

## Viral Molecular Machines [

Rossmann, Michael G, ed. lit Rao, Venigalla B, ed. lit

Springer New York, 2012

 Medical virology
 Microbiology
 Emerging infectious diseases

 Immunology
 Virology
 Microbiology
 Infectious Diseases

Monografía

A biological organism can be viewed as a collection of molecular machines well integrated to function as a self-replicating unit. One of the principal goals in biology is to be able to fully understand the mechanisms of an organism in atomic detail. Viruses offer the best opportunities to achieve this goal. Written by leaders in the respective fields, this book examines a variety of viral molecular machines, using the best examples from bacteriophages and animal viruses, many causing infectious diseases of public health importance. Beginning with the viral entry into a host cell, the book takes the reader through replication of the genome, assembly of structural components, genome packaging and maturation into an infectious virion. The book conveys the state of the art knowledge of the topic generated by combining X-ray crystallography, high resolution electron microscopy, molecular genetics, biochemistry, and single molecule biophysics. Viral Molecular Machines is not only a "must-have" book for virologists but it will also be broadly useful for molecular biologists in academia and industry as well as an educational tool for teaching graduate and upper level undergraduate students

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