

DOE – Medical and Infectious Disease Update – Wednesday, April 07, 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 8, 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.

Jefferson Scientists Use Gene Therapy To Restore Function Of Damaged Heart Cells In Lab – 6April2004, *ScienceDaily* --Researchers at Jefferson Medical College and Duke University have used gene therapy to help damaged heart cells regain strength and beat normally again in the laboratory. The work takes the scientists one step closer to eventual clinical trials in humans. Walter Koch, Ph.D., director of the Center for Translational Medicine of the Department of Medicine at Jefferson Medical College of Thomas Jefferson University in Philadelphia, and his colleagues at Duke used a virus to carry a gene into the heart cells of individuals who had suffered from congestive heart failure. The gene introduced into these heart cells blocks the activity of an enzyme that is increased in failing human hearts and which contributes to the loss of the heart's contractile strength during the development of heart failure. When the activity of this enzyme is blocked by the gene therapy, the heart cells were able to contract at normal strength and their overall performance was improved ... <http://www.sciencedaily.com/releases/2004/04/040406085923.htm>.

Allergy Sufferers, Listen Up – 5April2004, *By Jeanie Lerche Davis, WebMD* -- Allergies can wreak havoc on the best of us. Grass and tree pollen irritate some 36 million people every year. Dust mites and pet dander plague us, too. Want to make your home an itch- and sneeze-free zone? The experts offer their insights. During the tree pollen season, "there will be a sequence of little 'mini seasons' throughout the spring, as various trees pollinate," reports Jay Portnoy, MD, chief of allergy, asthma & immunology at Children's Mercy Hospital in Kansas City, Mo. Spring rains may wash pollen from the air, but it's temporary relief, Portnoy tells WebMD. "Pollen counts actually spike prior to thunderstorms." Indeed, allergy-proofing your home -- getting rid of outdoor and indoor allergens -- isn't easy, but it's well worth the effort ... <http://dailynews.att.net/cgi-bin/health?e=pub&dt=040405&cat=women&st=women72158&src=webmd>.

Low Vitamin B12 Is Associated With Poorer Memory In Older People With High Risk For Alzheimer's – 4April2004, *ScienceDaily*
WASHINGTON --Among healthy people over the age of 75 who have the genotype associated with higher risk for Alzheimer's, low levels of vitamin B12 are associated with significantly worse performance on memory tests. This finding is published in the April issue of *Neuropsychology*, which is published by the American Psychological Association (APA) ... Scientists already knew of a genetic predisposition for Alzheimer's disease, and that low levels of two B vitamins-- B12 and folate--were also linked to problems. However, few had examined nutrition and genotype together relative to cognition, to reflect what real people carry into old age – a mix of inborn traits and environmental factors such as nutrition, including undiagnosed vitamin B deficiencies ...
<http://www.sciencedaily.com/releases/2004/04/040405085355.htm>.

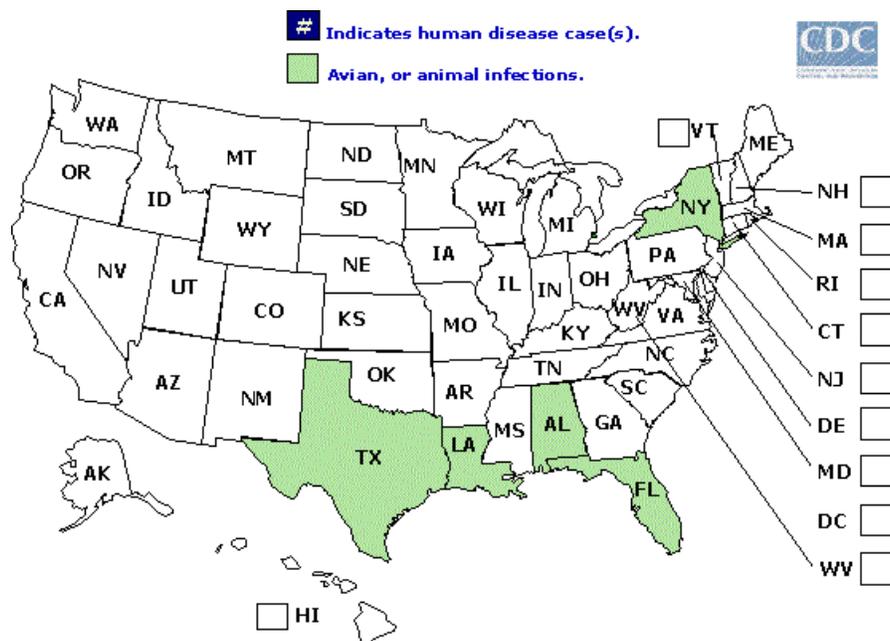
Lab Finds Way to Grow Large Number of Neurons from Stem Cells

— 1April2004, Newswise — A team at the Albany Medical College has found a way to use neural stem cells in animal studies to generate large numbers of neurons - one important step on the way to developing treatments for humans to reverse a wide variety of neurological diseases and conditions from Parkinson's and Alzheimer's to spinal cord injuries. The groundbreaking technique is detailed in a paper just published in the journal *Science* ... Previous research had produced large amounts of glial cells, which are the maintenance and support cells in the brain, but only small amounts of neurons, which are the "excitable" cells that carry nerve impulses and are responsible for controlling thought, memory and body functions ... "The hope is that eventually we will be able to transplant these neurons into humans afflicted with a wide variety of neurological disorders and see improvement in function" ... <http://www.newswise.com/articles/view/504060/>.

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/.

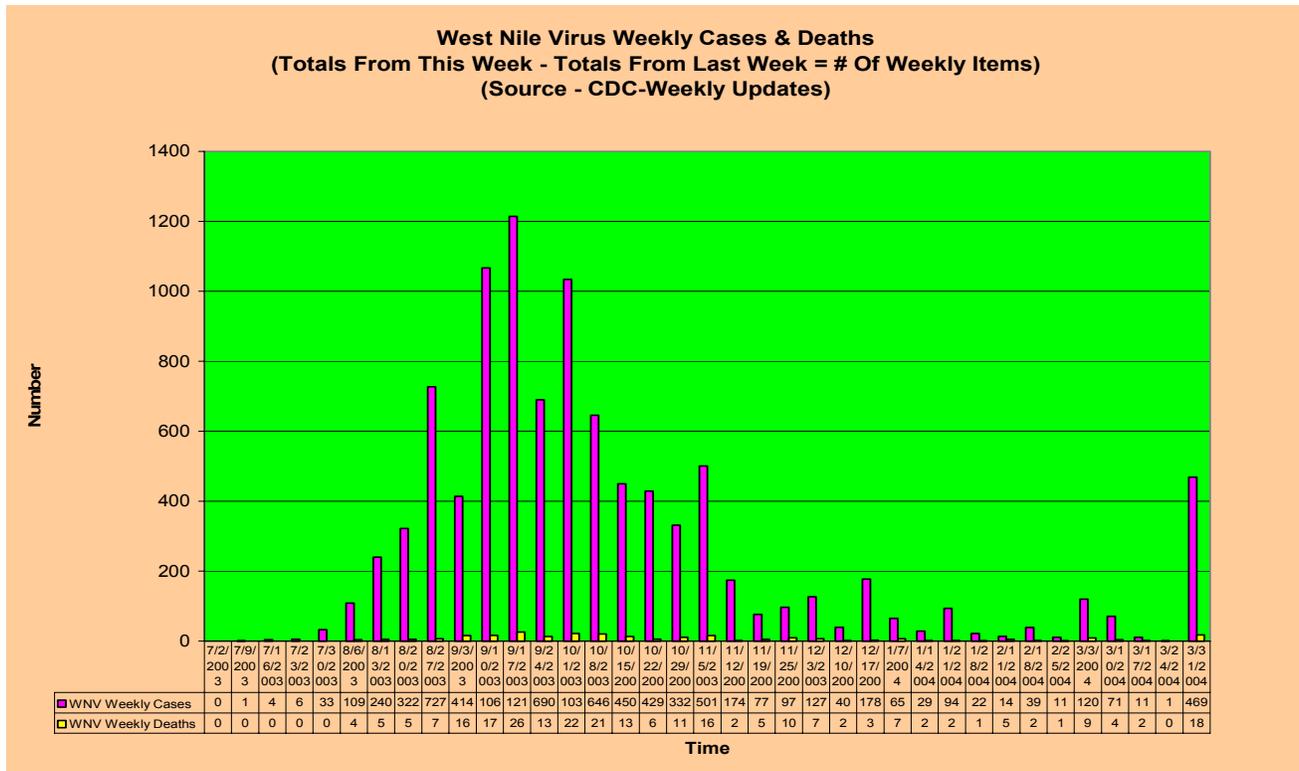
2004 West Nile Virus Activity in the United States, reported to CDC as of March 31, 2004. [Maps](#) reporting WNV avian and veterinary activity occurring during 2004 are updated regularly. **NO human WNV cases** occurring during 2004 have yet been reported



2003 CDC West Nile Virus Case Count - Total Human Cases Reported to CDC- These numbers reflect both mild and severe human disease cases occurring **between Jan.1 - Dec. 31, 2003** that have been reported to ArboNet by state and local health departments. ArboNet is the national, electronic surveillance system established by CDC to assist states in tracking West Nile virus and other mosquito-borne viruses. Information regarding 2004 virus/disease activity will be posted when such cases are reported to CDC. [Maps](#) reporting WNV activity and [human disease cases](#) reported to CDC were updated on April 2, 2004 and provide weekly information thru March 31, 2004.

Total cases, and deaths from 46 states stand at 9858 and 264, respectively. Since last week, there were 469 new cases and 18 deaths. See the chart below ...

<http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount03.htm>



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