

Prenylated Flavonoids from the Root of Egyptian *Tephrosia apollinea* – Crystal Structure Analysis

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Three complex 7-oxygenated-8-prenylflavones, (-)-semiglabrin and (-)-pseudosemiglabrin, which are diastereoisomers, and lanceolatin A have been isolated from the root of *Tephrosia apollinea* (Del.) Link (Leguminosae) growing in Southern Egypt, together with two phytosterols, stigmasterol and sitosterol. The structures of the isolated compounds have been elucidated by means of physical and several spectroscopic methods including UV, IR, ¹H, ¹³C NMR, DEPT, 2D ¹H-¹H COSY, HSQC, HMBC experiments, and high resolution mass spectrometry (HR-MS), as well as some chemical transformations. The stereochemistry of the structures of (-)-semiglabrin and lanceolatin A have been confirmed by X-ray crystal structure analysis. The anticarcinogenic properties of the isolated compounds showed no inhibitory mechanisms concerning the initiation, promotion, and progression stage of carcinogenesis. Moreover, the *in vitro* antimicrobial activities of the root ethanolic extract are discussed.

Key words: *Tephrosia apollinea*, Leguminosae, 7-Oxygenated-8-prenyl-flavones, Lanceolatin A, Antimicrobial Activity