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### **Development and application of pseudotyped retroviral vectors with influenza HA**

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The hemagglutinin (HA) envelope glycoprotein of influenza mediates virus infection through its attachment to sialic acid receptors on target cells and subsequent low pH-induced conformational changes that fuse the virus to cellular endosomal membranes. Current influenza vaccines elicit antibodies to HA that block virus attachment and fusion to target cells. Classical methods for measuring protective antibody responses are hemagglutination inhibition (HI) and virus microneutralization (VMN) by using live virus, which limits their application to high-level biocontainment facilities when highly pathogenic viruses are used. Retroviral reporter vectors with pseudotyped envelope proteins provide a powerful tool for measuring virus neutralization in the absence of replicating virus. In my presentation, the focus would be on the development of HA- pseudotyped retroviral vectors and its potential in neutralization and hemagglutination inhibition assays.

#### **Biography**

Dr. Wei Wang received his Ph.D. in 2000 from the University of Saskatchewan, Canada, and completed postdoctoral studies from National Cancer Institute. He joined US Food and Drug Administration in 2005. His research is on viral entry and viral vaccine development.