January 11, 2007

This is an abbreviated version of Genomics and Health Weekly Update, published by the National Office of Public Health Genomics at CDC. View using the HTML option in Groupwise. 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).

Birth Defects
"January Is National Birth Defects Prevention Month And Family Health History Month"  (Jan 4) Michigan.gov reports, "The Michigan Department of Community Health (MDCH) is pleased to recognize January 2007 as a special time to both reduce the risk of birth defects and increase awareness of the role of family history to health and risk for disease." (Find more information at Michigan's Genetics Resource Center).


Cancer
"Study examines genetic factors associated with head and neck cancer"  (Jan 9) EurekAlert! reports, "Preliminary research indicates that several specific genetic alterations are associated with the development of smoking-related head and neck skin cancers, according to a report in the January 10 issue of JAMA."

"USC study in Nature Genetics supports a stem cell origin of cancer"  (Jan 8) EurekAlert! reports, "Researchers at the University of Southern California (USC) recently made significant strides toward settling a decades-old debate centering on the role played by stem cells in cancer development."

"Scientists Find Guardian Gene's Choices Crucial To Stopping Cancer Process"  (Jan 8) Science Daily reports, "Scientists at the Kimmel Cancer Center at Thomas Jefferson University in Philadelphia have uncovered a novel pathway by which the anti-cancer gene p53 springs into action, protecting a damaged cell from becoming cancer."

"Jefferson scientists find guardian gene's choices crucial to stopping cancer process"  (Jan 5) EurekAlert! reports, "Scientists at the Kimmel Cancer Center at Thomas Jefferson University in Philadelphia have uncovered a novel pathway by which the anti-cancer gene p53 springs into action, protecting a damaged cell from becoming cancer."
"Rogue Gene Linked To Breast And Childhood Cancer Risk"   (Jan 5) Medical News Today reports, "Women who inherit one damaged copy of a gene called PALB2 have double the risk of developing breast cancer."

"Renegade RNA -- Clues to cancer and normal growth"   (Jan 4) EurekAlert! reports, "Researchers at Johns Hopkins have discovered that a tiny piece of genetic code apparently goes where no bit of it has gone before, and it gets there under its own internal code."

"British gene team are on the brink of cancer breakthrough"   (Jan 4) The Mail reports, "British scientists are on the verge of producing a drug that could revolutionise cancer treatment."


In search of a familial cancer risk assessment tool  Kelly K & Sweet K  Clin Genet 2007 Jan;71(1):76-83


"Gene test devised to predict lung cancer relapse risk"   (Jan 4) Yahoo! India reports, "A new gene test can predict how people with lung cancer will fare, say researchers, allowing aggressive chemotherapy to be targeted to only those who need it."


**Cardiovascular, Diabetes, Hypertension, Stroke, and Related Conditions**

"Researchers identify gene associated with severe kidney failure in diabetes"   (Jan 9) EurekAlert! reports, "A research team at Wake Forest University Baptist Medical Center and the University of Heidelberg has proven that a gene protects some people with diabetes from developing severe kidney failure or "end-stage renal disease."
"Japan scientists link strokes to gene variant"  (Jan 8) AlertNet reports, "Japanese researchers have identified a gene variant which appears to predispose a person to strokes, but it seems more prevalent in Asians than in those of European or African descent."

"Genetic Mutation Alters Response To Heart Failure Drugs"  (Jan 5) Science Daily reports, "The group of drugs known as beta blockers help slow nerve impulses traveling through the heart in order to reduce the heart's workload."

"Gender affects genes' influence on blood pressure"  (Jan 4) Reuters Health reports, "Variations in genes that play a role in regulating heart rate and kidney function appear to affect blood pressure differently in men and women, new research suggests."


Ethical, Legal, and Social Issues
"Analysis: Gene Tests Put Docs at Risk"  (Jan 6) Red Orbit reports, "The growth of personalized medicine -- treatment designed specifically for the genetic makeup of an individual -- could lead to a flood of new medical malpractice lawsuits, says a new report."


Mental Illness, Addiction and the Nervous System
"New Report Finds Little Evidence To Determine the Usefulness of Genetic Tests in the Treatment of Depression"  (Jan 4) AHRQ reports, "There is insufficient evidence to determine if current gene-based tests intended to personalize the dose of medications in a class of drugs called selective serotonin reuptake inhibitors (SSRIs) improve patient outcomes or aid in treatment decisions in the clinical setting, according to a new evidence report supported by a collaboration of the Agency for Healthcare Research and Quality (AHRQ) and the Centers for Disease Control and Prevention's (CDC) National Office of Public Health Genomics.

"Researchers Looking For Genes That Control The Brain"  (Jan 7) Medical News Today reports, "Although it's our most vital organ, surprisingly little is known about what
constitutes a "normal" brain."

"G Allele Of Mu-opioid Receptor Gene Is Linked To Craving For Alcohol"  (Jan 5) Science Daily reports, "The study of genes and their influence on alcohol consumption can operate on many different levels."

"Genetic variation may reduce Alzheimer's risk"  (Jan 8) EurekAlert! reports, "Adults with a genetic variation enabling them to express higher levels of fetal hemoglobin may have a reduced risk of Alzheimer's disease, researchers say."

"People at genetic risk for Alzheimer's age mentally just like noncarriers"  (Jan 8) EurekAlert! reports, "Australian researchers say that a genotype that heightens the risk for Alzheimer's disease does not contribute to cognitive change during most of adulthood."

**Population Screening**


**Respiratory System (including Asthma)**


**Vision and Hearing**
"Genes, lifestyle raise macular degeneration risk"  (Jan 8) Reuters Health reports, "New research suggests that one's genetic make-up interacts with two modifiable risk factors -- obesity and smoking -- to multiply the risk of developing age-related macular degeneration (AMD), a potentially blinding degenerative eye disorder."

**Let's Go Surfing**
Genetics and Genomics for Patients and the Public  From the National Human Genome
Research Institute

**Race and Human Variation**  A project of the American Anthropological Association: Looking through the eyes of history, science and lived experience, the RACE Project explains differences among people and reveals the reality - and unreality - of race. The story of race is complex and may challenge how we think about race and human variation, about the differences and similarities among people.

**The Minnesota Gene Pool Weblog:** New postings on Alzheimer Disease, Kidney Failure and Diabetes, the $1000 Genome.