

News, Literature, and Events in Braingenethics

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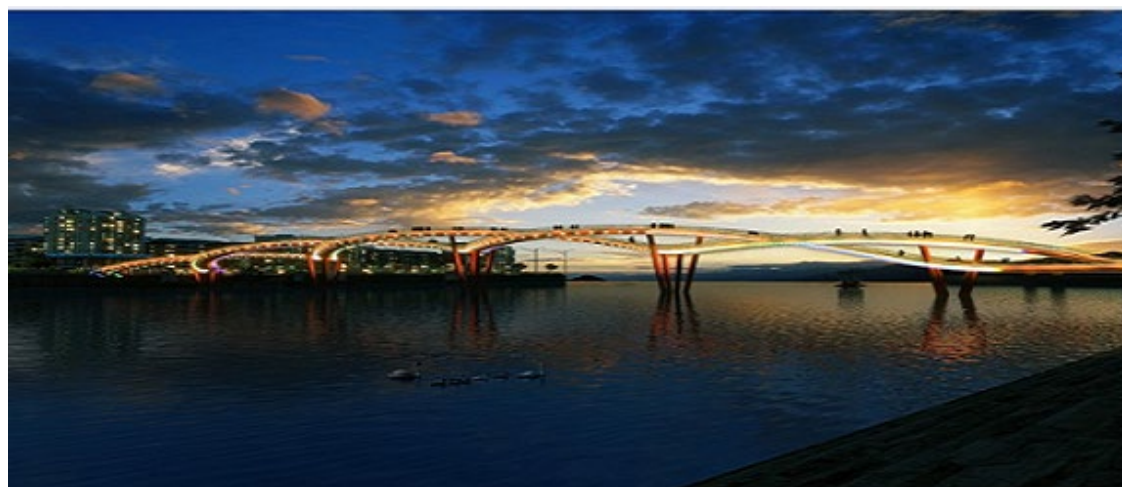


# Braingenethics Update

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## In the Literature

[The Elusive Ideal of Inclusiveness: Lessons From a Worldwide Survey of Neurologists on the Ethical Issues Raised by Whole-Genome Sequencing](#)

**Thierry Hurlimann et al.**

Within a research project entitled "Personalized medicine in the treatment of epilepsy", this paper discusses the scientific and ethical reasons for attempting to survey perspectives of neurologists worldwide, despite the lack, in many low- or middle-income countries, of access to genomic technologies. The authors concluded that inclusive recruitment remains a challenging, albeit necessary and legitimate, endeavor.

[The Autism "Epidemic": Ethical, Legal, and Social Issues in a Developmental](#)

## In The Media

[New Gene Interaction Appears to be Associated with Increased MS Risk](#)

**Sarah Avery**

A person carrying variants of two particular genes could be almost three times more likely to develop multiple sclerosis. This finding may facilitate the development of more accurate tests to identify those at greatest risk of MS and other autoimmune disorders.

[Schizophrenia's Unyielding Mysteries](#)

**Michael Balter**

It was hoped that massive genetic studies would help to discover the underlying causes of schizophrenia.

### [Spectrum Disorder](#)

**William Graf et al.**

Classic autism has gradually evolved into the concept of a larger "spectrum disorder." The growing practice of genetic testing in milder ASD raises ethical questions because of its uncertain scientific validity and limited clinical utility.

### [A Clinical Utility Study of Exome Sequencing Versus Conventional Genetic Testing in Pediatric Neurology.](#)

**Lisenka Vissers et al.**

Implementation of novel genetic diagnostic tests is generally driven by technological advances, but ignores aspects such as cost-effectiveness and impact on clinical management. This study examined some of those aspects and found data to support the use of whole exome screening in some pediatric neurologic cases.

### [Genomics, Health Disparities, and Missed Opportunities for the Nation's Research Agenda](#)

**Kathleen McGlone West et al.**

The authors suggest that the fact that the Human Genome Project was completed during a time of increased public focus on health disparities resulted in an inappropriate emphasis on the contribution of genomics to health disparities.

### [Comparative Approaches to Genetic Discrimination: Chasing Shadows?](#)

**Yann Joly et al.**

An increasing number of countries have adopted public policies to address genetic discrimination. This study offers a worldwide comparative review and typology of these approaches.

### [Is Privacy the Price of Precision Medicine?](#)

**Jennifer Kulynych**

A growing number of experts believe it

While there have been some promising results, findings have not yet lived up to their original expectations.

### [Identifying Genes Key to Human Memory: Insights From Genetics and Cognitive Neuroscience](#)

**Cognitive Neuroscience Society**

A study, part of the nascent field of "imaging genetics," has identified more than 100 genes important for human memory.

### [Food Choices Swayed by 'Behavior' Genes](#)

**Genetic Engineering & Biotechnology News**

Scientists have identified loci on oxytocin receptors and other genes implicated in behavioral and psychological traits that play a significant role in people's food choices and dietary habits.

Researchers hope results may inform prevention and treatment of disordered eating.

### [Scientists Believe the Secret of a Good Night's Sleep is All In Our Genes](#)

**Robin McKie**

Researchers may have uncovered new ways to explore how sleep works and why animals need it so badly.

### [New York Is Considering 'Genetic Stop And Frisk' DNA Testing Policy](#)

**Emma Whitford**

New York State is considering a policy of "familial searching," which would allow police to investigate the relatives of people whose DNA is recovered from crime scenes, but opponents warn that this will create a "suspect class" of citizens.

simply isn't possible to de-identify the genomic data and medical information needed for precision medicine. This realization is colliding with research norms that permit the relatively free exchange of patients' medical information.

## Genomics and Mental Health

### [Psychiatric Genomics and Mental Health Treatment: Setting the Ethical Agenda](#)

**Camillia Kong, Michael Dunn & Michael Parker**

Translating psychiatric genomics research into mental health care gives rise to distinct ethical challenges. The target article of [this month's issue of the American Journal of Bioethics](#) outlines some of these challenges, including concerns that genetic essentialism will exacerbate stigma towards mental disorders, and that genomics-focused approaches will shift attention away from the impacts of inequitable socioeconomic, political, and cultural structures on mental health. A number of commentaries respond to these issues, including one by CEER Director Paul Appelbaum and another by CEER faculty member Maya Sabatello.

### [Using Patterns of Genetic Association to Elucidate Shared Genetic Etiologies Across Psychiatric Disorders](#)

**Seung Bin Cho et al.**

Twin studies indicate that latent genetic factors overlap across comorbid psychiatric disorders. This study used a



## In the Literature, cont.

### [Cytoplasmic FMR1-Interacting Protein 2 Is a Major Genetic Factor Underlying Binge Eating](#)

**Stacey L. Kirkpatrick et al.**

Understanding the genetic basis of binge eating will inform its treatment, and that for several other comorbid disorders. This study identifies cytoplasmic FMR1-interacting protein 2 (Cyfip2) as a major genetic factor underlying binge eating, and provides a paradigm for future study design.

### [Mutation of the Human Circadian Clock Gene CRY1 in Familial Delayed Sleep Phase Disorder](#)

**Alina Patke et al.**

A variant in the core circadian clock gene CRY1 lengthens the period of circadian molecular rhythms, leading to Delayed Sleep Phase Disorder, and may affect a sizable additional portion of the population.

- Read more in [The Scientist](#).

### [Neuroscience Needs Behavior: Correcting a Reductionist Bias](#)

**John Krakauer et al.**

The authors offer a pluralistic notion of neuroscience when it comes to the brain-

novel approach to elucidate shared genetic factors across psychiatric outcomes, and finds that that method may be a promising approach for identifying the specific genetic etiologies underlying shared genetic variance.

[Genetic Assessment of Age-Associated Alzheimer Disease Risk: Development and Validation of a Polygenic Hazard Score](#)

**Rahul S. Desikan et al.**

Genetic information has not been integrated into an epidemiological framework for Alzheimer's Disease (AD) risk prediction. Going forward, measures of inherited genetic variation may prove useful for stratifying AD risk and as an enrichment strategy in therapeutic trials.

[NPAS1 and NPAS3 are Master Regulators of Neuropsychiatric Risk Genes](#)

**Jacob J. Michaelson et al.**

Aberrations of the protein NPAS3 have been established as robust genetic risk factors in major mental illness. Data from this study provide a clear view of the spectrum of genes regulated by NPAS3 and the related NPAS1, and provide insight into the nature of the molecular pathways that underlie diagnostically distinct neuropsychiatric conditions.

[Collaborative Meta-Analysis Finds No Evidence of a Strong Interaction Between Stress and 5-HTTLPR Genotype Contributing to the Development of Depression](#)

**Robert Culverhouse et al.**

How strongly is the S allele of the 5-HTTLPR serotonin transporter promoter region associated with increased risk of depression? This meta-analysis finds a more limited association than earlier widely-discussed studies suggested.

behavior relationship: behavioral work provides understanding, whereas neural interventions test causality.

## FDA and 23andMe

[FDA Approves Sale of Genetic Tests for Risk of Alzheimer's and Other Diseases](#)

**Meghana Keshavan**

The Food and Drug Administration granted approval to genetic testing company 23andMe to offer direct-to-consumer tests for risk of developing diseases such as Parkinson's, Alzheimer's, and celiac disease.

[Will At-Home Genetic Tests For Alzheimer's And Parkinson's Cause Unnecessary Worry?](#)

**Amanda McGowan**

Medical ethicist Arthur Caplan says that genetic risk information can be difficult to interpret for people who aren't medical professionals.

[The FDA's 23andMe Decision Will Also Change the Rules for All At-Home Medical Genetic Testing](#)

**Dave Gershgorn**

The FDA decision will have market ramifications well beyond 23andMe.

[FDA and 23andMe Change Their Facebook Status To 'In a Relationship'](#)

**Laura Herscher**

FDA and 23andMe's rocky relationship has recently turned rosy.

# Upcoming Events

May Seminar on Ethical, Legal and Social Implications of Genetics

**Monday, May 15th, 2017, 12:00 pm, Sergievsky Center Room PH19-201,  
Columbia University Medical Center**

This month's speaker is Dr. Catherine Bliss, an Assistant Professor at University of California San Francisco's School of Nursing Department of Social & Behavioral Sciences.

2017 Genomics and Society: Expanding the ELSI Universe (The 4th ELSI Congress)

**June 5-7, 2017, The Jackson Laboratory for Genomic Medicine and UConn  
Health, Farmington, CT**

This is the latest in a series of major conferences for ELSI researchers and others interested in the ethical, legal, and social implications of genomic research.



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