

## Chemical composition, anti-inflammatory activity and cytotoxicity of *Ridolfia segetum* Moris from Portugal

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*Ridolfia segetum* Moris, commonly known as *corn parsley*, *false fennel*, or *false caraway*, is distributed throughout the Mediterranean region. It belongs to the Apiaceae (carrot or parsley family), that includes well-known aromatic and medicinal plants with characteristic hollow stems. *R. segetum* is used in traditional medicine to prevent constipation, coughing and respiratory tract infections. The present work aimed to characterize the chemical composition of the essential oil obtained from the flowering aerial parts of *R. segetum* collected in Portugal, as well as to evaluate the anti-inflammatory activity at concentrations safe to mammalian cells. The oils were characterized by GC and GC-MS. Assessment of cell viability was made by the MTT assay and the *in vitro* anti-inflammatory potential of the oil was evaluated by measuring NO production using LPS-stimulated mouse macrophages as *in vitro* inflammatory model. The main compounds of the oils are  $\alpha$ -phellandrene (63.3%) and terpinolene (11.9%). The oil significantly inhibited NO production (0.16  $\mu$ L/mL) without affecting cell viability, at concentrations up to 1.25  $\mu$ L/mL. These findings add significant information to the pharmacological activity of *Ridolfia segetum* essential oils, specifically to its anti-inflammatory properties, thus justifying and reinforcing its use in traditional medicine. Taken together, these results provide evidence of the therapeutical effects of this oil, and suggest that the anti-inflammatory activity in doses without cytotoxicity, combined with its pleasant odor could be of great value to cosmetic and pharmaceutical industries. Additional studies are ongoing in our lab to clarify the cellular and molecular mechanisms underlying these properties.

### Biography

Lígia Salgueiro has completed his Ph.D. at the University of Coimbra, Portugal in the field of Pharmacognosy and Phytochemistry. She is full Professor of Pharmacognosy and the Director of the Group Analytical Sciences, Bromatology and Pharamacognosy of the Faculty of Pharmacy, University of Coimbra,. She has published more than 80 papers in reputed journals and several books and book chapters.

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