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Nota di contenuto	Chapter 1. Allostery in Drug Development -- Chapter 2. Dynamic Protein Allosteric Regulation and Disease -- Chapter 3. Protein Allostery in Rational Drug Design -- Chapter 4. Progress in Allosteric Database -- Chapter 5. Correlation between Allosteric and Orthosteric Sites -- Chapter 6. Characteristics of Allosteric Proteins, Sites and Modulators -- Chapter 7. Advances in the Computational Identification of Allosteric Sites and Pathways in Proteins -- Chapter 8. Advances in NMR Methods to Identify Allosteric Sites and Allosteric Ligands -- Chapter 9. Interrogating Regulatory Mechanisms in Signal-ling Proteins by Allosteric Inhibitors and Activators: A Dynamic View through the Lens of Residue Interaction Network -- Chapter 10. GPCR Allosteric Modulator Discovery -- Chapter 11. Allosteric Small-Molecule Serine/Threonine Kinase Inhibitors -- Chapter 12. Allosteric regulation of protein kinases downstream of PI3-kinase signaling. Chapter 13. Allosteric Modulators of Protein-Protein Interactions (PPIs) -- Chapter

14. Allosteric Modulation of Intrinsically Disordered Proteins -- Chapter 15. Engineering Allostery into Proteins.

Sommario/riassunto

The book focuses on protein allostery in drug discovery. Allosteric regulation, the second secret of life, fine-tunes virtually most biological processes and controls physiological activities. Allostery can both cause human diseases and contribute to development of new therapeutics. Allosteric drugs exhibit unparalleled advantages compared to conventional orthosteric drugs, rendering the development of allosteric modulators as an appealing strategy to improve selectivity and pharmacodynamic properties in drug leads. The Series delineates the immense significance of protein allostery—as demonstrated by recent advances in the repertoires of the concept, its mechanistic mechanisms, and networks, characteristics of allosteric proteins, modulators, and sites, development of computational and experimental methods to predict allosteric sites, small-molecule allosteric modulators of protein kinases and G-protein coupled receptors, engineering allostery, and the underlying role of allostery in precise medicine. Comprehensive understanding of protein allostery is expected to guide the rational design of allosteric drugs for the treatment of human diseases. The book would be useful for scientists and students in the field of protein science and Pharmacology etc. .