Novel therapies and vaccines against the human respiratory syncytial virus

Cita

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Abstract

Human respiratory syncytial virus (hRSV) is the leading cause of acute lower respiratory tract infections worldwide in infants, as well as an important pathogen affecting the elderly and immunocompromised individuals. Despite more than a half a century of research, no licensed vaccines are available and only palivizumab has been approved to use in humans, mostly recommended or limited to high risk infants. Therefore, novel therapeutic and preventive drugs need to be developed to fight this major human pathogen.

Areas covered: This review discusses current therapeutic approaches in preclinical and clinical stages, aimed at controlling or preventing hRSV infection. These methods include passive immunization, experimental drugs, vaccine candidates and maternal immunization.

Expert opinion: Based on the results of various immunization strategies and therapeutic approaches, it is likely that the most effective strategy against hRSV will be a prophylactic tool aimed at developing a strong antiviral T-cell response capable of both, promoting the generation of hRSV-specific high affinity antibodies and leading the protective immunity required to prevent the disease caused by this virus. Alternatively, if prophylactic strategies fail, antiviral drugs and novel passive immunity strategies could significantly contribute to reducing hospitalization rates in susceptible individuals.