



Abstract

The Effect of *Lysimachia Sauranii* on the Migration of the Breast Cancer Cells [†]

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Abstract: The treatment of breast cancer includes chemotherapy, radiotherapy and chemotherapy. Recently, alternative agents have been searched for breast cancer, especially medicinal plants because their anti-cancer effects. It has been reported that the genus of *Lysimachia* has anti-proliferative effect on cancer cells. In our study we aimed to evaluate in vitro anti-cancer activity of *Lysimachia sauranii* on migration of breast cancer cells. Breast cancer cell lines MCF-7 and MDA-MB-231 and also adipose tissue derived mesenchymal stem cells as normal cells. IC₅₀ doses of *Lysimachia sauranii* extract and Doxorubicin for each cells were calculated via MTT assay. *In vitro* wound model with (+) plus shape was created using pipette tips for migration analysis and IC₅₀ doses were exposed. The oxidative stress, vascularization and apoptosis were analyzed by immunocytochemical staining of eNOS, iNOS, VEGF and TUNEL. Data was evaluated by Graphpad software using one-way analysis of variance. *Lysimachia sauranii* and Doxorubicin have anti-proliferative effect on breast cancer cells. Breast cancer cell migration was inhibited by *Lysimachia sauranii*. There was an increase of eNOS and iNOS stainings, and apoptotic cells whereas there was a decrease of VEGF staining. Our findings indicate that *Lysimachia sauranii* extract is a potential herbal product for breast cancer therapy.

Keywords: *Lysimachia sauranii*; breast cancer; oxidative stress; apoptosis



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