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Nota di contenuto	Preface -- Part I -- Evolution of voltage-gated sodium channels -- 1. Evolutionary History of Voltage-Gated Sodium Channels -- 2. Mining Protein Evolution for Insights into Mechanisms of Voltage-Dependent Sodium Channel Auxiliary Subunits. - Part II. The structural basis of sodium channel function -- 3. Structural and Functional Analysis of Sodium Channels Viewed from an Evolutionary Perspective -- 4. The Cardiac Sodium Channel and Its Protein Partners -- 5. : Posttranslational Modification of Sodium Channels -- 6. Sodium Channel Trafficking -- 7. pH Modulation of Voltage-Gated Sodium Channels -- 8. Regulation of Cardiac Voltage-Gated Sodium Channel by Kinases: Roles of Protein Kinases A and C -- Part III. Drugs and toxins interactions with sodium channels -- 9. Toxins That Affect Voltage-Gated Sodium Channels -- 10. Mechanisms of Drug Binding to Voltage-Gated Sodium Channels -- 11. Effects of Benzothiazolamines on Voltage-Gated Sodium Channels -- 12. Structural Models of Ligand-

Bound Sodium Channels -- 13. Selective Ligands and Drug Discovery Targeting the Voltage-Gated Sodium Channel Nav1.7 -- Part IV. Pathophysiology of sodium channels -- 14. Sodium Channelopathies of Skeletal Muscle -- 15. Cardiac Arrhythmias Related to Sodium Channel Dysfunction -- 16. Translational Model Systems for Complex Sodium Channel Pathophysiology in Pain -- 17. Gating Pore Currents in Sodium Channels -- 18. Calculating the Consequences of Left-Shifted Nav Channel Activity in Sick Excitable Cells -- 19. Voltage-Gated Sodium Channel b Subunits and Their Related Diseases. .

Sommario/riassunto

This book provides a timely state-of-the-art overview of voltage-gated sodium channels, their structure-function, their pharmacology and related diseases. Among the topics discussed are the structural basis of Na+ channel function, methodological advances in the study of Na+ channels, their pathophysiology and drugs and toxins interactions with these channels and their associated channelopathies.