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chromatography techniques and identification using high-resolution Mass Spectrometry and NMR. We have performed an assay-based evaluation of isolated compounds from Artemisia annua against mycobacteria [2] and evaluated the antimicrobial properties of extracts from the other 18 herbs using high-throughput assays. These have revealed varying levels of anti-microbial activity, further purified. Each was tested for cytotoxicity, anti-parasite (Schistosoma mansoni) and anti-cancer properties. Our studies can help find different naturally available compound and help in the identification of targets to fight different diseases including the drug-resistant disease.

References:

[1] Baptista, R. et al. Future Med. Chem 2018; 0(0), p. null. doi: 10.4155/fmc-2017-0273.

[2] Bhowmick S. et al. Front Pharmacol 2018; (in press)

Poster Session-PO-72:

Chemical profile of wild and cultivated Salsola soda aerial parts

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The genus Salsola (Amaranthaceae) includes about 120 species of herbaceous or shubby plants, widespread especially in the brackish grounds of the moderate and subtropical regions of Europe, Asia, Africa, and North America. Previous phytochemical investigations on this genus reported the isolation of flavonoids, alkaloids, acetophenones, coumarins and sterols. Salsola species are well-known in folk medicine as anti-hypertensive, diuretic, anti-cancer, antioxidant, emollient, purgative, anti-ulcer, and anti-inflammatory remedies [1]. Wild S.soda L. is an erect glabrous annual plant widespread in South Europe, particularly in marginal areas near the coast [2]; the plant buds, called "agretti", are edible and cultivated as a food plant and in the past also as a source of impure sodium carbonate [1]. To date, in the literature there isn't any complete phytochemical characterization of the wild and cultivated plants. For this reason, the aim of the present study was to evaluate and compare the chemical content of wild and cultivated S.soda aerial parts. The dried and powdered plant materials were sequentially extracted with n-hexane and MeOH. The MeOH extracts were partitioned between n-BuOH and H_2O to remove sugar and other inorganic salt and the n-BuOH fraction was firstly submitted to LC-MS analysis. On the same time, the n-BuOH extract of the wild plant was chromatographed on Sephadex LH-20 column, and then, subsequently, fractioned with CPC and RP-HPLC, to obtain pure compounds. Flavonoids and saponins were finally isolated and characterized by NMR and MS analyses. The chemical profile of both plants exhibited that wild S.soda is richer than the cultivated one in

flavonoids and saponins content.

References:

[1] Rasheeda DM, El Zalabanib SM, Koheila MA, El-Hefnawyb HM, Faragb MA. Natural Product Research 2013; 27:2320-2327

[2] Pignatti S, 2017- Flora d'Italia. Vol. 2, Edagricole, Milano, p.270

Poster Session-PO-73:

Modulation of iNOS Expression in LPS-Stimulated BV-2 Microglia by Prenylated Chalcones from Cullen corylifolium (L.) through Inhibition of I-κBα Degradation

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The overproduction of nitric oxide (NO) and prostaglandin E2 (PGE2) by microglia may cause neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease. From the activity-guided purification of Cullen corylifolium (L.) Medik. (syn. Psoralea corylifolia L.), three prenylated chalcones were identified: isobavachalcone (1), bavachromene (2), and kanzonol B (3). These prenylated chalcones showed concentration-dependent inhibitory effects on NO and PGE2 production in lipopolysaccharide (LPS)-activated microglia. Western blotting and RT-PCR analysis demonstrated that these prenylchalcones reduced the expression of protein and mRNA of inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) in LPS-activated microglia. Furthermore, three prenylated chalcones blocked the inhibitory-κBα (I-κBα) degradation and down-regulated nuclear factor κB (NF-κB) level of nucleus in LPS-stimulated BV-2 microglia. Therefore, these prenylated chalcones from Psoralea corylifolia may be beneficial for the treatment of neuro-inflammatory diseases by modulating iNOS and COX-2 expressions in activated microglial cells.

Poster Session-PO-74:

Prenylated Polyphenols from Broussonetia kazinoki as Inhibitors of Nitric Oxide Production

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