

Table of Contents

1. A Brief History of Microbiology Robert Bauman	1
2. The Chemistry of Microbiology Robert Bauman	27
3. Cell Structure and Function Robert Bauman	59
4. Microscopy, Staining, and Classification Robert Bauman	101
5. Microbial Metabolism Robert Bauman	133
6. Microbial Nutrition and Growth Robert Bauman	175
7. Microbial Genetics Robert Bauman	207
8. Recombinant DNA Technology Robert Bauman	253
9. Controlling Microbial Growth in the Environment Robert Bauman	277
10. Controlling Microbial Growth in the Body: Antimicrobial Drugs Robert Bauman	305
11. Characterizing and Classifying Prokaryotes Robert Bauman	339
12. Characterizing and Classifying Eukaryotes Robert Bauman	371
13. Characterizing and Classifying Viruses, Viroids, and Prions Robert Bauman	409

14. Infection, Infectious Diseases, and Epidemiology

Robert Bauman

439

15. Innate Immunity

Robert Bauman

475

16. Adaptive Immunity

Robert Bauman

503

17. Immunization and Immune Testing

Robert Bauman

537

18. Immune Disorders

Robert Bauman

561

19. Pathogenic Gram-Positive Bacteria

Robert Bauman

585

20. Pathogenic Gram-Negative Cocci and Bacilli

Robert Bauman

625

21. Rickettsias, Chlamydias, Spirochetes, and Vibrios

Robert Bauman

659

22. Pathogenic Fungi

Robert Bauman

687

23. Parasitic Protozoa, Helminths, and Arthropod Vectors

Robert Bauman

715

24. Pathogenic DNA Viruses

Robert Bauman

749

25. Pathogenic RNA Viruses

Robert Bauman

777

Appendix: Metabolic Pathways

Robert Bauman

821

Appendix: Some Mathematical Considerations in Microbiology

Robert Bauman

829

Index

831