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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Preface -- Introduction -- PART I. TRANSALATION MACHINERY IN CANCER -- Mechanism of Translation in Eukaryotes -- Diverse Mechanisms of Translation Regulation and Their Role in Cancer -- eIF4E and Its Binding Proteins -- RNA Helicases and Their Cofactors -- PDCD4 -- eIF4G -- eIF3 -- The eIF2 Complex and eIF2 -- eIF5A -- eIF6 -- Translation Elongation -- Ribosomes -- Current and Emerging Therapies Targeting Translation -- PART II. REGULATION OF TRANSLATION BY SIGNALING PATHWAYS IN CANCER -- mTOR and

Regulation of Translation -- Ribosomal Protein S6 and S6 Kinases -- eIF4E Phosphorylation Downstream of MAPK Pathway -- PART III. CELL FATE AND TRANSLATION IN CANCER -- Translational Control of Cell Proliferation and Viability in Normal and Neoplastic Cells -- Translation and Apoptosis in Cancer -- Translation in Cancer at Hypoxia -- PART IV. TRANSLATION AND ITS REGULATION BY CANCER TYPES -- Melanoma and Non-Melanoma Skin Cancers -- Sarcomas -- Hematological Malignancies and Premalignant Conditions -- Brain Tumors -- Head and Neck Cancers -- Breast Cancer -- Cancers of the Respiratory System -- Gastric and Esophageal Cancers -- Colorectal Cancers -- Hepatic, Pancreatic and Biliary Cancers -- Pancreatic Neuroendocrine Tumors -- Gynecologic Cancers -- Prostate Cancer -- Cancers of the Urinary System -- List of Abbreviations.

Sommario/riassunto

This book, for the first time, comprehensively assembles and analyzes a large body of information on the role of the fundamental mechanism of the protein biosynthesis pathway, translation, in cancer biology. It systematically explores the function of the translation machinery and its regulation, including cell signaling, in the development, maintenance and progression of human cancer. The work presented here unveils the tremendous potential and applications of this vast and exciting branch of genetic, biochemical and molecular science in cancer medicine and drug development. Chapters contributed by experts in the field take the reader on a journey that starts with a dissection of the translation machinery and its regulation in norm and cancer. Later chapters characterize etiological and pathogenetic roles that translation plays in specific cancer types. Various aspects of diagnostic, prognostic and therapeutic significance of the translation machinery and its control in cancer are discussed. Readers will discover the importance of the process of translation and its regulatory mechanisms in physiology and cancer biology. The chapters and the numerous illustrations included here were contributed by expert scientists and clinicians from renowned academic and clinical establishments in Canada, the United States of America, the United Kingdom, Italy, France, Belgium, Spain, Germany and Australia. The book conveys information and knowledge that may interest a broad range of students and scholars ranging from basic scientists to clinicians and drug developers seeking to better understand the protein synthesis and its aberrations in cancer biology and cancer medicine. .