

## **STUDY OF 4-AMINOBTANOIC ACID DERIVATIVES INFLUENCE ON THE CNS FUNCTIONAL CONDITION IN MICE**

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Currently, cognitive impairment (CI) is one of the most important medical and social problem of modern clinical medicine. The importance of this problem is growing steadily in connection with demographic trends that have occurred in recent decades, namely the increase in life expectancy and growth in the population of people over 65 years. Today, more than 15% of the world's population is elderly and senile. Ukraine also belongs to the "aging" countries, in which about 30% of the population are people of retirement age. It is expected that in the near future the number of older people will increase even more. The most common neurological diseases that are accompanied by CI are stroke, chronic cerebral ischemia, Alzheimer's disease, neurodegenerative diseases, epilepsy, traumatic brain injury, alcoholic encephalopathy and others. Modern nootropic drugs help to improve CI, but are not without various side effects. In this regard, it is important to create new nootropic drugs. Fourteen derivatives of 4-aminobutanoic acid newly synthesized at the National University of Pharmacy under the direction of associate professor Golik N. Yu. are promising in this respect. As a result of screening studies of these derivatives for the presence of anti-amnesic activity, two leading compounds were found.

A study of the effect of the two leading compounds on the approximate research and emotional activity of mice in the "open field" test was performed. After administration of the leader compounds at a dose of 30 mg/kg, the animals were placed in the middle of the open field site and motor activity and emotional reactivity were recorded for three minutes.

The obtained data testified to the decrease of the indicators of the total indicative-research activity under the influence of the compounds and to their moderate sedative effect.

Thus, the results of the conducted researches show that the leading compounds among the new derivatives of 4-aminobutanoic acid, which show a pronounced anti-amnesic activity, slightly reduce the indicators of the total approximate research activity of animals. These compounds need further study.