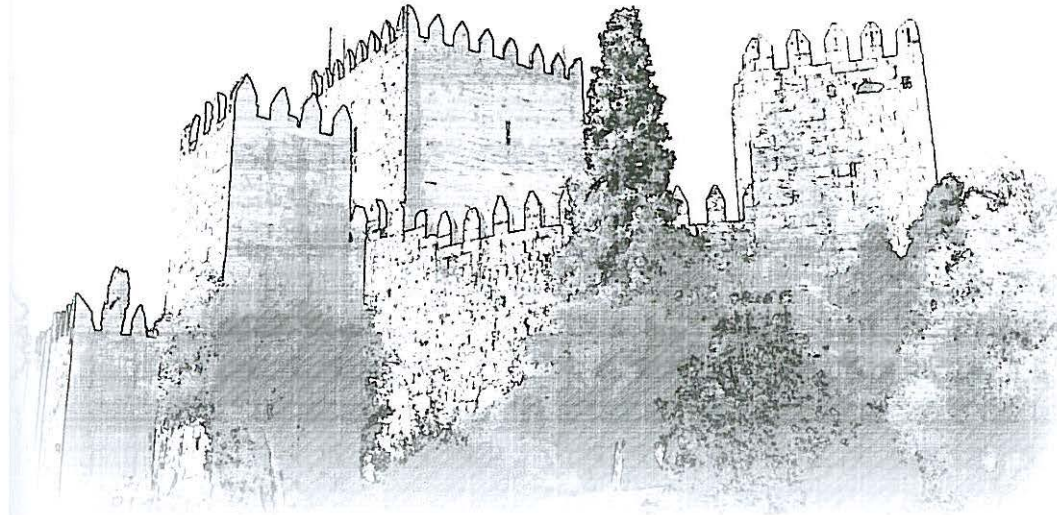
62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research - GA2014

Book of Abstracts



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patocytes (HepG2). Both bioactive and safe concentrations were disclosed (0.32 µL/mL) supporting further investigations for the development of a terpene-based anti-inflammatory agent. Taken together our results show evidence on the anti-inflammatory and safety profile of *T. carnosus* essential oil and additional experiments are being conducted to determine the mechanism of action of the oil, namely its effect at transcriptional and translational levels of pro-inflammatory mediators as well as its effect on selective pro-inflammatory signaling cascades.

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Keywords: *Thymus carnosus, essential oil, anti-inflamatory, cell viability*

P1L117 Antifungal activity against *Candida* species and phenolic characterization of decoction, infusion and hydroalcoholic extract of cultivated *Salvia officinalis* L.

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The frequency and severity of diagnosed fungal infections is growing and, linked with this, it is observed an exacerbated increase of the antifungal drugs resistance. *Candida albicans* has been considered the main agent responsible for opportunistic pathogenic infections, but, recently, other non-*C. albicans Candida* species have also been considered [1]. In face to the increased number of *Candida* species drug resistant, it is crucial to use natural matrices to discover efficient alternative therapies to current antifungal agents. *Salvia officinalis* L., commonly known as sage, could be one of those natural matrices, containing a wide variety of bioactive molecules. Despite the existence of some reports on antimicrobial activity of sage, the most studied preparation is the essential oil, being scarce the aqueous extracts. The antifungal activity of decoction, infusion and hydroalcoholic extract of cultivated sage were evaluated, and further characterized in terms of phenolic composition (HPLC–DAD–ESI/MS). Antifungal activity was assessed against a total of 19 *Candida* strains of *C. albicans, C. tropicalis, C. parapsilosis* and *C. glabrata* recovered from different human biological samples. The most pronounced effect was observed against *C. parapsilosis*, followed by *C. tropicalis* and *C. albicans*. No effect was observed against the three *C. glabrata* strains. In general, decoction presented the most pronounced effect, followed by infusion and hydroalcoholic extract, varying directly according with the extract concentration. Decoction also showed the highest concentration in phenolic compounds, followed by hydroalcoholic extract and infusions. Rosmarinic acid and luteolin 7-O-glucuronide were the main phenolic compounds. Thus, the use of sage decoction, incorporated on daily food dietary, or even as complement to an antifungal therapy, could provide considerable benefits, not only by internal but also external use, without the common side effects reported for essential oil.

Keywords: *Antifungal activity, Candida species, Salvia officinalis L., phenolic compounds*

References:
[1] Martins N, Ferreira ICFR, Barros L, Silva S, Henriques M. (2014). Mycopathol. DOI 10.1007/s11046-014-9749-1.

P1L118 Anti-Dengue virus limonoids from the actual seeds of *Swietenia macrophylla*

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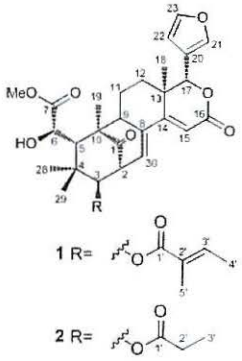
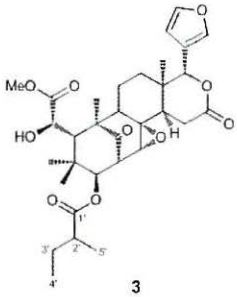
Fractionation of ethanol extract from the actual seeds of *Swietenia macrophylla* afforded seven new limonoids, swielimonoids A-G (**1-7**), together with twenty known compounds. Compounds **1** and **2**, mexicanolide-type limonoids, have a a,b-unsaturated d-lactone moiety (ring D) and a C=C bond between C-8 and C-30. Compounds **4-7** were categorized as a highly oxygenated phragmalin-type limonoid. The structures of these compounds were elucidated through the interpretation of spectroscopic methods, especially 2D NMR technologies (COSY, HMQC, HMBC, and NOESY). The anti-Dengue virus activities of isolated components from *S. macrophylla* were revealed for the first time. A dozen of compounds were subjected to the bioassay, and compounds **3** and **8-11** were active in the range of 3.5-12.5 mM. Among them, the new limonoid 3 exhibited significant activity (EC_{50} = 7.2 ± 1.33 mM) with maximum selection index CC_{50}/EC_{50} value >27.7.





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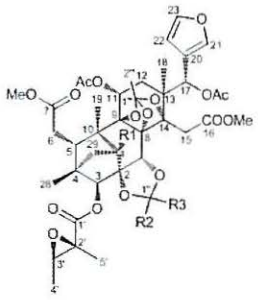

4 R1 = OAc, R2 = α-Et, R3 = β-OMe
5 R1 = OAc, R2 = β-Et, R3 = α-OMe
6 R1 = OH, R2 = β-Et, R3 = α-OMe
7 R1 = OAc, R2 = β-Me, R3 = α-OMe

Keywords: *Swietenia macrophylla, limonoid, anti-Dengue virus*