Purdue researchers help to develop avian flu vaccine

By Craig Davison
Features Editor

A new vaccine developed by Purdue researchers and scientists at the Center for Disease Control and Prevention may be the next step in preventing an avian flu pandemic.

The vaccine has only been tested on mice, but it has been effective on several different strains of the flu. All the variations of the virus tested on the mice were taken from human infections in Hong Kong and Vietnam.

Suresh Mittal, professor of veterinary pathobiology and one of the researchers responsible for the vaccine, said the delivery system for the vaccine could speed up the time of production, making a vaccine available for the public in case of a pandemic.

"The delivery system is a virus, and commonly you call it the common cold virus, but actually it does not cause the common cold," said Mittal. The virus does not cause infection in people, and has been modified so it cannot grow in people.

A gene was added into the common cold virus, so that the virus could produce a protein found in bird flu. Mice injected with the virus had no antibodies for bird flu but were protected from its effects.

Because standard methods for creating a vaccine would involve first growing a virus strain in fertilized chicken eggs, the process takes at least six to nine months to create the vaccine.

Mittal said that in a pandemic, that much time cannot be wasted — the first six to nine months is when damage will be maximum.

"One of the important parts of our study is to provide evidence that can be able to get protection against the newer strain, and if we do, that will allow us a stockpiling option," he said.

Mary Hoelscher, a researcher at the Center for Disease Control in Atlanta, who collaborated with the project, agreed with Mittal's statement.

"If we have a pandemic and the vaccine is not dependent on eggs, we don't have to worry about creating the egg supply," she said.

Hoelscher predicted that if there is no rush, the vaccine could become available late next year. If there is a pandemic and a vaccine is needed immediately, she estimated that one could be ready by the end of the year.

The next step to make that happen is to study to see if the vaccine can work in humans. Mittal said he is also looking for a pharmaceutical partner who can produce the vaccine with the quality required to be used in people. They also need to obtain approval from the Food and Drug Administration.