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Nota di contenuto	Past, present and future perspectives of renin angiotensin system -- Biochemical pathways of renin angiotensin system -- Structure-function relationships of angiotensin II receptors -- Signal transduction mechanism of angiotensin II -- Renin angiotensin system: Pathophysiology and clinical implications in cardiovascular disease COVID-19 infection -- Angiotensin II and the pathogenesis of hypertension -- Signaling transduction of angiotensin II in hypertension -- Role of angiotensin II type 1 receptors in vascular remodeling in hypertension -- Molecular and cellular mechanisms of renin-angiotensin system in hypertension -- Tissue renin-angiotensin system and risks in hypertension -- Oxidative stress and angiotensin II-induced hypertension -- Angiotensin II: inflammatory system disorder and hypertension -- Therapeutic approaches for angiotensin receptor blockers in hypertension -- Renin-angiotensin systems: A pivotal role in the development of atherosclerosis -- Angiotensin II induced intracellular signaling pathways in pathogenesis of atherosclerosis -- Cellular and molecular mechanisms of Ang II: Contribution to atherosclerotic plaque vulnerability -- Role of angiotensin II, nitric oxide and reactive oxygen species in atherosclerosis -- The renin-angiotensin system and inflammatory processes in atherosclerotic lesion formation -- Role of renin-angiotensin system in alterations in blood lipids and gene expression in

atherogenesis -- Effects of angiotensin-converting enzyme and receptors in atherosclerosis -- Effects of angiotensin II on cardiac arrhythmia and signal transduction -- Angiotensin II induced oxidative stress contribute to ventricular arrhythmias -- Modulation of renin angiotensin system: Beneficial effect on ventricular arrhythmias -- ACE inhibitor and ventricular arrhythmia in ischemic heart disease -- The renin-angiotensin system modulators and cardiac arrhythmias -- Angiotensin receptor blockers in the treatment of arrhythmias -- Angiotensin II induced cardiac hypertrophy and heart failure -- Renin-angiotensin system: Role in cardiac remodeling and subcellular defects in heart failure -- Renin-angiotensin system: Molecular and cellular mechanisms in heart failure -- Role of angiotensin II receptor mRNA expression in heart failure -- Renin angiotensin system: Mitochondrial dysfunction in the progression of heart failure -- Angiotensin II type 1 receptor: Genetic polymorphisms and heart failure -- Angiotensin converting enzyme 2 and angiotensin metabolism in heart failure -- Cellular and molecular mechanisms of renin-angiotensin system blockade in heart failure: An update -- Angiotensin II receptor antagonists: Modulation of the extracellular matrix regulatory system in heart failure.

Sommario/riassunto

This book on “Renin-Angiotensin System in Cardiovascular Disease” includes 25 chapters, which are organized in three sections, namely (i) modulatory aspects, (ii) pathophysiological aspects, and (iii) pharmacotherapeutic aspects. It includes an updated as well as comprehensive knowledge about molecular and cellular aspects for the role of the renin-angiotensin system (RAS) in the pathophysiology and therapy of cardiovascular diseases such as hypertension, atherosclerosis, ischemic heart disease, and heart failure. This book emphasizes the molecular and cellular mechanisms, signaling transduction pathways involved in the development of different cardiovascular diseases due to the prolonged activation of RAS. Furthermore, biochemical mechanisms are outlined for the inhibition of this system by the blockade of angiotensin converting enzyme as well as angiotensin II type 1 receptors in patients suffering from cardiovascular abnormalities. Since cardiovascular disease is the number one cause of death worldwide, leading to approximately 17.9 million deaths each year, there is a keen interest in understanding the pathogenesis and improving its therapy. In this regard, we can attest that this book provides ample information about essential components of RAS and their role in the development of cardiovascular disease. From the selection of recognized global experts in their area of investigation, this book can be seen to cover diverse cardiovascular aspects and molecular and cellular mechanisms of angiotensin II action for the development of different cardiovascular abnormalities. It is our contention that this book will be most suitable for promoting knowledge in the field of RAS biology and will be of great interest to health professionals involved in both experimental and clinical cardiology as well as academic investigators and cardiovascular scientists, graduate students, and fellows worldwide.
