

## **DEVELOPMENT OF GELS ANTI-INFLAMMATORY AND ANALGESIC ACTION FOR THE TREATMENT OF SPORTS INJURIES**

Kharchenko A.A., Tikhonov O.I., Shpychak O.S.

The National University of Pharmacy, Kharkiv, Ukraine

atl@nuph.edu.ua

Diseases and injuries of the musculoskeletal system (OPA) is one of the most pressing reasons for limiting physical activity of people with active lifestyles. Inflammation musculoskeletal tissues occur usually during or after exercise, including overload associated with professional sports, extreme or work, accompanied by long stereotyped movements in the muscles and joints.

Most common manifestations of inflammatory diseases and degenerative tendons, muscles and joints are considered pain, seizures, tumors and soft tissue inflammation near the joint that significantly affect the pathological process and the quality of life of patients. In most cases, the success of the treatment depends not only on the correct choice of a drug in terms of the symptoms described in the instructions for use and evidence-based research on the effectiveness of the drug, but in general also how we stand unable to compare the clinical impact of medications means to the individual characteristics of the patient.

In modern conditions in pharmacotherapy OPA to eliminate inflammation and ease pain commonly used NSAIDs. However, currently remains unresolved a number of questions regarding the details of the pharmacological effects and adverse side effects of drugs of this group. Despite the fact that the range of drugs for the treatment of above named pathology is quite diverse, analysis of the pharmaceutical market of Ukraine demonstrates the need for the development of the domestic market sector preparations for the local treatment of diseases of OPA and the relevance of developing, manufacturing and medical practice new home, highly efficient and harmless drugs Local destination.

We have conducted research on the development in the new integrated drug in gel form based on compounds of synthetic and natural origin, including bee products to treat injuries OPA, which are mainly found in sports medicine. The structure of the drug includes active pharmaceutical ingredients – propolis phenolic hydrophobic drug (Praeparatum Propolis phenohydrophobum) (RP № UA/4505/01/01, order Ministry of Public Health of Ukraine of 07.06.2011 № 337 g.), a local anesthetic, menthol and rosemary oil, rational concentration which was established by the analysis of contemporary literature. Conducted research also studied the structural, mechanical and technological properties in order to choose the basis for investigational gel, the choice gel creators and its concentration, and provided indicators of quality control was included in the project is designed to quality control the drug.