# EFFECT OF ULTRASOUND AND SUPERHIGH-FREQUENCY 3 cm RANGE ELECTROMAGNETIC FIELD ON LIVER AND KIDNEY MITOCHONDRIAL OXIDATIVE PHOSPHORYLATION

V. R. Faitelberg-Blank, G. A. Sivorinovsky

*Department of Pathologic Physiology, Agricultural Institute, Odessa*

Summary

The authors established that the effect of 0.1 W/cm² ultrasound on the albino rats stomach surface does not cause essential changes in oxidative phosphorylation of kidney and liver mitochondria with both single action and in the action repeated 10 times. The single irradiation with an intensity of 0.3 W/cm² evokes an increase in oxidative phosphorylation indices, while the ten time one completely dissociates oxidation and phosphorylation. An electromagnetic 3 cm range field with an intensity of 25, 50 and 100 μW/cm² at a single effect causes a decrease in phosphorylation efficiency of mitochondria in the investigated organs.

A supposition is advanced on cumulative effect and ultrasound action and on possible adaptation to the effect of low intensities of an electromagnetic 3 cm range field.



(in Russ, Engl. Summary)