DEPUTY EDITOR-IN-CHIEF'S PREFACE TO ISSUE 1, 2025

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Dear readers!

We are pleased to present the first issue of the journal "Acta biomedica scientifica" in 2025. In the era of rapid development of medical science and practice, we aim to become a reliable source of relevant and reliable information for doctors, scientists, and anyone interested in the latest advances in medicine. We strive to maintain the highest standards of professionalism and scientific accuracy in our published materials, while also providing a wide range of topics and issues that are relevant to modern healthcare.

Articles on the health of newborns deserve special attention. Researchers from Chita (Sushchenko R.A. et al.) studied the level of osteolysis markers (beta-CrossLaps) and osteogenesis (N-osteocalcin, VEGFR1) in venous blood serum from newborns with cephalohematomas, and assessed the dynamics of local bone changes. Another study by scientists from Blagoveshchensk (Andrievskaya I.A. et al.) found that maternal infection with SARS-CoV-2 in the third trimester leads to an inflammatory response in the fetus, increasing the risk of neonatal complications.

The long-term consequences of SARS-CoV-2 infection continue to be a global concern, despite a decrease in the incidence rate. A study by researchers from Vladivostok (Lobova T.G. et al.), published in English, found that disruptions in the regulation of the NLRP3 inflammasome and gasdermin D can lead to an inadequate immune response to COVID-19 infection, contributing to the maintenance of a hyperinflammatory process and long-term recovery. The work of authors from Yalta (Yatskov I.A. et al.) focuses on the study of blood lipid levels in patients after a new coronavirus infection and the possibility of its correction during the rehabilitation period in sanatorium-resort conditions with the additional use of herbal medicine.

Interesting works in the field of surgery are presented. A team of researchers from Iraq (Ali S.M. et al.) conducted a study comparing the open excision technique with reconstruction using the Limberg flap for the treatment of sacrococcygeal pilonidal sinus. This method provides faster healing, reduced pain, early recovery of normal functions, and a lower risk of recurrence, making it an attractive option for treating this condition.

The article by the authors from Moscow (Sipki V.N. et al.) presents data comparing the results of repeat reconstructive procedures on the breast using allogeneic and autologous materials.

The series of articles in this issue are based on experimental work. In the joint work of authors from Moscow, Novosibirsk and Irkutsk (Michurin S.V. et al.), the results of a study on the micro- and ultrastructural features of lipid metabolism in the liver of *db/db* mice with obesity and type 2 diabetes mellitus are presented. The effect of melatonin administration on them is also assessed. Another team of authors from Kazan (Sabirov D.Kh. et al.) in their work assessed structural and molecular changes occurring in areas close to (Th_9) and distant from (L_2) the epicenter of spinal cord injury in rats (Th_8), against the background of rehabilitation motor load. The work by scientists from Izhevsk (Protopopov V.A. et al.) is devoted to the impact of an acid sphingomyelinase inhibitor on oxidative stress, advanced glycation end products, and the myosin phenotype of rat soleus muscles under conditions of functional unloading.

Traditionally, the journal has published works in the field of ophthalmology. Recently, colleagues from Krasnodar (Nabatova O.S. et al.) have assessed the effectiveness of correcting corneal astigmatism using toric intraocular lenses,

calculated using various methods for measuring the target astigmatic axis. Data obtained by the authors from Moscow (Subbot A.M. et al.) during experimental work has confirmed the modern concept of keratoconus etiopathogenesis, according to which disorders of the biomechanical function of the cornea in this disease are caused by mineral dismetabolism of copper, iron, and zinc ions in the connective tissue stroma.

The issue of a personalized approach to patients with ischemic stroke continues to be relevant. Scientists from Chita (Ma-Van-de A.Yu. et al.) have studied the level of fractalkine (FKN) in the blood serum of patients with ischemic stroke, specifically the atherothrombotic subtype, over time. The data collected can potentially serve as a basis for further research into the possible use of FKN as a treatment option for patients with acute cerebral ischemia.

Undoubtedly, readers will find a wealth of useful information in the scientific reviews. The authors from North Ossetia (Takoeva E.A. et al.) analyzed the mechanisms described that underlie the effects of mesenchymal stem cells and extracellular vesicles on the pathogenesis of rheumatoid arthritis. The authors from Vladivostok (Kytikova O.Yu. et al.) have summarized modern concepts regarding the role of lipoxins, lipid mediators involved in inflammation resolution, in the pathogenesis of bronchial asthma. An author from Moscow (Salkov V.N.) has presented a critical analysis of literature on factors contributing to the excessive accumulation of iron in the substantia nigra of the brain in patients with Parkinson's disease.

We hope that the materials in this issue will be helpful and interesting for our readers, and will assist them in their professional endeavours. We also hope that these materials will inspire our readers to pursue further scientific research.

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