## Phenolic Compounds with Antioxidant Activity from Anthemis tinctoria L. (Asteraceae)

Paraskevi Papaioannou<sup>a</sup>, Diamanto Lazari<sup>a,\*</sup>, Anastasia Karioti<sup>b</sup>, Christos Souleles<sup>a</sup>, Jörg Heilmann<sup>c</sup>, Dimitra Hadjipavlou-Litina<sup>d</sup>, and Helen Skaltsab,\*

- <sup>a</sup> Laboratory of Pharmacognosy, School of Pharmacy, Aristotle University of Thessaloniki,
- 54124, Thessaloniki, Greece. Fax: +2310997662. E-mail: dlazari@pharm.auth.gr <sup>b</sup> Department of Pharmacognosy & Chemistry of Natural Products, School of Pharmacy,
- University of Athens, Panepistimiopolis, Zografou, 15771 Athens, Greece <sup>c</sup> Department of Pharmaceutical Chemistry, School of Pharmacy, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece
- <sup>d</sup> Institute of Pharmacy, Department of Pharmaceutical Biology, University of Regensburg, Universitätsstrasse 31, D-93053, Regensburg, Germany
  - Authors for correspondence and reprint requests

genase.

Z. Naturforsch. **62 c**, 326–330 (2007); received January 8, 2007 From the aerial parts of Anthemis tinctoria L. subsp. tinctoria var. pallida DC. (Asteraceae), one new cyclitol glucoside, conduritol F-1-O-(6'- $\hat{O}$ -E-p-caffeoyl)- $\beta$ -D-glucopyranoside (1), has been isolated together with four flavonoids, nicotiflorin (2), isoquercitrin (3), rutin (4) and patulitrin (5). The structures of the isolated compounds were established by means of NMR, MS, and UV spectral analyses. Methanolic extract and pure isolated compounds were examined for their free radical, scavenging activity, using the 1,1-diphenyl-2-picrylhydrazyl (DPPH) free stable radical, and for their inhibitory activity toward soybean lipoxygenase, using linoleic acid as substrate. Compounds 1 and 5 showed a strong scavenging effect in the DPPH radical assay. In addition 5 also exhibited high inhibitory activity on soybean lipoxy-

Key words: Anthemis tinctoria subsp. tinctoria pallida, Asteraceae, Flavonoids, Conduritol F