



Essential Oil Compositions of Subspecies of *Scutellaria Brevibracteata* Stapf from Turkey

M. ÇIÇEK^{1,*}, G. YILMAZ², B. DEMIRCI³, K.H.C. BAŞER³

¹Pamukkale University, Turkey, 20070, Denizli, Department of Biology, Faculty of Arts and Science,

²Ankara University, Turkey, 06100, Ankara, Faculty of Pharmacy, Department of Pharmaceutical Botany

³Anadolu University, Turkey, 26470, Eskişehir, Faculty of Pharmacy, Department of Pharmacognosy

Key words: essential oil composition, *Scutellaria*, Lamiaceae, Turkey

Scutellaria L., with nearly 400 species, is one of the largest genera of the family Lamiaceae. In the last taxonomic treatment conducted by the first author, the genus *Scutellaria* has been evaluated as a genus with 33 taxa consisting of 25 species, 1 hybrid species and 13 subspecies in the Flora of Turkey. Turkish *Scutellaria* species are classified under three sections: section *Scutellaria*, section *Salviifoliae* and section *Lupulinaria*. We have here studied essential oil composition of the subspecies of *S. brevibracteata* belonging to the section *Scutellaria*. In the Anatolian traditional medicine, there is no more information on usage of *Scutellaria* except for the usage for constipation, hemostatic, tonic and wound healing, due to lack of its aromatic odour.

Dried the aerial parts of three subspecies of *Scutellaria brevibracteata* Stapf from Turkey were hydrodistilled. The chemical compositions of the essential oils obtained by hydrodistillation were analyzed by gas chromatography (GC) and gas chromatography/mass spectrometry (GC/MS), simultaneously. The subspecies of *S. brevibracteata* investigated here as follows: *S. brevibractetata* Stapf subsp. *brevibracteata*, *S. brevibractetata* Stapf subsp. *subvelutina* (Rech.f.) Greuter & Burdet and *S. brevibractetata* Stapf subsp. *pannosula* (Rech.f.) Greuter & Burdet.

According to the results of analyzing, β -caryophyllene (22.8%) and caryophyllene oxide (16.0%) were determined as the main components in *S. brevibractetata* subsp. *brevibracteata* oil. In *S. brevibractetata* subsp. *subvelutina* oil, β -caryophyllene (28.3%), linalool (12.4%), hexadecanoic acid (10.8%) were found as major constituents. β -caryophyllene (36.4%), α -cadinol (9.8%), d-cadinene (7.0%) linalool (5.3%) were identified as major component in the oils of *S. brevibractetata* subsp. *pannosula*.

*Corresponding Author Phone: +90 258 296 3881, Email: mcicek@pau.edu.tr

This study was presented at 2nd International Symposium Secondary Metabolites Chemistry, Biology and Biotechnology, 19-23 May 2014, Moscow