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# Proceedings Book

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## O 2B - *Salicornia ramosissima* an edible halophyte with nutritional value and a source of a unique natural compound

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### Abstract

**Purpose:** *Salicornia ramosissima* J. Woods aerial parts are considered, in the Iberian Peninsula and France, a gourmet product mainly because of its salty taste. Nevertheless, its metabolomic profile is still unknown. As a part of our continuing search for structurally interesting natural products from plants, the aerial parts of *S. ramosissima* were phytochemically investigated.

**Experimental description:** The GC-MS technique was employed to fully characterize the lipophilic profile of *S. ramosissima* aerial parts and to assess the effect of natural and extra irrigation in that profile. The isolation of secondary metabolites from dichloromethane extract and their structural characterization were performed by preparative chromatographic techniques and spectroscopic experiments (NMR and MS) respectively.

**Results:** The obtained data showed esterified and free fatty acids, fatty alcohol, sterols, alkanes and aromatic acid derivatives, being palmitic acid, tetracosanol and octacosanol the most abundant compounds. The extra irrigation increases significantly ( $P < 0.001$ ) the content of esterified lipophilic compounds. Stigmastanol, 24-ethyl- $\delta$ (22)-coprostenol, several secondary fatty alcohols and dicarboxylic acids were identified for the first time in *Salicornia* genus.<sup>1</sup> The dichloromethane extract afforded a unique skeleton-type compound named saliramophenol along with compounds identified, for the first time, in *Salicornia* genus and/or in *S. ramosissima*.<sup>2</sup>

**Conclusions:** Several of the detected compounds are known to have health benefits and the results suggest that *S. ramosissima* should be considered as an important dietary source of lipophilic phytochemicals. The isolation and structural elucidation of saliramophenol has added a completely new skeleton to the already large and varied family of chemical structures obtained from natural resources.

**Key Words:** *Salicornia ramosissima*, lipophilic profile, saliramophenol, secondary metabolites.

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