

Key words: microelements, Lithium, Li, Silver, Ag, Zink, Zn, antioxidant, radioprotective

ANTI-CONVULSION AND PSYCHOTROPIC ACTIVITY OF N- AND C-SUBSTITUTED DERIVATIVES OF NEUROAMINO ACIDS

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The great interest of pharmacologists and clinicians is attracted to the various properties of certain derivatives of neuroamino acids. One of the groups of biologically active substances is neuroactive amino acids, for which the mediating role and functions of modulators of various processes in the body are proved. GABA-based drugs have long been used as neurotropic, with anticonvulsant, psychotropic, nootropic, neuroprotective properties.

Recently, during therapy with antiepileptic drugs, mainly of the second generation, there has been a tendency to optimize treatment aimed at the use of anticonvulsants with advanced combined properties. So, epileptic mood disorders, twilight dizziness, epileptic psychoses, epileptic personality changes, disorders of the emotional sphere are known. A new direction in treatment allows such drugs to be used in various related fields of neurology and psychiatry, when it becomes necessary to alleviate emotional stress, cause relaxation and sedation.

In this regard, we synthesized and studied the neurotropic properties of the new 15 N- and C-substituted derivatives of GABA (N-p-alkoxybenzoyl GABA) and their lithium and zinc salts. The correct combination of the obtained amino acid derivatives with lithium and zinc cations is also attractive in the sense that these cations are used for the treatment and prevention of manic-depressive psychosis and various affective conditions.

We investigated the anticonvulsant properties of the compounds according to the tests: corazole, nicotine, thiosemicarbazide convulsions,

maximal electroshock, arecoline tremor, etc. As a result of the studies, active compounds for antagonism with corazole were identified, some of which (the most active) were studied on the psychotropic effect on the models : "Open field", "elevated cross-shaped labyrinth", "forced swimming", "rotating rod". 50% effective doses of the compounds, therapeutic and / or protective indices were calculated.

Among the studied amino acids, the most active compounds identified were N-p-propoxybenzoyl, N-p-isopropoxybenzoyl, N-p-butoxybenzoyl and N-p-isobutoxybenzoyl radicals. Derivatives are most active in the test of corazole seizures Zn in comparison with GABA bases and lithium salts, but they are much more toxic than them. GABA base muscle relaxation and their lithium salts are caused in doses much higher than the effective doses, and zinc derivatives - in doses very close to therapeutic ones.

Key words: γ -aminobutyric acid, neuroamino acids, GABA, Zink, Lithium derivatives, anticonvulsant

PROTECTIVE EFFECTS OF GALARMINE AND VENOM OF NAJA OXIANA ON SUBSTANTIA NIGRA OF RATS IN A MODEL OF PARKINSON'S DISEASE.

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Parkinson's disease is the most common movement disorder in a wide range of neurodegenerative diseases, primarily resulting from the death of the dopaminergic neurons of the substantia nigra and associated with the gradual degradation of the individual. Therapy aimed at slowing down the death of dopaminergic neurons can be effective. A comparative study of the morphofunctional state of the cellular structures of rats substantia nigra neurons of the Parkinson's disease rotenone model and also on this model with treatment by venom of the Central Asian cobra *Naja naja oxiana* (NOX) and with the introduction of galarmin has been carried out.