

THE BACTERIOPHAGES

Foreword

Preface

Part I. General Background of Phage Biology

1. Phage and the Early Development of Molecular Biology

William C. Summers

2. Classification of Bacteriophages

Hans-W. Ackermann

3. Prophage Genomics

Harald Brüssow

4. Phage Evolution

Frank Desiere and Harald Brüssow

5. Phage Ecology

Stephen T. Abedon

Part II. Life of Phages

6. DNA Packaging in DS DNA Phages

Paul J. Jardine and Dwight L. Anderson

7. General Aspects of Lysogeny

Allan Campbell

8. Gene Regulatory Circuitry of Phage λ

John W. Little

9. Regulation of λ Gene Expression by Transcription Termination and Antitermination

David L. Friedman and Donald L. Court 21

10. Phage Lysis.

Ry Young and Ing-Nang Wang

Part III. Cubic and Filamentous Phages

11. ϕ X174 *et al.*, the *Microviridae*

Bentley A. Fane, Karie L. Brentlinger, April D. Burch, Min Chen, Susan Hafenstein, Erica Moore, and Christopher R. Novak

12. Filamentous Phage

Marjorie Russel and Peter Model

13. PRD1 – Dissecting the Genome, Structure and Entry

A. Marika Grahn, Sarah J. Butcher, Jaana K. H. Bamford and Dennis H. Bamford

14. Lipid-Containing Bacteriophage PM2, the Type-Organism of *Corticoviridae*

Dannis H. Bamford and Jaana K. H. Bamford

15. Single-Stranded RNA Phages

Jan Van Duin and Nina Tsareva

16. Phages With Segmented Double-Stranded RNA Genomes

Leonard Mindich

Part IV. Individual Tailed Phages

17. The T1-like Bacteriophages

Gregory T. German, Raseev Misra and Andrew M. Kropinski

18. T4 and Related Phages: Structure and Development

Gisela Mosig and Fred Eiserling

19. Bacteriophage T5

Jon R. Sayers

20. The T7 Group

Ian Molineux

21. Bacteriophage N4

Krystina M. Kazmierczak and Lucia B. Rothman-Denes

22. Phage ϕ 29 And Its Relatives

Margarita Salas

23. Bacteriophage SPP1

Juan C. Alonso, Paulo Tavares, Rudi Lurz and Thomas A. Trautner

24. Bacteriophage P1

Hansjörg Lehnerr

25. The P2-like Bacteriophages

Anders S. Nilsson and Elisabeth Haggård-Ljungquist

26. The Satellite Phage P4

Gianni Dehò and Daniela Ghisotti

27. Phage Lambda and its Genetic Neighborhood

Roger Hendrix and Sherwood Casjens

28. N15: The Linear Plasmid Prophage

Nikolai V. Ravin

29. Phage P22

Peter E. Prevelige, Jr.

30. The Bacteriophage Mu

Luciano Paolozzi and Patrizia Ghelardini

Part V. Phages by Host or Habitat

31. Viruses of *Archaea*

Kenneth M. Stedman, David Prangishvili and Wolfram Zillig

32. Phages of *Cyanobacteria*

Nicholas H. Mann

33. Marine Phages

Robert V. Miller

34. *Yersinia* Phages

Stefan Hertwig, Mikael Skurnik and Bernd Appel

35. Temperate Bacteriophages of *Bacillus subtilis*

Pamela S. Fink and Stanley A. Zahler

36. Phages of *Lactococcus lactis*

Lone Brøndsted and Karin Hammer

37. The *Listeria* Bacteriophages

Martin J. Loessner and Richard Calendar

38. Mycobacteriophages

Graham F. Hatfull

39. Molecular Genetics of *Streptomyces* Phages

Margaret C. M. Smith

40. Mycoplasma Phages

Jack Maniloff and Kevin Dybvig

41. *Lactobacillus* Phages

Harald Brüßow and Juan E. Suárez

Part VI. Applications

42. Control of Bacteriophage in Commercial Microbiology and Fermentation Facilities

Gregg Bogosian

43. Phage-Based Expression Systems

Noreen E. Murray

44. Phage in Display

Björn H. Lindqvist

45. Bacteriophage as Pollution Indicators

Charles P. Gerba

46. The Use of Phage as Diagnostic Systems

Cath Rees

47. Bacteriophages in Bacterial Pathogenesis

Patrick L. Wagner and Matthew K. Waldor

48. Phage Therapy

Carl R. Merrill, Dean Scholl and Sankar Adhya