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RADICAL PROCESSES AND ANTIOXIDANT STATUS RATTUS NORVEGICUS IN COMBINED EFFECT OF INJURIES AND MODEL HYPERHOMOCYSTEINEMIA

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Studied the intensity of the production of reactive oxygen species, the rate of lipid oxidation in rat plasma and the activity of SOD and catalase in the liver of animals in trauma on the background of hyperhomocysteinemia. The increase rate of production of reactive oxygen species, along with increasing the antioxidant activity of rat plasma with a third at the 14th day after the occurrence of mechanical damage to the background hyperhomocysteinemia. There was an inverse correlation between the activity of catalase and SRA.

Keywords: *medium hyperhomocysteinemia, trauma of the musculoskeletal system, thrombophilia, chemiluminescence, oxidative stress.*

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STUDY OF NUCLEIC ACIDS SYNTHESIS ACTIVITY IN HETEROSIS AND STIMULATE GROWTH PROCESSES INDUCED BY ACTION OF MALEIC HYDRAZIDE

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Current work is devoted to study of activity of nucleic acids synthesis in heterosis and stimulate growth processes induced by action of maleic hydrazide. It was reveled that the content of DNA in per cells of leaf tissue of the heterosis hybrids plants was higher than those of their parents. Heterosis and growth stimulation belong to the category of phenomena relating to the genetic regulation mechanisms of traits. Both phenomena are characterized by increased transcriptional activity of the DNA, ratio of the labile and stable fractions of DNA, and euchromatin portion of DNA, which leads to the intensification of the synthetic processes enhancing morphogenesis.

Keywords: *nucleic acids, chromatin, heterosis, growth stimulation, wheat.*

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AQUABIOCULTURAL INNOVATIVE BIOTECHNOLOGY FOR ORGANIC PRODUCTS REARING IN RECIRCULATION SYSTEM MODULE

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The data obtained by aquabiocultural innovative biotechnology for organic products rearing in recirculation system module are presented. Research was carried out at aquabiocomplex of Southern Scientific Center of RAS (2014–2016), in specially constructed module with controlled environmental conditions. It allows to rear hydrobionts of different age stages and to provide commercial rearing of different aquacultural objects (sturgeon hybrids, catfish, plants etc.). It was found that 12 months is a sufficient time to achieve commercial weight (1500,0–2000,0 g) for sturgeon hybrids and 6 months – for catfish (1200,0 g). It was observed in recirculation system that productivity of plants increased by 1,3–1,8 times as fish density was increased to 40 kg/m^3.

Keywords: *innovation biotechnology of aquabioculture, recirculation system, hydrobionts, aquaponics, organic products.*

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