## CONTENTS

<table>
<thead>
<tr>
<th>Contributors</th>
<th>vii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>xi</td>
</tr>
<tr>
<td>Introduction</td>
<td>xiii</td>
</tr>
</tbody>
</table>

### I. Mechanisms and Spectrum of Antibacterial Activity and Resistance

1. Structure-Activity Relationships of the Quinolone Antibacterials in the New Millennium: Some Things Change and Some Do Not  
   * John M. Domagala and Susan E. Hagen  
   * 3

2. Mechanisms of Quinolone Action  
   * Karl Drlica and David C. Hooper  
   * 19

3. Mechanisms of Quinolone Resistance  
   * David C. Hooper  
   * 41

4. Quinolones and Eukaryotic Topoisomerases  
   * Thomas D. Gootz and Neil Osheroff  
   * 69

5. Activity In Vitro of the Quinolones  
   * C. Thauvin-Eliopoulos and G. M. Eliopoulos  
   * 91

### II. Pharmacology

6. Pharmacokinetics of Fluoroquinolones  
   * Michael N. Dudley  
   * 115

7. Drug-Drug Interactions  
   * Roula Qaqish and Ronald E. Polk  
   * 133

8. Pharmacodynamics of Quinolone Antimicrobial Agents  
   * William A. Craig and David R. Andes  
   * 147

### III. Clinical Applications

9. Treatment of Urinary Tract Infections  
   * Kalpana Gupta, Kurt Naber, and Walter Stamm  
   * 159

10. Use of Quinolones for Treatment of Sexually Transmitted Diseases  
    * Rosanna W. Peeling and Allan R. Ronald  
    * 171

11. Treatment and Prophylaxis of Gastroenteritis  
    * Michael L. Bennish  
    * 193

12. Treatment of Intra-Abdominal Infections  
    * Joseph S. Solomkin  
    * 217

13. Treatment of Community-Acquired Respiratory Tract Infections  
    * Peter Ball and Lionel Mandell  
    * 227

14. Treatment of Infections of the Ears, Nose, and Throat and Nasal Carriage  
    * Jennifer Rubin Grandis and Victor L. Yu  
    * 245

15. Treatment of Osteomyelitis and Septic Arthritis  
    * Louis Bernard, Francis Waldvogel, and Daniel Lew  
    * 251

16. Treatment of Experimental and Human Bacterial Endocarditis with Quinolone Antimicrobial Agents  
    * Thuan P. Le, Michael R. Yeaman, and Arnold S. Bayer  
    * 259

17. Treatment of Bacterial Meningitis and Other Central Nervous Systems Infections  
    * Allan R. Tunkel and W. Michael Scheld  
    * 275
18. Treatment of Eye Infections • 291
   Michael H. Miller and Martin Mayers

19. Treatment of Skin and Soft Tissue Infections • 311
   Adolf W. Karchmer

20. Treatment of Intracellular Infections • 323
    Jean-Marc Rolain and Didier Raoult

21. Fluoroquinolones in Intensive Care Unit Infections • 337
    Ethan Rubinstein

22. Quinolones in Pediatrics • 343
    Faryal Ghaffar and George H. McCracken, Jr.

23. Quinolone Resistance and Its Clinical Relevance • 355
    Donald E. Low

24. Veterinary Use of Quinolones and Impact on Human Infections • 387
    Henrik C. Wegener and Jørgen Engberg

IV. Adverse and Other Effects

25. Adverse Effects • 407
    Hartmut Lode and Ethan Rubinstein

26. QT Prolongation with Quinolone Antimicrobial Agents • 421
    Yee Guan Yap and A. John Camm

27. Effects on Connective Tissue Structures • 441
    Ralf Stahlmann

28. Phototoxicity Due to Fluoroquinolones • 451
    James Ferguson

29. Central Nervous System Toxicity • 461
    S. Ragnar Norrby

30. Effects of Quinolones on the Immune System • 467
    Lowell S. Young

Index • 475