

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ



**СУЧАСНА ФАРМАЦІЯ:
ІСТОРІЯ, РЕАЛІЇ ТА ПЕРСПЕКТИВИ РОЗВИТКУ**

**Матеріали науково-практичної конференції з міжнародною участю,
присвяченої 20-й річниці заснування
Дня фармацевтичного працівника України**

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HISTORY, REALITIES AND PROSPECTS OF DEVELOPMENT**

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Збірник містить матеріали науково-практичної конференції з міжнародною участю, присвяченої 20-й річниці заснування Дня фармацевтичного працівника України «Сучасна фармація: історія, реалії та перспективи розвитку», в яких представлено сучасний стан та актуальні питання розвитку наукових напрямів фармацевтичного сектора галузі охорони здоров'я: конструювання, синтез і модифікація біологічно активних сполук та створення на їх основі лікарських субстанцій; сучасні аспекти розробки та промислового виробництва лікарських, косметичних засобів і добавок дієтичних, госпітальна фармація; біофармацевтичні аспекти створення екстемпоральних лікарських засобів, удосконалення складу і технології алопатичних і гомеопатичних лікарських засобів; сучасний стан та перспективи використання лікарських рослин і розробки фітотерапевтичних засобів; фармацевтичний аналіз, стандартизація та організація виробництва лікарських засобів; фармацевтична та медична біотехнологія, нанотехнології у фармації; організація та економіка у фармації, менеджмент та маркетинг у фармації, фармакоекономіка на етапах створення, реалізації та застосування лікарських засобів; механізми патологічних процесів та їх фармакологічна корекція; клінічна фармація: від експериментальної розробки лікарських засобів до стандартизації фармацевтичної допомоги; соціальна фармація; фармацевтична освіта в Україні.

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The collection presents the proceedings of the of scientific-practical conference with international participation dedicated to the 20th anniversary the founding of the Day of the Pharmaceutical Worker of Ukraine “Modern Pharmacy: history, realities and prospects of development”.

The current state and topical issues of development of scientific directions of the pharmaceutical sector of healthcare are presented: design, synthesis and modification of biologically active compounds and the creation of medicinal substances based on them; modern aspects of development and industrial production of medicines, cosmetics and dietary supplements, hospital pharmacy; biopharmaceutical aspects of the creation of extemporaneous drugs, improving the composition and technology of allopathic and homeopathic medicines; current state and prospects of use of medicinal plants and development of herbal medicines; pharmaceutical analysis, standardization and organization of drug production; pharmaceutical and medical biotechnology, nanotechnology in pharmacy; organization and economy in pharmacy, management and marketing in pharmacy, pharmacoeconomics at the stages of creation, sales and administration of medicines; mechanisms of pathological processes and their pharmacological correction; clinical pharmacy: from experimental drug development to standardization of pharmaceutical care; social pharmacy; pharmaceutical education in Ukraine.

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CREATION OF EXTEMPORAL DRUGS FOR USE IN THERAPEUTIC DENTISTRY**Shulga L., Rolik-Attia S., Bezsenna T., Gubchenko T.***National University of Pharmacy,**Institute of Pharmacy Professionals Qualification Improvement, Kharkiv, Ukraine**Department of General Pharmacy and Safety of Drugs*

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Inflammatory and dystrophic-inflammatory periodontal diseases are remains one of the most common pathologies in the structure of dental diseases. Treatment of inflammatory diseases of the oral cavity acquires medical and social significance in connection with their prevalence, severity of the course, duration of treatment, the occurrence of complications, predisposition to relapses and the emergence of a center of chronic infection in the body. Diagnostic regimens of drug therapy for these diseases should include multidirectional drugs that can have a comprehensive effect on all pathogenetics links. For this purpose, medicinal products of natural origin are used, a large part of which – on the basis of medicinal plant material – multicomponents compositions, which detect a multimodal effect due to the contents of a wide spectrum of biologically active substances. Herbal remedies in the form of various dosage forms are characterized by efficiency and safety, mild action, availability and relative ease of production, and therefore the creation of new herbal medicinal products is relevant in present conditions.

Scientists of the Department of General Pharmacy and Safety of Drugs within the scientific direction of the department for the treatment of inflammatory diseases of periodontal and mucous membrane of the oral cavity a composition and technology of the dental gel «Sonident», the collection «Denta-Fit» and medical pencils «Dentastil», which can be made in pharmacies, were developed.

Thus, the introduction of the proposed composition and technology of the gel «Sonident» will allow more effective use of the pharmacotherapeutic action of a medicinal product of natural origin – tincture of Japanese sophora – by entering it into a combined preparation. As active ingredients for the purpose of providing the pharmacotherapeutic effect of the gel, a substance of natural origin is selected – a tincture of Japanese sophora, which according to the chemical composition is a complex of flavonoids, the main of which are routine (vitamin P) and phenolic compounds, and has a stabilizing capillaries, antimicrobial, fungicidal, anti-inflammatory, analgesic, reparative, hemostatic, astringent, tonic action, and synthetic – nimesulide, which is a non-steroidal anti-inflammatory drug with anti-inflammatory, analgesic and antipyretic activity.

The gel is intended for the treatment of trophic and inflammatory diseases of the periodontal and mucous membrane of the oral cavity and has the composition: tincture of Japanese sophora 40% – 10,0; nimesulide – 0,5; carbopol – 1,0; trometamol – 0,6; propylene glycol – 20,0; water purified – up to 100,0. In a pharmacy conditions, the process of obtaining a gel base begins with the preparation of the carbopol dispersion at room temperature ($20\pm 5^{\circ}\text{C}$). Weighed out amount 934P carbopol is added to the measured portion of purified water and dispersed. Next, prepare a solution of trometamol in purified water and mix it with a dispersion of carbopol, resulting in the formation of a gel. The quality of the gel base is verified organoleptically by the absence of air bubbles. Since the substance of nimesulide is not soluble in water, it is rationally applied to the gel base as a suspension in propylene glycol. To do this, weigh and grind Nimesulide, first in dry form, and then with a portion of propylene glycol, which is half the amount of nimesulide. The remaining propylene glycol is added while stirring and the prepared suspension is mixed with a gel base. Due to the fact that the tincture of Japanese sophora is an alcoholic solution with a specific odor, its introduc-

tion into the gel is carried out in the last resort with constant stirring. The resulting gel is packed in jars of glass, clogged with caps, which are screwed in. The gel is a homogeneous, viscous transparent mass of yellowish-brown color with a specific smell of tinctures (pH ranges 6.5-7.0), according to the quality indices, it meets the requirements of the State Pharmacopoeia of Ukraine.

To expand the range of domestic medicines on the basis of medicinal plant raw material used in therapeutic dentistry, the development of phytopreparation «Denta-Fit» of the following composition was timely: sage leaves – 14,28; St. John's Wort herbs – 28,58; marigold flowers – 14,28; mint leaves – 14,28; linden flowers – 28,58; tincture of Japanese sophora 40% – 10.00. The technology of manufacturing the collection in the conditions of pharmacies is as follows: after the entrance control for the absence of foreign impurities constituents, namely St. John's Wort herbs, linden flowers, mint leaves, marigold flowers, sage leaves, chop off separately with the help of a grass cutter to a particle size of 2 mm and sift through a sieve with diameters of holes 3 mm and 1 mm, receiving fraction of particles of medicinal plant raw material size 1-3 mm; the crushed and sieved components are weighed on the Mora scales in the specified amount (calculated on 10 packs of medical collection of 100.0); mix in the collection, adding in the first place the medicinal plant raw material written in a smaller amount. A mixture of medicinal plant raw material components of the collection, which is in the collection, uniformly sprayed with a spray gun tincture of Japanese sophora. The obtained collection is dried at room temperature for 30-40 minutes or in a drying oven at a temperature of 30-40°C for 15-20 minutes and packed in cardboard packs with an internal packet of 100.0. Terms and conditions of storage: 2 years in original packaging in a dry, inaccessible place for children at a temperature not above 30°C. In appearance, the phyto substances are a mixture of particles of medicinal plant raw material of different shapes of grayish-greenish, orange-yellowish, brownish and white with a size of 1-3 mm with a characteristic odor, and in terms of quality meets the requirements of the State Pharmacopoeia of Ukraine.

Developed medical pencils «Dentastil» can also be obtained in the pharmacy conditions under the following technology. The method of their manufacture was based on the general dependencies of the manufacture of suppositories by the method of pouring in accordance with the general articles of the State Pharmacopoeia of Ukraine, which relate to this dosage form. For extemporal manufacturing, simple and convenient equipment – forms for pouring out vaginal and rectal suppositories, was used, which are divided into 2 segments and are pressed by the clips.

Since the essential effect on the characteristics of the finished product has not only the method but also the sequence of introduction of the active substance – chlorophyllipt thick extract, while developing the technology, the focus was on the phasing of the introduction of the plant substance to the basis. A technology for obtaining a dental product was proposed, according to which the chlorophyllipt thick extract was homogenized with a T-2 emulato alloy and half the amount of cocoa butter, and after the remaining cocoa butter was added. According to the developed technology, the introduction of half the amount of cocoa butter occurs at a lower temperature, which contributes to the preservation of the structural properties of the base of cocoa butter and prevents the appearance of polymorphic modifications.

The introduction of the proposed compositions and technologies for obtaining the prescribed dosage forms into the practice of medical establishments of health care provides the possibility of qualitative extemporal preparation of developed herbal medicinal products. Their manufacture involves a simple technological process with the use of traditional equipment, which will increase the range of extemporal drugs, solving the issues of providing patients with medicines for local therapy of inflammatory and trophic diseases of the periodontal and mucous membrane of the oral cavity.

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