Analysis of the results of the study shows that with the introduction of galarmine and small doses of venom, an increase in phosphatase activity is observed, the normal morphological picture is preserved, positive changes in the structural properties of the substantia nigra neurons are compared with the Parkinson's disease model, and galarmin is more effective. The data obtained suggest that galarmine and small doses of NOX venom act as a neuroprotective agents.

Key words: *Parkinson's disease, substantia nigra, galarmine, NOX venom, neuroptotection.*

ALCOHOL, DIABETES MELLITUS AND ITS IMPROVEMENT

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Diabetes mellitus (DM) is one of the diseases of the century and it has not been fully studied yet. Over 400 million people on our planet suffer from diabetes and most of them consume alcoholic beverages. The research aimed to create a model of 1-st form diabetes by alloxan in laboratory white rats, study the behavior of sick rats under the influence of ethanol and try to improve the state of diabetes caused by alloxan by giving the animals an amino acid mixture.

The experiments were carried out in two series. 32 healthy male white rats were divided into 4 groups. All animals except the control group, were intraperitoneally (i/p) injected with alloxan at a dose of 150 mg/kg body wt. In 3 days after the injection (confirming stable DM image) the blood glucose level increased 5-fold compared with the control group. The following symptoms have been observed in animals with DM: increased use of water by animals (more than 120 ml), excessive urination, abrupt weight loss, hair loss, depression. Animals in one group were i/p injected with 25% ethyl alcohol at a dose of 2.5 g/kg and with an amino acid mixture (100 mg/kg GABA, 50 mg/kg glutamine, 100 mg/kg β-alanine) in another group.

On the 4th day of alloxan administration, the ethanol decreased the glucose content by 24.2%, and the amino acid mixture by 32.4% and on the 5th day 26.3% and 33%, respectively, i.e.the use of these two substances has a positive effect on the amount of glucose in the blood.

The behavior of all animals was recorded using "Open field" test. Animal behavior has dramatically changed under the influence of alloxan: motor, orientation-research activity and emotion decreased,depression occurs. The action of alloxan was so strong, that the single injection of ethanol or amino acids mixture did not make visible changes, which would probably be with prolonged use of these substances.

All values are presented as mean ± standard error (MEAN ± SEM). Data were statistically analyzed by Sigma Stat test. A statistically significant comparison test was performed with ONE WAY ANOVA. The reliability of the mean differences between the control and experimental groups was observed at $p < 0.05$.

Results of this study show that the single administration of ethanol and the amino acid mixture have hypoglycemic action in Alloxan induced diabetic model, which is mediated via increased peripheral utilization of glucose, but do not act on the animals behavior.

INVESTIGATION OF THE EFFECT OF GALARMIN ON THE PERIPHERAL BLOOD COMPOSITION OF MICE WITH THE INFECTION OF METHICILLIN-RESISTANT STRAIN OF *STAPHYLOCOCCUS AUREUS* (MRSA)

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Staphylococcus aureus (*S. aureus*) and particular its methicillin-resistant strains (MRSA) are emerging one of the major health threats in many countries worldwide and are responsible for the majority of severe cases of intra- and community-acquired staphylococcal infections.