Genomics Weekly News Digest

September 21, 2006

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GENERAL INTEREST

"Nanocantilever biosensors detect multiple genes"
(Sep 19) News Medical.Net reports, “Using nanoscale cantilevers in a microfluidics device, a team of European researchers has developed a portable biosensor capable of detecting specific genetic sequences."

"Structure determined for key molecular complex involved in long-term gene storage"
(Sep 17) EurekAlert! reports, “Around the home, regularly used tools are generally kept close at hand: a can opener in a kitchen drawer, a broom in the hall closet. Less frequently used tools are more likely to be stored in less accessible locations, out of immediate reach, perhaps in the basement or garage.”

"Human Genetic Testing Center Receives International Quality Accreditation in Germany"
(Sep 14) Yahoo reports, “IntegraGen, the personalized healthcare company focused on the development and commercialization of genetic tests for complex diseases, announced today that its German Competence Centre based in Bonn has received accreditation under ISO Standard 17025 for performing human genetic analyses.”

ETHICAL, LEGAL AND SOCIAL ISSUES

"The mixed blessing of genetic choice"
(Sep 19) The Manila Times reports, “The advance of knowledge is often a mixed blessing. Over the past 60 years, nuclear physics has been one obvious example of this truth. Over the next 60 years, genetics may be another.”

"FTC warns consumers about at-home genetic tests"
(Sep 18) HeartCenterOnline reports, “Federal agencies want consumers to understand the facts about at-home genetic tests before choosing to use a product.”

Exploring barriers to long-term follow-up in newborn screening programs
CHRONIC DISEASE

Cancer

“Protein duo ‘blocks cancer gene”
(Sep 20) The Sidney Morning Herald reports, “Australian scientists have discovered a pair of proteins that team up to attack a notorious enzyme responsible for cancer.”

Population-based study of the prevalence of family history of cancer: Implications for cancer screening and prevention

Predictors of breast cancer development in a high-risk population

BRCA1/2 testing in hereditary breast and ovarian cancer families III: Risk perception and screening

Low rates of acceptance of BRCA1 and BRCA2 test results among African American women at increased risk for hereditary breast-ovarian cancer

Role of BRCA1/2 mutations in pancreatic cancer
Greer JB & Whitcomb DC Gut 2006 Sep

“Gene variant may raise lung cancer risk from radon”
(Sep 19) Reuters Health reports, “Gene variants that lead to decreased amounts of an enzyme known as GSTM1 may raise the risk of lung cancer related to radon exposure, new research suggests.”

Cardiovascular Disease (including Hypertension and Stroke)

Advances in congenital long QT syndrome

Autoimmune Disorders

Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus

Diabetes and Related Metabolic Disorders

“Genetic Discovery Allows Diabetic Girl to Swap Insulin Pump for Pill”
(Sep 14) RedOrbit reports, “When Lilly Jaffe, 6, gleefully disconnected her insulin pump from her hip last month, her mother, Laurie, forced herself to be brave.”
INFECTIONOUS DISEASE

“Genetic susceptibility in viral encephalitis”
(Sep 18) Medindia.com reports, “According to a study published in Science X-Press, an advanced, online edition of the journal Science on Sept. 14, a single gene immunodeficiency may cause susceptibility to herpes simplex virus.”

MOTHERNAL AND CHILD HEALTH / CHILDREN WITH SPECIAL HEALTH NEEDS

Congenital Conditions

Comprehensive genetic analysis of the cystic fibrosis transmembrane conductance regulator from dried blood specimens - Implications for newborn screening

MENTAL and NEUROLOGICAL CONDITIONS

Mental Health and Behavioral Conditions

Candidate gene studies of attention-deficit/hyperactivity disorder
Faraone SV & Khan SA *J Clin Psychiatry* 2006;67 Suppl 8:13-20

Neurological Disorders

“Alzheimer’s Symptoms May Arise From Mutant Genes”
(Sep 19) Health Scout reports, “Researchers at the University of Texas Southwestern Medical Center at Dallas and colleagues have been studying genes known as "presenilins," known to be mutated in people with an inherited form of Alzheimer's disease.”

Genetics and epidemiology of tourette syndrome

Diagnostic yield in the clinical genetic evaluation of autism spectrum disorders
Schaefer GB & Lutz RE *Genet Med* 2006 Sep;8(9):549-56

PHARMACOCENOMICS

Genetic, Ethnic, and Gender Differences in the Pharmacokinetics of Antiretroviral Agents

Pharmacogenetics, drug-metabolizing enzymes, and clinical practice
Gardiner SJ & Begg EJ *Pharmacol Rev* 2006 Sep;58(3):521-90
Pharmacogenetics of warfarin: current status and future challenges
Wadelius M & Pirmohamed M Pharmacogenomics J 2006 Sep

Pharmacogenomics of colorectal cancer prevention and treatment

Genetic databases and pharmacogenetics: introduction

“Single genetic assay could help physicians decide when to switch patients from Gleevec to Sutent”
(Sep 14) EurekAlert! reports, “Researchers have found that the same gene mutation responsible for a tepid response to Gleevec (imatinib) in treatment of gastrointestinal stromal tumors (GIST), bestows benefit when a newer targeted therapy, Sutent (sunitinib), is used.”

GENOMIC EPIDEMIOLOGY AND TOOLS FOR POPULATION HEALTH

“UC Davis study finds distinct genetic profiles”
(Sep 14) EurekAlert! reports, “An international team of scientists lead by researchers at UC Davis Health System has found that, with respect to genetics, modern Europeans fall into two groups: a Northern group and a Southern, or Mediterranean one.”

A tutorial on statistical methods for population association studies

Test of association between haplotypes and phenotypes in case-control studies: Examination of validity of the application of an algorithm for samples from cohort or clinical trials to case-control samples using simulated and real data
Furihata S, et al. Genetics 2006 Sep