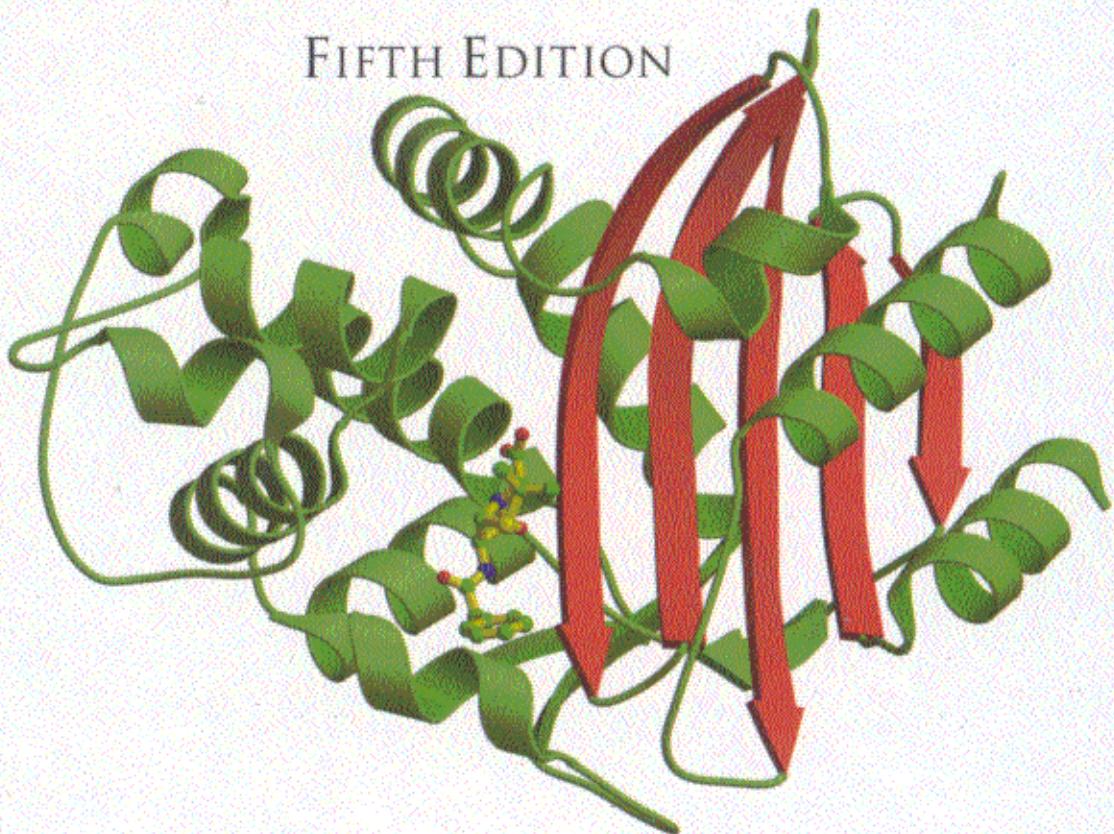


FOYE'S PRINCIPLES OF
Medicinal Chemistry

FIFTH EDITION



David A. Williams • Thomas L. Lemke



LIPPINCOTT WILLIAMS & WILKINS

Contents

Introduction	Origins of Medicinal Chemistry	1	12. Serotonin Receptors and Drugs Affecting Serotonergic Neurotransmission	315	
			RICHARD A. GLENNON AND MALGORZATA DUKAT		
Part I	Principles of Drug Discovery	11	13. Local Anesthetics	338	
			MATTHIAS C. LU		
Overview	Drug Design and Development: A Perspective	12	Section 2	Drugs Affecting Central Nervous System	357
		24	14. Volatile Anesthetics	357	
			TIMOTHY J. MAHER		
1.	Natural Products	37	15. Hypnotics	370	
	ALICE M. CLARK		WILLIAM SOINE		
2.	Drug Design and Relationship of Functional Groups to Pharmacologic Activity	68	16. Antiseizure Drugs	384	
	JAMES J. KNITTEL AND ROBIN M. ZAVOD		BARBARA W. LEDUC		
3.	Molecular Modeling and Drug Design	86	17. Psychotherapeutic Drugs: Antipsychotic and Anxiolytic Agents	408	
	ERIC BILLINGS		RAYMOND G. BOOTH AND JOHN L. NEUMAYER		
4.	Receptors and Drug Action	100	18. Hallucinogens, Stimulants, and Related Drugs of Abuse	434	
	TIMOTHY J. MAHER AND DAVID A. JOHNSON		RICHARD A. GLENNON		
5.	Drug Design Through Enzyme Inhibition	114	19. Opioid Analgesics	453	
	STEPHEN G. KERR		DAVID S. FRIES		
6.	Peptide and Protein Drugs	143	20. Drugs Used to Treat Neuromuscular Disorders: Antiparkinsonian and Spasmolytic Agents	480	
	MICHAEL MOKOTOFF		RAYMOND G. BOOTH AND JOHN L. NEUMAYER		
7.	Physicochemical and Biopharmaceutical Properties of Drug Substances and Pharmacokinetics	234	Section 3	Drugs Affecting the Cardiovascular System	497
	SUNIL JAMBHEKAR				
8.	Drug Metabolism	245	21. Cardiac Agents: Cardiac Glycosides, Antianginal, and Antiarrhythmic Drugs	497	
	DAVID A. WILLIAMS		AHMED S. MEHANNA		
9.	U.S. Drug Regulation: An Overview	246	22. Diuretics	518	
	DOUGLAS J. PISANO		GARY O. RANKIN		
Part II	Pharmacodynamic Agents	264	23. Angiotensin Converting Enzyme Inhibitors, Antagonists and Calcium Blockers	533	
			MARC W. HARROLD		
Overview	Drug Receptors: A Perspective	264	24. Central and Peripheral Sympatholytics and Vasodilators	562	
	DAVID J. TRIGGLE		DAVID A. WILLIAMS		
Section 1	Drugs Affecting Neurotransmission	292			
10.	Drugs Affecting Cholinergic Neurotransmission				
	DANNY L. LATTIN AND E. KIM FIFER				
11.	Drugs Affecting Adrenergic Neurotransmission				
	ROBERT GRIFFITH				

25. Antihyperlipoproteinemics and Inhibitors of Cholesterol Biosynthesis	580	<i>Section 6</i>	<i>Chemotherapeutic Agents</i>	819
MARC W. HARROLD		34.	Antibiotics and Antimicrobial Agents	819
26. Antithrombotics, Thrombolytics, Coagulants and Plasma Extenders	604	LESTER A. MITSCHER		
ROBERT B. PALMER, PH.D.		35.	Antiparasitic Agents	867
Section 4	Drugs Affecting the Hormonal Systems	629	THOMAS L. LEMKE	
27. Insulin and Oral Hypoglycemic Drugs	629	36.	Antifungal Drugs	891
ROBERT A. WILEY		ROBERT GRIFFITH AND TIMOTHY TRACY		
28. Adrenocorticoids	653	37.	Antimycobacterial Agents	904
DUANE D. MILLER, ROBERT W. BRUEGGEMEIER, AND JAMES T. DALTON		THOMAS L. LEMKE		
29. Estrogen, Progestins and Androgens	685	38.	Cancer and Cancer Chemotherapy	924
ROBERT W. BRUEGGEMEIER, DUANE D. MILLER, AND JAMES T. DALTON		PATRICK S. CALLERY AND PETER M. GANNETT		
30. Thyroid Function and Thyroid Drugs	718	39.	Antiviral Agents and Protease Inhibitors	952
ALI R. BANIJAMALI		MANOHAR L. SETHI		
31. Calcium Homeostasis	739	Part III	Recent Advances in Drug Discovery	981
ROBIN M. ZAVOD		40.	Pharmaceutical Biotechnology	982
Section 5	Drugs Affecting the Immune Systems	751	ROBERT D. SINDELAR	
32. Nonsteroidal Anti-Inflammatory Agents	751	41.	Gene Therapy	1016
RONALD F. BORNE		RONALD E. REID		
33. Antihistamines and Related Antiallergic and Antulcer Agents	794	42.	Antisense Therapeutic Agents	1052
WENDEL L. NELSON		MARILYN K. SPEEDIE		
		43.	Selective Estrogen Receptor Modulators	1059
		V. CRAIG JORDAN		
		Appendices	pKa Values for Some Drugs and Miscellaneous Organic Acids and Bases	
		pH Values for Tissue Fluids		1070
		DAVID A. WILLIAMS		