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## Study on the inhibitory activity of 3'-hydroxypterostilbene on tumor growth in xenograft model of human prostate cancer cells

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According to the Ministry of Health and Welfare in Taiwan, prostate cancer is the sixth highest cause of cancer-related death. Besides, prostate cancer cells will metastasize to bones and lymph nodes, so it's important that prevention and treatment of prostate cancer. In this study, 3'-hydroxypterostilbene (OHPt), a structural analogue of pterostilbene (Pt), were used as experimental samples to investigate the potent anti-tumor effects in PC-3 xenografted nude mice.  $1 \times 10^6$  PC-3 cells were injected subcutaneously into the flanks of 30 male Balb/c nude mice to form tumors. When xenografted tumor volume reached around 100 mm<sup>3</sup>, mice were randomly divided into five groups. Each group consisted of 6 animals. Mice were orally administrated with daily doses of OHPt (5, 25 and 50 mg/kg/d) and Pt (25 mg/kg/d) for 4 weeks; while control group was orally administrated with olive oil only. During the experiment, the tumor volume was determined and recorded once or twice per week using caliper measurements. At the end of the experiment, animals were sacrificed by CO<sub>2</sub> asphyxiation and the individual tumors were excised immediately and weighed. Further the protein expression of tumors was measured. The results showed that the treatment of mice with OHPt could inhibit the tumor volume and tumor weight in a dose-dependent manner, and increased the expression of c-caspase-3 while decreased the expression of MMP-9 and Cox-2. In conclusion, these results revealed that OHPt might be a potential agent to treat prostate cancer.

### Biography

Ching-Yi Kuan is currently a Master's student in the Department of Food Science at National Pingtung University of Science and Technology in Taiwan. She has a great passion for Food Science. She can perform cell experiments, western blotting and animal experiments. She is studying the inhibitory activity of the stilbenes on liver cancer. She has published one poster in Taiwan Association for Food and Technology in 2015.

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