Public Health Genomics Digest for January 18, 2007

This is an abbreviated and reorganized version of Genomics and Health Weekly Update, published by the National Office of Public Health Genomics at CDC. View using the HTML option of your e-mail program. The full the unabridged version, is available online.

Spotlight: A CDC-sponsored evidence report on Testing for CYP450 Polymorphisms in Adults With Non-Psychotic Depression Treated With SSRIs has been released by the Agency for Healthcare Research & Quality (AHRQ).

Spotlight: "Genomics and Public Health at CDC" (Jan 17) Red Orbit reports, "Genomics is the study of the entire genome, including all genes and their interactions with each other and with the environment (1)."

Birth Defects
"Midstate briefs: Genetic mutations may cause SIDS" (Jan 16) Tennessean.com reports, "Sudden infant death syndrome, or SIDS, may be caused by genetic mutations that could lead to fatal arrhythmias, or irregular heart rhythms, in some children, according to two newly published studies involving several Vanderbilt University Medical Center researchers in the online edition of the journal Circulation."

Cancer

"Novel regulation of the common tumor suppressor PTEN" (Jan 12) EurekAlert! reports, "PTEN is one of the most commonly mutated tumor suppressor genes. It is an antagonist for many cellular growth, proliferation and survival processes."


Cardiovascular, Diabetes, Hypertension, Stroke, and Related Conditions

"Scientists Debunk So-Called 'Fat Gene" (Jan 18) abc News reports, "Just as death and taxes are inevitable, some people assume they're also fated to be fat."

"Creating GENETIC MEDICINE" (Jan 16) The Washington Times reports, "Personalized medicine, the tailored treatments that a few patients now get based on their own DNA, is finally headed for the masses: the many heart patients at risk of deadly blood clots."

"Masonic lab finds genetic basis for heart attacks" (Jan 16) Uticaod.com reports, "Scientists at the Masonic Medical Research Laboratory have found a new genetic basis for abnormal heart rhythms that can cause sudden cardiac arrest, according to research being made public today."


"Accuracy Of Gene Expression Test For Heart Transplant Patients Confirmed" (Jan 14) Medical News Today reports, "For many Americans living with a heart transplant, invasive heart-muscle biopsies that check for organ rejection are a fact of life."

Immune System

Interleukin-18 genetics and inflammatory disease susceptibility Thompson SR & Humphries SE Genes Immun 2007 Jan
Infectious Disease

"Scientists find potential 'off-switch' for HIV virus"  (Jan 12) EurekAlert! reports, "While there is no cure for lingering viral infections such as HIV and herpes, a recent study at Princeton University suggests it may be possible to deactivate such viruses indefinitely with the flick of a genetic switch."

"Genetic tests may make Pap smears less vital"  (Jan 17) International Herald Tribune reports, "The big news in the war on cervical cancer is the new vaccine recently approved to prevent the disease."

Mental Illness, Addiction and the Nervous System

"Researchers find a common genetic risk factor for Parkinson's disease in Asians"  (Jan 16) Mayo Clinic reports, "Researchers at Mayo Clinic in Jacksonville, Fla. and the National Taiwan University Hospital in Taipei, Taiwan have discovered what to date appears to be the most common genetic risk factor for Parkinson's disease worldwide."

"Early treatment of autism hinges on genetic discoveries"  (Jan 16) The Columbus Dispatch reports, "Autism is a complex disorder of social, communicative and behavioral development that usually starts in children before 3 years of age.


"Researchers Discover Genetic Cause For Word-finding Disease"  (Jan 16) Science Daily reports, "Northwestern University researchers have discovered a genetic cause of a mysterious neurological disease in which people have trouble recalling and using words."

"New Gene Uncovered For Late-onset Alzheimer's; Findings Replicated In Four Different Ethnic Groups"  (Jan 15) Science Daily reports, "An international team of researchers, led by Columbia University Medical Center, Boston University School of Medicine and the University of Toronto, has uncovered a major new gene - SORL1 - implicated in late-onset Alzheimer's disease."

"The Biological Clock is Genetically Determined"  (Jan 12) Softpedia reports, "Do you go to sleep at the same time with the chickens? Or are you a nigh bird? Well, researchers have proven it to be hereditary."

"Omic" Tools and Approaches

"Scientists Map Gene Regulators"  (Jan 17) Red Orbit reports, "U.S. researchers said
Tuesday they have mapped key points in the human genome which may lead to therapies for cancer and other diseases.

"Bethesda List Center Announces a New Mailing List: Human Genetics Worldwide"  
(Jan 17) PR Web reports, "Bethesda List Center, Inc. today introduced a new mailing list; Human Genetics Worldwide."

"Nanoparticles yield delivery tools for therapeutic nucleic acids"  
(Jan 16) News-Medical.Net reports, "Cancer researchers hold great hope that nucleic acid-based therapeutics, such as anticancer genes, antisense oligonucleotides, and small interfering RNA (siRNA) molecules, will prove to be powerful antitumor agents."

GOLD (Genomes OnLine Database v 2.0)  
Genomes Online Database, is a World Wide Web resource for comprehensive access to information regarding complete and ongoing genome projects around the world. GOLD provides the largest available and most detailed monitoring of genome sequencing projects.

**Pharmacogenomics**

*Overview of the pharmacogenomics of cigarette smoking*  
Ho MK & Tyndale RF Pharmacogenomics J 2007 Jan

*Identifying drugs needing pharmacogenetic monitoring in a Korean hospital*  
Kim YM, et al.  
Am J Health Syst Pharm 2007 Jan;64(2):166-75

*Pharmacogenomics and nutrigenomics: synergies and differences*  
Ghosh D, et al.  
Eur J Clin Nutr 2007 Jan

**Respiratory System (including Asthma)**

*Gene-environmental interaction in asthma*  
Yang IA, et al.  
Curr Opin Allergy Clin Immunol 2007 Feb;7(1):75-82

*Identifying novel genes contributing to asthma pathogenesis*  
Holloway JW & Koppelman GH  

**Vision and Hearing**

"Macular degeneration has a strong genetic link"  
(Jan 16) Reuters Health reports, "A new study has found that a specific form of the apolipoprotein E (APOE) gene, called E2, increases the risk of age-related macular degeneration well beyond the age of 65, whereas another form of APOE called E4, may confer some protection."
Genetic etiologies of glaucoma  Wiggs JL  Arch Ophthalmol 2007 Jan;125(1):30-7

Connexin 26 deafness is not always congenital  Orzan E & Murgia A  Int J Pediatr Otorhinolaryngol 2007 Jan

**Let's Go Surfing**

*Public Health Genetics Unit, UK, Newsletter, January 2007*  The Public Health Genetics Unit (PHGU) of the United Kingdom (UK) aims to keep abreast of developments in molecular and clinical genetics, and in their ethical, legal, social and public health implications.