

Antiproliferative and apoptotic effects of *Lamium purpureum* L. extract on prostate cancer cells

İrem Atlıhan^{1,2}, Ayca Güner¹, Feyza Şule Aslan³, Ali Şen⁴, Oya Orun² & Pinar Mega Tiber^{2*}

¹Department of Biophysics, Institute of Health Sciences, Marmara University, Istanbul, Turkey

²Department of Biophysics, Faculty of Medicine, Marmara University, Istanbul, Turkey

³Faculty of Medicine, Marmara University, Istanbul, Turkey

⁴Department of Pharmacognosy, Faculty of Pharmacy, Marmara University, Istanbul, Turkey

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The use of herbal agents in cancer treatment is an important concept. It is thought that the *Lamiaceae* family may have anticancer effects due to its polyphenol metabolites. The anticancer effect of the *Lamium* genus belonging to this family has been examined in some studies. However, there are few studies on the *Lamium purpureum* (purple dead-nettle) species. In this study, the *Lamium purpureum* extract/fractions were prepared in different solvents, and their effects on proliferation and apoptosis in the LNCaP prostate cancer cell line were examined *in vitro*. This was investigated using the CCK-8 test, JC-1 mitochondrial membrane potential assay, caspase 3/7 enzymatic activity test, and caspase-7 protein level by Western blot. It has been determined that *Lamium purpureum* ethanol extract suppresses cell proliferation with increasing concentration and may induce apoptosis *via* caspase-7. It is the first study to investigate the anticancer effect of *Lamium purpureum* on LNCaP cells.

Keywords: Cancer, LNCaP, Apoptosis, Purple dead-nettle