

EDITOR-IN-CHIEF'S PREFACE TO ISSUE 6, 2024

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The final issue of Acta biomedica scientifica in 2024 is of particular value as a means of exchanging scientific knowledge and achievements with colleagues, including foreign experts.

The current issue contains article of the authors from India. The work by M.V. Patil et al. presents data on the treatment of wounds using modified xanthan gum-based gel incorporating curcumin and a solution of copper nanoparticles. The gel showed significant antibacterial and wound-healing activity due to the synergistic action of *Tinospora cordifolia*, curcumin and Cu⁺⁺ nanoparticles.

I would also like to draw your attention to the article presented by the researchers from the Institute of Future Biophysics and the Institute of Cell Biophysics of the RAS. The authors studied the geroprotective effect of 10 biologically active substances (BAS) isolated from medicinal plants of the Altai Region of Russia and their effect on the accumulation of intestinal autofluorescence material (IAM) using the *Caenorhabditis elegans* model. It has been established that IAM accumulation is inversely proportional to longevity. Thus, the studied BAS can serve as a basis for the development of geroprotective drugs.

The issue includes articles by our regular authors, who are engaged in surgical research. Several groups of authors from Irkutsk Scientific Centre of Surgery and Traumatology presented the results of their research. The article by E.E. Chepurnykh et al. presents the study of the effect of the drug "Seroguard" on ATPase activity and peroxidation indices in liver tissue in experimental peritonitis. S.N. Larionov et al. assessed the effectiveness of laser nucleoplasty and radiofrequency neuromodulation of radicular nerves and ganglia in the treatment of discogenic lumbar radiculopathy. A.P. Zhivotenko et al. studied the laminectomy zone and transformation of epidural fibrosis using original gels in an experiment.

A number of other studies and literature reviews in this area have also been published. An interesting data is presented by the authors from Volgograd (Maskin S.S. et al.), who proved the insufficient effectiveness of vacuum-assisted laparostomy compared to planned relaparotomy in widespread purulent peritonitis and abdominal sepsis. The data allow us to significantly reduce the economic burden on healthcare in this area.

Our regular section – ophthalmology – has also been replenished with new studies. Authors from Irkutsk (Shvets L.V., Iureva T.N.) based on the structural optical coherence tomography data revealed degenerative changes in the pathways of the visual analyzer in patients with multiple sclerosis, even in the absence of complaints and clinically expressed visual impairment. Another article by ophthalmologists from Irkutsk, Saint Petersburg and Pushkin describes the risk factors for the occurrence of adverse hemorrhagic events during regional anesthesia in surgical treatment of retinal pathology in patients with diabetes mellitus undergoing programmed hemodialysis.

Children's health is one of the main problems of the healthcare system, especially against the background of the COVID-19 pandemic, when more and more questions arise about its consequences. A group of authors from the Scientific Centre for Family Health and Human Reproduction Problems (Irkutsk) made an attempt to identify prognostic criteria for the course of the infectious process by assessing the level of pro- and anti-inflammatory cytokines and the characteristics of the immune response in newborns during

the acute period of a new coronavirus infection. Suppression of the innate immune system was revealed, which requires further research in this area and increased attention from pediatricians to this category of children.

Not only COVID-19, but also other infectious diseases are relevant for healthcare. Tick-borne infection studies are presented in two articles. These are authors from Koltsovo in the Novosibirsk Region and Ulan-Ude (Kartashov M.Yu. et al.), who gave a molecular genetic characterization of YGTV variants found in *Dermacentor nuttalli* Ol. ticks in Buryatia, and the authors from Irkutsk (Suntsova O.V. et al.), who studied ixodid ticks as carriers and causative agents of babesiosis in humans and animals.

This is not a complete list of articles presented in the issue. More detailed information about all the works can be found on the website of *Acta biomedica scientifica*.

To conclude the work on this issue and the year as a whole, on behalf of the entire team, I would like to wish our authors and reviewers health, well-being, new prospects and discoveries in your scientific work in the New Year of 2025! Many thanks to all the authors for their help in creating the journal and special thanks to the reviewers, who significantly improve the quality of publications and help to create a good working atmosphere in our journal.

Happy New Year! We wish you fruitful researches and discoveries!

For citation: Kolesnikov S.I. Editor-in-Chief's preface to Issue 6, 2024. *Acta biomedica scientifica*. 2024; 9(6): 5-8. doi: 10.29413/ABS.2024-9.6.1