

## ***Elaeagnus Angustifolia* Plant Extract inhibits Epithelial- mesenchymal Transition in Human Colorectal Cancer via $\beta$ -catenin/JNK signaling Pathways**

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### **ABSTRACT**

*Elaeagnus angustifolia* (EA) is a traditional plant that has been used as an alternative medicine for centuries. EA roles as anti-cancer has been investigated against different types of cancer, however, its effect against human cancer has not been investigated yet. Therefore, we investigated the aqueous EA extract effect on colorectal cancer (CRC) cell lines (HCT-116 and LoVo) and examined its underlying mechanisms of action *in vitro*. Our results showed that EA inhibited cell proliferation and disturbed cell-cycle progression of both CRC cell lines comparing to the control. Moreover, EA extract significantly reduced colony formation in addition to migration and invasion ability of both CRC cell lines this is confirmed by significant upregulation of E-cadherin and Pan-cadherin as well as down regulation of Vimentin. Further,  $\beta$ -catenin/JNK signaling pathway was analyzed and we found that EA extract significantly blocked the activity of total and phosphorylated  $\beta$ -catenin and JNK1/2/3.