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- (54) **INFLUENZA IMMUNOGEN AND VACCINE**
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- (52) **U.S. Cl.** 424/189.1; 424/184.1; 424/185.1; 424/186.1; 424/192.1
- (58) **Field of Classification Search** None
See application file for complete search history.

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(57) **ABSTRACT**

A chimeric, carboxy-terminal truncated hepatitis B virus nucleocapsid (HBc) protein is disclosed that contains an immunogen for inducing the production of antibodies to the influenza M2 protein. An immunogenic influenza sequence in two to four copies is preferably expressed at or near the N-terminus or in the HBc immunogenic loop sequence. The HBc chimeric preferably contains an influenza-specific T cell epitope and is preferably engineered for both enhanced stability of self-assembled particles and enhanced yield of those chimeric particles. Methods of making and using the chimers are also disclosed.

45 Claims, 15 Drawing Sheets