

FLOW CYTOMETRIC ANALYSIS OF DENGUE VIRUS-INFECTED CELLS IN PERIPHERAL BLOOD

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Abstract. With the development of permeabilization techniques in flow cytometry and the availability of various monoclonal antibodies (MAbs) that specifically bind with cell surface and intracellular antigens, it is now possible to use flow cytometric assay to identify dengue virus (DEN) infected cells in peripheral blood. Blood samples were analyzed using phycoerythrin (PE) labeled anti-CD3, anti-CD14, anti-CD16, and anti-CD19 antibodies and Alexa Fluor[®] 488 labeled anti-flavivirus monoclonal antibody (MAb) 6B6C-1. The predominant DEN-infected cells were CD19⁺ in this study. There was dim partial to moderately bright partial expression of CD19 positive cells in the blood samples tested. Virus isolation and serotype-specific RT-PCR revealed the cells were infected with dengue serotype 3 (DEN3). Our results suggest B cells may play an important role in DEN1 and DEN3 replication, and dissemination *in vivo*.

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