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Nota di contenuto	Part I. From the Bench to the Bedside -- 1. Novel Insights into the Autoimmunity from the Genetic Approach of the Human Disease -- 2. Learning the Autoimmune Pathogenesis through the Study of Aire -- 3. Extrathymic AIRE expressing cells: a historical perspective -- 4. Autoimmunity Associated with the Misfolded Proteins Complexed with MHC Class II Molecules -- 5. Regulatory T cells for the Control of Autoimmunity -- 6. Autoinflammatory Diseases of Men and Mice -- 7. Nucleoside-Sensing Toll-Like Receptors as Therapeutic Targets for Autoimmune Diseases -- Part II. Manipulating the Immune System -- 8. Development and Function of New Subsets of Innate-Like Lymphocytes and Innate Lymphoid Cells -- 9. The Molecular Mechanisms and the Functions of New Types of Regulated Cell Death -- 10. RNA Metabolism

Controls Immune Function -- Part III Coopting with Microorganisms -- 11. Development of Orally Ingestible IgA Antibody Drugs to Maintain Symbiosis between Humans and Microorganisms -- 12. TCR Signals Controlling Both Toxoplasmosis and Cancer -- Part IV. Novel Methodologies for the New Era of Immunology -- 13. Imaging of the CAR-T Cells -- 14. Development of T-cell Therapy from Multipotent Stem Cell -- 15. Genetic and Epigenetic Control of Immune Cells -- 16. HLA Genetics for the Human Diseases.

Sommario/riassunto

This book overviews ongoing and upcoming clinical applications of basic immunology. Recent advances in our knowledge of immunology coupled with new technologies have aided in the development of efficient cancer immunotherapy, as well as the control of emerging microorganisms such as SARS-CoV-2. However, knowledge of basic immunology has not been fully utilized even after the discoveries of immune checkpoint inhibition for cancer immunotherapy and the development of mRNA vaccination against SARS-CoV-2. There is still room for improving the clinical application of basic immunology. The book summarizes the achievements in clinical applications of basic immunology and highlights what can be further extended to make immunology a more practical human science. Basic immunology and its clinical applications are two wheels of the same cart in the immunology field, which aids in the development of more efficient cancer immunotherapy and rapid control of infectious diseases against microorganisms, including new viruses and classical toxoplasmosis. The exploration of ongoing and upcoming applications of basic immunology in this book makes it a useful resource for immunologists, physicians, molecular and genome biologists, bioinformaticians, and students in these fields.
