proceedings

MDPI

Abstract

The Effect of *Lysimachia Savranii* on the Migration of the Breast Cancer Cells †

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† Presented at the 2nd International Conference on Natural Products for Cancer Prevention and Therapy, Kayseri, Turkey, 8–11 November 2017.

Published: 16 November 2017

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 savranii* 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 savranii* 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 savranii* and Doxorubicin have anti-proliferative effect on breast cancer cells. Breast cancer cell migration was inhibited by *Lysimachia savranii.* 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 savranii* extract is a potential herbal product for breast cancer therapy.

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