Novel vaccination approach against HSV type-1 and type-2 infections

Herpes simplex virus type 1 and type 2 (HSV-1 and HSV-2) infections would be controlled by the development of an e ective vaccine. However, in spite of several clinical trials, starting as early as 1920s, no vaccine has been proven su ciently safe and e cient to warrant commercial development. Recently, great advances in cellular and molecular immunology understanding have stimulated creative approaches in controlling herpes infections and diseases. Before moving towards nov vaccine strategy, it is required to answer the important questions: Why past herpes vaccines were unsuccessful? Why th majority of HSV seropositive individuals naturally control HSV infections and exhibit few or no recurrent herpetic disease, while few others have frequent herpes clinical episodes? We recently discovered that HSV-1 symptomatic and asymptomati individuals develop distinct immunity to viral epitopes recognized by CD4+ and CD8+ T cells. ese epitopes (protective vs. pathologic) have provided a solid foundation for the development of novel herpes epitope based vaccine strategy. In thi presentation, I will provide an overview of past clinical vaccine trials and outline current progress towards developing a new generation “asymptomatic” clinical herpes vaccines and discuss future mucosal “asymptomatic” prime boost vaccines that could optimize the protective immunity.

Biography

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