

News, literature, and events in the ethical, social, and legal implications of psychiatric, neurologic, and behavioral genetics.

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# Braingenethics Update

No.4      May 2014

[braingenethics.cumc.columbia.edu/](http://braingenethics.cumc.columbia.edu/)



## In the Literature

### [Genetic Testing in the Epilepsies— Developments and Dilemmas](#)

By Annapurna Poduri, Beth Rosen Sheidley, Sara Shostak, & Ruth Ottman

The availability of testing for epilepsy-related genes is potentially helpful for clarification of the diagnosis and prognosis, selection of optimal treatments, and provision of information for family planning. The availability of genetic testing also raises new issues that have only begun to be considered.

### [“Obesity Is a Disease”: Examining the Self-Regulatory Impact of This Public- Health Message](#)

**Brewing controversy over  
Nicholas Wade's new book  
*A Troublesome Inheritance:  
Genes, Race and Human  
History***

[A conversation between author  
Nicholas Wade and  
anthropologist Agustin Fuentes](#)

**Book reviews by:**

[Andrew Gelman for \*Slate\*](#)

[Charles Murray for \*The Wall  
Street Journal\*](#)

By Crystal L. Hoyt, Jeni L. Burnette, & Lisa Auster-Gussman

A new study suggests that calling obesity a disease can be associated with increased body satisfaction, but also to reduced self-control (i.e. bad diet choices).

[Convergence of Genes and Cellular Pathways Dysregulated in Autism Spectrum Disorders](#)

By Dalila Pinto et al.

Authors find that even though Autism Spectrum Disorder (ASD) risk is affected by rare variants of hundreds of genes, many of those genes "converge in interconnected modules, providing diagnostic and therapeutic targets."

[The Familial Risk of Autism](#)

By Sven Sandin et al.

Earlier, smaller twin studies yielded heritability estimates of ASD as high as 90%. This large study, including more than 2 million families, yielded the much lower figure of 50%.

[Aberrant White Matter Microstructure in Children with 16p11.2 Deletions](#)

By Julia P. Owen et al.

Since abnormal white matter microstructure can be seen in broadly defined clinical disorders, this study used diffusion magnetic resonance imaging and tract-based spatial statistics to investigate white matter microstructural integrity in human children with chromosomal locus deletions.

[Childhood Intelligence is Heritable, Highly Polygenic and Associated with FBNP1L](#)

By B Benjamin et al.

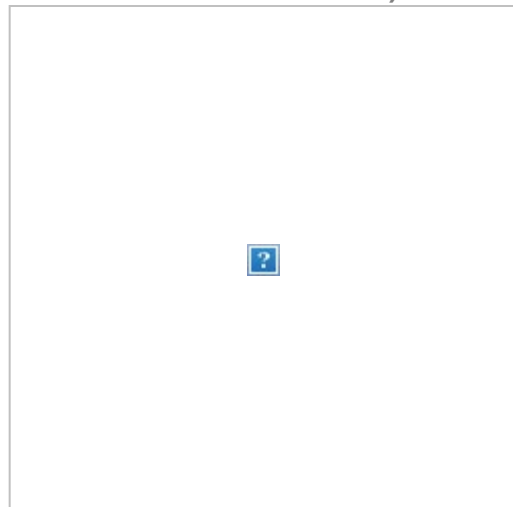
[H.Allen Orr for The New York Review of Books](#)



To contribute a news item, an academic article, or an event on the ethical, legal, and social implications of psychiatric, neurological, and behavioral genetics research please [email us](#).

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**Autism-- What We Know (and What We Don't Know Yet)**



[TED Talk by Dr. Wendy Chung](#) of

No robustly associated genetic loci or variants for childhood intelligence have previously been reported. This study reports the first genome-wide association study on childhood intelligence (age range 6–18 years) from 17,989 individuals in six discovery and three replication samples.

### [Life Extension Factor Klotho Enhances Cognition](#)

By Dena B. Dubal

Whether anti-aging factors such as *klotho* can counteract cognitive decline is unknown. This paper shows that a lifespan-extending variant of the human KLOTHO gene, KL-VS, is associated with enhanced cognition in heterozygous carriers.

### [Genetic Variation in the Atrial Natriuretic Peptide Transcription Factor GATA4 Modulates Amygdala Responsiveness in Alcohol Dependence](#)

By Anne Jorde et al.

Two genome-wide association studies recently showed alcohol dependence to be associated with a single-nucleotide polymorphism (rs13273672) located on a gene (GATA4) that encodes a transcription factor of atrial natriuretic peptide (ANP). This study examines whether reactivity to alcohol cues in the ANP target region amygdala, a key area implicated in addictive behavior, differs depending on the GATA4 genotype of a patient.

### [CLP1 Founder Mutation Links tRNA Splicing and Maturation to Cerebellar Development and Neurodegeneration](#)

By Ashleigh E. Schaffer et al.

Columbia University and the Simons Foundation Autism Research Initiative.

## **In the News**

### [Environment as Important as Genes in Autism, Study Finds](#)

Environmental factors are more important than previously thought in leading to autism, as big a factor as genes, according to the largest analysis to date to look at how the brain disorder runs in families.

### [Klotho Gene Variant Not Only Helps Slow Aging But Also Helps Old People Stay Sharp](#)

A gene variant called KL-VS linked to longer life was also found to make humans smarter and may help fight the effects of cognitive decline due to aging.

## **Events**

Braingenethics Seminar:

[Columbia University](#)  
[June 23, 2014 4PM](#)

Hank Greely, JD

Stanford Law School

## **Braingenethics CEER Conference Genetic Testing in Neurologic Disorders 2014: Developments & Dilemmas**

[Full conference schedule.](#)

In the swiftly changing world of genetic testing, neurological disorders pose their own specific risks and dilemmas. This

Neurodegenerative diseases can occur so early as to affect neurodevelopment. From a cohort of more than 2,000 consanguineous families with childhood neurological disease, investigators identified a founder mutation in four independent pedigrees.

[Genetic Counseling for Common Psychiatric Disorders: An Opportunity for Interdisciplinary Collaboration](#)

By Jehannine Austin, Angela Inglis, & George Hadjipavlou

In a letter to the editor, the authors comment on [Gershon and Alliey-Rodriguez's findings](#).

conference brings together the latest developments in genetic testing for neurologic disorders, viewed through the perspectives of physicians, researchers, people at risk, ethicists, and community-based groups.

**June 6, 2014 2:00-6:00PM**

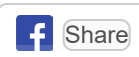
Columbia University Faculty House

64 Morningside Drive NY, NY

Seminar locations:

PH10-405 at CUMC

[Register by emailing here](#)



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