



CSHL in the News

Genome Technology magazine
Research consortium charts functional genomics of seed plants

Mutations identified that could improve prognosis for patients with rare leukemia
February 2012

GENengnews.com
Academic centers may face the pinch of budgetary constraints and data deluge
February 21, 2012

Scientific American
Jumping genes in the brain ensure that even identical twins are different
February 14, 2012

Times Beacon Record
Dr. Adrian Krainer: working to cure spinal muscular atrophy
February 14, 2012

The New York Times
The scientist was a figment, but his work was real
February 13, 2012

MyLITV.COM/FIOS1
Cold Spring Harbor Laboratory Association
February 13, 2012

Read more news...

Upcoming Events

03/02/12
Joni Gladowski Breast Cancer Foundation's First Annual Winter Classic
(All proceeds will benefit CSHL research)

03/15 and 03/21
Application deadlines for Professor For a Day

03/23/12
Concert: Charlie Albright

03/30/12
Deadline for submitting Partners for the Future program nominations

04/16/12
Public Lecture in partnership with Down Syndrome Connection of Long Island

04/19/12
The Laboratory @ Your Library: Discussion of "The Immortal Life of Henrietta Lacks"

04/21/12
Labapalooza!



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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.

PTEN in the brain: roles in autism and stroke

After years in the limelight as a powerful anti-cancer agent, the PTEN gene is gaining a new reputation as a critical player in neuronal processes and in various brain disorders, as highlighted by two recent CSHL papers.

In the first study, Professor Tony Zador's team describes how a mutation in PTEN leads to hyperconnectivity in the brain's auditory cortex. The findings explain how PTEN mutations in some autistic individuals lead to difficulties in processing auditory cues and paying spatial attention to sound. Treatment with rapamycin, a drug currently in use as an immunosuppressant, blocks this hyperconnectivity in mice; so this drug could potentially be a good therapeutic agent for some cases of PTEN-mediated disorders.



In the second study, Asst. Professor Lloyd Trotman and collaborators in Australia have detailed an aspect of PTEN regulation in neurons that could prove to be useful in designing a therapy for stroke. The researchers have found that the relocation of PTEN protein from a neuron's cytoplasm to its nucleus helps the neuron survive the sudden loss in blood supply that occurs after stroke. So drugs that block PTEN activity in the cytoplasm might potentially be beneficial to stroke patients.

Some 'big' ideas about biofuels; genomics in the Cloud

A few weeks ago, online magazine BigThink.com invited CSHL researchers Rob Martienssen and Michael Schatz (@mike_schatz on Twitter) to explain how they're applying their research to solve some very big problems.



R. Martienssen

In this video, Martienssen explains how he's using some of the principles of epigenetics that his group has uncovered to "persuade" a tiny weed to produce biofuel. In another video, Schatz talks about his efforts to modify Google's "secret sauce" to combat the DNA data deluge caused by the revolution in genome sequencing.



M. Schatz

Error messages in cancer: a splicing protein's role

Cancer cells are chock-full of molecular messages that are riddled with errors because of missteps in an RNA editing process called splicing. Professor Adrian Krainer has been investigating how a splicing protein, SRSF1, that is found at abnormally high levels in breast and lung cancer, initiates tumor growth and how its levels get boosted in cancer cells.



An artistic rendering of splicing in breast cancer

Two recent studies from his group have partly answered these questions, bringing the scientists closer to their goal of using this information to design new anti-cancer strategies. A key finding in both studies is a close relationship between SRSF1 and the potent cancer-causing gene Myc, which is mutated in more than half of all human cancers.