

Special Issue

Recent Progress in Biological and Molecular Mechanisms and Targeted Therapies of Leukemia

Message from the Guest Editor

Recent advancements in the understanding of leukemia have significantly improved the development of targeted therapies. AML has seen major progress in molecular profiling, leading to better classification and risk stratification. This has resulted in the identification of specific genetic mutations, which are now targeted by new therapies. The introduction of low-intensity induction therapies, such as hypomethylating agents combined with venetoclax, has substantially improved outcomes for patients. Additionally, targeted oral therapies against driver mutations have expanded the treatment options available. Regarding Chronic Myeloid Leukemia (CML), the excellent progress induced by tyrosine kinase inhibitors (TKIs) has dramatically improved the prognosis for CML patients. However, the resistance to TKIs in some CML patients necessitates ongoing research into new therapeutic strategies and combination treatments with the aim to offer a safe TKIs discontinuation and to eradicate the leukemic residual disease. Understanding these resistance pathways is crucial for developing combinatorial and sequential therapeutic approaches to enhance patient survival.

Guest Editor

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