

Special Issue

Cell and Molecular Mechanisms of Bacterial Meningitis

Message from the Guest Editor

Bacterial meningitis remains a significant cause of mortality and long-term neurological sequelae worldwide, particularly among neonates, children, and immunocompromised individuals. Despite advances in vaccination and antimicrobial therapy, the complex pathogenesis of bacterial meningitis—marked by blood–brain barrier disruption, immune activation, and neuronal damage—continues to present diagnostic and therapeutic challenges. Recent research has uncovered intricate molecular interactions between invading pathogens and host cells that govern disease progression and outcomes. This Special Issue aims to provide a comprehensive overview of the latest findings on the cellular and molecular mechanisms underlying bacterial meningitis. We invite original research articles, reviews, and communications that explore key aspects, such as bacterial invasion strategies, host immune responses, blood–brain barrier dynamics, cytokine signaling, neuroinflammation, and cell death pathways. Studies utilizing advanced models, imaging techniques, omics technologies, or translational approaches are particularly encouraged.

Guest Editor

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About the Journal

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).