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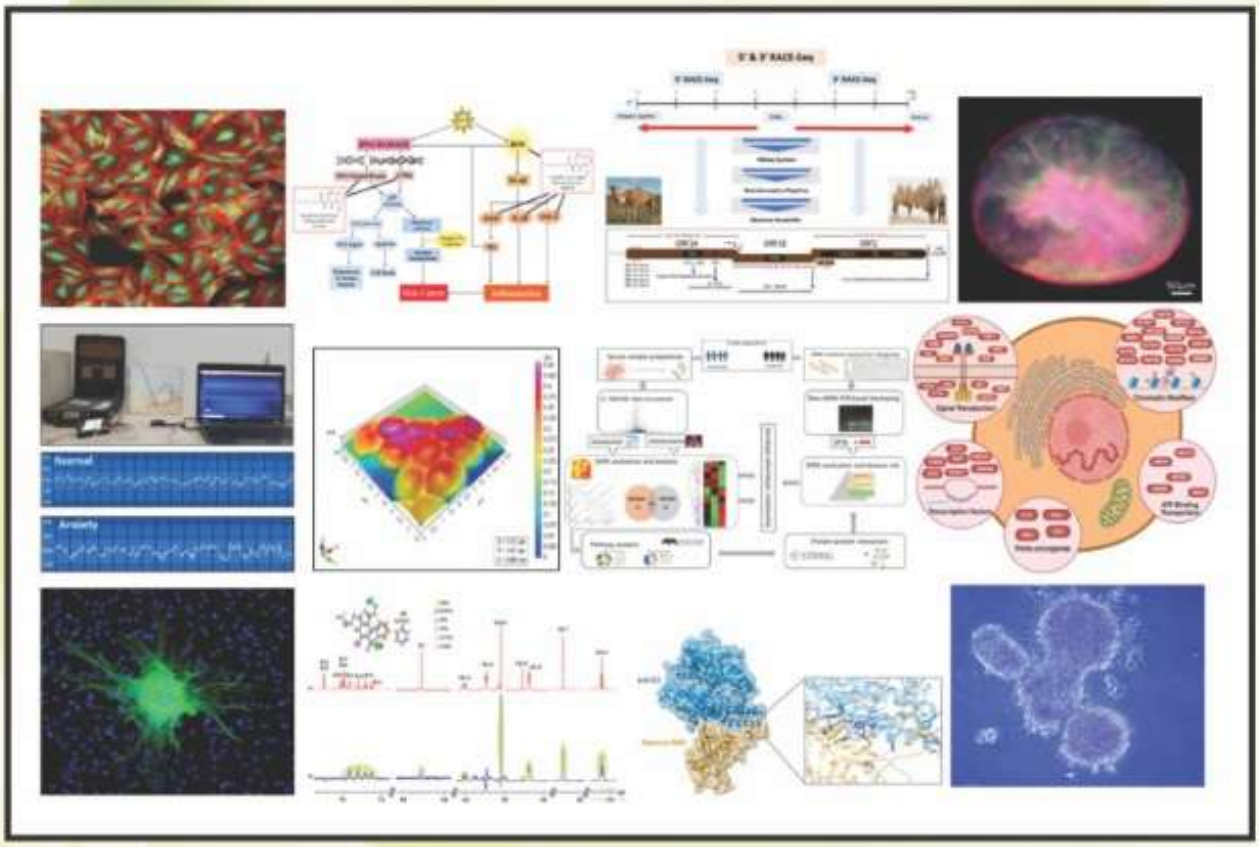
ABSTRACTS



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PO ***MMDR-8***

Chemistry and Activity of a Natural Complex from the Aerial Part of the Plant - *Alhagi kirghisorum Schrenk*

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The raw material for obtaining «Alhidin» is the aerial part of *Alhagi kirghisorum Schrenk*, which grows only in Kazakhstan and approved for use by the Pharmacological State Committee of the Republic of Kazakhstan as medicinal raw material as anti-inflammatory, antiseptic, astringent, hepatoprotective and antitumor agent. Biologically active complex «Alhidin» is a cream-colored, odorless, astringent powder, slightly soluble in water, insoluble in ethyl and methyl alcohols, ether, and chloroform. Polymeric proanthocyanidin $(C_{45}H_{34}O_{18})_{11}$ is registered with Scientific Research Institute for Biological Testing of Chemical Compounds (No. 2946580). Together with JSC «Chimpharm» and Al-Farabi Kazakh National University (KazNU), drew up industrial regulations No. 243-6-01 for the production of alhidin, approved by PC «Chimpharm» and agreed upon by chairman of the committee of pharmacy, pharmaceuticals, and medical industry of the Ministry of Health of the Republic of Kazakhstan. Registration number of Alhidin is RK-MS-No. 004762. It is proposed to produce alhidin substance in accordance with requirements of PPA RK 42-389-01. «Alhidin» is registered as a domestic medicinal product under RK-MS-3 No. 004762. From «Alhidin», following have been developed: alhidin ointment, 5% (RK-MS-3 No. 005155), an alcohol tincture from *Alhagi kirghisorum Schrenk* (RK-MS-3 No. 005302). In terms of effectiveness and safety, these dosage forms are not inferior, and in some parameters, they are superior to widely used drugs such as butadione, rutin, calendula ointment, and «Kyzyl-May». For the first time, at the Republican Center for Preclinical and Clinical Testing of Pharmacological Drugs at Kazakh National Medical University, preclinical studies of biologically active complex «Alhidin» were conducted as active principle of various non-steroidal anti-inflammatory dosage forms.

The biologically active complex «Alhidin» was first developed at the Department of Organic Chemistry and Chemistry of Natural Compounds of the KazNU is from the aerial part of the local plant *Alhagi kirghisorum Schrenk*. Currently, the medicinal plant raw material, *Alhagi kirghisorum Schrenk*, has PA RK 42-12-99. The acute and chronic toxicity of the drug was studied using standard toxicology methods on white mice. Toxicological study materials according to the LD_{50} parameter showed that «Alkhidin» is a low-toxic substance. Specific effects of biologically active complex «Alhidin» on aseptic peritonitis and aseptic pleurisy showed that «Alhidin» significantly reduces the amount of exudative fluid in the abdominal and pleural cavities compared to standard, butadione, under the conditions of prophylactic use of drugs. Effect of «Alhidin» on chronic inflammation and capillary-strengthening activity was also studied. A pronounced anti-edematous effect of the biologically active complex «Alhidin» was revealed in histamine and serotonin inflammation. Studies have been conducted to study the antitumor activity and the effect of «Alhidin» on sulfhydryl groups in tumor tissue and blood serum. Work is underway to search for and develop parameters for obtaining a biologically active complex under supercritical conditions. Currently, work has begun on the study of new dosage forms in the form of gels, dermatological films, and suppositories.