

The effect of bioactive compounds on the functional characteristics of erythrocytes

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Nowadays, administration of plant extracts is important approach in oncology. The reason must be an easy way for administration, low price and the complex action of herbal medicines. Investigations in this respect are held in different directions: The study of herbal medicines on one hand as biologically active substances with antitumor activity and their positive effects on organism after the negative effects of chemotherapy treatment on the other. The aim of the given work was to study the influence of bioactive substance (Walnut yoke - *Juglans regia L.*) on the functional characteristics of erythrocytes after the administration of cytotoxic agent- Cyclophosphamide. According to the gained results, sorption capacity of erythrocytes was increased in the 8th day of administration of cyclophosphamide and especially in case of cyclophosphamide together with Greek walnut extract. This must be caused by the stimulative effect of walnut extract on sorption capacity of erythrocytes. The maximum effect of cyclophosphamide on resistance of erythrocyte membrane was revealed on 4th day from the administration of the cytotoxic agent. The similar picture of erythrocyte resistance against the lysis has been revealed in case of administration of both cyclophosphamide and Greek walnut after 4th and 8th days. This effect must be caused by the special effect of walnut extract on erythrocytes that was reflected in significant delay in the lysis process.