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Collana	Advances in Biochemistry in Health and Disease, , 2512-2150 ; ; 8
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part A: Proteases and Neural Disorders.- Role of Calpain in Immunobiology of Neurodegenerative Diseases.- Calpain Interactions with the Protein Phosphatase Calcineurin in Neurodegeneration. - Involvement of Caspases in Neurodegeneration and Stroke.- Matrix Metalloproteinases in Ischemia-Reperfusion Injury in Brain: Antioxidants as Rescuer.- The Role of Matrix Metalloproteinases in Neurovascular Injury.- The Role of Proteases in Embryonic Neural Crest Cells.- Part B: Proteases and Cancer -- Proteases and Cancer Development.- Matrix Metalloproteinase and its Inhibitors in Cancer Progression.- Ubiquitin-Proteasome System in the Hallmarks of Cancer. - Matrix Metalloproteinases in Cancer Metastasis: An unsolved Mystery. - A Disintegrin and Metalloprotease-12 as a New target for Cancer

Treatment -- Proteases and Their Role in Drug Development with an Emphasis in Cancer.- Part C: Proteases and Cardiovascular Defects.  
- Role of Matrix Metalloproteinases in Atherosclerosis.- The Importance of the Urokinase-type Plasminogen Activator (uPA) and its receptor (uPAR) for the Development and Progression of Atherosclerosis.- Matrix Metalloproteinases and Hypertension.  
- Regulation of Proteolysis in Vascular Remodeling.- Emerging Role of Genetic Variants of Matrix Metalloproteinases Genes in Left Ventricular Dysfunction.- Implications of Intracellular Proteolytic Activation of MMP-2 in the Heart.- Matrix Metalloprotease-2 in the Development and Progression of Cardiovascular Diseases.- Role of Protease Activation in Subcellular Remodeling and Heart Failure.- Proteases as Potential Targets in Left Ventricular Remodeling After Myocardial Infarction.- MMPs in Cardiovascular Diseases: Emerging Pharmacological Targets.- Proteases as Clinical Markers of Adverse Remodeling for Heart Failure in the Aging Population.

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Sommario/riassunto

It is now well known that proteases are found everywhere, in viruses and bacteria as well as in all human, animal and plant cells, and play a role in a variety of biological functions ranging from digestion, fertilization, development to senescence and death. Under physiological conditions the ability of proteases is regulated by endogenous inhibitors. However, when the activity of proteases is not regulated appropriately, disease processes can result, as seen in Alzheimer's disease, cancer metastasis and tumor progression, inflammation and atherosclerosis. Thus it is evident that there is an absolute need for a tighter control of proteolytic activities in different cells and tissues. Aimed at graduate students and researchers with an interest in cellular proteolytic events, Role of Proteases in Cellular Dysfunctions is the second book on Proteases in this series. The book consists of three parts in specified topics based on current literatures for a better understanding for the readers with respect to their subject-wise interests. The first section of this book covers a brief idea about the neuronal disorders and the involvement of proteases such as calpains, caspases and matrix metalloproteases (MMPs). The second section covers the deadly disease cancer and its relation to ubiquitin-proteosomal system, MMPs and serine proteases. The last section is about the role of proteases such as calpains, MMPs and serine protease as well as urokinase type plasminogen activator receptor (uPAR) in causing cardiovascular defects.

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