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### **Anti-angiogenic treatment in non-small cell lung cancer (NSCLC)**

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Lung cancer is the leading cause of cancer-related deaths worldwide. Due to lack of early symptoms patients are diagnosed with advanced stage of the disease. Growing tumors promotes angiogenesis inside malignant tissue, what next results in metastatic potential and poor prognosis. Tumor angiogenesis is one of the targets for anticancer therapy developed today. Malignant cells including lung cancer cells, release many growth factors that are involved in tumor angiogenesis. Blocking signal transduction pathway of VEGF, main angiogenic factor by for example VEGF receptor inhibitors or anti-VEGF monoclonal antibodies results in endothelial cells apoptosis what in turn blocks angiogenesis. Recently it was discovered that tumor suppressor p53 protein is involved in controlling tumor vascularization. In cancer tissue samples obtained from patients with lung cancer, immunohistochemical analysis showed that mutant p53 correlated with higher VEGF expression. In our study we decided to combine some tyrosine kinase inhibitors (TKI) with cytostatics: Cisplatin and docetaxel and also calcitriol analog as a proposed treatment in non-small cell lung cancer (NSCLC) model. The research focused on combined effect of above mentioned drugs towards proliferation of lung cancer and endothelial cells and the VEGF production by cancer cells in vitro. The mechanism of observed down regulation of VEGF expression in lung cancer cells after exposure to combination of TKI with cytostatics was explored.

#### **Biography**

Ewa Maj is PhD student at Institute of Immunology and Experimental Therapy, Polish Academy of Science. She has completed her MSc of Biotechnology from University of Agriculture in Krakow and also MSc of Medical Analytics from Jagiellonian University Medical College in Krakow. Before PhD studies she worked in Laboratory of Auto immunology in Diagnostyka Medical Laboratories as medical technologist. She has published about 9 papers as co-author in reputed journals and presented results of her research in national and international conferences.

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