



CSHL in the News

Science Business Exchange  
[Mouse models of autism](#)  
October 20, 2011

Minneapolis Star Tribune  
[Is gene deletion at the core of autism?](#)  
October 17, 2011

Voice of America  
[Scientists study genetic basis of autism](#)  
October 7, 2011

Genetic Engineering News  
[Antisense therapy improves lifespan and motor function in mice with severe spinal muscular atrophy](#)  
October 6, 2011

SFARI.org  
[Two autism mouse models highlight gene dosage effects](#)  
October 6, 2011

Technology Review  
[Researchers engineer mice with anomalies linked to autism, schizophrenia](#)  
October 4, 2011

Agence France Press  
[Scientists study autistic mice for disease clues](#)  
October 3, 2011

The Scientist  
[A mouse model of autism?](#)  
October 3, 2011

Upcoming Events

11/5/11  
The Don Monti Memorial Research Foundation [Anniversary and Fundraiser](#)

11/15/11  
[The 6th Annual Double Helix Medals Dinner](#)

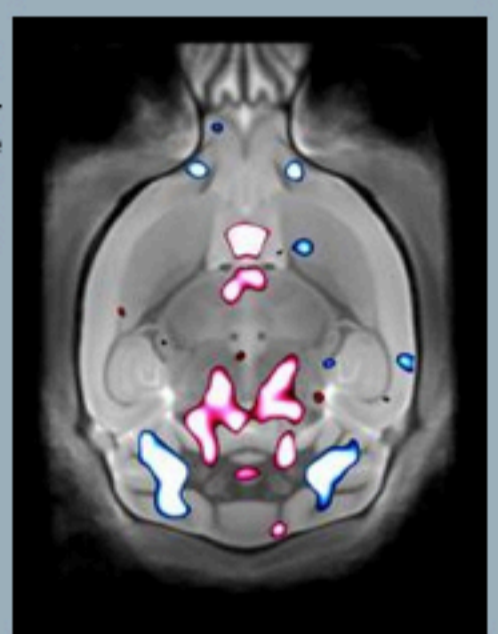
11/28/11 - 12/3/11  
Scotto Brothers and Cold Spring Harbor Laboratory  
[Insignia Steak and Sushi Grand Opening Charity Event](#)

12/11/11  
Long Island Open and Scholastic [Chess Tournament](#) at Cold Spring Harbor Laboratory

Engineered mice provide autism clues

Professor Alea Mills' lab has created a mouse model of one of the most common genetic aberrations seen in human autism - deletion of a small region on chromosome 16 containing 27 genes. In a just-published paper that received wide media attention, they provide the first functional evidence that mice inheriting fewer copies of the genes in this region have characteristics resembling those seen in children diagnosed with autism.

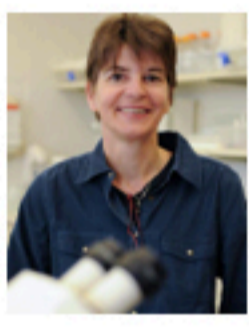
The team observed that mice with these deletions displayed some of the behavioral hallmarks of autism including hyperactivity, difficulty adapting to a new environment, sleeping deficits, and restricted, repetitive behaviors. It's not yet known which of the 27 genes in the deleted region are involved in the observed pathologies, although the team was able to use MRI to identify eight brain regions whose function appeared to be altered in those affected.



Brain regions altered in 'autistic' mice

Protein implicated in mental retardation helps adjust synapse strength

Lightning-quick changes in the strength of synapses - tiny gaps across which nerve cells in the brain communicate - are thought to play a vital role in learning and memory. Professor Linda Van Aelst's team is interested in how flaws in the mechanisms regulating this plasticity are involved in cognitive disorders. In a new paper, they lay bare a signaling pathway that results in long-term depression (LTD), a form of plasticity in which synaptic strength is suppressed. It entails synthesis of a protein called oligophrenin 1, notable because it is associated with X-linked mental retardation and other cognitive and behavioral deficits.



Long-term correction of spinal muscular atrophy

Professor Adrian Krainer's latest work has paved the way for a potential "antisense" drug for the neuromuscular disease spinal muscular atrophy (SMA) to soon enter Phase I clinical trials. In mice that have the equivalent of severe human SMA, the drug extended lifespan by 25-fold. In contrast to the previous belief that SMA exclusively affects motor neurons, the study suggests that defects in peripheral tissues such as liver, heart, etc., might also contribute SMA pathology in severely affected patients.



You too can hold a piece of history in your hands

A treasure trove of documents produced by two of the seminal figures in the history of modern biology - Nobelists James D. Watson and Sydney Brenner - will soon be accessible in a highly intimate way to anyone, anywhere in the world equipped with a computer and printer. CSHL's Library and Archives and The Wellcome Trust are digitizing these vital collections, which also include a recently uncovered stack of letters written by Francis Crick.



Drs. Watson & Crick

Calling all (future) Cold Spring Harbor Fellows!

The Laboratory has issued its annual call for applications for Cold Spring Harbor Fellowships. It's an opportunity for outstanding young scientists who have recently received their PhD or MD to pursue independent research before taking a faculty position (and perhaps even winning the Nobel Prize as former Fellow Carol Greider did in 2008!) Fellows have their own lab space and direct their own research under the guidance of a senior CSHL faculty member. To apply, follow the "Fellowship Openings" links on the CSHL homepage!

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Founded in 1890, Cold Spring Harbor Laboratory (CSHL) has shaped contemporary biomedical research and education with programs in cancer, neuroscience, plant biology and quantitative biology. CSHL is ranked number one in the world by Thomson Reuters for impact of its research in molecular biology and genetics. The Laboratory has been home to eight Nobel Prize winners. Today, CSHL's multidisciplinary scientific community is more than 350 scientists strong and its Meetings & Courses program hosts more than 11,000 scientists from around the world each year. Tens of thousands more benefit from the research, reviews, and ideas published in journals and books distributed internationally by CSHL Press. The Laboratory's education arm also includes a graduate school and programs for undergraduates as well as middle and high school students and teachers. CSHL is a private, not-for-profit institution on the north shore of Long Island.