A potent and selective anti-tumor agent on human gastric cancer

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A research article to be published on June 21, 2009 in the *World Journal of Gastroenterology* addresses this question. The research team led by Professor Yan Li from Shengjing Hospital of China Medical University studied the growth inhibitory effects of Alisol B acetat and determined its mechanism of antitumor activity in human gastric cancer cell line SGC7901.

Professor Li and his colleagues found that Alisol B acetat could inhibit the proliferation of SGC7901 cell in a time and dose dependent manner. Among the various phases of cell cycle, the percentage of cells in S phase was significantly decreased, while the percentage of cells in G1 phase was increased. Flow cytometry assay also showed Alisol B acetate had positive effect on apoptosis. Typical apoptotic morphology such as condensation and fragmentation of nuclei and formation of apoptotic bodies could be observed through electron microscope and phase-contrast microscope. Further investigating the molecular mechanism behind Alisol B acetat -induced apoptosis, cells treated with Alisol B acetat underwent a rapid loss of mitochondrial transmembrane potential, activition of caspase-3, -9, upregulation of Apaf-1 and Bax, and inhibition of the PI3K/Akt in a time-dependent manner.

The researches domenstrated for the first time that Alisol B acetate induced human gastric cancer apoptosis through regulation of mitochondrial and PI3K/AKT signaling pathways Their research results indicate that Alisol B acetate might be used to treat gastric cancer , one of the most common cancers worldwide. By knowing the mechanism of

action of Alisol B acetate, it may provide a new therapeutic option, as a potential anticancer agent, in the treatment of gastric cancer.

More information: Xu YH, Zhao LJ, Li Y. Alisol B acetate induces apoptosis of SGC7901 cells via mitochondrial and phosphatidylinositol 3-kinases/Akt signaling pathways. World J Gastroenterol 2009; 15(23): 2870-2877. www.wjgnet.com/1007-9327/15/2870.asp

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