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# Antiglycation, Antiplatelets Aggregation, Cytotoxic and Phytotoxic activities of *Nepeta suavis*

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**SUMMARY.** ***Nepeta suavis*** **Stapf. (Lamiaceae), one of the ignored species for testing biological activities, was studied. In present research, the Nepeta suavis fractions: chloroform (FC), ethyl acetate (FE) and aqueous (FW) were evaluated for platelet aggregation, antiglycation, cytoxicity, and phytotoxicity. FE showed 65.60% antiglycation activity against the protein glycation while the other fractions showed less than 50% inhibitory potential. The FW inhibited arachidonic acid (AA) and platelet activating factor (acetyl-glyceryl-ether-phosphorylcholine, PAF) induced platelet aggregation. FE showed significant cytotoxicity against brine shrimp larvae with LD50 of 41.3 µg/ml. Phytotoxic studies of FC, FE and FW against *Lemna minor* showed 77.5-100% inhibitory effects at 1000 µg/ml. However, at lower concentration (10 µg/ml) enhancing effects were observed in FC and FE, as compared to control. FW remained in a uniform pattern of inhibitory effects in all three concentrations (10,100 and 1000 µg/ml). FE showed highest inhibitory activities against formation of glycation, while FW showed significant inhibitory effects against platelet aggregation and *Lemna minor*. Both of these fractions are recommended for further study to identify and isolate active chemical compounds.**

*KEY WORDS: Nepeta suavis,* Antiglycation, Antiplatelets, Cytotoxic, Phytotoxicity.

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