

B053 Phytochemical profile of *Leontopodium alpinum* Cass. in comparison to other Asian *Leontopodium* speciesS. Schwaiger^a, M.J. Dobner^a, B. Odonchimeg^a, E.P. Ellmerer-Müller^b and H. Stuppner^a^a Institut für Pharmazie, Abt. Pharmakognosie, Universität Innsbruck, Innrain 52, Josef-Möller-Haus, A-6020 Innsbruck, Austria.^b Institut für Organische Chemie, Universität Innsbruck, Innrain 52a, A-6020 Innsbruck, Austria.

The genus *Leontopodium* comprises more than 50 species that grow mainly in high mountainous regions of Central Europe and East Asia. In this presentation we report the isolation and structure elucidation of the sesquiterpenes β -isocomene, silphinenene and modhephene from *L. alpinum* Cass. and 5-hydroxyobliquine from *L. leontopodioides* Beauverd. Isolation was performed by means of silica gel CC, silica gel AgNO₃ CC and Sephadex® LH-20 CC; structure elucidation by means of GC-MS, HR mass spectrometry and 1D- and 2D-NMR spectroscopy. For the fingerprint analysis of the secondary metabolite pattern of the *Leontopodium* species *L. calocephalum* Beauverd, *L. campestre* Hand-Mazz., *L. dedekensii* Beauverd, *L. franchetii* Beauverd, *L. sinense* Hemsl. ex Forb. & Hemsl., *L. subulatum* Beauverd, *L. leontopodioides* Beauverd. appropriate chromatographic methods were developed. Root extracts were analysed by TLC, RP-HPLC-UV/MS and GC/MS allowing the assignment of the characteristic constituents: bisabolane derivatives (1), benzofurane glycosides (2), lignanes (2), coumarins (2) and most of the described sesquiterpenoids (2-4). For the analysis of flavonoids and phenolic acids (5,6) of the aerial parts RP-HPLC-UV/MS methods were used. Comparison of the investigated species showed significant differences of the bisabolane and coumarin pattern in the root extracts. *L. franchetii* and *L. sinense* e.g. contained none of the known bisabolane derivatives. The known ligand derivative occurred in all investigated species. Root extracts of *L. alpinum*, *L. campestre* and *L. leontopodioides*, three closely related species, showed a similar secondary metabolite pattern. Analysis of the aerial parts revealed no significant differences between the investigated species.

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B054 On-line identification of metabolites in crude extracts of various *Justicia* species (Acanthaceae) by LC/UV/APCI-MSⁿA.I. Calderón^a, C. Terreaux^a, M. P. Gupta^b and K. Hostettmann^a^a Institut de Pharmacognosie et Phytochimie, Université de Lausanne, BEP, CH-1015 Lausanne, Switzerland. ^b Center for Pharmacognostic Research on Panamanian Flora (CIFLORPAN), College of Pharmacy, University of Panama, Republic of Panama.

LC/MS/MS and LC/MSⁿ represent very important tools for the on-line identification of natural products in crude extracts (1, 2). This study aimed at improving the knowledge on the chemical composition of the dichloromethane extract of *Justicia secunda* (stems) and to monitor variations in profiles of the isolated compounds from *J. secunda* and other non identified compounds in *J. refractifolia* and *J. graciliflora* by liquid chromatography with ultraviolet and mass spectrometric detection. MSⁿ fragmentation experiments were very useful to identify the known compounds present in the extracts. The compound classes peptide alkaloids, phenylalanine derivatives, indoloquinoline alkaloids, triterpenes, phenolic and olefinic amides and 2,5-diaryl-3,4-dimethyltetrahydrofuranoid lignans, were determined via on-line identification by LC/UV/APCI-MSⁿ analysis. The most frequently encountered metabolite among *Justicia* species was auranamide (phenylalanine derivative) while distribution of quindoline (indoloquinoline alkaloid) was limited to *Justicia secunda*.

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