



[Print](#) | [Close this window](#)

Trial by fire: New antibody method gets big test

Sat May 2, 2009 11:36am EDT

By [Julie Steenhuisen](#)

CHICAGO (Reuters) - Researchers in two U.S. laboratories are preparing for the arrival of blood samples from Mexican flu victims to make a serum that might offer some protection from a dangerous new flu virus.

"It's emergency science," Patrick Wilson, of the University of Chicago, said in a telephone interview.

Wilson and colleague Rafi Ahmed, a vaccine expert at Emory University in Atlanta, hope to develop a new way to quickly make targeted, infection-fighting proteins called monoclonal antibodies.

In a study last year in the journal *Nature*, Wilson and Ahmed showed that using just a few tablespoons of blood, they could make influenza antibodies in as little as a month.

They speculated these monoclonal antibodies -- specially engineered antibodies that attack a specific protein -- might prove useful in an influenza pandemic to help protect health workers until a vaccine could be made.

Last Sunday, researchers at the U.S. Centers for Disease Control and Prevention -- facing an outbreak of a strange new strain of the H1N1 flu virus -- asked the researchers to put their new technology to the test.

For the past week, the teams in Chicago and Atlanta have been stocking up on supplies and waiting for the CDC to send them vials of blood from Mexican patients infected with the new strain of the H1N1 virus, widely known as swine flu.

Officials say the virus has killed up to 101 people in Mexico, although almost all cases in other countries have been mild.

When the blood samples arrive, the teams will isolate a type of immune system cell known as antibody-secreting plasma cells, which produce a surge of antibodies as part of an initial response to infection.

Using these cells, the researchers will go to work making highly targeted antibodies against the new flu strain.

"Within a few weeks from the time we get the blood, we're likely to have something of value," said Wilson, adding that the antibodies would be sent to the CDC for tests to see if they block the virus from infecting cells grown in the lab.

Wilson said the CDC first plans to use the antibodies to make rapid diagnostic test kits that quickly identify the new virus without the need for sophisticated lab equipment to match its genetic sequence.

Later, they hope to make antibodies that can be injected into people who have been exposed to the virus.

"If they find some of these antibodies that are really good at neutralizing this flu, the potential is there to use it as a therapy," Wilson said.

He said antibody therapy would offer only temporary immunity, but it could be available much more quickly than a vaccine, which is expected to take four to six months.

(Editing by Vicki Allen)

© Thomson Reuters 2009. All rights reserved. Users may download and print extracts of content from this website for their own personal and non-commercial use only. Reproduction or redistribution of Thomson Reuters content, including by framing or similar means, is expressly prohibited without the prior written consent of Thomson Reuters. Thomson Reuters and its logo are registered trademarks or trademarks of the Thomson Reuters group of companies around the world.

Thomson Reuters journalists are subject to an Editorial Handbook which requires fair presentation and disclosure of relevant interests.