Genomics Weekly News Digest

July 6, 2006

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GENERAL INTEREST

“Genetic link found to noise-induced hearing loss”
(July 5) Reuters Health reports, “Belgian scientists have pinpointed three genes that may explain why some people exposed to loud noise suffer hearing loss.”

ETHICAL, LEGAL AND SOCIAL ISSUES (ELSI)

“Monitoring genetic counseling”
(July 5) Daily News Tribune reports, “Genetic counselors would have to obtain licenses to practice in Massachusetts under pending legislation that also gives state regulators authority to discipline counselors who specialize in this emerging medical field.”

“Dawn of home genetic testing offers promise and controversy”
(July 4) The Charlotte Observer reports, “You no longer need a doctor or genetic counselor to test your risk of developing certain diseases that run in families, such as breast cancer or Alzheimer's.”

Attitudes of urban American Indians and Alaska Natives regarding participation in research

CHRONIC DISEASE

Cancer

TPMT, UGT1A1 and DPYD: genotyping to ensure safer cancer therapy?

“Scientists Identify an Inherited Gene That Strongly Affects Risk for the Most Common Form of Melanoma”
(June 30) National Cancer Institute reports, “Researchers at the National Cancer Institute (NCI), part of the National Institutes of Health, have identified a link between inherited and acquired genetic factors that dramatically increase the chance of developing a very common type of melanoma.”
“Genetic parallels found between lung development and lung cancer”
(July 3) EurekAlert! reports, “For over 100 years, biologists have speculated that cancer growth shares common features with embryonic development.”

Family History, and Impact on Clinical Presentation and Prognosis, in a Population-based Breast Cancer Cohort from the Stockholm County
Margolin S, et al. Fam Cancer 2006 Jul

Direct-to-patient BRCA1 testing: the Twoj Styl experience

Breast cancer as a second primary in patients with prostate cancer-estrogen treatment or association with family history of cancer?

Cardiovascular Disease (including Hypertension and Stroke)

Single gene disorders causing ischaemic stroke
Razvi SS & Bone I J Neurol 2006 Jun;253(6):685-700

Obesity

Genetics of obesity

Reproductive Disorders

Genetic causes of male infertility

INFECTION DISEASE

“Researchers develop T-cells from human embryonic stem cells”
(July 3) News-Medical.net reports, “Researchers from the UCLA AIDS Institute and the Institute for Stem Cell Biology and Medicine have demonstrated for the first time that human embryonic stem cells can be genetically manipulated and coaxed to develop into mature T-cells, raising hopes for a gene therapy to combat AIDS.”

MATERNAL AND CHILD HEALTH / CHILDREN WITH SPECIAL HEALTH NEEDS

Congenital Conditions

“Scientists identify overactive protein that plays a key role in cystic fibrosis”
(July 5) News-Medical.net reports, “A team led by Johns Hopkins Children's Center scientists has identified and successfully tamed an overactive protein that plays a key role in cystic fibrosis (CF), a genetic disorder that interferes with the body's ability to transport chloride in and out of cells.”
“Johns Hopkins Lab Scientists Tame Overactive Cf Protein”
(June 29) Johns Hopkins Medicine reports, “A team led by Johns Hopkins Children’s Center scientists has identified and successfully tamed an overactive protein that plays a key role in cystic fibrosis (CF), a genetic disorder that interferes with the body’s ability to transport chloride in and out of cells.”

“Novel gene therapy may lead to cure in hemophilia A patients”
(July 3) EurekAlert! reports, “A discovery by Medical College of Wisconsin and BloodCenter of Wisconsin researchers in Milwaukee may be a key to a permanent genetic cure for hemophilia A patients, including a subset who do not respond to conventional blood transfusions.”

MENTAL and NEUROLOGICAL CONDITIONS

Mental Health and Behavioral Conditions

“Illicit Drug Use And Abuse May Be Genetic”
(July 5) VCU News reports, “Researchers have found that genetic factors may play an important role in a person’s use, misuse or dependence of illicit drugs like marijuana, stimulants, opiates, cocaine and psychedelics.”

Genetic and Cultural Transmission of Smoking Initiation: An Extended Twin Kinship Model

Neurological Disorders

“Variations in detoxifying genes linked to Lou Gehrig's disease”
(July 5) EurekAlert! reports, “Genetic variations in three enzymes that detoxify insecticides and nerve gas agents as well as metabolize cholesterol-lowering statin drugs may be a risk factor for developing sporadic amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease), and possibly responsible for a reported twofold increased risk of ALS in Gulf War veterans.”

The genetics of neurodegenerative diseases

NUTRIOGENOMICS

Nutrigenetics, plasma lipids, and cardiovascular risk
Ordovas JM J Am Diet Assoc 2006 Jul;106(7):1074-81

PHARMACOGENOMICS

“Sleep gene discovery”
(July 4) News-Medical.net reports, “Proteins that regulate sleep and biological timing in the body work much differently than previously thought, meaning drug makers must change their approach to making drugs for sleep disorders and depression and other timing-related illnesses.”
“New class of experimental drug that targets master regulator gene called c-Jun”
(July 3) News-Medical.net reports, "University of New South Wales (UNSW) researchers have announced they are developing a new class of experimental drug that has the potential to treat a diverse range of health problems, from inflammation and cancer through to eye and heart disease."

“Lexicon Genetics Files Application For LX6171 Phase 1 Trial For Cognitive Disorders”
(June 30) Medical News Today reports, "Lexicon Genetics Incorporated (Nasdaq: LEXG) announced today that it has submitted a Clinical Trial Authorization (CTA) filing to the United Kingdom Medicines and Healthcare Products Regulatory Agency (MHRA) for LX6171, an internally-developed small molecule compound for cognitive disorders."

Role of CYP pharmacogenetics and drug-drug interactions in the efficacy and safety of atypical and other antipsychotic agents

Pharmacogenomics: Catechol O-Methyltransferase to Thiopurine S-Methyltransferase
Weinshilboum RM Cell Mol Neurobiol 2006 Jun

Pharmacogenetics of anticancer drug sensitivity in pancreatic cancer

GENOMIC EPIDEMIOLOGY AND TOOLS FOR POPULATION HEALTH

“New diagnostic approach for carriers of recessive genetic disorders”
(July 3) News-Medical.net reports, “Scientists Vivian Cheung and Warren Ewens from the University of Pennsylvania have developed a new approach for the diagnosis of medical disorders that are inherited in a recessive manner.”

Genetic diagnosis and testing in clinical practice