



Dear Readers,

We are delighted to present the first issue of *BioTechnologia* this year and invite you to explore our new website to discover its fresh look and recent updates.

BioTechnologia: Journal of Biotechnology, Computational Biology, and Bionanotechnology, published by the Institute of Bioorganic Chemistry PAS and the Biotechnology Committee PAS, has recently undergone significant changes, both in its editorial team and publishing policies. As of July 1, 2024, we have been appointed the new Editors. Since January 1, 2025, the journal has strengthened its collaboration with its publisher, Termedia, and transitioned to a new journal management system and website. Furthermore, starting from March 10, 2025, an article processing charge applies.

All articles published in *BioTechnologia* are indexed in PubMed, PubMed Central, and SCOPUS. Additionally, the journal has been awarded 70 points in the Polish Ministry of Science and Higher Education (MNiSW) scientific journal ranking. *BioTechnologia* is also currently under evaluation for inclusion in the Web of Science ESCI. For the latest journal updates and recent achievements, please visit us at <https://www.biotechnologia-journal.org/>.

In this issue, you will find intriguing original research and review articles covering various aspects of biotechnology.

Among plant biotechnology studies, one article explores the effects of salinity on the morpho-biochemical traits of spinach in hydroponic systems. Another presents biochemical and transcriptomic profiling of rice mutants, demonstrating how this research contributes to plant physiology studies and the discovery of stress-responsive genes in rice. Additionally, a study on *Camellia oleifera* seed oil evaluates its physical, chemical, antioxidant, and antibacterial properties, showing its great potential in food technology. You will also find an interesting article on the overexpression of UGPase and SPP enzymes in tobacco as a model energy plant, highlighting its significant role in improving biomass production.

Moreover, this issue features an article on the bioinformatic identification of novel CTL and HTL epitopes from secretory antigens, which could be incorporated into future vaccine formulations against *Mycobacterium tuberculosis*.

Finally, the current issue includes two comprehensive review articles. One review examines recent advancements in understanding the gut microbiome's influence on the development and prognosis of lifestyle diseases. The second explores cutting-edge AI tools that have revolutionized scientific research in the life sciences and addresses the challenges of balancing innovation with responsibility. As AI continues to shape biotechnology, we leave you with open questions: Are we truly prepared for this transformation? Can AI replace human scientists, or will they only assist them? With great power comes great responsibility. What do you think?

We wish all our readers a pleasant and insightful reading experience!

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