

Special Issue

Unraveling the Enigma of Colorectal Cancer: From Mechanisms to Therapeutic Advances

Message from the Guest Editors

Colorectal cancer (CRC) remains a significant global health burden, with an increase in its incidence and mortality rates necessitating a deeper understanding of its molecular underpinnings. Unravelling the intricate regulatory networks that govern the pathogenesis of CRC is essential for developing precision therapies and improving clinical outcomes. This Special Issue aims to present cutting-edge research on the molecular drivers of CRC, including genetic mutations, epigenetic modifications, transcriptomic and proteomic alterations, and the dysregulated signalling pathways that orchestrate the initiation, progression, and therapeutic resistance of tumors. We will place particular emphasis on the interplay between oncogenes and tumor suppressors, the tumor microenvironment, immune evasion mechanisms, and the utilization of emerging biomarkers in early detection and prognostic assessment. Additionally, we explore novel therapeutic paradigms, such as targeted therapies, immunotherapy, and multi-modal treatment strategies, that circumvent drug resistance and enhance therapeutic efficacy.

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