

**Oral presentation**

**APPLICATIONS OF SECONDARY PLANT METABOLITES DERIVED BY AROMATIC AND MEDICINAL PLANTS**

**Paraskevi Yfanti<sup>2</sup>, Polyxeni Lazaridou<sup>1</sup>, Nicholas E. Korres<sup>2</sup>, Dimitra Douma<sup>2</sup> and Maria-Eleni Lekka<sup>1</sup>**

<sup>1</sup> *Department of Chemistry, University of Ioannina, University campus, P.C. 45110 Ioannina, Greece.*

<sup>2</sup> *Department of Agriculture, University of Ioannina, University campus of Arta P.C. 47.150, Arta, Greece.*

**Abstract**

Aromatic plants and virgin olive oil, basic elements of the Mediterranean diet have beneficial effects on human health attributed to the composition of the secondary metabolites. The aim of this work was to incorporate selected wild grown aromatic and medicinal plants (AMP) plants into a local virgin olive oil from the local variety “Lianoelia Prevezas” (Epirus, Greece) to evaluate the phenolic content (Folin-Ciocalteu assay) and antioxidant capacity (DPPH method) of the enriched olive oils. The chemotype of the aromatic plants was determined by the GC-MS analysis of their essential oils obtained by hydro distillation. According to the results, the species *Origanum vulgare* ssp. *hirtum*, *Coridothymus capitatus*, *Satureja horvatii* spp. *macrophylla* (Lamiaceae), used in the experiment, belong to Carvacrol (50.5 % to 83.5%), while *S. triloba*, to 1.8 cineole (45.1%) chemotypes. The total phenolic content of the olive oil samples ranged from 279.1 ±31.4 to 501.1 ±26.1 mg Gallic Acid Equivalent/Kg of olive oil, while the antioxidant activity expressed as IC<sub>50</sub> ranged from 23.0 ±1.5 to 77.1 ±0.3 mg. The enriched Lianoelia Prevezas olive oil with *C. capitatus* contained the highest total phenolic content, while the enriched one with *S. triloba* showed the highest antioxidant capacity. The use of biotechnological methods for the breeding and reproduction of aromatic and medicinal plants could be a useful tool for the development of wild grown AMP populations of Epirus which are characterized of excellent quality.

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