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Poster Session

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Biological activities of extracts and constituents of Salvia tingitana Etl. (Lamiaceae)

A Bisio[1], P Castagnola[2], I Panfoli[1], M Schito Anna[3], F Pedrelli[1], B Ruffoni[5], N De Tommasi[4]

[1]Università degli Studi di Genova – Dipartimento di Farmacia – Viale Cembrano 4, 16148, GENOVA, Italy
[2]IRCCS AOU, San Martino – IST, Largo Rosanna Benzi, 10, 16132, Genova, Italy
[3]Università degli Studi di Genova – Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate, Sezione di Microbiologia – Largo Rosanna Benzi 8, 16145, Genova, Italy
[4]Università di Salerno – Dipartimento di Farmacia, Via Giovanni Paolo II 132, 84084, Salerno, Italy
[5]CREA OF – Centro di ricerca Orticoltura e Florovivaismo, San Remo (IM), Italy

Further Information

Congress Abstract | Full Text

The dichloromethane extract obtained from the aerial parts of *Salvia tingitana* [1] was investigated for its anticancer and antimicrobial properties following a bioassay-oriented fractionation approach. Twelve known compounds were isolated *i.e.* two polymethoxylated flavonoids, three labdane and one isopimarane diterpenes and six sesterterpenes, along with six new sesterterpenes, identified by IR, 1D and 2D NMR and HR-MS analysis. The extract and the semi-purified fractions inhibited both the ATP synthetic and hydrolytic activity of retinal rod outer segment homogenates (OS). The modulatory activity of the OS ectopic FoF1-ATP synthase of two of the isolated compounds, manool and salvileucolide methylester, was comparable with that of polyphenols like resveratrol [2]. The extract and the isolated compounds were then investigated for anticancer properties. In particular, manool and one novel sesterperpene, both assayed at 75μM, inhibited the 48h survival of the BT474 human breast cancer cells at the 13.7% and 40.0% of controls, respectively. The antimicrobial activity was analyzed on several Gram positive multiresistant bacterial strains of clinical origin (*Staphylococcus aureus, S. epidermidis, S. capitis, S. lugdunensis, S. saprophyticus, S. haemolyticus, Enterococcus faecium, E. faecalis, E. durans, E. gallinarum, E. casseliflavus, E.gallolyticus*). The extract and the compounds showed moderate antimicrobial activity against Gram positive bacteria, with the exception of manool and sclareol, which exhibited MIC values ranging from 4 to 64 μg/mL. Moreover, methanolic fractions of the root extract were particularly active, displaying MIC values ranging from 2 to 32 μg/mL. Results indicate that *S. tingitana* can be considered a plant active against important Gram positive human pathogens.

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