Special Issue

Immune Cell Profiling in Human Diseases

Message from the Guest Editors

Abnormal immune cells play a crucial role in the pathogenesis and exacerbation of various human diseases. Therefore, profiling of immune cells specifically present in a certain disease microenvironment can provide critical clues for the diagnosis and treatment of diseases. With the development of next-generation sequencing technology, immune cell profiling has being carried out across a variety of diseased tissues. Transcriptomic analysis of immune cells using RNA-seq provides differential gene regulation by various stimuli from the disease environment. Using epigenomic techniques such as ATAC-seq and ChIP-seq, it is possible to find key transcription factors and cis-regulatory elements that control gene expression in human diseases. In addition, through metabolomics, some metabolites in the disease environment contribute to epigenetic and transcriptomic changes. Recent investigations show that immune profiling of human diseases at the multi-omics level reveals the composition and heterogeneity of specific immune cells within tissues in human diseases. The application of omics technology at the single-cell level sheds light on the more precise immune profiling in human diseases.

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Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to Biomedicines, be it original research, review articles, or developing Special Issues of current key topics.

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