



CSHL in the News

- Businessweek**
[DNA's 'Junk' Now Seen as Lever Controlling Future Health](#)
September 6, 2012
- The New York Times**
[Bits of Mystery DNA, Far From 'Junk', Play Crucial Role](#)
September 5, 2012
- The Washington Post**
["Junk DNA" Concept Debunked by New Analysis of Human Genome](#)
September 5, 2012
- The Wall Street Journal**
[New DNA Encyclopedia Shows Complex Inner Workings](#)
September 5, 2012
- NBC News**
[New DNA Project Shows Us Living Beyond Our Genes](#)
September 5, 2012
- Newsday**
[LI Scientists: New DNA Secrets Revealed](#)
September 5, 2012
- North County Times**
[Isis Pharma Helps Develop New Genetic Disease Model](#)
August 14, 2012

"In Quotes"

Emily Hodges, quoted in **Businessweek**
[Ancient Human Kin's DNA Code Illuminates Rise of Brains](#)
September 5, 2012

Upcoming Events

- September 1 - October 31
[Support Rett Syndrome Research at CSHL](#)
- September 9
[Long Island Cruizin' for a Cure for Prostate Cancer Research](#)
- September 11
[11th Annual Women's Partnership for Science Lecture & Luncheon](#)
- September 22
[2012 Diane Emdin Sachs 9th Annual Memorial Walk for Lung Cancer Research](#)
- September 23
[Christina Renna Foundation 2012 Walk-A-Thon and Blood Drive for Childhood Cancer Research](#)
- September 29
[Science Walking Tour](#)
- October 1-31
[Panera Bread Pink Ribbon Bagels@ campaign to support LI breast cancer organizations](#)

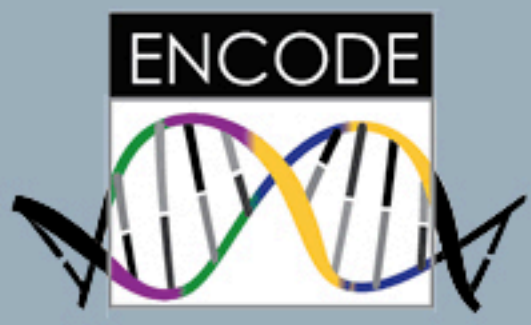
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Definition of the 'gene' called into question, ENCODE scientists say

The ENCODE (Encyclopedia of DNA Elements) project has released results of a massive multiyear, multinational study that challenges how we think of genes. Professor Tom Gingeras, one of ENCODE's principal investigators, led a team whose research, just reported in *Nature*, indicates that three-quarters of our genome is capable of being transcribed into RNA, far more than the fraction that specifically encodes proteins. Intriguingly, many disease-causing mutations are found within the non-coding RNA transcripts, a fact likely to have implications relating to their contribution to complex genetic diseases.



A total of 32 institutions in 5 countries were involved in this 2nd phase of the ENCODE research, with data appearing in 30 papers across 3 journals (*Nature*, *Genome Research*, and *Genome Biology*).
Graphic: 150 years of shifting conceptions of the gene, a history in which CSHL has made major contributions.

Can a 'storm' of awakened transposons cause Lou Gehrig's disease?

Associate Professor Josh Dubnau and Assistant Professor Molly Hammell have arrived at a novel hypothesis about disease pathology in **ALS** (also known as Lou Gehrig's disease) that may also shed light on several other devastating neurodegenerative disorders, including **Alzheimer's**. They propose in a paper in *PLoS One* that dormant transposable elements - "jumping genes" - awaken in brain cells, setting off a "storm" that wreaks genetic havoc capable of causing cell death. The telltale clue, as we explain, is a protein called TDP-43, which often associates with RNAs generated by transposons.

A new way to model illnesses caused by splicing errors

After making major strides in developing an approach to reverse disease pathology in spinal muscular atrophy, or **SMA** - the leading killer among childhood genetic disorders - Professor Adrian Krainer's team reports it has harnessed the same antisense-based technology for the opposite purpose: for inducing pathology in laboratory animals to achieve a more detailed understanding of disease progression and to test new therapeutics. Read more about this exciting development [here](#).



Microbiologists honor pioneering CSHL research

The **American Society for Microbiology** chose the end of the Bacteria, Archaea and Phage meeting to announce the selection of CSHL as one of their **Milestones in Microbiology** sites - an honor marked with a commemorative plaque. The timing was deliberate and significant as it appropriately recognized the role of the annual Phage Course, which was started in 1945 by Max Delbrück, as well as research at the Laboratory itself in opening the frontiers of molecular biology and genetics.



New! Now you can experience the Harbor Transcript magazine in a whole new way -- on your iPad



Stories about CSHL's latest scientific advances and profiles of the individual investigators behind the discoveries now come alive on interactive pages! All this for free at the iTunes store, where you can also download other apps like the DNA Learning Center's 3-d Brain. **Please share the experience with your friends!**

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 360 scientists strong and its Meetings & Courses program hosts more than 12,500 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.