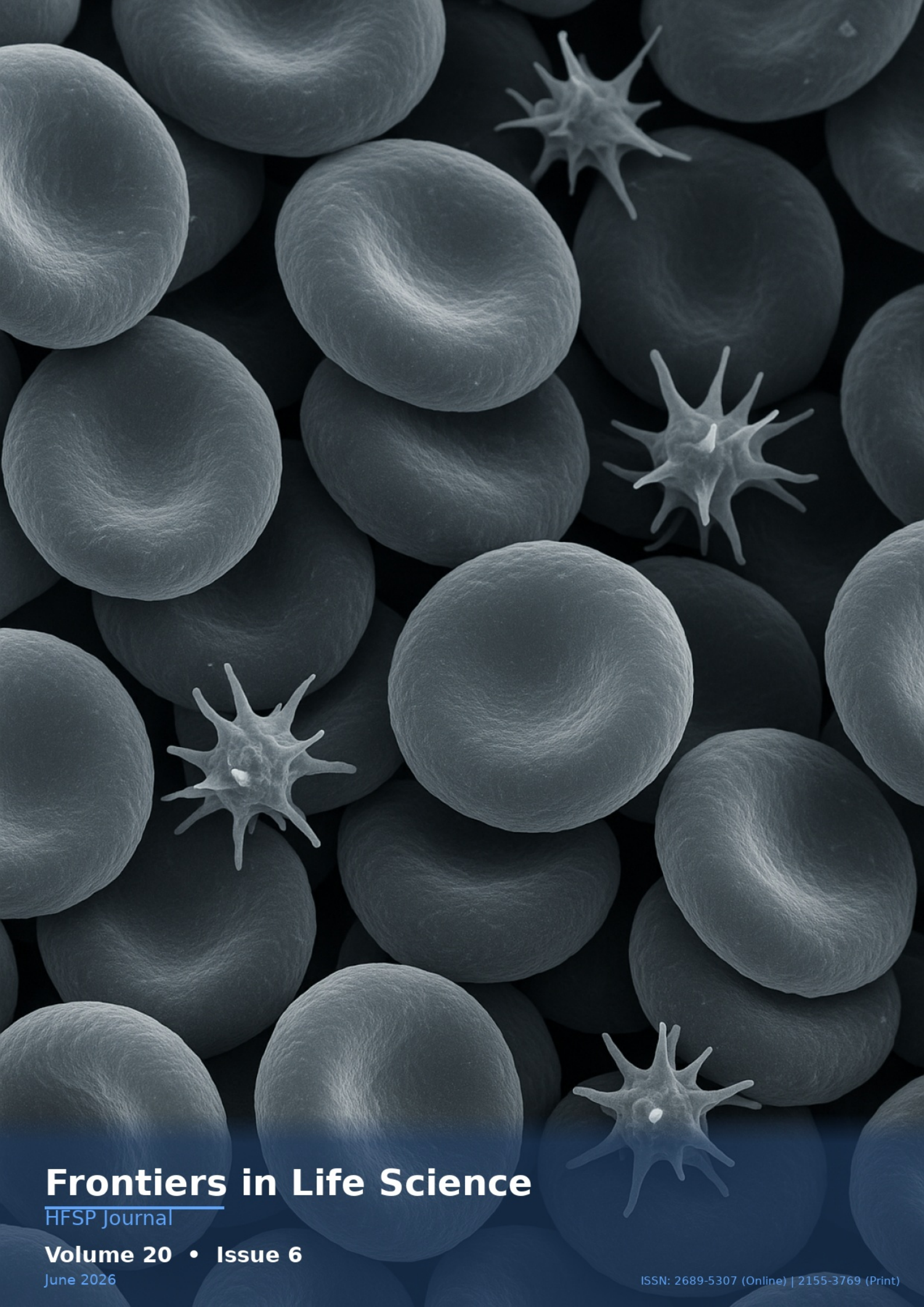

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Anja M. Bremer, Kenjiro Sato, Nandini Iyer

Keywords: epigenetics, leukocyte differentiation, DNA methylation, histone acetylation, immune modulation, cytokine production

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Divergence in Gut Microbiome Composition Across Diverse Dietary Patterns

Emma L. Schneider, Amir Al-Saadi, Miho Suzuki

Keywords: Gut Microbiome, Dietary Patterns, Microbial Diversity, 16S rRNA Sequencing, Mediterranean Diet, Bifidobacterium, Prevotella

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Stefan M. Fischer, Li Mei-Yun, Priya N. Iyer

Keywords: Protein Structure Prediction, Deep Learning, Convolutional Neural Networks, Attention Mechanisms, Computational Efficiency, Bioinformatics

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Lars Müller-Stein, Mei-Ling Zhang, Javier López-Alonso

Keywords: mRNA vaccine, adjuvants, immunogenicity, lipid nanoparticles, T-cell response, cytokine production

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Genomic and Biochemical Strategies for Enhancing Drought Tolerance in Soybean Cultivars

Matthias J. Müller, Li Na Chen, Ahmed Al-Hussein

Keywords: drought tolerance, soybean, genome-wide association study, osmoprotectants, quantitative trait loci, marker-assisted selection

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6.

Impact of Habitat Fragmentation on Pollinator Diversity in Tropical Ecosystems

Johannes F. Müller, Mei-Ling Zhao, Anita M. Chukwu

Keywords: habitat fragmentation, pollinator diversity, tropical ecosystems, biodiversity conservation, ecosystem services, landscape management

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Mechanisms of Cell Fate Determination in Early Embryonic Development: A Cross-Species Analysis

Nils van der Meer, Ananya Menon, Farhad El-Khoury

Keywords: cell fate, embryonic development, Notch signaling, transcription factors, single-cell RNA sequencing, CRISPR-Cas9, pluripotency

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Leveraging CRISPR-Cas9 for Targeted Genomic Modifications in Arabidopsis thaliana

Marek Wójcik, Aiko Matsumoto, Thulani Dlamini

Keywords: CRISPR-Cas9, Arabidopsis thaliana, genomic editing, guide RNA, gene function, plant biotechnology, mutation efficiency