

News, Literature, and Events in Braingenethics

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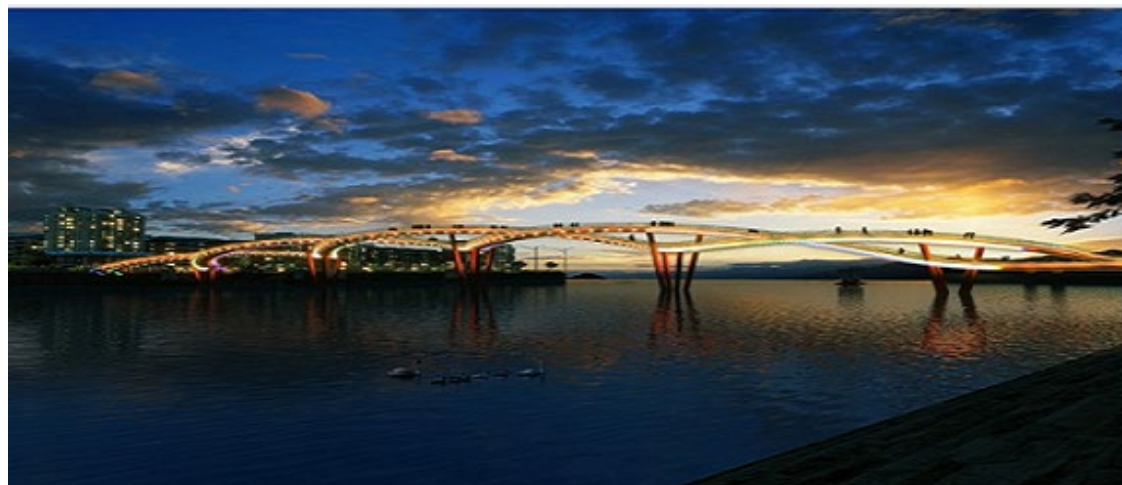


Braingenethics Update

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braingenethics.cumc.columbia.edu/



The next Braingenethics Update (Vol. 3, No. 7) will appear in September 2016.

In the Literature

[Challenges and Opportunities for ELSI Early Career Researchers](#)

Jessica Bell et al.

In light of the international and interdisciplinary nature of researchers studying the Ethical, Legal and Social Implications (ELSI) of genetic and genomic research, it is important to identify how emerging digital technologies can be used to facilitate research, and to offer support for early career ELSI researchers.

Conference:

[Reductionism and Integration, Bioethics and Behavior: A Conference Celebrating the Career of Kenneth F. Schaffner](#)
September 23-24 2016
University of Pittsburgh

In the Media

[The Inheritance of Crime](#)

Douglas Starr

A number of (now debunked) studies have purported to link genetics to

[Personal Genome Sequencing in Ostensibly Healthy Individuals and the PeopleSeq Consortium](#)

Michael D. Linderman et al.

This report compiles data from ostensibly healthy individuals who have had their genomes sequenced, and introduces the PeopleSeq consortium, a newly formed collaboration designed to collect longitudinal outcome data from genetic information from healthy individuals.

Genes and Environment

[Evaluating the Contribution of Genetics and Familial Shared Environment to Common Disease Using the UK Biobank](#)

María Muñoz et al.

While most genetic factors that contribute to disease susceptibility remain unknown, by examining 1.5 million individuals from the UK biobank, the authors provide evidence that part of the "missing heritability" can be explained by an overestimation of heritability. The results show that both genetics and familial environment make substantial contributions to familial clustering of disease.

[Environmental Determinants of Aggression in Adolescents: Role of Urban Neighborhood Greenspace](#)

Diana Younan et al.

Neighborhood greenspace has been shown to improve mental health, but its neurobehavioral benefits in adolescents remain unclear. This study found a reduction in aggressive behaviors of urban-dwelling

criminal tendencies. Now, a number of retrospective studies, as well as studies of brain scans and genetic traits, seek again to investigate a link between biology and criminal behavior.

[Could a Molecular 'On-Off Switch for Agony' Lead to a Safer Painkiller?](#)

Damian Garde

Biotech companies are placing big bets on the idea that they can develop drugs that toggle a genetic "switch" to relieve pain without the risk of addiction.

[Sperm Banks Accused of Losing Samples and Lying About Donors](#)

Tamar Lewin

Since sperm banks are not required to verify the information provided by donors, it's "buyer-beware."

[Metabolic Syndrome, Research, and Race](#)

Anthony Ryan Hatch

Scientists who study the metabolic syndrome must do a better job of incorporating political and social science into their work. Read an excerpt from the author's new book [here](#).



adolescents exposed to greenspace in their neighborhoods.

[Indifference to Dissonance in Native Amazonians Reveals Cultural Variation in Music Perception](#)

Josh H. McDermott et al.

While the contrast between consonance and dissonance is central to Western music, results from this study suggest that consonant preferences can be absent in cultures sufficiently isolated from Western music, and are thus unlikely to reflect innate biases. Instead, culture likely has a dominant role in shaping responses to music.

[An Epigenetic Mechanism Mediates Developmental Nicotine Effects on Neuronal Structure and Behavior](#)

Yonwoo Jung et al.

Developmental nicotine exposure causes neurological and behavioral changes. In this study, the authors identified a histone complex that couples developmental nicotine exposure to changes in brain epigenetic marks, neuronal structure, and behavior.

[A Thrifty Variant in CREBRF Strongly Influences Body Mass Index in Samoans](#)

Ryan L Minster et al.

Samoans are a unique founder population with a high prevalence of obesity, making them well suited for identifying new genetic contributors to obesity. Data from a genome-wide association study suggests that a variant in CREBRF selectively decreased energy use and increased fat storage when overexpressed.

In the Literature, Cont.

[NEK1 Variants Confer Susceptibility to Amyotrophic Lateral Sclerosis](#)

Kevin Kenna et al.

In a new screening strategy, the authors identified a link between familial ALS and loss-of-function NEK1 variants. These results provide new insights into ALS etiopathogenesis and genetic etiology.

[Polygenic Risk of Alzheimer Disease is Associated with Early- and Late-Life Processes](#)

Elizabeth C. Mormino et al.

Using data from two large observational cohort studies, this study examines associations between aggregate genetic risk and Alzheimer's disease markers in stages preceding the clinical symptoms of dementia. It finds that there are effects related to common genetic risk loci distributed throughout the genome that are detectable in individuals without dementia.

[Errors in Identification of 17 of 527 Brain Images in Genetic Study of Phenotypes Associated With Bipolar Disorder](#)

Scott C. Fears et al.

A letter to the editor regarding errors in their study, [Multisystem Component Phenotypes of Bipolar Disorder for Genetic Investigations of Extended Pedigrees](#).

[Genetically Induced Retrograde Amnesia of Associative Memories After Neuroplatin Ablation](#)

Soumee Bhattacharya et al.

Dementia, accidents, or traumatic events can

[Association of a Genetic Risk Score with Body Mass Index Across Different Birth Cohorts](#)

Stefan Walte et al.

Many genetic variants are associated with body mass index (BMI). Associations may have changed with the 20th century obesity epidemic and may differ for black versus white individuals. Younger study participants were found to have a greater association between BMI and genetic risk score for BMI, which suggests that associations of known genetic variants with BMI may be modified by obesogenic environments.

[Altered Proliferation and Networks in Neural Cells Derived from Idiopathic Autistic Individuals](#)

Maria C Marchetto et al.

Many theories of cellular and molecular mechanisms responsible for autism spectrum disorders (ASD) are difficult to investigate because of a lack of human cell models. In this study, researchers reprogrammed fibroblasts to generate induced pluripotent stem cells, neural progenitor cells, and neurons from autistic individuals. They found that defects in neuronal networks could be addressed by insulin growth factor 1 (IGF-1), a drug currently in clinical trials for ASD.

make people lose the memories formed before the injury or the onset of the disease. Researchers have now shown that some memories can also be erased when one particular gene is switched off.

[Genome-wide Association Studies of Post-traumatic Stress Disorder in Two Cohorts of US Army Soldiers](#)

Murray B. Stein et al.

Post-traumatic stress disorder (PTSD) is a prevalent, serious public health concern, particularly in the military. This study examines the biological foundations of the disorder by looking for genetic risk factors, and finds limited evidence of of genetic association. Read a commentary on the study [here](#).

[Why We're Different: A Conversation with Robert Plomin](#)

“What we're trying to do in behavioral genetics and medical genetics is explain differences.”

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