# VIRUSES, PLAGUES, AND HISTORY

Past, Present, and Future

SECOND EDITION

MICHAEL B. A. OLDSTONE



# CONTENTS

#### Part I Viruses, Plagues, and History

Chapter 1	A General Introduction   3
Chapter 2	Introduction to the Principles of Virology   11
Chapter 3	Introduction to the Principles of Immunology   23

## **Part II Success Stories**

Chapter 4	Smallpox: The Geopolitical Impact of Smallpox   37
Chapter 5	Yellow Fever   89
Chapter 6	Measles Virus   123
Chapter 7	Poliomyelitis   151
Chapter 8	Hepatitis Viruses: Oysters, Blood Transfusions, and Cancer   187

## Part III Present and Future Challenges

- Chapter 9 An Overview of Newly Emerging Viral Plagues: The Hemorrhagic Fevers and a Newly Mysterious Suspect of Viral Disease, Acute Flaccid Paralysis | 203
- Chapter 10 Lassa Fever | 215
- Chapter 11 Ebola | 223
- Chapter 12 Hantavirus | 241

Chapter 13	Severe Acute Respiratory Syndrome, the First Pandemic of the Twenty-First Century; Middle East Respiratory Syndrome; and the 2019-2020 Outbreak of 2019-nCoV   247
Chapter 14	West Nile Virus: Deaths of Crows and Humans   261
Chapter 15	Zika Comes to the Western Hemisphere and Americas: How, When, Consequences   281
Chapter 16	Human Immunodeficiency Virus: AIDS, the Current Plague   295
Chapter 17	Mad Cow Disease and Englishmen: Dementia of Humans—Prions: Folding Protein Transmissible Diseases   331
Chapter 18	Influenza Virus, the Plague That Will Continue to Return   355
Chapter 19	Apathy and Ignorance: False Prophets of Autism and the Anti-Vaccine Movement   389
Chapter 20	Conclusions and Future Predictions   399

References | 413 Index | 467