

Brief information about the project

Name of the project	AP19680131 «Optimization of the method for obtaining active complex and development of new drugs from plants of Chenopodiaceae and Fabaceae families»
Relevance	<p>Currently, the development of new domestic effective medicines includes various measures for the search, determination of the active principle, methods of substance isolation, identification of the active substance from the substance of a plant object. Among them, the most important are the methods of isolating the substance and offering the dosage form. The production technology of the substance remains an urgent problem due to the universal interest in significantly improving its efficiency. Ways to improve the technology of processing raw materials and the development of substances are the dominant motive in plant chemistry.</p> <p>Despite its effectiveness, the isolation of a substance from plant objects has its own difficulties in technological aspects. Therefore, strict requirements for the safety and effectiveness of their use are imposed on substances and dosage forms.</p>
Purpose	The purpose of this project is to search for new substances and suppositories based on a biologically active complex isolated from plant raw materials of the haze family and legumes growing in the Republic of Kazakhstan. Determination of the current state of resources for the objects under study.
Objectives	<ol style="list-style-type: none">1. Conduct a patent search with a depth of 15-20 years for medicinal suppositories (vaginal candles, tampons, and others) with anti-inflammatory, wound-healing effects and oral and dental hygiene products. At this stage, literary and patent searches will be conducted on plant objects, suppositories and parapharmaceuticals with anti-inflammatory, wound-healing effects.2. Carrying out resource work on plant sites and collecting plants of the genus <i>Climacoptera</i> and <i>Alhagi</i>. Determination of the qualitative composition and quantitative content of the main groups of biologically active substances. Within the framework of this project, an agreement will be concluded with the Institute of Botany and Phytointroduction to analyze the current state of resource work and possible harvesting of plants of the genus <i>Climacoptera</i> and <i>Alhagi</i>. To determine the quantitative content and qualitative composition, the following methods will be used: spectrophotometric, complexometric, titrimetric. According to the requirements of the GF RK 1st edition, the following will be studied: the goodness of plant objects and the quantitative content of biologically active substances.3. Installation of an ultrasonic extractor and selection of optimal extraction conditions (time, temperature, raw material: solvent ratio, extraction multiplicity, etc.). Study of the component composition, safety and effectiveness of the extracts under study. At this stage, the installation of an ultrasonic extractor will be carried out. Technological parameters were studied and selected: selection of extractants, solvent-raw material ratio, working out the extraction mode: multiplicity, time, temperature of extractions, etc. The methods for obtaining substances will be carried out by various extraction methods. The qualitative compositions of the isolated substances will be studied by paper, thin-layer chromatography, the active substances in the studied objects will be determined by UV, IR, GC-MS and HPLC analysis methods.4. Development of suppositories and parapharmaceuticals (toothpaste and mouthwash) based on extracts from plant raw materials. Preparation of

	candles and parapharmaceuticals based on extracts from plant raw materials and assessment of their quality. To study the specific and pharmacological effects of extracts using in vitro and in vivo methods.
Expected and achieved results	<ol style="list-style-type: none"> 1. Conduct a patent search 15-20 years in depth for medicinal suppositories (vaginal suppositories, tampons, etc.) with anti-inflammatory, wound-healing effects and oral and dental hygiene products. 2. Carrying out resource work on plant objects and collecting plants of the genus Climacoptera and Alhagi. Determination of the qualitative composition and quantitative content of the main groups of biologically active substances. 3. Installation of an ultrasonic extractor and selection of optimal extraction conditions (time, temperature, ratio of raw materials: solvent, extraction ratio, etc.). Study of the component composition, safety and efficacy of the studied extracts. 4. Development of suppositories and parapharmaceuticals (toothpaste and mouthwash) based on extracts from plant materials. Obtaining suppositories and parapharmaceuticals based on extracts from plant materials and assessing their quality. Study of specific and pharmacological actions of extracts with in vitro and in vivo methods.
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List of publications with links to them	-
Patents	"A method for obtaining a suppository based on a herbal preparation with an anti-inflammatory effect" registration number 2023/0820.1