Universal Influenza Vaccine

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Technology description

Investigators at St. Jude have developed a method for making a multi-valent influenza vaccine that provides protection against a wide range of influenza viruses within a particular subtype. Conventional influenza vaccines are trivalent and contain antigens from 1 virus of each currently circulating type (influenza B virus) and subtype (influenza A virus subtypes H3N2 and H1N1). This new method creates a universal vaccine by selecting multiple antigens from each type or subtype to represent the entire diversity of existing influenza viruses within that population.
Related Scientific References Huber VC, Thomas PG, McCullers JA. A multi-valent vaccine approach that elicits broad immunity within an influenza subtype. Vaccine 2009 Feb 18;27(8):1192-1200. Epub 2009 Jan 7.

Advantages

A universal vaccine provides several advantages compared to conventional influenza vaccines:
1) broader immunity against antigens from virus strains included in the vaccine,
2) broader cross-protective immunity against antigens from virus strains not included in the vaccine, and
3) the vaccination or vaccination series need only be given once or at much less frequent intervals than yearly.
In other words, a vaccine made using this method can be used to immunize individuals with a single series of vaccinations instead of with the repeated annual vaccinations needed throughout a person's lifetime with the conventional vaccine.

Institution

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