



# Abstracts

**FOR**

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## PP86: Bioactive potential of aromatic and medicinal plants traditionally used as condiments

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Aromatic and medicinal plants are highly appreciated and used worldwide as condiments, tinctures, and preservatives. Due to their nutritional value and chemical composition, related to beneficial properties to health, their inclusion in the human diet has gained increasing expression<sup>[1]</sup>. Certain mixtures of plants have greater potential when compared to isolated plants, due to synergistic effects, and these properties make them of great interest in the food, pharmaceutical, and cosmetic industries. They have been consumed directly in prepared dishes, but also by incorporation into foods, making them bioactive and functional<sup>[2]</sup>. In the present study, two mixtures of aromatic plants used to season meat (*Petroselinum crispum* L., *Salvia officinalis* L., *Thymus mastichina* L., and *Rosmarinus officinalis* L.) and salads (*Allium schoenoprasum* L., *P. crispum*, *Origanum vulgare* L., and *T. mastichina*) were characterized in terms of phenolic compounds (HPLC-DAD-ESI/MS), organic acids (UFLC-PDA), and tocopherols (HPLC-fluorescence). The antioxidant, antimicrobial, anti-inflammatory, and anti-proliferation capacities were also evaluated to validate their bioactive properties.

Twenty-four phenolic compounds were identified, with concentrations of 101.2±0.6 mg/g and 52.1±0.8 mg/g of total phenolics in meat and salad seasoning mixtures, respectively, being apigenin-*O*-malonyl-pentoside-hexoside the most abundant compound in both extracts. Oxalic, citric, and malic acids were detected in both samples, as well as the four isoforms of tocopherols, namely,  $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$ . In terms of bioactive properties, the meat blend extract revealed the best results for antimicrobial and anti-inflammatory activities. For the antioxidant activity, both extracts showed good results in the TBARS test, while in the OxHLIA assay, the mixture for meat stood out. On the other hand, the salad seasoning mixture had the best anti-proliferation property. In conclusion, these aromatic and medicinal plant mixtures demonstrated valuable bioactive properties, conferred by their chemical composition and cumulative and synergistic effects observed in the mixtures, which corroborates the importance of their inclusion in the Human diet.

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