

Assessment of Hemostatic Activity of the Aqueous Extract of Leaves of *Marrubium vulgare* L.: A Mediterranean Lamiaceae Algeria

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Abstract : The overall objective of this study was to evaluate in vitro the hemostatic activity of secondary metabolites (polyphenols, flavonoids, and tannins) of *Marrubium vulgare* leaves, aromatic plant widely used in traditional medicine for the treatment of asthma, cough, diabetes (by its effect on the pancreas to secrete insulin), heart disease, fever has a high efficiency as against inflammation. Qualitative analysis of the aqueous extract (AQE) by thin layer chromatography revealed the presence of quercetin, kaempferol and rutin. Quantification of total phenols by Folin Ciocalteu method and flavonoids by AlCl₃ method gave high values with AQE: 175±0.80 mg GAE per 100g of the dry matter, 23.86±0.36 mg QE per 100g of dry matter. Moreover, the assay of condensed tannins by the vanillin method showed that AQE contains the highest value: 16.55±0.03 mg e-catechin per 100 g of dry matter. Assessment of hemostatic activity by the plasma recalcification method (time of Howell) has allowed us to discover the surprising dose dependent anticoagulant effect of AQE lyophilized from leaves of *M. vulgare*. A positive linear correlation between the two parameters studied: the content of condensed tannins and hemostatic activity (r=0.96) were used to highlight a possible role of these compounds that are potent vasoconstrictor activity in hemostatic. From these results we can see that *Marrubium vulgare* could be used for the treatment of health.

Keywords : *Marrubium vulgare* L., aqueous extract, phenolic compounds dosing, hemostatic activity, condensed tannins

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