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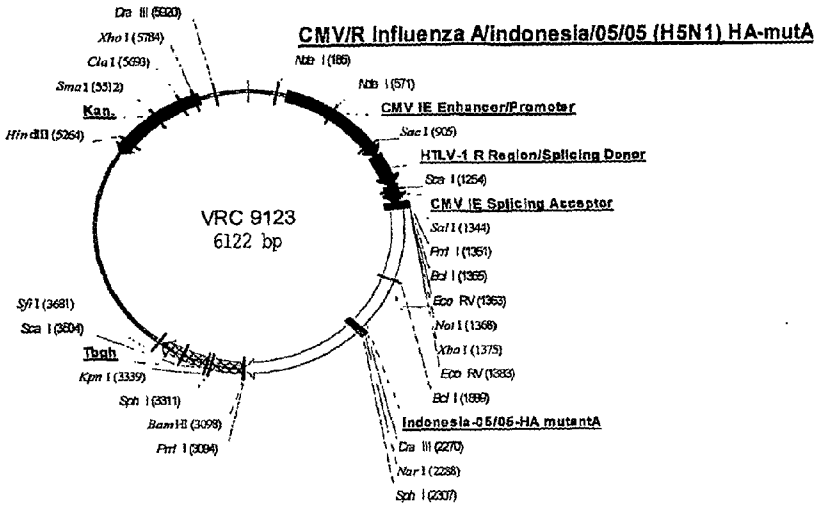
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(54) Title: ANTIVIRAL AGENTS AND VACCINES AGAINST INFLUENZA



(57) Abstract: These vaccines target H5N1, H1, H3 and other subtypes of influenza and are designed to elicit neutralizing antibodies, as well as cellular immunity. The DNA vaccines express hemagglutinin (HA) or nucleoprotein (NP) proteins from influenza which are codon optimized and/or contain modifications to protease cleavage sites of HA which affect the normal function of the protein. Adenoviral constructs expressing the same inserts have been engineered for prime boost strategies. Protein-based vaccines based on protein production from insect or mammalian cells using foldon trimerization stabilization domains with or without cleavage sites to assist in purification of such proteins have been developed. Another embodiment of this invention is the work with HA pseudotyped lentiviral vectors which would be used to screen for neutralizing antibodies in patients and to screen for diagnostic and therapeutic antivirals such as monoclonal antibodies.

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