Thus, studies on the possibility of using PEO-400 and PG-1,2 for the extraction of biologically active substances from Melilótus officinális, the development of the composition and technology of antimicrobial ointment containing a glycolic extract from this plant raw material, are relevant for pharmaceutical science.

On the development of a phytopreparation for the treatment of varicose veins

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Disorders of microcirculation, which provides nutrition for cells, metabolism in the extracellular space, lead to the development of capillaropathies - an increase in the permeability and fragility of capillaries, a decrease of their stability, and a violation of metabolic processes. As a result, capillary hemorrhages, hematomas, then chronic venous insufficiency and varicose veins occur. For the treatment of these circulatory disorders, angioprotectors (capillary protectors, venotonics) are used - agents that stimulate metabolic processes in the walls of blood vessels, strengthen the wall, improve microcirculation and reduce edema.

An important role in the prevention and complex therapy of peripheral vascular diseases is played by external therapy using products containing phytocomponents, and in many cases of varicose veins it is the only effective and safe direction of treatment. For the treatment and prevention of chronic venous insufficiency, drugs are used, which include extracts of horse chestnut, red grape leaves, gingo biloba, witch hazel, green tea and other plants containing flavonoids, coumarins, saponins, tannins, salicylates. According to the literature, the use of total extraction preparations is in many cases more effective than the use of individual natural substances - saponins, flavonoids.

The meadowsweet (Filipéndula ulmaria (L.)) is one of the perennial medicinal plants that have long been used in folk and scientific medicine and have a wide spectrum of pharmacological action. The influence of meadowsweet on the body is determined by the predominant action of polyphenols - tannins, phenol carboxylic acids (caffeic, ellagalic), flavonoids (hyperoside, avicularin, quercetin dipentoside), as well as essential oil components (methyl salicylate, ethyl benzoate, salicylic aldehyde). In official medicine, extracts of meadowsweet are used as an anti-inflammatory, wound-healing, antiseptic. To date, there are practically no official medicinal preparations of meadowsweet, despite the fact that the composition of raw materials has been sufficiently studied and the domestic

raw material base is significant, and such pharmacological aspects of action as anti-inflammatory, wound healing, capillary-strengthening, antioxidant have been confirmed experimentally.

Consequently, the development of soft dosage forms based on them that have anti-inflammatory, wound healing, capillary-strengthening, action and are intended for the prevention and treatment of varicose veins, chronic venous insufficiency, and hemorrhoids is a modern and significant issue.

Reasons for the appearance of biopharmacy as a science in modern pharmacy

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In world pharmaceutical practice in the development and production of an effective drug, it is necessary to take into account various biological and pharmaceutical factors. At the stages of research and manufacture of new drugs in modern pharmacy, special attention is paid to the biopharmaceutical screening, associated with the study of the effect of the physicochemical properties of excipients, the nature and concentration of active pharmaceutical ingredients, as well as the type of dosage form and the characteristics of the technological process on the bioavailability of the active substances. The progressive development of pharmacy, medicine, chemistry and other disciplines, as well as the accumulation of empirical research results and theoretical aspects, contributed to a deeper understanding of the need to study the dependence of the therapeutic effect of drugs on a living organism on various factors.

In the 19th century, biological evaluation of drugs became an urgent problem in the development and production of drugs. Later, this topic was developed in the works of such scientists as K.E. Munzel, L. Kruvchinsky, V.A.Manassein, N.A. Zasetsky. In the 20th century, there has been a rapid growth in the search and synthesis of original biologically active substances and the creation of reproduced drugs - generics, as well as the production of new dosage forms. Studies of the safety and efficacy of drugs, as well as the properties of all constituent dosage forms, their mutual influence and the complex therapeutic effect of the drug were insufficiently complete, which led to such notorious events as the “Thalidomide tragedy” of the early 1960s, as a result of which in a number of countries In the world, children were born with congenital deformities due to the fact that mothers during pregnancy took a sedative sleeping pill thalidomide, which has teratogenicity. There are also known cases describing the inequality of the therapeutic action of the same drugs that meet the requirements of regulatory documents, but