CHARACTERIZATION OF SECONDARY METABOLITES IN HYDROALCOHOLIC EXTRACTS FROM LEAVES OF *Salvia pomifera* subsp. *calycina*

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The genus *Salvia* L. (Lamiaceae) is a frequent subject of study due to its variety of biological activities and phytochemical content. Crude sage extracts and individual compounds have demonstrated antimicrobial, antioxidant, cytotoxic, AchE- and BuChE-inhibitory activity. *Salvia pomifera* L. is a native species to Eastern Mediterranean. It consists of two taxa: *S. pomifera* L. subsp. *pomifera* (cretan sage) and *S. pomifera* subsp. *calycina* (Sm.) Hayek (apple sage). The latter is an aromatic taxon with antioxidant properties [1], whose non-volatile content has not been thoroughly investigated. The aim of this study was to provide further knowledge about this taxon's phenolic content. Dried leaves from two native populations were collected and identified by Dr. Aristidis Zografidis (Sparta, Peloponnese and Karlovasi, Samos). Ultrasound–assisted extraction was performed on 2 g of plant material, first with petroleum ether and then with 70% (aq) methanol. The hydroalcoholic extracts were analyzed with UHPLC-DAD-ESI-MS (Ultra-High Performance Liquid Chromatography–Diode Array Detector–Mass Spectrometry). This method provided data for the identification of more than 15 compounds and demonstrated the presence (in both populations) of two peaks of important intensity which correspond to two unknown metabolites, previously detected in the *S. pomifera* L. species [2]. Both extracts were rich in phenolic acids, such as rosmarinic acid (main compound) and salvianolic acid K; and flavones, such as cynaroside, luteolin glucuronides and hydroxyluteolin glucuronide. The extracts were further processed with liquid-liquid extraction using ethyl acetate as the organic phase. The aqueous phase was fractionated, based on UV-Vis absorption, with automated reverse-phase Flash Chromatography. Therefore, one fraction consisting of the two compounds with molecular weight values of 598 and 778 was collected. Further purification is performed with HPLC-DAD equipped with a fraction collector so as to enable their spectroscopic characterization. This work contributes to the characterization of secondary metabolites of *Salvia pomifera* subsp. *calycina*.

[1] Koutsoulas, A.; Čarnecká, M.; Slanina, J.; Tóth, J.; Slaninová, I. Characterization of Phenolic Compounds and Antiproliferative Effects of *Salvia pomifera* and *Salvia fruticosa* Extracts. *Molecules* **2019**, 24(16).

[2] Gkioni, M.D.; Zeliou, K.; Dimaki, V.D.; Trigas, P.; Lamari, F.N. GC-MS and LC-DAD-MS Phytochemical Profiling for Characterization of Three Native *Salvia* Taxa from Eastern Mediterranean with Antiglycation Properties. *Molecules* **2023**, 28(93).