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Nota di contenuto	Micro (Nano) Plastics and the Risk of Cancer Development; Calling for Attention to a Macro Issue -- Cancer: Insight and Strategies to Reduce the Burden -- The Molecular Biology of Cancer Disparities -- The Pattern of Epithelial Carcinogenesis -- Mitochondria as a Key Player In Cancer -- Mitochondrial Energy Metabolism in Carcinogenesis -- Exploring the Role of Mitochondrial DNA Mutations in Cancer Development and Diagnosis -- The Obesity Epidemic and Cancer Risk: Molecular Pathways, Risk Factors and Therapeutic Avenues -- CircRNAs: Orchestrating Obesity, Thermogenesis, and Obesity-associated Cancer Pathways -- Mutagenic Properties of Urban Road Dust. Different Approaches Using Bioindicators -- Relationship between Genotoxicity and Cancer -- Sour Consequences of Aberrant

Glycosylation in Cancer Development -- Melatonin and Cancer: New Insights -- Matrix Metalloproteinases as a Key Player in Cancer Progression -- Vascular Endothelium in Cancer -- Extracellular Vesicles: The Dynamic Structural and Functional Network in Aging-Related Diseases and Cancer -- Versatile Component of Extra-Cellular Matrix: Hyaluronan with Dual Application in Understanding Cancer Progression initiation and Cancer Inhibition -- Molecular Markers in Circulating Tumor Cells: Advancing Clinical Precision -- Cancer-Associated Programmed-Cell Death Mechanisms: Extended With Biochemical Markers and Experimental Approaches -- Clinical implications of Epithelial-to-Mesenchymal Transition (EMT) in cancer -- The Unfolded Protein Response Role in Cancer -- PRDM2 in Cancer: Deciphering the Molecular Orchestra of a Multifunctional Regulator -- Importance of Selected Antioxidants in Carcinogenesis and Cancer Therapy -- Decoding Metabolic Changes in Cancer Cells Resistant to Therapy -- A Glance at The Effects of Secondary Metabolites in Fighting Cancer.

Sommario/riassunto

The “Pathophysiology of Cancer: An Interdisciplinary Approach” is the twenty-two volume of the “Interdisciplinary Cancer Research” series and a comprehensive volume on the pathophysiology of cancer. The volume starts with a few chapters on the risk of cancer development and carcinogenesis, including mitochondrial energy metabolism in carcinogenesis and the role of mitochondrial DNA mutations in cancer development. The obesity epidemic and cancer risk, urban road dust, genotoxicity, aberrant glycosylation, melatonin, and matrix metalloproteinases as players in cancer development and progression are explained in other chapters. The subsequent chapters discuss vascular endothelium, extracellular vesicles and extracellular matrix, circulating tumor cells, cancer-associated programmed-cell death, and epithelial-to-mesenchymal transition in cancer. Importance of antioxidants, decoding metabolic changes and effects of secondary metabolites in cancer therapy are the subjects of the concluding chapters. This is the main concept of Cancer Immunology Project (CIP), which is a part of Universal Scientific Education and Research Network (USERN). This interdisciplinary book will be of special value for those who wish to have an update on the pathophysiology of cancer.