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У збірнику представлені матеріали 100 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет», присвяченої 75-річчю БДМУ (м.Чернівці, 11, 13, 18 лютого 2019 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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In blood plasma, the intensity of lysis of low molecular weight proteins exceeded the untreated animals for lysine by azoalbumin for 7 days in 1.8 times. The proteolytic degradation of high molecular weight proteins, determined by the azocasein lysis increased by 1.8 times. The collagenolytic activity of blood plasma by azocole lysis under the drug's influence increased in comparison with untreated animals in 2.1 times.

The results of the study of proteolytic activity against the background of gentamicin-induced nephropathy in the renal tissue showed a significant increase of azolealbumin lysis in 1.8 times, azoxazine lysis in 1.7 times, azocola in 1.9 times compared to untreated animals with corvitin usage. Consequently, corvitin with prolonged use contributed to the restoration of proteolytic activity in animals with gentamicin-induced nephropathy.

Hudz N.A.

VOLATILE COMPOUNDS OF STEVIA (STEVIA REBAUDIANA BERTONI)

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Stevia (Stevia rebaudiana Bertoni) from the Asteraceae family is widely used in the pharmaceutical and food industry as a dietary supplement and sweetener.

The chemical constituents of Stevia have not already been studied completely, thus the aim of our researches was to determine the qualitative composition and quantity content of the volatile compounds from the leaves of Stevia.

The investigation was conducted by a gas chromatograph Agilent 6890N/5973inert (Agilent technologies, USA) with a mass-spectrometric detector and library of the mass-spectra NIST 02.

29 compounds were found in the essential oil obtained from the leaves of Stevia. Among them terpenoids, sesquiterpenes are in the highest quantity – 44.39 %. In the leaves of Stevia sesquiterpenes are represented by an acyclic, monocyclic, monocyclic oxide and tricyclic forms. The greatest part of sesquiterpenes presents in the form of oxide (25.33 %) in the leaves from Stevia. Component composition of the essential oil of Stevia is also represented by monoterpenes, diterpenes, arenas and polyhydric alkanes.

According to the results of the chromatographic analysis of methyl ethers of volatile components obtained from the leaves of Stevia 21 substances were identified. The chemical profile of the volatile fractions was determined incuding low molecular weight organic acids, saturated and unsaturated fatty acids, diterpenoids and triterpenes.

Among the methyl esters of the volatile fraction isosteviol was found in a significant amount (6.23 %), which is specific diterpenes of Stevia. Due to the presence of isosteviol, infusion of the leaves of Stevia decreases the glucose level in blood and increases the sensitivity of cells to insulin. Isosteviol can be used as a marker for the standardization of the lipophilic fraction of Stevia leaves.

Drachuk V.M.

RENAL EFFECTS OF THE ADEMETIONINE AND TAURIN IN CONDITIONALLY HEALTHY ANIMALS

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Nowadays, in spite of the pharmaceutical industry achievements, the problem of prevention and treatment of acute kidney injury (AKI), which prevalence reaches 31% and the mortality rate exceeds 80% of patients, remains an urgent and unresolved issue of modern nephrology. According to the literature data, the key link in the pathogenesis of renal pathology is the development of oxidative stress, which is characterized by a prooxidant-antioxidant imbalance and involves a shift of the redox equilibrium towards free radical oxidation with the formation of lipid and protein peroxides. Consequently, the promising direction is the usage of nephroprotectors with an aim to strengthen the antioxidant defense, and induce the membrane protective and cytoprotective

mechanisms. It is known, that sulfur-containing amino acids, presented on the pharmaceutical market of Ukraine with drugs ademetionine, and taurine, possess such capacities.

The task of the research was to study the renal effects of ademetionine and taurine in a comparative aspect by their influence on the morphofunctional state of rat kidneys after the 7-day administration.

Experiments were performed on mature non-linear white rats weighing 130-180 g. Animals were divided into 3 groups (n = 7): the I group – intact control, the II group – animals which were given ademetionine («Geptral», «Abbott SpA», Italy) at a dose of 20 mg/kg, the III group – animals administered with taurine («Sigma-Aldrich», USA) at a dose of 100 mg/kg. All drugs were injected intramuscularly for 7 days.

The research on the renal effects of the studied sulfur-containing amino acids derivatives (SAD) upon the 7-day administration to conditionally healthy animals has shown that taurine has a weak diuretic effect, which is probably due to a decreased tubular reabsorption of water without significant changes in the glomerular filtration rate. Besides, the usage of ademetionine resulted in a slight reduction of azotemia. An impact on the acid regulatory kidney function was manifested in a tendency to increase in urine pH and excretion of titrated acids. Administration of ademetionine and taurine resulted in a significant decrease in proteinuria, which is probably caused by the effect on the processes of protein reabsorption. The effect on the ion regulatory kidney function upon the course of SAD administration is characterized by an increase in urinary sodium excretion against the background of a decrease in relative sodium reabsorption, which was accompanied by an intensification of a distal transport of sodium ions due to the activation of the tubular-tubular balance. Morphological examination hasn't revealed any histopathological changes in renal tissue, confirming an absence of nephrotoxicity of the studied SAD.

According to obtained data, the 7-day administration of ademetionine and taurine to conditionally healthy animals moderately affects the processes of glomerular filtration and tubular transport in nephrons, which results in a slight increase in diuresis along with a preservation of the renal mechanisms of autoregulation and the absence of histopathological changes in kidneys.

Ezhned M.A.

HYPOGLYCEMIC ACTION OF DRY EXTRACT MADE OF DANDELION ROOTS

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Diabetes mellitus (DM) and its complications remain one of the most serious medical, social and economic problems of modern health care. Today, in the world, about 382 million people suffer from diabetes, and by 2035, according to the International Diabetic Federation, this figure will increase by 55%, mainly due to patients with type 2 DM. DM type 2 is accompanied by an imbalance of the body's protective system and a violation of physiological processes. Therefore, the search for alternative use of herbal drugs containing a complex of biologically active compounds, which simultaneously affects several body's systems, are relevant.

The aim of the work is to study the pharmacological properties of 60% dandelion roots dry extract in order to determine possible hypoglycemic action under conditions of glucose tolerance test by means of single oral introduction of glucose.

For the experiment dandelion roots dry extract has been used on 60% solvent with oral administration on 1% starch gluc in the dose of 0,1 g/kg during 14 days. As a drug of comparison the plant collection "Arfazetin" (the producer – Ltd "Liktravy", Zhytomyr) has been chosen in the form of infusion in a dose of 24 ml/kg. The model pathology in rats of weight 180-220 g has been caused by oral administration of glucose in a dose of 3 g/kg. The experimental animals have been divided in the following way: 1 group of animals with simulated pathology (control); animals of 2 group received dandelion extract; animals of 3 group animals received a drug of comparison.

According to the results of the experiment it has been determined that oral administration of glucose in a dose of 3 g/kg led to the development of acute hyperglycemia, which has been