younger group, but were still somewhat lower compared to TIV.

Conclusion: These data suggest that FluBlok is as safe but less immunogenic than similar volumes of TIV, particularly in the youngest children. The immunogenicity data is the converse of what has been observed in adults. Further studies examining the immunogenicity of FluBlok in older children are warranted.

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A recombinant West Nile virus envelope protein vaccine candidate produced in Spodoptera frugiperda expresSF+ cells


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ABSTRACT
In this study, a recombinant truncated West Nile virus envelope protein antigen (rWNV-E) was produced in serum-free cultures of the expresSF+ insect cell line via baculovirus infection. This production system was selected based on its use in the production of candidate human and animal vaccine antigens. A defined fermentation and purification process for the rWNV-E antigen was established to control for purity and immunogenicity of each protein batch. The material formulated with aluminum hydroxide was stable for greater than 8 months at 4°C. The recombinant vaccine candidate was evaluated for immunogenicity and protective efficacy in several animal models. In mouse and hamster WNV challenge models, the vaccine candidate induced viral protection that correlated with anti-rWNV-E immunogenicity and WNV neutralizing antibody titers. The rWNV-E vaccine candidate was used to boost horses previously immunized with the Fort Dodge inactivated WNV vaccine and also to induce WNV neutralizing titers in naïve foals that were at least 14-weeks of age. Furthermore, the vaccine candidate was found safe when high doses were injected into rats, with no detectable treatment-related clinical adverse effects. These observations demonstrate that baculovirus-produced rWNV-E can be formulated with aluminum hydroxide to produce a stable and safe vaccine which induces humoral immunity that can protect against WNV infection.


Development of a novel recombinant influenza vaccine in insect cells

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ABSTRACT
Influenza is a highly contagious viral respiratory illness that is best prevented through vaccination. Currently, all U.S. licensed influenza vaccines are produced in embryonated chicken eggs. The Baculovirus Expression Vector System (BEVS) technology offers several advantages over existing technology, including an exact match between the circulating virus and the antigen in the vaccine, speed, safety, versatility, and reliable scale-up. The expresSF6 insect cells are grown in the absence of serum and have been extensively qualified for safety according to ICH and U.S. FDA guidance and for suitability for the production of recombinant proteins using BEVS. FluBlok, a recombinant hemagglutinin influenza vaccine, is composed of purified hemagglutinin protein produced using the BEVS technology. FluBlok has been shown to be safe, effective, and efficacious in human clinical studies.