

Turkish Journal of Chemistry

Turkish Journal

of

Chemistry

 [Keywords](#)
 [Authors](#)



chem@tubitak.gov.tr

[Scientific Journals Home Page](#)

Polyphenolic Compounds and Antimicrobial Activity of Quercus aucheri Leaves

M. Koray SAKAR¹, Didem ŞÖHRETOĞLU¹, Meral ÖZALP²,
Melike EKİZOĞLU², Sonia PIACENTE³, Cosimo PIZZA³

¹Hacettepe University, Faculty of Pharmacy, Department of Pharmacognosy,
06100 Ankara-TURKEY
e-mail: msakar@hacettepe.edu.tr

²Hacettepe University, Faculty of Pharmacy, Department of Microbiology,
06100 Ankara-TURKEY

³University of Salerno, Department of Pharmaceutical Sciences, Via Ponte Don Melillo
84084, Fisciano-Salerno-ITALY

Abstract: Chromatographic studies (CC, VLC, MPLC, and PTLC) on ethyl acetate extract from the leaves of *Quercus aucheri* yielded 2 flavonoids (quercetin 3-O- α -L-arabinopyranoside (1), quercetin 3-O- β -D-galactopyranoside (2)) and 2 tannin precursors and a procyanidin [(isolated as peracetates of (+)-catechin (3a), (+)-gallocatechin (4a) and epicatechin-(4 β to 8)-catechin (5a)]. The structures of the compounds were elucidated by UV, 1D-NMR (¹H, ¹³C, TOCSY) and 2D-NMR (COSY, HSQC, HMBC) techniques. Different extracts (80% MeOH, EtOAc, n-BuOH and H₂O) from the leaves of *Q. aucheri* were investigated for their antimicrobial activity against 2 Gram-positive and 2 Gram-negative bacteria and 3 yeast-like fungi by a broth microdilution method. EtOAc extract, which showed the highest antimicrobial activity, was further used for isolation.

Key Words: *Quercus aucheri*, flavonol glycosides, (+)-catechin, (+)-gallocatechin, epicatechin-(4 β to 8)-catechin, antimicrobial activity

Turk. J. Chem., **29**, (2005), 555-559.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Chem., vol.29, iss.5.](#)