

Results from a novel flu vaccine



Influenza pandemics, such as the H1N1 (swine flu) outbreak in 2009, pose a serious risk to public health around the world. Vaccines offer protection against the disease, but current manufacturing methods cannot meet the demands, resulting in only a fraction of the global population getting vaccinated. Now, an international team of researchers has developed a process that does not grow the virus using the conventional hen's eggs but rather by expressing the main surface antigen of influenza within bacteria. To do this the researchers attached the antigen to harmless virus-like particles and then injected them into mice. Compared with the mice that were inoculated with licensed flu' vaccine, animals inoculated with the new vaccine produced a similar number of effective antibodies against the H1N1 virus. Demonstrating that this new production method provides immunity as effectively as the existing vaccine. In addition mice that were inoculated with the new vaccine produced more T cells than those inoculated with the licensed vaccine. This is an added benefit as the importance of T cells is that they help protect the body against influenza, reduce the severity of the disease, and provide protection against different strains of the virus. The authors thus conclude that

producing the influenza vaccine with this method could improve the global response to future pandemics by shortening the time between the emergence of a virus and production of a functional vaccine, thus enabling many more individuals to be vaccinated before they become infected.

[Skibinski, D. et al. 2013. Enhanced Neutralizing Antibody Titers and Th1 Polarization from a Novel Escherichia coli Derived Pandemic Influenza Vaccine. *PLOS*.](#)