“The Ins And Outs Of Dengue Virus Neutralization”

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Abstract
The global spread of the dengue virus (DENV) has put 2.5 to 3 billion people at risk of potentially life-threatening infections annually. The presence of four closely related but antigenically distinct serotypes complicates vaccine development. Furthermore, the associated increased risk of severe dengue with waning levels of neutralizing maternal antibodies suggests that antibody concentration is an important determinant of immunity. While stoichiometric requirements for virus neutralization have been explored, antibodies also aggregate viruses and how these affect the fate of the virus in monocytes, are unknown. Using a mouse-human chimeric antibody, our laboratory has begun to explore the interaction between antibody, virus and Fc receptor expressing cells. Preliminary data demonstrating that in addition to stoichiometry, the formation of viral aggregates by antibody also affects the fate of the virus in monocytes, will be presented in this seminar. This work could provide new insights into humoral immunity against DENV.

Selected Publications


