

Pandemic influenza.

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Human pandemic influenza viruses are characterized by the presence of an antigenically novel viral hemagglutinin which allows viral replication even in the presence of pre-existing influenza virus immunity. Such hemagglutinins are derived from influenza virus strains that circulate in a non-human host animal. As viral strains adapted to non-human hosts are in general unable to transmit well in humans, pandemic influenza viruses require some levels of adaptation before being able to jump from one host to humans and initiate a pandemic. The novel pandemic H1N1 influenza virus, despite being genetically similar to other swine influenza virus, started the 2009 influenza human pandemic. We are investigating the genetic and molecular characteristics responsible for the success of the novel H1N1 virus in humans. Our results will be presented and discussed.