

# Contents

<b>Introduction to Antibiotic Resistance . . . . .</b>	<b>1</b>
Richard Bax and David Griffin	
<b>The Origins of Antibiotic Resistance . . . . .</b>	<b>13</b>
Gerard D. Wright	
<b>Surveillance Programmes and Antibiotic Resistance: Worldwide and Regional Monitoring of Antibiotic Resistance Trends . . . . .</b>	<b>31</b>
Stephen Hawser	
<b>Current and Future Challenges in the Development of Antimicrobial Agents . . . . .</b>	<b>45</b>
Robert P. Rennie	
<b>The Role of the Outer Membrane of Gram-negative Bacteria in Antibiotic Resistance: Ajax' Shield or Achilles' Heel? . . . . .</b>	<b>67</b>
Malcolm G.P. Page	
<b>Prevention of Drug Resistance by Combined Drug Treatment of Tuberculosis . . . . .</b>	<b>87</b>
Denis A. Mitchison	
<b>Nonmultiplying Bacteria are Profoundly Tolerant to Antibiotics . . . . .</b>	<b>99</b>
Yanmin Hu and Anthony Coates	
<b>Persister Cells: Molecular Mechanisms Related to Antibiotic Tolerance . . .</b>	<b>121</b>
Kim Lewis	
<b>Antimicrobial Textiles . . . . .</b>	<b>135</b>
J. Vaun McArthur, R.C. Tuckfield, and C. Baker-Austin	

**Efflux: How Bacteria Use Pumps to Control Their Microenvironment . . .** 153  
E. David G. McIntosh

**Antibiotics in Phase II and III Clinical Trials . . . . .** 167  
Anthony R.M. Coates and Gerry Halls

**Index . . . . .** 185