

Nerve growth factor stimulates cellular proliferation of human epithelial ovarian cancer

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Due to its ability to induce vascular endothelial growth factor expression and proliferation, migration, and vasculogenesis of endothelial cells, nerve growth factor (NGF) has been considered as an angiogenic factor in epithelial ovarian cancer (EOC). In this work, we evaluated the angiogenic and proliferative mRNA expression profiles of EOC and addressed the responsiveness of EOC explants to NGF stimulation. Twenty EOC samples were obtained from Obstetrics and Gynecology Department, University of Chile's Clinical Hospital. Global gene expression profiles of selected poorly differentiated serous EOC samples were obtained with DNA oligonucleotide microarrays. In addition, EOC explants were subjected to NGF stimulation and levels of p-AKT, BAX, BCL2, Ki-67, c-MYC, and FOXL2 proteins were determined by immunohistochemistry. Results showed that mRNAs coding for specific transcriptional regulators and antiapoptotic components of the NGF signaling pathway were upregulated in EOC cells. At th