

15<sup>th</sup> World Congress onBIOTECHNOLOGY AND BIOTECH INDUSTRIES MEET  
&2<sup>nd</sup> International Conference on

## ENZYMOMOLOGY AND MOLECULAR BIOLOGY

March 20-21, 2017 Rome, Italy

**Biochemical effect of some antioxidants on metabolic changes in experimentally induced tumor in female mice****Mohammed F. El-Shiekha**

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**B**iochemical effect of tannic acid and curcumin on female mice which experimentally induced Ehrlich ascites carcinoma (EAC) was investigated in this study. This study was carried out on 220 (12-14 weeks old, 25-30 g each) female mice. Mice were classified into two main large experiments. Experiment 1: Non-tumor bearing mice (NTB) included 100 animals and divided into four groups, each one comprised 25 mice. Group 1: NTB-control saline treated. Group 2: NTB-treated with curcumin orally (350 mg/kg/day) for 6 weeks. Group 3: NTB-treated with tannic acid orally (160 mg/kg/day) for 6 weeks. Group 4: NTB-treated with curcumin and tannic acid orally at ratio (50%:50%) for 6 weeks. Experiment 2: Tumor bearing (TB) mice. Out of the total 120 animals, were divided into four groups each one comprised of 30 mice. Group 1: TBM-control saline treated. Group 2: TBM-treated with curcumin orally (350 mg/kg/day) for 6 weeks. Group 3: TBM-treated with tannic acid orally (160 mg/kg/day) for 6 weeks. Group 4: TBM-treated with curcumin and tannic acid orally at ratio (50%:50%) for 6 weeks. Blood samples were collected from all animals groups after 2, 4 and 6 weeks from treatment. Serum were separated and processed directly for glucose, insulin, total cholesterol, triacylglycerol, total protein determination. The obtained results revealed that, a highly significant decrease in serum glucose, total cholesterol, total protein concentration, meanwhile, a highly significant increase in serum triacylglycerol concentration was also observed. But a non-significant decrease in serum insulin levels were observed in tumor bearing mice when compared with control. The results of this study indicated that curcumin, tannic acid and their combination treatment have potential benefits in cancer treatment.

**Biography**

Mohammed F. El-Shiekha has completed his PhD from the Department of Biochemistry, Faculty of Veterinary Medicine, Benha University, Egypt. He is a Faculty Member in the Department of Biochemistry, Faculty of Pharmacy, October 6 University, Egypt. He has published 6 papers in reputed journals.

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