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Titolo	Pathophysiological Aspects of Proteases // edited by Sajal Chakraborti, Naranjan S. Dhalla
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Descrizione fisica	1 online resource (XV, 671 p. 88 illus., 71 illus. in color.)
Disciplina	612
Soggetti	Human physiology Molecular biology Pharmaceutical technology Cancer - Research Human Physiology Molecular Medicine Pharmaceutical Sciences/Technology Cancer Research
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Protease mediated viral infection -- Role of proteases in cancer pathology especially in breast cancer, as well as role of proteases as possible targets for drug development for cancer -- The multifunctional post-prolinedipeptidyl peptidase, DPP9, in EGF signaling, immunity and cancer biology -- Translating the knowledge of functional dynamics towards designing inhibitors of BACE1, a key aspartate protease in Alzheimer's disease -- Cysteine Dependent Aspartate Specific Proteases in Coronary Artery Disease -- Matrix metalloproteases: Potential role in Type 2 Diabetic Nephropathy -- Matrix-metalloproteinases in Breast Carcinoma, Immunohistology and Prognosis -- Matrix metalloproteinases in parasitic infections -- Role of proteases in cancer metastasis -- Proteolytic activation of kinase growth factors in the pathophysiology of cancer -- Involvement of m-Calpain in Colorectal Adenocarcinomas -- Proteases in Cancer: Potential Therapeutic Targets -- MMPs in Oral Squamous Cell Carcinoma -- Matrix metalloproteinase silencing: a therapeutic

approach to treat cardiovascular pathology -- Proteases and Breast cancer -- Matrix metalloproteinases (MMPs) in cancer initiation and progression -- Neutrophil Serine protease in health and disease -- Proteases in disease pathology -- PAR1 mediated apoptosis and tumor regression of breast cancer cells by V. cholerae hemagglutinin protease -- Protein-protease interactions : an overview of the process from an 'in silico' perspective -- The functional relevance of Deubiquitinases in life and disease -- Physiological and pathological functions of mitochondrial proteases -- Proteases of parasitic helminths: their metabolic role in establishment of infection in the host -- Cysteine proteases of parasitic helminths -- Targeting proteases in urine for bladder cancer diagnosis.

Sommario/riassunto

This book provides a comprehensive overview of the multifaceted field of protease in the cellular environment and focuses on the recently elucidated functions of complex proteolytic systems in physiology and pathophysiology. Given the breadth and depth of information covered in the respective contributions, the book will be immensely useful for researchers working to identify targets for drug development. Multidisciplinary in scope, the book bridges the gap between fundamental and translational research, with applications in the biomedical and pharmaceutical industry, making it a thought-provoking read for basic and applied scientists engaged in biomedical research. Proteases represent one of the largest and most diverse families of enzymes known, and we now know that they are involved in every aspect of a given organism's life functions. Under physiological conditions, proteases are regulated by their endogenous inhibitors. However, when the activity of proteases is not correctly regulated, disease processes such as tumour progression, vascular remodelling, atherosclerotic plaque progression, ulcer, rheumatoid arthritis, Alzheimer's disease and inflammation can result. Many infective microorganisms require proteases for replication or use them as virulence factors, which has facilitated the development of protease-targeted therapies for a variety of parasitic diseases.
