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Titolo	Single Cell Sequencing and Systems Immunology // edited by Xiangdong Wang
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Descrizione fisica	1 online resource (184 p.)
Collana	Translational Bioinformatics, , 2213-2775 ; ; 5
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Preface -- Significance of Single Cell Sequencing in Future Medicine -- Uncovering Phenotypes with Supercells: Applications to Single-Cell Sequencing -- Single-Cell Sequencing of Microorganisms -- Application of single-cell sequencing in dynamic transcriptomes -- System Immunology in Metabolic Research of Dendritic Cells -- FOXP3+ Treg Cells and Systems Biology Approaches to Studying Their Function -- T Cells and T Cells -- Prolymphocyte: Lymphocytes and Bioinformatics -- Lymphocytes in liver cancer -- Early biomarkers of hepatocyte necrosis -- Protocol of Single Cell Isolation by Flow Cytometry -- Single-cell based omics-the new era of human disease and medicine -- Cancer bioinformatics.
Sommario/riassunto	The volume focuses on the genomics, proteomics, metabolomics, and bioinformatics of a single cell, especially lymphocytes and on understanding the molecular mechanisms of systems immunology. Based on the author's personal experience, it provides revealing insights into the potential applications, significance, workflow, comparison, future perspectives and challenges of single-cell sequencing for identifying and developing disease-specific biomarkers

in order to understand the biological function, activation and dysfunction of single cells and lymphocytes and to explore their functional roles and responses to therapies. It also provides detailed information on individual subgroups of lymphocytes, including cell characters, function, surface markers, receptor function, intracellular signals and pathways, production of inflammatory mediators, nuclear receptors and factors, omics, sequencing, disease-specific biomarkers, bioinformatics, networks and dynamic networks, their role in disease and future prospects. Dr. Xiangdong Wang is a Professor of Medicine, Director of Shanghai Institute of Clinical Bioinformatics, Director of Fudan University Center for Clinical Bioinformatics, Director of the Biomedical Research Center of Zhongshan Hospital, Deputy Director of Shanghai Respiratory Research Institute, Shanghai, China. .
