

DEPUTY EDITOR-IN-CHIEF'S PREFACE ISSUE 5-1, 2022

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Dear readers!

We present to your attention the new issue of our journal.

This time the issue will consist of two parts. The first part includes articles published within the framework of the V All-Russian research/practice conference of young scientists with international participation "Fundamental and applied aspects in medicine and biology", which was held on October 27–28, 2022 in Irkutsk.

The first part of this issue opens with an article from the Institute for Biological Instrumentation, Pushchino Scientific Center for Biological Research of the Russian Academy of Sciences (Pushchino). This study was aimed at a systematic search for peptide and protein ligands of human serum albumin capable of affecting its interaction with amyloid- β peptide. The peptide and protein candidates selected by the authors are subject to experimental verification regarding their effect on the interaction of human serum albumin with amyloid- β peptide and can become the basis for the development of first-in-class drugs for the prevention of Alzheimer's disease.

The articles published in English are of our particular interest. In an international cross-sectional multicenter study, E.A. Novikova et al. (Irkutsk) assessed the attitudes of parents from India and Russia towards vaccination and found that parents from both countries showed good vaccination compliance. E.A. Bayandina et al. (Perm) in their work describe the complex mechanisms of interaction between nanometals and biofilms, which will contribute to the development of effective biocatalysts based on immobilized bacterial cells. The data obtained by the authors can be used to eliminate unwanted biofilms using metal nanoparticles. The authors from the Institute of Ecology and Genetics of Microorganisms, Perm Federal Research Center of the Ural Branch of the Russian Academy of Sciences (Perm) studied the reaction of *E. coli* bacteria to the effect of four antibiotics, the inhibitors of protein synthesis, using a combined approach and found that the using electrochemical sensors in combination with traditional methods is a promising approach to studying the mechanisms of antibiotics effects.

This issue contains a large number of experimental works of a high professional methodological level. Rats, mice, and even rainbow trout have been used as experimental models. Microbiological works reflecting the relevance of the study of microorganisms are also well covered.

A number of articles are devoted to the study of the pathophysiology of various human diseases. E.V. Vyrupaeva et al. (Irkutsk) assessed the general condition and quality of life of women of post-reproductive age who had COVID-19, as well as 12 months after the moderate form of COVID-19. In the work of A.S. Lesnaya et al. assessed the functional state of the glutathione system in women of the Buryat ethnic group with insomnia in the menopause, which is undoubtedly of interest from the point of view of studying ethnic characteristics.

The studies of the tick-borne encephalitis virus continue to be relevant. The authors from Tomsk developed models for the quantitative assessment of the severity of the tick-borne encephalitis febrile form based on the most informative predictors of severe course. Authors from the Scientific Centre for Family Health and Human Reproduction Problems (Irkutsk) in their work updated information on the presence and prevalence of specific immunoglobulins M and G to *A. phagocytophilum* and *Ehrlichia* sp. among residents of the Baikal region affected by tick bites.

The issue turned out to be multidisciplinary, interesting and inviting to the discussion. We thank our authors and reviewers and look forward to meet you in our next issue!

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