

LIPID PEROXIDATION INHIBITION STUDY OF FLOWER EXTRACT AND TWO COUMARINS ISOLATED FROM *DAPHNE MEZEREUM* L.

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The medicinal importance of the genus *Daphne* L. is related to the richness in the expansive range of different classes of natural products and bioactive phytochemicals, such as coumarins, flavonoids, lignans and different classes of terpenes. The current study reports on the lipid peroxidation effect of diethyl-ether macerate of *Daphne mezereum* L. flowers and of two coumarins we have isolated from the aqueous subfraction of the crude diethyl-ether extract. All three tested samples, *D. mezereum* flowers extract ($IC_{50} = 25.1 \pm 2.9$ mM) and isolated coumarins: umbelliferone ($IC_{50} = 7.1 \pm 2.6$ mM) and herniarin ($IC_{50} = 19.0 \pm 1.3$ mM), exhibited notable antioxidative potential in lipid peroxidation assay. None of the samples, however, had an inhibitory effect as pronounced as standardly applied antioxidants Trolox ($IC_{50} = 22 \pm 6$ μ M), caffeic acid ($IC_{50} = 15 \pm 3$ μ M) and quercetin ($IC_{50} = 23 \pm 6$ μ M). Taken altogether, the results of our studies bring forward new data regarding the antioxidant activities of *D. mezereum* species.

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Key words: *Daphne mezereum*, coumarin isolation, umbelliferone, herniarin, lipid peroxidation