J Cancer Sci Ther 2014, 6:10
http://dx.doi.org/10.4172/1948-5956.S1.035

OMICS Group Conferences
Accelerating Scientific Discovery

4th World Congress on
Cancer Science & Therapy
October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore Conference Center, USA

Jar cell response to oxidative stres in an *in-vitro* model

Meral Koyuturk, Erengul Tokay, Elif Yaprak and **Elif Guzel**
Istanbul University, Turkey

In this study, the response of choriocarcinoma cells (JAR) to tumor necrosis factor-α (TNF-α) mediated oxidative stress was searched with the intention of offering new approaches for placental pathologies.Cells were cultured in DMEM containing 10% FBS in a humidified incubator at 37°C with 5% CO_2. Time and concentration depended preliminary experiments were performed. The effects of TNF-α (100ng) on NF-κB pathway, cell proliferation and apoptotic cell death and the effect of pentoxifylline (PTX) (10 mM) on TNF-α mediated NF-κB expression in choriocarcinoma cells were investigated by immunocytochemical tecniques. Cell proliferation rate was detected by PCNA, on the other hand determination of apoptotic cells was performed by anti-caspase-8. Staining intensities were semi-quantitatively evaluated by HSCORE.As a result of immunocytochemical staining; we determined that NF-κB expression was significantly changed at both nuclear and cytoplasmic levels according to the application time of TNF-α. TNF-α induced nuclear NF-κB levels was significantly lowered in choriocarcinoma cells when TNF-α was combined with PTX. In only PTX applied group, there was no nuclear NF-κB immunoreactivity in these cells.According to our results, PTX may be a potent therapeutic agent targeting NF-κB related signalling pathways.

Biography

Meral Koyuturk graduated from medical faculty on 1995 than she has completed her PhD in Histology and Embryology at the Istanbul Medical Faculty of Istanbul University. She attended postdoctoral studies in Medical Faculties of Kadir Has University and Istanbul Bilim University. She has been working in the Cerrahpasa Medical Faculty of Istanbul University for the four last years. She has published book chapters and papers in reputed journals.

mkoyuturk1@yahoo.com

Anti-proliferative and immunomodulatory activities of different jelly fig achenes extracton human leukemic cell

Shih-Yi Zhen, Diana Lo, Chii-Ming Jiang and **Ming-Chang Wu**
National Pingtung University of Science and Technology, Taiwan

This study aimed to investigate the anti-proliferative and immunomodulatory activity of jelly fig achenes extract, which was divided into pectin esterase inhibitors (PEI), crude polyphenols extract (CP), and purified polyphenols extract (PP) and their increase in anti-proliferative activity by combining with Sunitinib, a commercial cancer medicine. DPPH radical scavenging ability of PEI, CP, and PP extracted from jelly fig achenestended to increase as theconcentrationincreased and the inhibition capacity reached more than 75% at the concentration of 89.4, 78.3, and 46.8 μg/ml, respectively. Purified polyphenols (PP), which contain anthocyanin about 0.25±0.02 mg gallic acid equivalent/g,has higher reducing power than α-tocopherol and (BHA) at the concentration lower than 200 μg/ml. PEI of jelly fig acheneshave anti-proliferative effect on U937 and K562 cells. After 24 h treatment, the anti-proliferative effect of PEI reached 75% and increased to 82% by addition of 1 μg/ml sunitinib. Moreover, PP extract of jelly figachenescould inhibit the proliferation of U937 and K562 cells up to 92% and it increased to 100% by addition of 1 μg/ml sunitinib.Beside anti-proliferative effect, PEI and PP also could induce nuclear stain, DNA fragmentation, and increase in Sub-G1 cell cycle population, which support the finding that anti-proliferative effect of PEI and PP were triggered through apoptosis.Moreover, PEI, CP and PP could significantly inhibit IL-2, IL-4, IL-10 and γ-IFNon blood lymphocytesat the concentration less than 100 μg/ml, while PP showed highest inhibition on IL-4, IL-10 and γ-IFN. In conclusion, PP extract of jelly fig achenesrevealed the highest anti-proliferative and immunomodulatory activities.

globalizationwu@yahoo.com.tw