The genetic change that enables a flu strain to jump from one animal species to another, including humans, is called "ANTIGENIC SHIFT." Antigenic shift can happen in three ways: The new strain may further Without evolve to spread undergoing from person to genetic change, Bird influenza A strain person. If so, a a bird strain of flu pandemic influenza A can could arise. jump directly from a duck or other aquatic Bird host bird to humans. HAHuman Human influenza A strain antiger antigen host A duck or other aquatic bird passes a bird strain of influenza A to Without an intermediate host undergoing such as a chicken or pig. genetic change, a bird strain of influenza A can jump directly from a A person passes a duck or other human strain of antigen aquatic bird to influenza A to the an intermediate same chicken or pig. (Note that reassortments can animal host and occur in a person who is infected with two flu strains.) then to humans. When the viruses infect the same cell, the genes from the bird strain mix with genes from the human strain to yield a new strain. Viral entry intermediate host cell **A-4** The new strain can spread New influenza from the strain intermediate host to humans. Intermediate host cell Genetic mixing

Intermediate

host (pig)

Title: File:AntigenicShift HiRes vector.svg Author: Mouagip

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