liver was perfused by cold saline and 10% homogenate was prepared in ice cold Tris-HCl buffer (50 mM, pH 7.4) using a homogenizer. Thiobarbituric acid reactive substances (TBARS), conjugated dienes (CD) and reduced glutathione (GSH) were measured. Silibor was used as a reference preparation. The data obtained were processed statistically.

Results and discussion. Ethanol oral administrations significantly increased TBARS, CD levels in 1.8 and 1.7 times, respectively. GSH was decreased in 1/63 times in the liver alcohol-injured liver. The data obtained lipid peroxidation activation and reducing of the antioxidant defense in these conditions. Both plum extracts normalize the studied indicators in the liver. Analysis of the experimental data showed that DEF was more effective in dose 200 mg/kg. DEF decreased TBARS and CD in 1.38 and 1.45 times, respectively, and increased GSH level in 1. 27 times. The effectiveness of DEF is not inferior to the comparison preparation silibor.

Conclusions. Dry plum fruit extracts exhibit antioxidant activity. Dry plum fruit extract with fibers was more active in dose 200 mg/kg body weight. The experimental data obtained prove the advisability of further pharmacological studies of this extract.

STUDY OF NEWLY SYNTHESIZED COMPOUNDS ANTI-INFLAMMATORY PROPERTIES

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Introduction. Despite the fact that nonsteroidal anti-inflammatory drugs (NSAIDs) are the most frequently prescribed drugs, during the last years were found serious treatment side effects. So, the search of new synthetic compounds with anti-inflammatory activity is steel topical.

Aim. The aim of this study was to examine anti-inflammatory activity of the drugs, which are newly synthesized at the NPhU organic chemistry department, on the modelled inflammation in rats.

Materials and methods. Experiment was conducted using adult white outbred rats of both sexes; weighting 180-220 g. Anti-inflammatory activity was studied on the model of on model of carrageenan edema paws: 0.1 ml of 1% flogogen injected subcutaneously. For the purpose of the experiment, animals were divided into 5 groups, including group of control pathology and group of rats administered reference preparation – indomethacin. As an object of research were used three compounds chosen in previous experiments (C1, C2, C3). One hour before injection these compounds and indomethacin were single administered per os in dose 7 mg/kg and 5,25 mg/kg respectively. The size of the edema was measured in 1; 2, 3, 4, 5 and 24 hours after carrageenan administration using an oncotometer.

Results and discussion. The results of the studies showed the edema gradual increase up to 3 hours (prostaglandin phase) and further decrease until 24 hours of the experiment. During almost the all experiment, the compounds 1C and 2C did not show sufficient anti-inflammatory activity and did not significantly affect the reduction of edema size compared with the control group. The greatest impact was observed under 3C administration during all phases of the inflammatory process. Beginning from the first hour of experiment, 3C administration significantly reduced inflammation compared with the control pathology. The maximum anti-exudative activity of 58.72% of the 3C compound was fixed after 3 hours during the period of such inflammatory mediators as prostaglandins action, which may indicate the ability of this compound to inhibit COX activity. However, anti-exudative activity was recorded, as for 1 hour - 27,01% (phase of biogenic amines), and 2 hours of experiment - 29,63% (kinin phase). As well as, at 4, 5 and 24 hours, the anti-inflammatory effect of the compound 31C remained rather high (45.66%, 55.69%, and 49.96% respectively).

Conclusions. A compound with a conditional code C3 in a dose of 7 mg/kg revealed anti-inflammatory activity that is comparable with activity of reference preparation.