## МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»



## МАТЕРІАЛИ

105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ присвяченої 80-річчю БДМУ 05, 07, 12 лютого 2024 року

Конференція внесена до Реєстру заходів безперервного професійного розвитку, які проводитимуться у 2024 році № 3700679

УДК 001:378.12(477.85)

ББК 72:74.58

M 34

Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

ББК 72:74.58

У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Геруш І.В., професорка Грицюк М.І., професор Безрук В.В.

Наукові рецензенти: професор Братенко М.К. професор Булик Р.Є. професор Гринчук Ф.В. професор Давиденко І.С. професор Дейнека С.Є. професорка Денисенко О.І. професор Заморський I.I. професорка Колоскова О.К. професор Коновчук В.М. професор Пенішкевич Я.І. професорка Хухліна О.С. професор Слободян О.М. професорка Ткачук С.С. професорка Тодоріко Л.Д. професор Юзько О.М. професорка Годованець О.І.

ISBN 978-617-519-077-7

<sup>©</sup> Буковинський державний медичний університет, 2024

deaths for 2020 indicates that patients with active or a history of breast cancer have a higher risk of a severe course of COVID-19. Oncology increases the probability of hospitalization by 30%, as well as up to 13.4% - the risk of death as a result of the disease in the first 30 days from the moment of infection, therefore, the cause of death was probably determined to be from the coronavirus disease and its complications.

Conclusions. The results of the analysis of incidence rates for 2017–2021 in Ukraine indicate that the minimum number of breast cancer patients was observed in 2017 (142,097 people) with a gradual increase to 157,274 people in 2020. In 2021, the number of patients was 52,752 people. In 2021, there was a sharp decrease in the incidence rate, which could have occurred not due to a real decrease in incidence, but due to a decrease in the level of diagnosis, which was facilitated by quarantine restrictions on the coronavirus infection, the outbreak of which began in 2019. Analysis of the dynamics of changes in the number of cases of breast cancer in Ukraine for 2017–2021, shows that the maximum value of the absolute increase was observed in 2017 (1,326 people), and the minimum (essentially no increase and a decrease in the number of cases of the disease) was observed in 2020 (-2,031 people).

## Horoshko O.M. INFLUENCE OF NANO-DRUGS ON LIPID AND PROTEIN PEROXIDATION PROCESSES IN EXPERIMENTAL ACUTE RENAL FAILURE

Department of Pharmaceutical Botany and Pharmacognosy Bukovinian State Medical University

**Introduction.** Today one of the main directions of pharmacology is the delivery of drugs to the organs and tissues of the body, since the effectiveness of many biologically active compounds is limited by poor solubility, and some drugs can quickly lose activity when administered to the body under the influence of inactivating agents. The use of drugs based on nanocarriers, in particular liposomes, is one of the promising systems for delivering drugs to the location of the pathology. Such a drug is the liposomal form of quercetin - lipoflavone.

**The aim of the study**. To compare the effect of quercetin nanopreparations on the processes of lipid and protein peroxidation in experimental acute kidney damage under the conditions of their single administration.

**Materials and methods.** Experiments were performed on non-linear white outbred rats. Acute kidney damage was caused by intramuscular injection of 50% glycerol solution at a dose of 10 mg/kg. The first group of animals was injected with lipoflavone powder, the second with lipoflavone solution at a dose of 10 mg/kg once intraperitoneally 40 minutes after the introduction of glycerol. The third group of animals was injected with "Corvitin" in a dose similar to the level of their content in lipoflavone.

**Results**. When modeling the pathology in the tissues of the kidneys, lesions of animals were noted, which was determined by the accumulation of products of free radical oxidation of macromolecules and the activity of the enzyme component of the anti-radical glutathione system, as well as the non-enzyme content of sulfhydryl groups, decreased. According to research results, the content of TBC-active products in blood erythrocytes increased in animals of the model pathology group by 2 times compared to the control group of animals. After the introduction of lipoflavon powder, the content of TBC-active products decreased by 1.2 times, when lipoflavon solution was administered, this indicator decreased by 1.3. With the simultaneous administration of corvitin, this indicator decreased by 1.1 times in comparison with the group of model pathology. In kidney tissues, the content of TBK-active products increased by 2.4 times in the group of animals that were subjected to acute kidney damage. The introduction of lipoflavone drugs reduced this indicator by almost 1.8 times, while the introduction of corvitin was less effective - it reduced the content of free radical oxidation products by 1.4 times. The activity of glutathione peroxidase in kidney tissues decreased almost 2 times in the group of untreated animals. Administration of lipoflavone-solution restored this indicator, which is 1.8 times higher than the indicators of model pathology.

Administration of corvitin and linoflavone powder restored glutathione peroxidase activity in animals by 1.1 and 1.2 times, respectively.

**Conclusions.** Therefore, according to the data of our study, lipoflavone drugs as a nanopharmacological dosage form had a more intense effect on the indicators of the process of lipid and protein peroxidation in model pathology compared to separate simultaneous administration of corvitin, since the inclusion of drugs in liposomes significantly increases their therapeutic effectiveness.

## Kopchuk T.G. ANALYSIS OF PARACETAMOL-BASED DRUGS ON THE UKRAINIAN PHARMACEUTICAL MARKET

Department of Pharmacology Bukovinian State Medical University

**Introduction.** Paracetamol/acetaminophen is one of the most popular and widely available over-the-counter pain relievers and antipyretics in both mono- and multi-component formulations. This medicine is a drug of choice in category of patients who can't use for treatment non-steroidal anti-inflammatory drugs (NSAIDs), for example, ailments with bronchial asthma, hemophilia, sensitization to salicylates, children under 12 years of age or women who are breastfeeding. Paracetamol has good analgesic properties and, unlike other NSAIDs, has a less irritating effect on the gastrointestinal tract. A mechanism of action is complex and includes effects on both peripheral (COX inhibition) and central (COX, serotonergic descending neuronal pathway, L-arginine/NO pathway, effect on the cannabinoid system) antinociceptive processes.

The aim of the study was to conduct a marketing analysis of the range of mono- and combined paracetamol preparations registered on the pharmaceutical market of Ukraine of domestic and foreign production.

**Material and methods**. The object of the study was the nomenclature of medicines with the active ingredient paracetamol, which are presented on the pharmaceutical market of Ukraine. The research used the methods of marketing analysis of the assortment of medicines and statistical processing of the obtained data.

**Results.** According to the results of the market research, it was established that 194 names of medicinal products with the active ingredient paracetamol are registered on the pharmaceutical market of Ukraine, most of which are drugs of foreign production, 59.8%, while about 40% of consumers are provided with domestic products. Among drugs manufactured abroad, the leading place is occupied by drugs manufactured in India (41.4%), approximately the same specific weight belongs to drugs from Spain, France, Italy – 7.8% and 6.9%, respectively and a small number of drugs (4.3% and less) is manufactured by pharmaceutical enterprises of other regions in the ratio. The research of the pharmaceutical market in terms of the contribution of different dosage forms of release showed that paracetamol drugs are presented in 7 different dosage forms, among which the largest share is taken by the dosage form – tablets (46.4%) (of which a large share is occupied by enteric tablets – 24.8%), powders for oral use occupy 34.5%, capsules – 24.2%, solutions for injections (17.1%) and rectal suppositories (10.5%). Other dosage forms are presented in lower percentage ratios. Among all drugs of paracetamol, the majority of names are combined forms (82.4%). The most effective and widely used combinations are the mixtures of paracetamol with caffeine, drotaverine hydrochloride, aspirin, ibuprofen, diclofenac sodium.

**Conclusions.** Taking into account the wide range of use of paracetamol in medical practice, it can be classified as a drug of first choice for the elimination of pain syndromes of various genesis and the most effective antipyretic, and according to the results of a comprehensive marketing analysis of the assortment of the domestic market, it should be noted that it has a significant share among other drugs, however, with the prescription of these drugs, it is especially important to evaluate the ratio of effectiveness/safety and price/quality, which is important for the patient. Further conducting a pharmacoeconomic analysis of the use of paracetamol drugs will allow us to