Special Issue

Integrative Omics Strategies for Biomarker Discovery and Mechanistic Insights into Disease

Message from the Guest Editor

Recent advances in high-throughput technologies have enabled a systems-level understanding of the molecular complexity underlying human diseases. In particular, integrative omics strategies—encompassing genomics, transcriptomics, proteomics, phosphoproteomics, and metabolomics—have become powerful tools for uncovering novel disease mechanisms, identifying predictive biomarkers, and guiding therapeutic interventions. This Special Issue will focus on innovative studies that combine multiple omics layers to unravel the molecular underpinnings of diseases, with a special emphasis on cancer and therapy resistance. We welcome original research papers and reviews that employ integrative omics approaches to discover new regulatory networks, define cell-state transitions, identify druggable targets, or develop computational frameworks for biomarker prioritization. Studies addressing disease-specific signaling pathways, tumor heterogeneity, immune responses, and therapy-induced adaptations are particularly encouraged, as well as contributions that leverage patient-derived models or clinical datasets to provide translational insights.

Guest Editor

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Message from the Editor-in-Chief

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Editor-in-Chief

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