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products from an obscure mass of traditional herbal medicines to an eye-to-eye level with chemical synthetic products further advancing the road towards an evidence-based phytomedicine.

Poster Session-PO-87:

Isoquinoline alkaloids and amides from *Chelidonium majus*

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Chelidonium majus is the only species in the genus *Chelidonium*, belongs to family Papaveraceae. The aerial parts of this plant are used as a traditional medicine for anti-bacterial, anti-inflammatory, anti-cancer activities to treat gastric ulcer, gastric cancer, many types of skin diseases and liver disorders. In the previous reports, the main constituents of *C. majus* were confirmed as isoquinoline alkaloids, flavonoids and phenolic acids. On continuing research of the bioactive compounds from natural sources, we isolated two new isoquinoline alkaloids: cis-tetrahydrocoptisine N-oxide (1), trans-tetrahydrocoptisine N-oxide (2); three known isoquinoline alkaloids: impatien B (3)^[1] spallidamine (4), oxychelerythrine (5); a phenolic acid: 3,4-methylenedioxy phthalic acid (6) and three known amides: noroxyhydrastinine (7), trans-N-coumaroyltyramine (8)^[2], cis-N-coumaroyltyramine (9)^[3] from the dried aerial parts of *C. majus*. Their structures were elucidated on the spectroscopic methods including 1D-NMR (1H, 13C-NMR), 2D-NMR (HSQC, HMBC, NOESY), mass (HR-ESI, ESI). Compounds 3, 5, 6, 8 and 9 were isolated for first time from *C. majus*. Additionally, all of the isolates were tested for their inhibitory effect on LPS-induced NO production in RAW 264.7 cells. Among them, compounds 2 and 5 showed inhibitory effect with IC₅₀ values of 26.3 and 70.1 µM, while aminoguanidine, a positive control, showed an IC₅₀ value of 15.9 µM.

References:

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Poster Session-PO-88:

Clerodanes from *Salvia pseudorosmarinus* and their activity as inhibitors of monoacylglycerol lipase (MAGL)

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As a part of our research program for characterization of the biological activity of Lamiaceae diterpenes, the aerial part extract of *Salvia pseudorosmarinus* Epling, a perennial shrub up to 150 cm high with purple flowers growing in Peruvian Andes at 3500-4000 m above sea level, were investigated [1]. Over 900 *Salvia* species are widely distributed in different regions around the world such as the Mediterranean area, Central Asia, Africa, and America, and secondary metabolites produced by these plants include mainly diterpenoids, having an abietane or clerodane skeleton, sesquiterpenoids, triterpenoids, flavonoids, and polyphenols [2]. Diterpenoids and phenolic derivatives isolated from different species showed antioxidant, anticoagulant, cytoprotective, antihypertensive, anti-fibrotic, anti-ischemia-reperfusion injury, antiviral and antitumor activities [3]. Three new and one known clerodane diterpenes were isolated from the chloroform extract of the plant, by means of flash Silica gel column chromatography and RP-HPLC. The structural characterization of all compounds was performed by spectroscopic analyses, including 1D and 2D NMR, and HRESIMS experiments. The isolated compounds were assayed for their inhibitory activity on two enzymes involved in the peculiar glycolytic or lipidic metabolism of cancer cells, human lactate dehydrogenase (LDH) and monoacylglycerol lipase (MAGL), respectively. All the compounds showed negligible activity on LDH, whereas the known clerodane jenuenol A displayed a certain inhibition activity on MAGL, showing an IC₅₀ value of 75.8 μM.

References

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Poster Session-PO-89:

Antileukemia effect of Xestoquinone, induced apoptosis via oxidative stress combined with inhibition of Hsp90 and topoisomerase II activities

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