

THE REPLICATION OF NEGATIVE STRAND VIRUSES

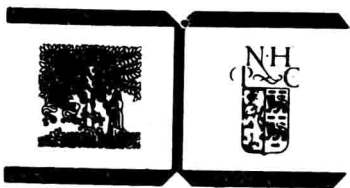
Proceedings of the 4th International Symposium on Negative Strand Viruses
held October 26–November 1, 1980 at Frenchman's Reef,
Saint Thomas, U.S. Virgin Islands

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DEVELOPMENTS IN CELL BIOLOGY

Volume 1—Development and Differentiation in the Cellular Slime Moulds,
P. Cappuccinelli and J.M. Ashworth (1977)

Volume 2—Biomathematics and Cell Kinetics, A.J. Valleron,
P.D.M. Macdonald (1978)

Volume 3—Developmental Biology of Acetabularia, S. Bonotto, V. Kefeli,
S. Puiseux-Dao (1979)

Volume 4—Physical and Chemical Aspects of Cell Surface Events in
Cellular Regulation, Charles DeLisi, Robert Blumenthal (1979)

Volume 5—Structure and Variation in Influenza Virus, Graeme Laver and
Gillian Air (1980)

Volume 6—Novel ADP-Ribosylations of Regulatory Enzymes and Proteins,
Mark E. Smulson, Takashi Sugimura (1980)

Volume 7—The Replication of Negative Strand Viruses, David H.L. Bishop
and Richard W. Compans (1981)

Preface

The Negative Strand Viruses are responsible for many important common, or exotic, human and animal diseases, for example, influenza, mumps, measles, rabies, Rift Valley fever, certain human encephalitis and hemorrhagic fevers. Three previous Symposia concerning Negative Strand Viruses, organized by Drs. R.D. Barry and B.W.J. Mahy, were held in Cambridge, England, in 1969, 1973, and 1977. The proceedings of those meetings were published in the following books: "The Biology of Large RNA Viruses" (R.D. Barry and B.W.J. Mahy, eds.), Academic Press, 1970; "Negative Strand Viruses" (B.W.J. Mahy and R.D. Barry, eds.), Academic Press, 1975; and "Negative Strand Viruses and the Host Cell" (B.W.J. Mahy and R.D. Barry, eds.), Academic Press, 1978.

Since 1977, our understanding of the molecular biology and genetics of this group of viruses has expanded enormously. The fourth Negative Strand Virus Symposium, held at Frenchman's Reef, St. Thomas, U.S. Virgin Islands, October 27–November 1, 1980, brought together virologists and molecular biologists to discuss the recent advances made with these viruses, and present their research data on the following topics: the composition and function of the viral structural components; virus gene cloning and sequence analyses; virus infection processes; the mechanisms of viral RNA transcription and replication; virus genetics; the nature of antigenic determinants (as studied through hybridoma analyses), and the mechanism of antigenic variation; virus pathogenic and transmission capabilities; the molecular basis of virus virulence; interferon; viral defective particles; and studies of persistent virus infections in cell culture and *in vivo*.

This book, entitled "The Replication of Negative Strand Viruses" represents the collection of some 115 papers presented at the fourth Negative Strand Virus Symposium. The papers have been grouped into sections dealing with the studies concerning the various negative stranded virus families (Arenaviridae, Bunyaviridae, Orthomyxoviridae, Paramyxoviridae, Rhabdoviridae, and the unclassified Marburg-Ebola viruses). Within each section, papers are organized in the order of those concerning virus structure, replication and assembly, genetics, defective viruses, antigenic analyses and antigenic variation, virus persistence, transmission and the pathogenesis of virus infections.

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Finally, we would like to personally thank Mrs. Denice Lee-Montgomery and Mrs. Betty Jeffrey, both of whom worked cheerfully, extraordinarily hard and unselfishly in organizing the Symposium.

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