinate 3, four flavone glycosides viz the new compound luteolin. Moreover, AME exhibited a significant anti-inflammatory activity only at 100 mg/kg in comparison to indomethacin. Finally, AME exhibited a marked significant scavenging activity against DPPPH, the maximum reactive reaction rate after 5 min was 62.9, 82.5, 83.7, 84.3 and 85.1 % for the concentration 10, 20, 30, 40 and 50 mg/ml, respectively.

Conclusions: This is the first study reporting the identification of a new flavone along with eleven known phenolic metabolites from AME of *S. Splendens*. It showed significant hypoglycemic and anti-inflammatory effects in dose dependent manner. Moreover, it showed an in vitro antioxidant activity.

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