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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction/Perspective -- Genetics and Classification of Acute Myeloid Leukemia -- Proteomics of AML to guide Selection of Therapy -- Roles of Apoptosis Regulating Bcl-2-Family Genes in AML -- Bcl-2 family: Translational aspects -- IAP Family and Proteins as Therapeutic Targets for Acute Myeloid Leukemia -- TP53 Mutations in Acute Myeloid Leukemia -- Targeting p53 Tumor Suppressor for AML Therapy -- AML-Selective Apoptosis Induction by rationally designed Death Ligand Fusion Protein -- PIM Kinases in AML -- Development of Midostaurin as a Tyrosine Kinase Inhabitor -- FLT3 in AML -- FLT3-ITD. Clinical (Sorafenib/AC220) -- Nucleophosmin (NPM1) -- Raf/MEK Pathway -- The Role of Translational Medicine in Optimization of Therapies targeting the RAS-MAP Kinase Pathway -- Clinical Use of Farnesyltransferase Inhititors -- The P13K-AKT-mTOR signaling

Network in AML -- Targeting the P13 Kinase-mTOR Signaling Pathway in AML -- Aurora kinases -- The Clinical Development of Aurora Kinase Inhibitors in Acute Myeloid Leukemia -- AML-Deacetylases -- Methylation in AML-Clinical Applications -- Topic: RARa/RXR Part: Basic -- Arsenic Trioxide in Untreated APL -- Targeting PML-RAR with Retinoids -- NR4A Orphan Receptors as Drug Targets -- Antibody-based Therapeutics Targeting CD33, CD45, and CD66 -- New Heterogeneity of the Leukemic Stem Cells -- Targeting Leukemia Stem Cells -- Regulation of Hematopoiesis by CXCL12/CXCR4 Signaling -- CXC4/CXCL12 as a Therapeutic Target -- VLA-4: A Cell's Consequential Encounter -- VLA-4 Function and Prognosis in Acute Myeloid Leukemia -- VLA4 in Acute Lymphoblastic Leukemia -- The Leukemic Bone Marrow Microenvironment: Targeting Hypoxia with Hypoxia Activated Pro-Drugs -- Topic: miRs as Therapeutic Targets -- Clinical Implications of MicroRNAs in AML -- Inhibition of Glycolysis as a Therapeutic Strategy in Acute Myeloid Leukemias -- Molecular and Biochemical Basis for the Reprogramming of Intermediary Metabolism in Leukemia Cells -- NK Cell Immunotherapy for AML -- Allogeneic and Autologous T cell Strategies to Enhance Targeting of Acute Myeloid Leukemia -- Indications for Hematopoietic Transplantation for AML -- Mesenchymal Stem/Stromal Cell Targeted Therapies for Solid Tumors and Hematological Malignancies.

Sommario/riassunto

This book provides an unprecedented overview of targeted therapies for acute myeloid leukemias. The volume provides comprehensive coverage of the diverse therapeutic strategies that have been developed during the last decade and are now being evaluated in early clinical trials. Authoritative chapters are written by leading research scientists and clinicians, who explain basic concepts and the clinical translation of topics that include the underlying genetic and proteomic abnormalities of AML. The chapter topics include the development of novel nucleoside analogues, the roles of microRNAs, apoptosis regulators Bcl-2 and p53, and of critical cell signaling proteins such as PIM, FLT3, Raf/MEK, PI3K/AKT/mTOR and aurora kinases. In addition, chapters on epigenetic mechanisms, nuclear receptors, cell surface antigens, the hypoxic leukemia microenvironment, stem cells, and leukemia metabolism, provide insight into leukemia cell vulnerabilities. Cell therapies utilizing T-, NK- and mesenchymal stem cells and progress in hematopoietic transplantation strategies complete the overview of the multi-dimensional therapeutic landscape, where leukemia specialists develop treatment strategies, which are expected to bring forth critical breakthroughs in the field of leukemia. .