

### **Synergistic anti-tumour effect of propolis against Ehrlich carcinoma**

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**Abstract:** Two hundred and fifty female Swiss mice were used to study the ability of Egyptian propolis to protect methotrexate induced dysfunction to liver and kidneys of mice bearing Ehrlich ascites carcinoma (EAC). They equal divided into 5 groups: 1<sup>st</sup> kept as negative control, 2<sup>nd</sup> was implanted intraperitoneally with  $2.5 \times 10^6$  EAC and kept as positive control and, 3<sup>rd</sup> implanted intraperitoneally with  $2.5 \times 10^6$  EAC and treated with propolis by dose (50 mg/kg body weight) was given by gastric intubations 2 hours prior to the intraperitoneal injection of EAC, 4<sup>th</sup> implanted intraperitoneally with  $2.5 \times 10^6$  EAC and treated with methotrexate by dose (0.4 mg/kg body weight) and 5<sup>th</sup> implanted with the same count of the EAC cells and treated with combination of propolis and methotrexate (50 mg/kg body weight and 0.4 mg/kg body weight) for eleven successive days . Increasing mean survival time (MST), increasing life span (ILS %) and treated vs. positive control (T/C %) in the all treated group with increased of the body weight, volume of ascites fluid, total number of EAC cells, viable % cells and decreased of dead% cells in second group while in 3,4 and 5 groups which treated by trials of propolis ,methotrexate and combination of the two compounds respectively, revealed decreasing in body weight, volume of the ascites fluid, total number of EAC cells and the percentage of life cells. Histopathology revealed that least degree of malignancy was in combination group where malignant cells became smaller and showed less degree of malignancy and apoptosis.

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