

Contents

<i>Preface to the Fourth Edition</i>	v
<i>Preface to the First Edition</i>	vii
Introduction to Medicinal Chemistry	1

SECTION I

Physicochemical Factors in Relation to Biological Activity of Drugs

1. Physicochemical Properties	11
2. Ferguson Principle	13
3. Hydrogen Bonding	16
4. Ionization and pK_a Value	20
5. Redox Potential	24
6. Surface Tension	27
7. Complexation	29
8. Solubility	32
9. Partition Coefficient	39
10. Steric Features of Drugs	43
11. Bioisosterism	51
12. Protein Binding of Drugs	55
13. Biotransformation or Metabolism of Drugs	60

SECTION II

Drug Design

14. Concepts of Drug Design	105
15. Receptors	111

16. Computer-aided Drug Design	116
17. Structure–Activity Relationship and Quantitative Structure–Activity Relationship	128
18. Combinatorial Chemistry	144
19. High-throughput Screening	152
20. Prodrugs	157
21. Antisense Technology	165

SECTION III

Drugs Acting on Central Nervous System

22. Central Nervous System	173
23. Sedatives and Hypnotics	175
24. General Anaesthetics	217
25. Local Anaesthetics	237
26. Tranquillizers	265
27. Antidepressants	295
28. CNS Stimulants	320
29. Narcotic Analgesics	337
30. Anticonvulsants	376
31. Antiparkinsonism Agents	411
32. Skeletal Muscle Relaxants	423
33. Alzheimer's Disease	437

SECTION IV

Drugs Acting on Autonomic Nervous System

34. Autonomic Nervous System	445
35. Adrenergic Drugs	450
36. Cholinergic Drugs	477
37. Adrenergic Blockers	499
38. Anticholinergic Drugs	524

SECTION V

Drugs Acting on Cardiovascular System

39. Cardiovascular System	553
40. Antihypertensive Drugs	555
41. Antiarrhythmic Drugs	588
42. Antihyperlipidaemic Agents	613
43. Antianginals	636
44. Drugs Used in Congestive Cardiac Failure (CCF) or Congestive Heart Failure (CHF)	663

SECTION VI

Drugs Acting on Urinary System

45. Urinary System	673
46. Diuretics	675
<i>Index</i>	715