

## Special Issue

# Single Cell Analysis and Spatial Omics for Cell-Based Diagnostics

### Message from the Guest Editor

Powerful genome-wide technologies have expanded the field of genomics for finding gene regulatory factors. However, these approaches can only provide population average data that combine information from millions of cells. This population heterogeneity can be resolved by analyzing interactions of regulatory elements in single cells. Current single-cell profiling technologies resolve this cellular variability using label-free monitoring, live-cell imaging, microfluidics single-cell assays, and single-molecule nucleic acid detection methods to achieve spatially resolved analysis of genes, proteins, and metabolites. While single-cell methods shed light on cell-based diagnostics, they have been limited to the screening of only a few genes at a time. There is an increasing demand in biology and medicine for single-cell analysis technologies that can both capture spatial data and high-throughput molecular differences of individual cells. To provide solutions to this important need, this Special Issue discusses emerging technologies and computational approaches to define a new field of spatial omics (genomics, proteomics, metabolomics, and multi-omics) in health and disease.

### Guest Editor

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### Deadline for manuscript submissions

closed (28 February 2021)



## Diagnostics

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