

Abstract

Cytotoxic Effects of *Alchemilla mollis* (Buser) Rothm. Extracts on MCF 7 Cell Line †

Selen İlğün ¹, Gökçe Şeker Karatoprak ^{2,*} and Müberra Koşar ³

¹ Faculty of Pharmacy, Department of Pharmaceutical Botany, Erciyes University, Kayseri 38039, Turkey; erturkselen@g-mail.com

² Faculty of Pharmacy, Department of Pharmacognosy, Erciyes University, Kayseri 38039, Turkey

³ Faculty of Pharmacy, Department of Pharmacognosy, Eastern Mediterranean University, Gazimağusa, North Cyprus via Mersin 10, Turkey; muberrakosar@gmail.com

* Correspondence: gskaratoprak@gmail.com; Tel.: +09-0505-488-94-06

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Abstract: *Alchemilla* is a genus of herbaceous perennial plants in the Rosaceae, with the common name Lady's Mantle. Aerial part of the plant which is used medicinally, traditionally used for skin irritations, wounds, female conditions such as menorrhagia, menopause and painful periods. *Alchemilla mollis* (Buser) Rothm. which grown in Black Sea Region of Turkey were investigated for its cytotoxic activities on MCF 7 cell line with SRB method. *A. mollis* herb material was extracted with methanol using a Soxhlet apparatus for 8 h. and separately *A. mollis* herb material was extracted with water using reflux for 3 h. Deodorized water extract of *A. mollis* was prepared using Clevenger apparatus. Results clearly demonstrated that the water extract of *A. mollis* has the highest cytotoxic effect among the other extracts. Water extract was significantly cytotoxic between the 62.5–1000 µg/mL concentrations ($p < 0.05$). The IC₅₀ value of the water, deodorized water and methanol extracts are 59.34 ± 3.41 µg/mL, 87.37 ± 25.15 µg/mL, 68.18 ± 6.12 µg/mL, respectively. The cytotoxic activity on MCF7 cell line of the *A. mollis* was first studied by us and the results are promising. Further studies are needed to confirm in vivo anti-tumorigenicity and subsequent chemical characterization of the active molecule(s).

Keywords: *Alchemilla mollis*; cytotoxicity; MCF 7



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