

EDITOR-IN-CHIEF'S PREFACE TO ISSUE 4, 2023

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Dear readers!

The leading article in this issue, in my opinion, is the article by O.B. Ogarkov et al. (Irkutsk), who isolated a lipophilic representative of the *Corynebacterium tuberculostearicum* species complex from a tuberculosis lesion and sequenced it. The authors put forward an important hypothesis that favorable conditions for the development of secondary anaerobic lipophilic microbiota can be created inside the tuberculosis focus.

The second article is an interesting and promising *in vitro* study of the structure and characteristics of five microbial consortia with probiotic properties from naturally fermented milk products, performed by A.S. Pendyukhova et al. (Irkutsk). The authors showed that such consortia can be neutral and bactericidal against multidrug-resistant isolates of opportunistic bacteria, which is important for the creation of probiotics with antibacterial properties.

The third work that I would like to highlight is the study of N.V. Korotaeva, L.I. Ippolitova and E.S. Pershina (Voronezh) on the using neural network in ultrasound diagnostics for the early determination of intrauterine fetal distress based on the analysis of facial descriptors.

The search for diagnostic and prognostic criteria for COVID-19 and its consequences (including post-COVID syndrome) continues. Article by Zh.P. Vasneva et al. (Samara) demonstrates a change in the ratio of lymphocyte subpopulations in 67.7 % of patients with COVID-19 and lung damage of less than 30 %. Correlations between the content of NK cells and a wide range of T lymphocyte subpopulations were revealed, which may be a predictor of the severity of the disease. V.A. Vasilyev et al. (Petrozavodsk) showed in their research that changes in the phase structure of transmitral blood flow may be an early manifestation of intracardiac hemodynamics disorders in persons who have recovered from COVID-19.

A series of articles is devoted to the visual organ pathologies and their correction. In this section I would like to highlight the article by O.V. Pisarevskaya, A.G. Shchuko et al. (Irkutsk), who, through mathematical modeling, developed a technology for calculating the parameters of the effective SMILE surgery for the correction of high myopia with an optimal refractive effect. Another article of the authors from the Irkutsk Branch of the S. Fyodorov Eye Microsurgery Federal State Institution (Iureva T.N., Pisarevskaya O.V.) has shown that keratorefractive surgery can cause the transition of latent forms of the disease into an active process with the formation of glaucomatous neuropathy and corneal edema. In the work of M.V. Sinicin and N.A. Pozdeyeva (Novosibirsk), it was proven that rigid gas-permeable scleral lenses are preferable to the MyoRing implantation method for the correction of postkeratoplastic astigmatism.

Several works are devoted to current problems of zoonotic and infectious diseases, including socially significant ones. Of undoubted interest is the observation of E.K. Doroschenko et al. (Irkutsk) of the spread of the previously considered relict tick *Haemaphysalis concinna* in the territory of the Irkutsk region and the Republic of Buryatia, which makes it necessary to systematically monitor it in the Baikal region. Yu.V. Bazhenova et al. (Irkutsk) have shown that in case of comorbidity of tuberculosis and HIV infection, multislice computed tomography provides detailed information on the pathological process in the lungs and its dynamics during treatment.

Traditionally, our journal pays attention to various aspects of metabolic syndrome and obesity both in clinical practice and in experiment. In the study

by L.V. Belenkaya et al. (Irkutsk), a universal critical value of age (34.5 years) was determined which is associated with a significant increase in the prevalence of metabolic syndrome in women (regardless of their ethnicity), and the ranking determined the prevalence of a decrease in high-density lipoproteins. T.A. Bairova et al. (Irkutsk), when sequencing the leptin genome, has shown for the first time that 13 single nucleotide polymorphisms registered in the GenBank database and 14 unregistered single nucleotide substitutions of the *LEP* gene which may be one of the causes of obesity were identified in adolescents with overweight and obesity in contrast to adolescents with normal body weight. T.I. Dergacheva et al. (Novosibirsk) revealed in the experiment the corrective effect of a sorbent composition of aluminum oxide and polydimethylsiloxane on prelymphatics, blood and lymphatic vessels in the uterus and ovaries in *db/db* mice with obesity and type 2 diabetes mellitus, which is promising for further researches.

A.Yu. Maryanyan et al. (Irkutsk) assessed the course of pregnancy in women who consumed alcohol in the prenatal period, which was both indicated by them during the survey and, most importantly, was laboratory-confirmed (using a study of the phosphatidylethanol level), and found that 24.2 % of women did not stop consuming alcohol. This led to intrauterine growth retardation and premature birth.

Several articles in the issue are devoted to experiment and morphological studies. Thus, in the work of I.V. Bibik et al. (Lugansk, Stavropol), new derivatives of thienopyridine and 1,4-dihydropyridine with high anti-inflammatory and analgesic activity, promising for further preclinical studies, were synthesized and studied by virtual bioscreening. V.M. Vdovin et al. (Barnaul) experimentally proved the local hemostatic effect of exogenous fibrin monomer when administered systemically after injury and the suppression of platelet aggregation function in comparison with the use of tranexamic acid. I.A. Kulikov et al. (Moscow) has found the appearance and increase in areas of myometrial necrosis at the abnormal placentation in response to an increase in the depth of placental villi ingrowth, which can stimulate the development of abnormal vascularization.

As always, scientists, clinicians and young scientists might be interested in literature reviews and lectures by L.M. Lazareva (Irkutsk), K.Yu. Krasner et al. (Novosibirsk), D.D. Morikov et al. (Irkutsk) and K.B. Lelyavin (Irkutsk).

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