

Contents

Preface.	vii

- 1 Towards a definition of a virus, 1
- 2 Some methods for studying animal viruses, 13
- 3 The structure of viruses, 25
- 4 Viral nucleic acids, 47

viruses, 94

10

- 5 The process of infection: I. Attachment of viruses and the entry of their genomes into the target cell, 63
- 6 The process of infection: IIA. The replication of viral DNA, 77
- 7 The process of infection: IIB. Genome RNA synthesis by RNA
- 8 The process of infection: IIC. The replication of RNA viruses with a
- DNA intermediate and vice versa, 106

 The process of infection: IIIA. Gene expression and its regulation in
- DNA viruses, 117

The process of infection: IIIB. Gene expression and its regulation in

- RNA viruses, 134
- 11 The process of infection: IV. The assembly of viruses, 155
- 12 Lytic and lysogenic replication of bacteriophage λ , 177
- 13 Interactions between animal viruses and cells, 186
- 14 The immune system, virus neutralization and interferon, 196
- 15 Animal virus-host interactions, 215
- 16 Vaccines and antivirals: the prevention and treatment of virus diseases, 244
- 17 Carcinogenesis and tumour viruses, 274

CONTENTS 18 The evolution of viruses. 293 HIV and AIDS, 312 Prion diseases, 339 Trends in virology, 351 The classification and nomenclature of viruses, 375

Index. 409