

subcutaneous tissue about 1 cm long was made with scissors, after which a cavity was formed with tweezers in the subcutaneous tissue through the incision, into which a sterile 40 mg cotton ball was placed. Two sutures were put on the wound. On the 13th day after the start of the experiment, the implanted ball with the granulation tissue formed around it was removed, weighed, then dried to constant weight at 60-65°C. The processes of exudation were judged by the difference between mass of the original (freshly isolated) and dried granulomas; about proliferation – on the difference between mass of dried granuloma and initial mass implanted cotton ball. The extract of the cabbage garden was administered in doses of 25 and 50 mg / kg, the reference drug, indomethacin, in a dose of 5 mg / kg intragastrically daily for 12 days, starting from the day of tampon implantation.

**Results and discussion.** Studying the effect of extract of the cabbage garden on the development of inflammation showed that, against the background of pronounced proliferative processes, the extract of the cabbage promoted a significant reduction ( $p < 0.01$ ) of granulomatous infiltration in both studied doses. However, a more significant antiproliferative effect was observed with a dose of 50 mg/kg. The extract of the cabbage inhibited the formation of granulomas in doses of 25 and 50 mg/kg: the mass of dry granulation fibrous tissue significantly decreased by 23% and 29%, respectively, compared with untreated control. It should be noted that cabbage extract was somewhat inferior in its effectiveness to the comparator drug – indomethacin.

**Conclusions.** The cabbage extract in the garden shows a pronounced antiproliferative effect in the experiment.

## **EXPERIMENTAL SCREENING STUDY OF ANTICONVULSANT ACTIVITY OF NEW 2,4-THIAZOLIDINEDIONE DERIVATIVES ON MAXIMAL ELECTROSHOCK SEIZURE TEST**

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**Introduction.** Epilepsy is a neurological disorder affecting a large scale of the population, accounting for about 1% of the world's burden of diseases. Epilepsy is a neurological disorder characterized by excessive electrical discharge in the brain, which causes seizures. The current therapeutic treatment of epilepsy with modern antiepileptic drugs (AEDs) is associated with side-effects, dose-related and chronic toxicity, and teratogenic effects, and approximately 30% of the patients continue to have seizures with current AEDs therapy. As most antiepileptic drugs are consumed all the time, the concomitant administration of other drugs provokes the risk of drug interactions. The development of new AEDs with greater clinical efficacy and less amount of side effects, devoid of possibility drug control interactions and better pharmacokinetic properties is still current issue of modern pharmacology.

**Aim.** The aim of this work is to study the anticonvulsant activity of new 2,4-thiazolidinedione derivatives on the maximal electroshock seizure test (MES).

**Materials and methods.** 73 white mice have been used for screening. The animals were kept in accordance with international and national bioethics recommendations. Fifteen 2,4-thiazolidinedione derivatives have been studied of which 3 substances-leaders have been selected. The MES is a model for generalized tonic-clonic seizures and provides a hint of a compound's ability to stop seizure spread when all the neuronal bonds in the brain are maximally active. The studied substances have been administered intragastrically at a dose of 100 mg/kg. Carbamazepine has been used as a reference drug (Finlepsin, TEVA, Israel) and administered intragastrically at a dose of 40 mg/kg. Seizures have been induced after 30 minutes later the administration of drugs using coronal electrodes, over-threshold stimulation with a 50 Hz alternating current of 50 mA intensity. Tonic and clonic seizures have been caused by application for 0.2 s corneal electrodes. Protective anticonvulsant activity has been determined by the following indicators: latent period, number of clonic / tonic seizures per mouse, % of animals in a group with clonic and tonic attacks, the severity of the seizures (1 grade- single shaking, 2 grades – maneuvering run, 3

grades – clonic seizures, 4 grades – clonic tonic seizures, 5 grades – tonic extensity, 6 grades – tonic extensity, which led to the death of the animal ), the duration of the convulsive period, the lifetime of the animals before death and mortality.

**Results and discussion.** It has been found that the studied substances-leaders at a dose of 100 mg/kg showed an anticonvulsant effect by statistically significant ( $p < 0.05$ ) decrease the percentage of animals with tonic seizures, their severity and duration of convulsive period in clonic seizures and tonic extension. The significant differences in the anticonvulsant activity of the studied substances has not been identified comparing with the effect of the reference drug carbamazepine.

**Conclusions.** The obtained result point at the expediency of further study of the various mechanisms of new derivatives of 2,4-thiazolidinedione as perspective anticonvulsants with polytropic pharmacological properties.

## PROBLEMS AND PROSPECTS OF VITAMIN THERAPY

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**Introduction.** Vitamins are a group of low-molecular compounds of a different chemical nature. Most vitamins are coenzymes or their precursors. Vitamins are contained in food (or in the environment) in very small quantities and therefore belong to micronutrients. The human body does not synthesize vitamins or synthesizes in insufficient quantities, so their supply with food is compulsory. Despite the fact that vitamin-rich foods are well known, it is extremely difficult to reach the daily norm of vitamins. One can not but agree that the problem of deficiency of vitamins and minerals in the diet of most modern people does exist. Many vitamin-containing drugs can be seen on the modern pharmaceutical market. How much vitamin-containing drugs intake is needed is the question.

**Aim.** Find out if it's worth to use vitamin-containing drugs.

**Materials and methods.** Analysis of the scientific literature and the results of advanced research in the field of medicine and pharmacology.

**Results and discussion.** Many scientists in the field of medicine and pharmacy are asked the question is «is it worth to take vitamins?». On the one hand, we need to get them from the outside. Considering that we consume less useful food, it is quite difficult to get the necessary amount of vitamins from food. The products of modern food industry often do not contain any vitamins. The content of fresh vegetables and fruits of vitamins and minerals, directly depends on the conditions in which they were grown. If the soil is poor in mineral substances – in the plants of these substances, too, there will be little. If the growth and maturation of fruits and vegetables has been artificially accelerated, they will not have time to accumulate enough useful substances even on mineral-rich soil.

To claim that getting all the necessary vitamins only from food is impossible – an exaggeration. However, it is necessary to take into account additional factors. For example, caffeinated beverages, milk and dairy products impair the absorption of vitamins and minerals or provoke their loss. When consuming meat, eggs, dairy products, the beneficial microflora bacteria that synthesize vitamins will be replaced by putrefactive ones. To maintain a healthy microflora, fresh, non-processed vegetable products containing fiber are needed. The harmful effects on the microflora also have antibiotics. 90% of the population are infected with helminths.

It is desirable that the multivitamin complex, in addition to vitamins, contained minerals. They help each other to be absorbed and absorbed better. For example, calcium, necessary for muscle and bone tissue, is better absorbed in combination with vitamin D<sub>3</sub>, and magnesium – with vitamin B<sub>6</sub>. It will be quite enough, if in the complex chosen by you will contain vitamins of group B, vitamins A, C and E and magnesium, calcium, iron, zinc.

In Ukraine, more than 200 multivitamin drugs have been registered. And biologically active food supplements is much more. Theoretically, all of them can cause allergic reactions. Most likely, allergies are caused not by vitamins and minerals themselves, but by other substances that make up to medicinal