

BRIEF CONTENTS

<i>Boxed Material</i>	xiii
<i>Preface</i>	xv
<i>Symbols</i>	xvii
<i>Conversion Factors, Equations, and Units of Energy</i>	xix
<i>Definitions</i>	xxi
Chapter 1. Structure and Function	1
Chapter 2. Growth and Cell Division	55
Chapter 3. Chromosome Replication and Partitioning of Chromosomes	77
Chapter 4. Membrane Bioenergetics: The Proton Potential	111
Chapter 5. Electron Transport	146
Chapter 6. Photosynthesis	175
Chapter 7. The Regulation of Metabolic Pathways	199
Chapter 8. Bioenergetics in the Cytosol	207
Chapter 9. Central Metabolic Pathways	222
Chapter 10. Metabolism of Lipids, Nucleotides, Amino Acids, and Hydrocarbons	255
Chapter 11. RNA and Protein Synthesis	281
Chapter 12. Cell Wall and Capsule Biosynthesis	316
Chapter 13. Inorganic Metabolism	335
Chapter 14. C₁ Metabolism	358
Chapter 15. Fermentations	383
Chapter 16. Responses to Environmental Stress	403
Chapter 17. Solute Transport	432

Chapter 18. Protein Transport and Secretion	452
Chapter 19. Responses to Environmental Cues	482
Chapter 20. Chemotaxis, Photoresponses, Aerotaxis	534
Chapter 21. Microbial Biofilms—Structured Multicellular Assemblies	551
Chapter 22. Cell–Cell Communication Mechanisms	566
Chapter 23. Bacterial Development	587
<i>Index</i>	613