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PP73. Volatile constituents of several *Seseli* species with acetylcholinesterase activity

Jarosław Widelski[1]*, Alev Onder[2], Ahsen Sevde Cinar[2], Tomasz Mroczek[1], Krystyna Skalicka-Woźniak[1]

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Apiaceae is a well-known family of plants with characteristic umbels comprising a lot of aromatic plants important from the economic, medical and ecological points of view. Species from the *Seseli* L. genus are used in traditional medicine since ancient times from their antimicrobial, antiinflammatory and analgesic activities. Plants belonging to the genus *Seseli* are also a rich source of coumarin compounds of different type, which show the ability to inhibit several important enzymes, e.g. acetylcholinesterase (inhibitors of AChE are used in Alzheimer's disease treatment).

Extracts containing volatile compounds were prepared from several *Seseli* representatives (*S. elatum* subsp. *osseum* (Crantz) P.W.Ball, *S. andronakii* Woronow ex Schischk., *S. hartvigii* Parolly & Nordt, and *S. petraeum* M. Bieb.). AChE-inhibitory activity of the tested extracts from *Seseli* species was determined by TLC-bioautography on TLC plates (0.2-mm thickness) covered with silica gel. All TLC plates were developed with the optimized the mobile phase system containing an optimal concentration of 2-naphthyl acetate (30 mg/20 mL).

The GC-MS analysis was carried out on a Shimadzu GC-2010 Plus chromatograph coupled to a QP2010 Ultra mass spectrometric detector using a Phenomenex capillary column ZB-5MS (30 m; diameter of 0.25 mm and thickness of 0.25 µm). The initial column temperature was set to 50 °C, which was held for 3 min, and in the next step, the column was heated to 250 °C at a rate of 8 °C per min (and was then held at that temperature for 2 min). The split ratio after the injection of 1 µL was 1:20 and helium was used as the carrier gas (the flow rate was 1 mL per min). Ionization was performed by electron impact at 70 eV. The identification of compounds was based on a comparison of their mass spectra with those of MassFinder and NIST mass spectral libraries, as well as by retention index (calculated based on a homologous series of *n*-alkanes) comparison.

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[1]Department of Pharmacognosy with Medicinal Plant Laboratory, Medical University in Lublin, Chodźki 1, Poland; [2]Department of Pharmacognosy, Faculty of Pharmacy, Ankara Univeristy, Ankara, Turkey.
**Corresponding author*: jwidelski@pharmacognosy.org