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TITLE

Tanshinone IIA with Synergic Effects for 5-FU to Treat Human Colon Cancer colo 205 cells Xerograft Tumour

Chin-Cheng Su

Changhua Christian Hospital, Taiwan

Tanshinone IIA (Tan-IIA) was one of the diterpene quinone in *Danshen, Salviae miltiorrhizae Radix*. Tan-IIA could inhibit human colon cancer colo 205 cells in vitro and in vivo through decreasing ErbB2 and increasing TNF- α expression. But the synergic effects for Tan-IIA and 5-fluorouracil (5-FU) were not well evaluated. In the present study, the 3 weeks old, male; mice (NOD.CB17 prkdescid/TZU, number=24) were engrafted with human colon cancer colo205 cells and on day 10 onwards were divided into three groups. Each group were treated with vehicle alone, 5-FU(20mg/kg, I.P, QW1) and 5-FU(20mg/kg, I.P, QW1) plus Tan-IIA (20mg/kg, I.P, QW3,5) respectively. The xenografted tumor volumes were measured every other day. At the end of 4-weeks dosing schedule, the mice were sacrificed with CO₂ inhalation and colo 205 xenografted tumors were dissected and weighted, and then extracted total protein for proteomics 2D LC/MS analysis and western blot analysis. The results showed that the 5-FU plus Tan-IIA group resulted in a reduction in tumors volume and weight compared to the 5-FU group. The molecular mechanisms may be through down regulating P-Gp, LC3-II, MMP-2, MMP-7, VEGF, Topoisomerase I and Erb-B2 proteins expression. The proteomics 2D and LC/MS analysis showed that the proteins expression in 5-FU plus Tan-IIA group were up regulated more than double times when compared to 5-FU group including heterogeneous nuclear ribonucleoprotein H1,H2/ NCK-associated protein 1, isoform CRA, Porin 31HM/ voltage-dependent anion channel 1; down regulated more than 50% including as follow :peroxiredoxin 1/Porin 31HM/voltage-dependent anion channel 1/peroxiredoxin 4/enolase 1.

Biography

Chin Cheng Su has completed his Ph.D at the age of 42 years from Graduate Institute of Chinese Medical Science (2003-2006) from China Medical University. He is the director of laboratory of integrative medicine cancer research and Co-Chair of the Comprehensive Breast cancer center, Changhua Christian Hospital. He has published more than 33 papers in reputed journals and serving as a reviewer of reputed journals.