



CURRENT POSTGRADUATE STUDENT

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PROGRAM	PhD in Surgery	
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FIELD OF RESEARCH / INTENDED THESIS TITLE	Lung cancer	
KEYWORDS FOR RESEARCH	NSCLC, EGFR-TKI, drug resistance	
RESEARCH STUDY:		
Non small cell lung cancer (NSCLC) is one of the leading causes of cancer-related death worldwide. The platinum-based chemotherapy combination provides an effective treatment for non-small cell lung cancer and metastatic cancer patients, but most patients will inevitably develop disease progression. The discovery of EGFR mutation and the application of EGFR-TKI provide an effective new method for the treatment of NSCLC. Osimertinib a third-generation EGFR-TKI is developed for the first-generation EGFR-TKI drug resistance, and has achieved good clinical efficacy, but with the extension of treatment time, acquired resistance will still occur. Metformin is a widely used antidiabetic drug. Clinical studies have found that it can reduce the incidence of tumors in diabetic patients and improve prognosis. Studies have shown that metformin has the ability to improve sensitivity of cancer cells to chemotherapeutic drugs as well as molecule-targeted anticancer drugs. However, the mechanism has not been clearly explained. Our study demonstrated that the combination of osimertinib and metformin could significantly inhibit cell proliferation and promote apoptosis in NSCLC cells, and the effect was stronger than that of monotherapy groups. Furthermore, the mechanism may be related to the up regulation of p-AMPK and the downregulation of p-P70S6K through the AMPK/mTOR pathway. This study provides a theoretical basis for the further treatment of EGFR-TKI acquired drug-resistant NSCLC patients.		
CONFERENCE TITLE / ABSTRACT / POSTER:		
Peng Jia, Yuan Yuan, Pan Yueyin, Zhang Ying, etc. Synergistic Efficacy of Metformin in Combination with Osimertinib in PC 9/GR Cells [J]. Acta Universitatis Medicinalis Anhui, 2017, 52(7): 957-961. Wang Jing, Yuan Yuan, Peng Jia, etc. Quercetin promotes apoptosis of lung cancer PC9 /GR cell via Stat3 /Mcl-1 pathway[J]. Acta Universitatis Medicinalis Anhui, 2017, 52(12): 1782-1785.		