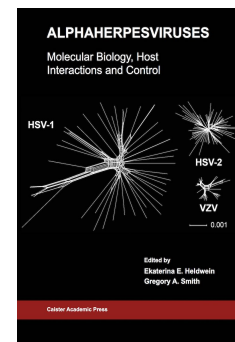


# Alphaherpesviruses

## Molecular Biology, Host Interactions and Control



**Edited by: Ekaterina E. Heldwein and Gregory A. Smith**

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Alphaherpesviruses encompass a broad group of pathogens including neuroinvasive viruses that establish lifelong infections in the peripheral nervous system of humans and many other vertebrates. One prominent example are herpes simplex viruses that infect most humans and can cause diseases ranging from painful skin ulcers to deadly encephalitis. For decades, researchers have been asking what makes these viruses neurotropic, how they establish a latent state, and why these typically benign infections can sometimes have severe or lethal outcomes.

Since the last edition of this volume in 2011, our understanding of the alphaherpesviruses has significantly advanced creating the need for this new book that distils the most important new information to provide a timely overview. Chapters are written by well-respected researchers, each offering their perspectives on the current state of the field, using herpes simplex virus as the main focus. Topics covered include: genomics; entry into the cell; genome delivery from the cell periphery to the nucleus; the fate of the genome in the nucleus; infection of neurons; establishment of latency; host cellular responses to infection; viral immune evasion strategies; capsid egress from the nucleus; virion assembly in the cytoplasm; vaccines; oncolytic vectors.

This book is essential reading for students, virologists, immunologists, medical and veterinary professionals and scientists working on neuroinvasive alphaherpesviruses. It is also a recommended reading for anyone with an interest in neurovirology and persistent viral infections.

**Chapter 1.** Alphaherpesvirus Genomics: Past, Present and Future (*Chad V. Kury and Moriah L. Szpara*)

**Chapter 2.** Entry of Alphaherpesviruses (*Tina M. Cairns and Sarah A. Connolly*)

**Chapter 3.** Navigating the Cytoplasm: Delivery of the Alphaherpesvirus Genome to the Nucleus (*Gregory A. Smith*)

**Chapter 4.** The Fate of Incoming HSV-1 Genomes Entering the Nucleus (*Oren Kobilier and Amichay Afriat*)

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