



viruses

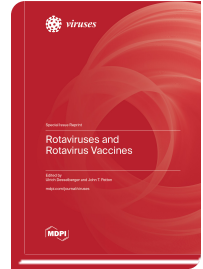


Special Issue Reprint

Rotaviruses and Rotavirus Vaccines

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Rotaviruses are a major cause of acute gastroenteritis in infants and young children and in the young of various mammalian and avian hosts. Although rotavirus-associated morbidity and mortality have significantly decreased since the introduction of rotavirus vaccines into childhood immunization programs, the efficacy of these vaccines is suboptimal in developing countries where they are needed most. Our insight into the molecular epidemiology of rotaviruses has benefited greatly from the application of advanced sequencing and bioinformatic techniques. Combined with the recent development of plasmid-only-based reverse genetics systems, powerful new approaches are now available for the study of all aspects of rotavirus biology, including their replication strategy, the structure and function of their proteins, and their ability to suppress immune responses. Moreover, these technologies provide a possible path for the development of new generations of more effective rotavirus vaccines. This Special Issue of *Viruses* reviews and explores recent progress made in the analysis of rotavirus replication, viral diversity, genotype–phenotype assignment, correlates of protection, biotechnology, and the development of alternative candidate vaccines.



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