Title: Exploring the synergistic effect and mechanism of Spatholobus Suberectus Dunn extract and doxorubicin in breast MCF-7/ADR cells

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Abstract

Breast cancer is one of the most prevalent cancers in women and the second most common cause of cancer mortality[1]. Chemotherapy is the major strategy for treating the breast cancer[2]. The doxorubicin can improve the survive rate of breast cancer patients significantly[3]. However, the toxicity and drug resistance are the main problem of using the doxorubicin. Grape seed extract (GSE) can reverse the multiple drug resistance by down regulated the NF-kB and YB-1 activity wihich medicatd by MAPK/ERK in A2780/T[4]. We obtained the most active Spatholobus Suberectus Dunn extract (SSP) by optimizing extraction time, the volume of percolation, the concentration of ethanol. The inhibitory effect of SSP and GSE on breast cancer resistant strains (MCF-7/Adr) is similar, but SSP shows a better synergistic effect than GSE when combining doxorubicin. It suggests that there is another pathway working in the MCF-7/Adr regulate by SSP. Thus, we are exploring the active substance of SSP and the potential mechanism of synergistic effect by cell proliferation, adherent, apoptosis, cell cycle and the amount of protein which related in Estrogen receptor. The aim of the project is to illustrate the mechanism of synergistic effect of SSP and doxorubicin. It helps us understand the Spatholobus Suberectus Dunn, traditional Chinse medicine, in a comprehensive way.

Biography

Ms. WEN Yi is a Ph.D student of The University of Hong Kong. She obtained her Master's degree of Traditional Chinese Medicine in Jiangsu University and Shanghai Institute of Materia Medica. And gained the Bachelor of Pharmacy in Jiangsu University. Ms. WEN Yi was granted the Dragon Culture Traditional Chinese Medicine Scholarship in 2017. And won the Best Paper Award in 17th Tri-University International Joint Seminar & symposium in Thailand. She won the first-class scholarship twice, the second-class scholarship once and also the National Motivational Scholarships during the Bachelor's degree. Ms. WEN Yi discovered the first novel inhibitor of NAD(P)+-dependent malic enzyme by high-throughput screening and studied the mechanism of inhibitor.



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