## Digalacturonide Flavones from Egyptian Lantana camara Flowers with in vitro Antioxidant and in vivo Hepatoprotective Activities

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A new digalacturonide flavone, luteolin 7-O- -galacturonyl-( $2\downarrow 1$ )-O- -galacturonide (1), was isolated along with nine known flavone glycosides from the aqueous methanolic extract of *Lantana camara* (L.) flowers. Their structures were determined on the basis of the spectral data. The extract of *L. camara* was evaluated for antioxidant and hepatoprotective properties in the acetaminophen-induced mouse liver damage model. 1 exhibited significant antioxidant activity in the 2,2-diphenyl-1-picrylhydrazyl (DPPH) free radical scavenging assay with an IC<sub>50</sub> value of 27.2  $\mu$ m. Pre-treatment with *L. camara* extract (25 and 75 mg/kg body weight) decreased the activities of alkaline phosphatase (ALP), serum glutamate oxaloacetate transaminase (SGOT), and serum glutamate pyruvate transaminase (SGPT) enzyme levels that were elevated by acetaminophen. Both doses of the *L. camara* extract ameliorated the histopathological and histochemical alterations induced by acetaminophen. The results indicate that the *L. camara* extract possesses hepatoprotective activity against acetaminophen-induced liver damage.

Key words: Digalacturonide, Lantana camara, Acetaminophen