

**SYNTHESIS AND PHYSICO-CHEMICAL PROPERTIES NEW
BIOLOGICALLY ACTIVE SUBSTANCES DERIVATIVES
5-R-1,3,4-OXADIAZOL -2-IL-THIOACETIC ACID
AS POTENTIAL ANTICONVULSANT**

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Introduction. A number of synthetic drugs are available to treat epilepsy. But these drugs are produces more side effects. Based on the foregoing the research of anticonvulsants is actual now. Analysis of the literature shows that among the derivatives of 1,3,4-oxadiazole, there are a lot of promising compounds in terms of pharmacy, but at the same time, their biological properties have been insufficiently studied.

Aim. Purpose of the work is synthesis of potential biologically active substances on the bases 5-(3-pyridil)-2-mercapto- 1,3,4-oxadiazoles, prediction of biological activity and study of their anticonvulsive activity.

Material and methods. The synthesis of new amides of 5-(3-pyridil) -1,3,4-oxadiazole-2-yl- thioacetic acid has been carried out. The high reactivity of starting substances of 5-(3-pyridil)-2-mercapto-1,3,4-oxadiazoles makes it possible quite easy modify their structure by alkylation, which extends the probability of finding new effective compounds in this series. Reactions were monitored by thin layer chromatography carried out using pre-coated silica gel plates. By the PASS program the prognosis of their pharmacological activity is carried out for a next planning of pharmacological skreening. Anticonvulsive activity of new compounds was studied.

Results and discussions. The series new derivatives 5- (3-pyridyl)- 1,3,4-oxadiazoles -2-ilthioacetic acid by interaction 5-(3-pyridil)-2-mercapto-1,3,4-oxadiazoles and amide chloracetic acid was synthesized. The structure was improved by the method of UV- and ^1H NMR-spectroscopy. The structure of substances synthesized was proved by spectral methods. The purity of the obtained compounds determined by TLC. By the computer program PASS *online* we can make the presumption that all compounds of the group may exhibit high anticonvulsive activities (Pa from 0.5 to 0.7).

Conclusions The series new derivatives 5- (3-pyridyl)- 1,3,4-oxadiazoles -2-ilthioacetic acid was synthesized. The structure was improved by the method of UV- and ^1H NMR-spectroscopy. Received experimental data show that all 10 synthesized substances have moderate anticonvulsive activity, and one compound exceed depakine activity.