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[Scientists create Algorithm to detect gene mutations](#)
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[What neuronal connections in your brain say about your stress response](#)
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[Cold Spring Harbor Laboratory's Hammell wins Rita Allen Award for work on jumping genes](#)
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Professor [Partha Mitra](#) - [Nature High-risk brain research wins NSF backing](#)
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... Upcoming Events

Science Walking Tour
[Sunday, September 7](#)
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[Christina Renna Foundation 2014 Walk-A-Thon and Blood Drive](#)
Sunday, September 21

[Art and Science Benefit](#)
Saturday, September 27

Public Lecture: Neuroscience and Creativity
Thursday, October 23

Uncovering a hidden genetic landscape in autism, OCD

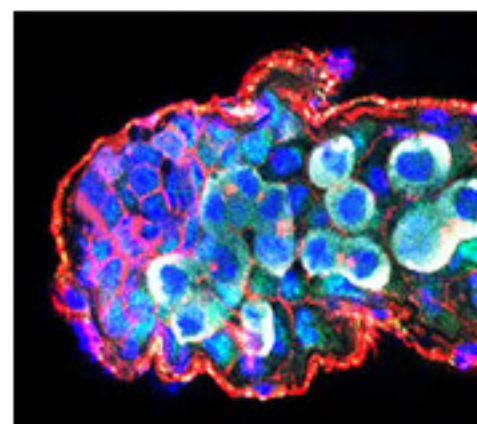
Scientists are scouring the three billion DNA letters in the human genome, searching for changes that cause diseases like autism and cancer, and they've discovered many important mutations. Still, one type - called "indels" - has remained largely hidden from view. Now, a team of CSHL scientists has developed a **method** to reveal indels, making it possible to discover new mutations associated with disease.



Indels are the addition or deletion of one or more letters in the genome. These often tiny changes cause a shift in the genetic code, rendering proteins dysfunctional and often causing disease. Led by CSHL Assistant Professor **Mike Schatz**, along with Professor **Mike Wigler** and Assistant Professors **Gholson Lyon** and **Ivan Iossifov**, the team created a computer formula to identify indels. They used the method to look at families with autism and discovered dozens of new mutations associated with the disease. Read more about this powerful new method [here](#).

New genetic basis for sex determination

Any high school biology student will tell you that the genetic difference between men and women comes down to the X and Y sex chromosomes. But a team of researchers at CSHL has found **another genetic basis** for sex determination, in fruit flies. The team, including lead author **Delphine Fagegaltier**, Ph.D., discovered that a class of very small genes called microRNAs are involved as the fly develops and matures. Even during adulthood, microRNAs send signals that ensure fertility and allow eggs and sperm to develop. In fact, the researchers found that one microRNA preserves sexual identity in male and female flies. Learn more [here](#).



NSF grants to Albeanu, Mitra support innovative brain research

The **National Science Foundation** has awarded Early Concept Grants for Exploratory Research (**EAGER**) to CSHL Assistant Professor **Florin Albeanu** and Professor **Partha Mitra**. As part of President Barack Obama's multi-year **BRAIN Initiative**, EAGER awards aim to answer fundamental questions about how the brain works. Albeanu and Mitra are working to develop new technologies that will provide insight into how neural circuits are configured and how they process and store complex information to control behavior, learning, and memory. Read more [here](#).



September is Pediatric Cancer Awareness Month

This year, nearly 16,000 kids will be diagnosed with cancer. During the month of September, Cold Spring Harbor Laboratory will join groups across the country to raise awareness about the need for cures. Check out the **#StepUp campaign**, urging Congress to increase research funding or join in a local event like **Christina Renna Foundation Walk for a Cure**, which benefits pediatric cancer research at CSHL.



LI2DAY Walk raises \$525,000 for women's cancers

For the last 10 years, the **LI2DAY walk** has raised funds for breast cancer research and support for patients. This year, the walk expanded its mission to include all women's cancers, raising \$525,000 from more than 600 participants. At a recent luncheon, CSHL was awarded \$22,800 which will support breast cancer research in Associate Professor **Mikala Egeblad's** laboratory. Learn more [here](#).

