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Nota di contenuto	Front Cover; Heart Physiology and Pathophysiology; Copyright Page; Contents; Contributors; Foreword; Preface; PART I: PUMPING ACTION AND ELECTRICAL ACTIVITY OF THE HEART; Chapter 1. Sequence of Cardiac Activation and Ventricular Mechanics; Chapter 2. Coronary Circulation and Hemodynamics; Chapter 3. Neurohumoral Control of Cardiac Function; Chapter 4. Control of Cardiac Output and its Alterations during Exercise and in Heart Failure; Chapter 5. Ultrastructure of Cardiac Muscle and Blood Vessels; Chapter 6. Excitability and Impulse Propagation Chapter 7. Electrocardiogram and Cardiac Excitation Chapter 8. Gap-Junction Channels and Healing-Over of Injury; PART II: CELLULAR ELECTROPHYSIOLOGY OF HEART AND VASCULAR SMOOTH MUSCLE; Chapter 9. Electrogenesis of the Resting Potential; Chapter 10. Cardiac Action Potentials; Chapter 11. Electrophysiology of Vascular Smooth Muscle; Chapter 12. Sodium Channels; Chapter 13. Voltage-Dependent Calcium Channels; Chapter 14. Voltage-Dependent K+ Channels; Chapter 15. Inwardly-Rectifying K+ Channels in the Heart; Chapter 16. Voltage and Calcium-Activated K+ Channels of Coronary Smooth Muscle

Chapter 17. Ion Channels in Vascular Smooth MuscleChapter 18. Cardiac Pacemaker Currents; Chapter 19. Chloride Channels in Heart; Chapter 20. Regulation of Cardiac Ion Channels by Phosphorylation, Ca<sup>2+</sup>, Cytoskeleton, and Stretch; PART III: PUMPS AND EXCHANGERS; Chapter 21. Cardiac Na<sup>+</sup>/K<sup>+</sup> Pump; Chapter 22. Cardiac Na<sup>+</sup> -Ca<sup>2+</sup> Exchanger: Pathophysiology and Pharmacology; Chapter 23. Na<sup>+</sup>/H<sup>+</sup> Exchanger and pH Regulation; Chapter 24. Transport in Nucleus; Chapter 25. Sarcoplasmic Reticulum Ca<sup>2+</sup> Transport; Chapter 26. Calcium Release from Cardiac Sarcoplasmic Reticulum; PART IV: VASCULAR ENDOTHELIUM Chapter 27. Function of Vascular EndotheliumChapter 28. Ion Channels in Vascular Endothelium; PART V: EXCITATION-CONTRACTION COUPLING AND PHARMACOMECHANICAL COUPLING; Chapter 29. Electromechanical and Pharmacomechanical Coupling in Vascular Smooth Muscle Cells; Chapter 30. Mechanisms Regulating Cardiac Myofilament Response to Calcium; Chapter 31. Vascular Smooth Muscle Contraction; PART VI: METABOLISM AND ENERGETICS; Chapter 32. Myocardial Energy Metabolism; Chapter 33. Metabolism and Energetics of Vascular Smooth Muscle; PART VII: SIGNALING SYSTEMS Chapter 34. Adrenergic Receptors in the Cardiovascular SystemChapter 35. Cardiac Action of Angiotensin II; Chapter 36. ATP and Adenosine Signal Transductions; Chapter 37. Kinase Signaling in the Cardiovascular System; Chapter 38. Calcium Signaling; Chapter 39. Diadenosine Polyphosphate Signaling in the Heart; PART VIII: DEVELOPMENTAL CHANGES AND AGING; Chapter 40. Cardiac Development and Regulation of Cardiac Transcription; Chapter 41. Developmental Changes of Ion Channels; Chapter 42. Aging of the Cardiovascular System; Chapter 43. Changes in Autonomic Responsiveness during Development PART IX: MECHANISM OF ACTION OF CARDIOACTIVE DRUGS

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Sommario/riassunto

Heart Physiology and Pathophysiology, 4E, provides the foundation for the scientific understanding of heart function and dysfunction, and bridges the gap between basic cardiovascular science and clinical cardiology. This comprehensive text covers all the important aspects of the heart and vascular system. The most important and relevant disorders are presented, with emphasis on the mechanisms involved. The first three editions of this book developed a reputation as the leading reference in cardiovascular science for researchers and academic cardiologists. This recent edition has bee

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