

EDITOR-IN-CHIEF'S PREFACE TO ISSUE 5, 2021

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We meet again on the pages of the journal *Acta biomedica scientifica*. I think the diversity of the issue will be of interest to a wide range of specialists, doctors and students.

First of all, I would like to draw your attention to a **series of articles on the novel coronavirus infection and other dangerous anthroozoonotic diseases** that concern scientists and pose a potential threat to the population.

A group of Rospotrebnadzor scientists from Saint Petersburg and the Far East continues to work consistently to analyze the incidence of a new coronavirus infection in Russia – in this case, in the Far Eastern Federal District. It has been shown that more than 90 % of seropositive volunteers suffered from the disease asymptotically, which is important for understanding the formation of population immunity.

Scientists from Irkutsk Antiplague Research Institute with colleagues from the Republic of Tuva have shown that a live anti-plague vaccine can effectively activate cellular and humoral defense mechanisms against plague in the Tuva natural focus.

Another work of the same institute identified natural foci and the main carriers of leptospirosis in the Baikal Region (representatives of the insectivores and rodents) with a fairly high infection rate.

For Russia and Siberia, in particular, due to the high prevalence of **tuberculosis**, studies of its pathogenesis, diagnosis and treatment are relevant. Two works are devoted to this: authors from Moscow and Saint Petersburg – on the important role of tumor necrosis factor in inhibiting the development of peritoneal tuberculosis in the experiment, authors from Moscow – on the differential diagnosis of Crohn's disease and intestinal tuberculosis. This is important for the development of new approaches to the treatment of these pathologies.

The series of articles is devoted to **nutritional and metabolic disorders**. Scientists from Novosibirsk and Gorno-Altai analyzed data on the nutritional habits of students enrolled in higher educational institutions in various regions of Russia and identified a high risk of metabolic disorders that are food-related. It is recommended to introduce an educational program on optimal nutrition during the period of adaptation of freshmen to student life.

Scientists from Kyrgyzstan presented the results of a seven-year international epidemiological study "Interepid" on the relationship between excess body weight and the development of cardiovascular events in residents. Interestingly, an increase in body mass index above 25 kg/m² is a risk factor for the development of cardiovascular accidents only in persons under 60 years of age.

Metabolic disorders, an increase in body mass index and the risk of cardiometabolic diseases associated with early menopause in women in Eastern Siberia were identified by scientists from the Scientific Centre for Family Health and Human Reproduction Problems (Irkutsk), which is important for the timely prevention and correction of long-term complications of early menopause.

I would recommend to carefully study the work of a team of renowned scientists from the National Medical Research Center for Cardiology (Moscow), who presented a **unique study of disorders of free radical processes in experimental hyperthermia** in healthy volunteers and patients with coronary heart disease during summer heat waves. The work is very relevant, given the global warming in the world and the increase in mortality from overheating, especially in patients with cardiovascular diseases.

The authors from Scientific Centre for Family Health and Human Reproduction Problems (Irkutsk) substantiated the importance of early **genetic diagnosis** of hereditary metabolic disorders of amino acids (aminoacidopathy), organic acids (organic acidemias) and defects in mitochondrial β -oxidation of fatty acids. These three groups are the largest in their class. Scientists from the Irkutsk State Medical University revealed in their review the role of the genetic polymorphism of N-acetyltransferase 2 in human pathology.

I hope that many readers of the journal and practitioners will be interested in a series of reviews and articles devoted to **various aspects of surgical pathology**, including metabolic features, comparative assessment of surgical methods and unique reconstructive operations, as well as the choice of treatment tactics for such severe pathologies as hemorrhagic stroke.

As always, there is a place for original **experimental studies** of new compositions: for example, the authors from Kirov presented the study of colloidal silver nanoparticles, and the Angarsk scientists – the study of the Se nanocomposite encapsulated in the polymer matrix of arabinogalactan (SeAG). In the latter, the authors revealed toxicity, which is somewhat alarming, since arabinogalactan has recently been often used to create nanocomposites.

A number of articles in the issue are devoted to various aspects of the **organization and economics of health care**, as well as **educational technologies**. I would single out a review of foreign studies on the management of burn-out in nurses, which was carried out by a group of scientists from Moscow and Irkutsk, which is relevant in the context of a pandemic. This problem became especially serious during the pandemic in many countries and led to **loss of personnel**. We will wait for the same research in Russia.

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