

# PROTEIN KINASE INHIBITORS IN DRUG DISCOVERY

KEYKAVOUS PARANG AND GONGQIN SUN

*University of Rhode Island  
Kingston Rhode Island*

- 1 PHOSPHORYLATION IN SIGNAL TRANSDUCTION PATHWAYS
- 2 CLASSIFICATION OF PROTEIN KINASES
- 3 GENERAL MECHANISTIC FEATURES OF PROTEIN PHOSPHORYLATION BY PROTEIN KINASES
- 4 GENERAL STRUCTURAL FEATURES OF PROTEIN KINASES
- 5 ACTIVATION OF PROTEIN KINASES
- 6 PROTEIN KINASES IN HUMAN DISEASES
- 7 IMPORTANT PROTEIN KINASES AS THERAPEUTIC TARGETS  
Protein Tyrosine Kinases  
Serine/Threonine Kinases
- 8 PROTEIN KINASES AS TARGETS FOR INHIBITOR DESIGN  
General Overview of Protein Kinase Inhibitors (PKIs)  
Alternative Strategies in Designing Protein Kinase Inhibitors
- 9 SELECTED INHIBITORS OF PROTEIN KINASES ON MARKET OR IN CLINICAL TRIALS  
Receptor Tyrosine Kinase Inhibitors  
Nonreceptor Tyrosine Kinase Inhibitors  
Serine/Threonine Kinase Inhibitors
- 10 PROSPECTS AND FUTURE DIRECTIONS  
References

---

*Pharmaceutical Sciences Encyclopedia: Drug Discovery, Development, and Manufacturing*  
Edited by Shayne C. Gad  
Copyright © 2010 John Wiley & Sons, Inc.