

Joint Event

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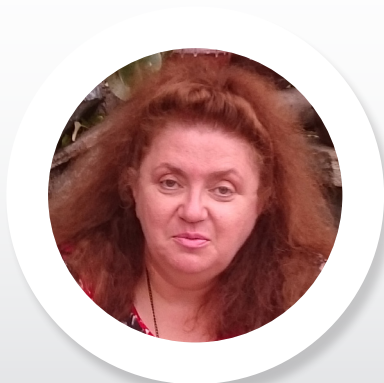
### **Metal [Zn(II), Co(II), Ni(II)] complexes with kojic acid: do they help us to fight against cancer?**

The aim of our study was to evaluate the influence of newly synthesized complexes of Zn(II), Co(II) and Ni(II) with kojic acid on viability and proliferation of cultured human (HeLa cervical carcinoma), rat (sarcoma LSR-SF-SR) and avian (liver cancer LSCC-SF-Mc29) cancer cells. Short-term experiments (24-72 h, with monolayer cell cultures) by thiazolyl blue tetrazolium bromide (MTT) test, neutral red uptake assay (NR), crystal violet staining (CV), double staining with acridine orange and propidium iodide, AnnexinV/FITC method as well as long-term experiments (14 days, with 3D cancer cell colonies) by 3D-colony forming method were carried out to investigate the cytotoxic activity of the compounds. The results obtained revealed that the compounds examined decreased viability and inhibited 2D and 3D growth of the treated cells in a time- and concentration-dependent manner. Co(II) complex with kojic acid (CoKoj) was found to be the most promising cytotoxic agent in human HeLa and rat LSR-SF-SR cells whereas ZnKoj showed the highest effectivity in chicken LSCC-SF-Mc29 cells. NiKoj exhibited the lowest cytotoxicity. Cytopathological changes and apoptosis were observed in the cells cultivated in the presence of the compounds tested.

#### **Biography**

Radostina Alexandrova has graduated with Honors in Biochemistry and Microbiology, Sofia University "St. Kl. Ohridski" (SU) in 1991. She has obtained her MSc and PhD degree's in Virology; and Postdoctoral training in Slovakia, Hungary, Denmark, Iceland; lecturer in SU and PhD School of Bulgarian Academy of Sciences (BAS). She is a Team-Leader in the Department of Pathology, IEMPAM-BAS. She has published more than 150 papers in reputed journals and conference proceedings

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