

7 July 2009

This supplement has been prepared to present scientific and technical news items that may be of more interest to technical personnel at RDT&E activities and the labs, or the medics rather than the broader readership of the basic CB Daily. Due to the nature of the material, the articles, if available online, are usually only available through subscription services thus making specific links generally unavailable. Thus, usually only the bibliographic citation is available for use by an activity's technical library.

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Chem-Bio News – Pandemic Influenza Edition #68

1. MIT, CDC FIND H1N1 FLU VIRUS ILL-SUITED FOR RAPID TRANSMISSION: *"The H1N1 strain, which circled the globe this spring, has a form of surface protein that binds inefficiently to receptors found in the human respiratory tract, the team reports in the July 2 online edition of Science."*

2. ACEP UNVEILS PLAN TO MANAGE FALL PANDEMIC WAVE: *"The American College of Emergency Physicians (ACEP) recently released a plan to help emergency departments, first responders, and public health departments manage a surge in pandemic flu cases that many experts predict will happen this fall."*

3. [AUSTRALIA] SWINE FLU IS THIS YEAR'S DOMINANT INFLUENZA: *"Swine flu has become Australia's dominant influenza strain, with experts predicting that as many as four out of five flu sufferers will have the H1N1 virus."*

4. EUROPEAN INFLUENZA SURVEILLANCE NETWORK (EISN): *The provided link leads to their weekly influenza activity surveillance report.*

5. CANADA-U.S. MAY GO DIFFERENT ROUTES ON PANDEMIC VACCINE PRODUCTION: *"Canada and the United States may go separate ways when deciding whether powerful boosting compounds called adjuvants should be added to swine flu vaccines, experts suggest."*

CB Daily Report

Chem-Bio News

MIT, CDC FIND H1N1 FLU VIRUS ILL-SUITED FOR RAPID TRANSMISSION

Infection Control Today Magazine

July 06, 2009

"A team from MIT and the Centers for Disease Control and Prevention (CDC) has found a genetic explanation for why the new H1N1 "swine flu" virus has spread from person to person less effectively than other flu viruses.

The H1N1 strain, which circled the globe this spring, has a form of surface protein that binds inefficiently to receptors found in the human respiratory tract, the team reports in the July 2 online edition of Science.

"While the virus is able to bind human receptors, it clearly appears to be restricted," says Ram Sasisekharan, the Edward Hood Taplin Professor and director of the Harvard-MIT Division of Health Sciences and Technology (HST) and the lead MIT author of the paper. Sasisekharan and his laboratory co-workers have been actively investigating influenza viruses.

That restricted, or weak, binding, along with a genetic variation in an H1N1 polymerase enzyme, which MIT researchers first reported three weeks ago in Nature Biotechnology, explains why the virus has not spread as efficiently as seasonal flu, says Sasisekharan. However, flu viruses are known to mutate rapidly, so there is cause for concern if H1N1 undergoes mutations that improve its binding affinity.”

The full article can be found at: <http://www.infectioncontrolday.com/hotnews/transmission-of-h1n1-flu-virus.html>

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ACEP UNVEILS PLAN TO MANAGE FALL PANDEMIC WAVE

By Lisa Schnirring

CIDRAP News (Center for Infectious Disease Research & Policy – University of Minnesota)

July 06, 2009

“The American College of Emergency Physicians (ACEP) recently released a plan to help emergency departments, first responders, and public health departments manage a surge in pandemic flu cases that many experts predict will happen this fall.

The 16-page plan was produced under a contract with the US Department of Health and Human Services (HHS) office of the Assistant Secretary for Preparedness and Response (ASPR) and its Emergency Care Coordination Center, ACEP said today in a press release. The document defines critical capabilities and suggests ways to achieve them, ACEP said.”

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“The main components of the plan, based on the federal template for managing biological threats, include situational awareness, protecting emergency department infrastructure and personnel, preventing service disruptions, organizing a timely surge response, and recovering to the previous status. Communications with local and state public health officials are crucial, and it's important to have agreements in place for the "triggers" authorities will use to "stand down" the pandemic plan, according to the document.

One of ACEP's key planning assumptions is that large volumes of vaccine against the novel H1N1 virus probably won't be available until mid October at the earliest and that the public won't be protected from infections until 2 weeks after a second injection.

As a result, if the second pandemic wave begins September, health officials may depend heavily on community mitigation strategies to slow the spread of the virus. Emergency departments will still face a surge of patients, but interventions such as school closures will likely strain the department workforces even further, the ACEP plan warns.”

The full article can be found at:

<http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/jul0609emergency.html>

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[AUSTRALIA] SWINE FLU IS THIS YEAR'S DOMINANT INFLUENZA

By Lauren Wilson

The Australian

July 03, 2009

“SWINE flu has become Australia's dominant influenza strain, with experts predicting that as many as four out of five flu sufferers will have the H1N1 virus.

Testing results for swine flu in Victoria have revealed that the H1N1 virus has dramatically overtaken

existing strains of seasonal influenza to become the dominant species of winter flu.

The World Health Organisation's Ian Barr, who is deputy director of the Collaborating Centre for Reference and Research on Influenza, said that in the latest sentinel test results, carried out by GPs across Victoria, as many as 99 per cent of people with influenza had tested positive to the swine flu virus.

Dr Barr said these results were high and while there is a variation in results from state to state, "the approximate figure would be closer to 50 to 80 per cent of people overall".

Dr Barr said more people appeared to be contracting swine flu than other influenza strands, but he said this might not be a trend in winters to come.

"It may peter out towards winter's end, or there is a possibility that, like previous influenzas, it may wipe out other flu species," he said."

The full article can be found at: <http://www.theaustralian.news.com.au/story/0,25197,25725808-5013871,00.html>

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EUROPEAN INFLUENZA SURVEILLANCE NETWORK (EISN)

July 28, 2009

The provided link leads to their weekly influenza activity surveillance report.

The full report can be found at:

http://ecdc.europa.eu/en/Activities/Surveillance/EISN/Newsletter/SUN_EISN_INFL_Bulletin_2009week26.pdf

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CANADA-U.S. MAY GO DIFFERENT ROUTES ON PANDEMIC VACCINE PRODUCTION

By Helen Branswell

Google News

July 01, 2009

"Canada and the United States may go separate ways when deciding whether powerful boosting compounds called adjuvants should be added to swine flu vaccines, experts suggest.

Canada will likely use adjuvanted swine flu vaccine, says Dr. David Butler-Jones, head of the Public Health Agency of Canada.

But it is not a slam-dunk that regulatory authorities south of the border will clear adjuvanted flu vaccines for a U.S. mass vaccination campaign - if one takes place - this fall, some American experts say.

"The risk-benefit of using an adjuvant in a population in which you don't have a lot of data, i.e. younger people . . . has to be balanced against ... what's going on," says Dr. Anthony Fauci, head of the U.S. National Institute of Allergy and Infectious Diseases."

The full article can be found at: http://www.google.com/hostednews/canadianpress/article/ALeqM5iH-wG-zD8Yn_Wxpav5Mn4ssTx5dw

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Steve Tesko: Steve.Tesko@anser.org

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