

5th International Conference and Exhibition onPHARMACOGNOSY, PHYTOCHEMISTRY
& NATURAL PRODUCTS

July 24-25, 2017 Melbourne, Australia

Dehydroandrographolide inhibits human oral cancer metastasis by transcriptionally repressing MMP-2**Shun-Fa Yang and Ming-Ju Hsieh**
Chung Shan Medical University, Taiwan

Oral cancer is one of the most common cancers worldwide and metastasis is recognized as a major factor causing its low survival rate. It is a critical research objective to inhibit the metastasis progress and improve the survival rate for oral cancer. Dehydroandrographolide is the principal component of *Andrographis paniculata* (Burm.f.) Nees and is the main contributors to its therapeutic properties. However, the molecular mechanism underlying the anticancer effect induced by dehydroandrographolide remains unclear. In this study, we investigated the effect of dehydroandrographolide on SCC-9 oral cancer cells and examined the potential inhibitory mechanisms involved. The results indicated that dehydroandrographolide attenuated the migration and invasion abilities of SCC-9 cells by reducing the activity and protein expression of matrix metalloproteinases-2 (MMP-2). Dehydroandrographolide inhibited the phosphorylation of ERK1/2, p38 and JNK 1/2 in SCC-9 cells. According to the mRNA levels detected using real-time PCR, dehydroandrographolide inhibited MMP-2 expression in SCC-9 cells. In addition, dehydroandrographolide administration effectively suppressed MMP-2 expression and tumor metastases in the oral carcinoma xenograft mouse model *in vivo*. These data indicate that dehydroandrographolide could be a potent therapeutic agent for the prevention and treatment of oral cancer and a prominent plant source for anticancer research in the future.

Biography

Shun-Fa Yang is a Professor of Institute of Medicine, Chung Shan Medical University, Taiwan. He has received his PhD degree in Molecular Biology. In particular, his researches have been focused on pharmacology, head and neck cancer metastasis, cancer biology, genetic polymorphism and environment risk factors in cancer.

ysf@csmu.edu.tw

Notes: