

DOE – Medical and Infectious Disease Update – Wednesday, April 21, 2004

DOE weekly updates on Bird Flu, Human Influenza, West Nile Virus, or other illnesses and medical issues will continue as appropriate or as requested. The following information is current as of Thursday, April 22, 2004, 0700 hours, EST. Information presented is routinely taken from the Centers for Disease Control and Prevention (CDC), <http://www.cdc.gov/>, The World Health Organization (WHO), <http://www.who.int/en/>, the Department of Defense Global Emerging Infections Surveillance and Response System site, (DoD-GEIS) - <http://www.geis.ha.osd.mil/>, and other creditable sources.

Recent News

ALLERGY-The Accuweather page provides current air quality information with specific charts for **Grass Pollen**, **Overall Pollen**, **Ragweed Pollen**, and **Tree Pollen** ...
http://www.accuweather.com/adcbn/public/maps_index.asp?type=airq.

Australian scientists find quicker way to heal wounds – 20 April 2004, CANBERRA, (Xinhuanet) -- Australian scientists have been able to make flesh wounds heal faster by using a newly-created speedy cell-growth mixture. The mixture, called VitroGro, uses a "sticky" blood protein called vitranectin and a human growth hormone known as type one insulin-like growth factor (IGF-1), the Australian Associated Press reported Tuesday. "We've found skin cells in particular respond really, really well to these complexes," Zee Upton, the tissue bioregeneration program leader at Queensland University of Technology, was quoted as saying. "They grow faster and they move faster and in particular they migrate -- if you've got a wound on your skin the thing you want the cells to do around the edges of the wound is to migrate over it and close the gap." The team is working with the Australian Red Cross to grow cells for spray-on skin to treat burns patients ...
http://news.xinhuanet.com/english/2004-04/20/content_1430008.htm.

Tea Slows Prostate Cancer - 20April2004, By *Jeanie Lerche Davis*, WebMD --Green tea, black tea, seems it doesn't matter. Drinking tea may slow prostate cancer growth, a new study shows. Recent studies show that tea drinking can help cholesterol levels and reduce cell damage caused by smoking, possibly preventing cancer and heart disease. The newest findings on prostate cancer were presented at the annual Experimental Biology 2004 meeting held this week in Washington. For their study, researchers recruited 20 men being treated for prostate cancer. They were randomly assigned to drink five cups of green tea, black tea, or soda each day before surgery to remove the tumor and prostate. Their blood was analyzed before the study for levels of phenols -- an antioxidant that may have antitumor effects. After their surgery, the men's blood was analyzed again -- as was their prostate tissue. While phenols were also found in the men's blood samples, there were no significant differences between the groups, reports researcher Susanne Henning, PhD, with the Center for Human Nutrition at UCLA. **However, the men's prostate tissue samples revealed a different story:**

- Those drinking the most tea had the most tea phenols in their prostate tissue samples.
- They also had lower levels of polyamines, a chemical associated with malignancy (cancer cells) ... <http://dailynews.att.net/cgi-bin/health?e=pub&dt=040420&cat=diet&st=diet98808&src=webmd>.

Another West Nile Virus Summer? – 15April2004, By *Daniel DeNoon*, WebMD -- It's back -- and it can be very bad. But just how bad will the 2004 return of West Nile virus be? In 2002, West Nile virus caused the largest encephalitis epidemic in history. Last years' epidemic was arguably twice as large -- possibly because new tests made it possible to diagnose mild cases of West Nile fever ... For reasons nobody can entirely explain, there tends to be a lot more West Nile disease when

the virus finds its feet in a new area -- usually the second year after it first appears. It never, ever, goes away. But the number of cases tends to drop off. New York, for example, was where West Nile virus first landed in the U.S. But last year, that state reported only 71 human infections. Colorado, on the other hand, zoomed from 14 cases in 2002 to 2,326 cases in 2003. "Nobody really understands the flattening out. We've seen it with St. Louis encephalitis virus in years before," Campbell says. "Part of it is bird immunity." **{If you want a good understanding of West Nile, this is a great article with which to start - Editor}** ... <http://dailynews.att.net/cgi-bin/health?e=pub&dt=040415&cat=men&st=men98709&src=webmd>.

Researchers Go Fishing, Pull Out Antigens - 15April2004, ScienceDaily -- Researchers at **National Jewish Medical and Research Center** have developed a method for finding the molecular targets of the immune system, known as antigens. The method extends a widely used technique, called library display, to more complex proteins. It could have broad applications in biological and medical research. The research team, led by National Jewish and Howard Hughes Medical Institute immunologist John W. Kappler, Ph.D., is already collaborating with teams looking for causes of the autoimmune disease rheumatoid arthritis, developing cancer vaccines, **and understanding the molecular triggers of chronic beryllium disease**. The technique is described in the April 2004 issue of PLoS Biology (<http://www.plosbiology.org/plosonline/?request=get-document&doi=10.1371%2Fjournal.pbio.0020090>), a publication of the Public Library of Science. "Our technique allows us to fish in a vast library of protein fragments for the specific ones that bind to T cells and trigger an immune-system attack," said Dr. Kappler. "We believe that researchers using this technique will extend its usefulness beyond T-cells and antigens to interactions involving a wide variety of biologically important proteins." ... <http://www.sciencedaily.com/releases/2004/04/040414004312.htm>.

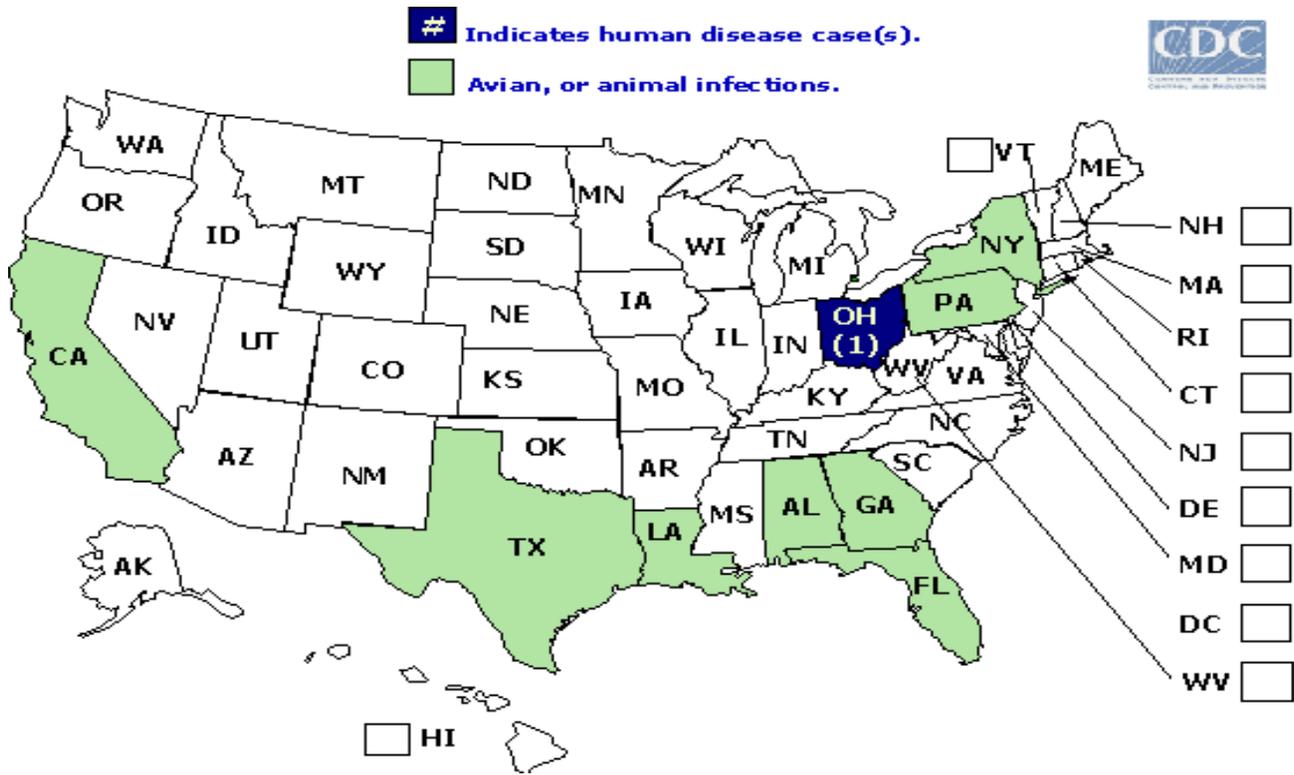
A New Hypothesis About Autoimmunity. Is It Possible To Be Too Clean? - 12April2004, La Jolla, CA. - A group of scientists at The Scripps Research Institute have found a connection between poor T cell survival in the body and the development of autoimmunity. On the basis of this connection, the scientists are proposing a new hypothesis about the cause of autoimmunity, in which components of a person's immune system attack his/her own tissues leading to diseases such as Type 1 diabetes and rheumatoid arthritis. "Autoimmunity has [traditionally] been considered a condition of too much stimulation," says Scripps Research Immunology Professor Nora Sarvetnick, Ph.D. "What we are seeing is that it is a condition of too little stimulation." ... <http://www.sciencedaily.com/releases/2004/04/040416014249.htm>.

Bird Flu 2003-2004: Doe Special Medical Update – With information from WHO and the CDC, this update also explains the concepts of viral infection, viral replication, antigenic “drift”, and antigenic “shift” ... http://www.eh.doe.gov/health/news/BIRDFLU2003-2004_DOESPECIALUPDATE_B200402091.pdf (PDF) or for a choice of PDF or Word format, <http://www.eh.doe.gov/health/index.html>, and scroll down under "News and Features".

WHO: Avian influenza-fact sheet – 5January2004-Avian influenza (“bird flu”) and the significance of its transmission to humans ... http://www.who.int/csr/don/2004_01_15/en/.

2004 West Nile Virus Activity in the United States, reported to CDC. Maps reporting WNV avian and veterinary activity occurring during 2004 are updated regularly. Human disease cases have been reported in Ohio.

2004 West Nile Virus Activity in the United States, reported to CDC as of April 14, 2004. *



<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

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