

Researchers monitor for next novel influenza strain

March 4 2015, by Lindsey Elliott

As seasonal influenza cases decrease across the United States, Kansas State University researchers are preparing for the next potential virulent strain of flu.

The work is starting with swine in the field. Juergen Richt, Regents distinguished professor of veterinary medicine and director of the U.S. Department of Homeland Security's Center of Excellence for Emerging and Zoonotic Animal Diseases, and Wenjun Ma, assistant professor of diagnostic medicine and pathobiology, are surveying for [swine influenza](#) viruses as part of a \$1 million grant from the National Institutes of Health.

"Swine [influenza](#) are constantly changing," Richt said. "There's a constant mutational rate, and sometimes they're changing very rapidly using a mechanism called reassortment—gene segments from one [influenza virus](#) are mixed with gene segments from a different influenza virus. We are very concerned about these genes coming together to create new surface proteins that have not been seen in the human population."

The researchers are collecting samples from diseased pig populations recorded by the Kansas State Veterinary Diagnostic Laboratory and the Abilene Animal Hospital. These samples are analyzed to determine if the swine influenza could be a danger to humans.

"Swine [influenza viruses](#) infect swine and cause a respiratory disease in

pigs, but they sometimes have the ability to transmit from pigs to humans," Richt said. "We hope that we are early enough in discovering these novel swine influenza viruses so that we can isolate and characterize these viruses and alert the respective authorities to control and eradicate them as soon as possible."

The Kansas State University research team has been working on this project for six years. It previously discovered a novel influenza subtype in swine from Missouri. Richt says this novel H2N3 virus was created through a reassortment from a duck influenza virus and an endemic swine influenza virus, which could have been very dangerous to human health. As the team monitored the influenza, the virus died out before it could spread.

"I think it is very important work because influenza is a threat to public health and animal health. We are providing very important information for the industry and for public health," Ma said.

Provided by Kansas State University

Citation: Researchers monitor for next novel influenza strain (2015, March 4) retrieved 28 April 2024 from <https://medicalxpress.com/news/2015-03-influenza-strain.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.