Special Issue

Single-Cell and Spatial Multi-Omics in Human Diseases

Message from the Guest Editor

The recent breakthrough in high-throughput omics technologies has revolutionized our understanding of human biology and disease. The emerging single-cell and spatial multi-omics have provided a holistic view of the cellular composition and molecular landscape within tissues at a single-cell resolution in a spatial context. These advancements, transitioning from bulk tissue or cell type to single-cell and spatial levels, have unlocked a wide variety of novel biological discoveries, such as the intricate interplay between gene expression, cellular heterozygosity, the microenvironment and disease pathogenesis. These technologies have become hallmarks of single-cell omics and multi-cellular-resolution spatial techniques, supported by significantly advanced analytical tools.

This Special Issue of Genes welcomes reviews and original papers covering recent genetic research on any type of single-cell or nuclei spatial genomics, transcriptomics, and epigenetics in human diseases or mouse models. Special interest will be given to integrative single-cell omics studies.

Guest Editor

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Deadline for manuscript submissions

25 December 2025

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Message from the Editor-in-Chief

Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the Genes team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider Genes for your next genetics paper?

Editor-in-Chief

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