

MESMAP-5 PROCEEDINGS BOOK
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MESMAP – 5
PROCEEDING BOOK
ABSTRACTS & FULL PAPERS

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Cappadocia – Turkey

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POSTER PRESENTATION

**LIPOSOLUBLE CONSTITUENTS FROM THE AERIAL PART OF
*LIGULARIA NARYNENSIS***

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Objective: *Ligularia* is a medicinally important genus of the family Compositae that comprises about 180 Eurasian species, 17 species growing in mountains of Kazakhstan [1]. Phytochemical investigations of various *Ligularia* species showed the presence of monoterpenes, sesquiterpenes, diterpenes, triterpenes, alkaloids, steroids, flavonoids, lignans, and other skeleton type compounds, as well as some of these compounds showed various biological activities such as anticancer, antibacterial, antihepatotoxicity, antioxidant, and antithrombus [2]. In this work, fifty liposoluble constituents in chloroform extract from the aerial part of *Ligularia narynensis* from Kazakhstan have been identified by GC-MS method for the first time.

Material and Methods: To determine the liposoluble constituents' composition was made erenow of the raw material used GC/MS device. The chloroform extract from the aerial part of *L. narynensis* was analyzed by Electron Impact Ionization (EI) method on Agilent 7890A-5975C GC-MS (Gas Chromatograph coupled to Mass Spectrometer) fused silica capillary column (30m x 0.25mm; 0.25 µm film thickness), coated with HP-5MS were utilized. The carrier gas was helium (99.999 %). The column temperature was programmed from 50°C (held for 10 min), with 10°C/min rate program to increase temperature to 300°C. The latter temperature maintained for 40 min (Acquisition parameters full scan; scan range 30-1000 amu). The injector temperature was 310°C. Injection: with a 1 µl. Detector ion source (EI-70eV). Samples were injected by splitting with the split ratio 5:1.

Results: The liposoluble constituent in aerial part of *L. narynensis* was analyzed by GC-MS method. Total fifty compounds were separated and their relative contents were determined by area normalization in which the major constituents were Olean-12-ene, 3-methoxy-, (3.beta.)- (18.24 %), 12-Oleanen-3-yl acetate, (3.alpha.)- (9.70 %), Linoleic acid ethyl ester (8.62 %), Lupeol (6.29 %), and A'-Neogammacer-22(29)-en-3-ol, acetate, (3.beta.,21.beta.)- (5.71 %).

Conclusion: Presence of these bioactive constituents indicated that the plant extract possesses anti-inflammatory, anticoronary and anticancer activities. Further and comprehensive investigation is scheduled to be implemented in the next research stage.

Key words: *Ligularia narynensis*, chloroform extract, liposoluble constituents, GC-MS.

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