

# INFLUENCE OF CONTINUOUS WATERING WITH NANOGERMANIUM CITRATE ON THE ORGANISM OF FEMALE RATS $F_2$

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Morphological and biochemical parameters of blood of the influence on the organism of female rats  $F_2$  of different concentrations of nanogermanium citrate (HGeC) obtained by the nanotechnology method, in the doses 20 and 200  $\mu\text{g Ge / kg b.m.}$  was studied. It was established that, compared with the control animals, prolonged feeding of HGeC with water in the  $F_0$ ,  $F_1$ ,  $F_2$  generations resulted in a significant decrease in the mean concentration of hemoglobin in erythrocytes by 4.7% in the female rats  $F_2$  in the second experimental group, that were given 200  $\mu\text{g Ge / kg b.m.}$  In animals, in the first experimental group that were given 20  $\mu\text{g Ge / kg b.m.}$  no such changes occurred. A statistically significant decrease the number of leukocytes: in the first experimental group by 47,8 %, in the second – by 52,7 %. In the blood of animals in both experimental groups statistically significant increase in the percentage of segmental neutrophils in the first experimental group by 32,1 %, in the second – by 27,2 %.

The results of biochemical studies indicate a certain tendency to change the blood parameters of both experimental groups in animals of the control group. The use of both low and high concentrations of HGeC at the same level of serum iron traces the tendency to decrease the total and residual iron binding capacity of the serum, decreases the activity of alkaline phosphatase and increases the concentration of urea and MSM.

In animals, that were given 20  $\mu\text{g Ge / kg b.m.}$  was noted the higher percentage of saturation of transferrin by iron and the tendency for increased activity of ALAT and ASAT. In animals of the second experimental group, the activity of ALAT and ASAT decreases, and the percentage of saturation of transferrin is also lower.

**Keywords:** BLOOD MORPHOLOGY, SERUM BIOCHEMISTRY, GERMANIUM CITRATE, NANOMATERIALS, FEMALE, RATS.