



CSHL in the News

Western Farm Press

[Wheat Breakthrough a Path to Counter Food Disaster](#)
January 29, 2013

Genetic Engineering and Biotechnology News

[Pancreatic Cancer Gets \\$25M Boost](#)
January 23, 2013

ABC Nightline

[Food Fraud? Watchdog Group Raises Concerns](#)
January 22, 2013

McGill blogs - Office for Science & Society

[What Are We to Make of Dr. Watson's Article in 'Open Biology'. Re: Antioxidants May Have Caused More Cancers Than Those Cured?](#)
January 11, 2013

The Guardian

[The Antioxidant Myth is Too Easy to Swallow](#)
January 10, 2013

Reuters

[DNA Pioneer James Watson Takes Aim at "Cancer Establishments"](#)
January 9, 2013

Garden City News

[Panera Bread Raises Funds for Breast Cancer Groups](#)
January 3, 2013

"In Quotes"

Professor Marja Timmermans quoted in [Rutgers Today - Rutgers Professor Recognized for Revolutionizing Agriculture](#)
January 21, 2013

Alumni News

Research of former Watson School student Elizabeth Murchison featured in [The New York Times Raising Devils in Seclusion](#)
January 21, 2013

Research of former Watson School student Yaniv Erlich featured in [The New York Times Web Hunt for DNA Sequences Leaves Privacy Compromised](#)
January 17, 2013

Upcoming Events

[Public Lecture - Dr. Richard Leakey: Hominid Evolution - How it has shaped human behavior, ethics and morality](#)
Wednesday, February 13

[Joni Gladowsky Breast Cancer Foundation - Second Annual Winter Classic](#)
Friday, March 8

[Saturday DNA!](#) Perform hands-on experiments and learn about techniques and developments in science. Open to children, teens and adults. Reservations required.
Saturday, March 9

[CSHL Open House](#)
Saturday, March 23

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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 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.

Watson takes aim at curing late-stage cancers

In a paper published in the open-access journal of The Royal Society, *Open Biology*, Nobel laureate and Chancellor Emeritus of CSHL James D. Watson outlines a novel hypothesis for tackling late-stage metastatic cancers. At the fulcrum of this hypothesis is the role antioxidants play in promoting cancer progression.

The common refrain heard by the public is that foods containing antioxidants, such as blueberries and red wine, are good for you. Antioxidants control DNA and protein-damaging molecules known as reactive oxygen species (ROS). However, ROS have a dual role. Watson calls ROS "a positive force for life" because of their role in apoptosis – an internal program that highly stressed cells use to commit suicide by programmed cell death. One role of apoptosis is to weed out biological dysfunction that poses a threat to the survival of organisms, including cancer cells. The shared characteristics among cancers treated with chemotherapeutic agents such as Taxol, radiation, and cancers driven by mutated proteins such as RAS and MYC are a ROS-dependent cell-killing mechanism or high levels of ROS-destroying antioxidants.



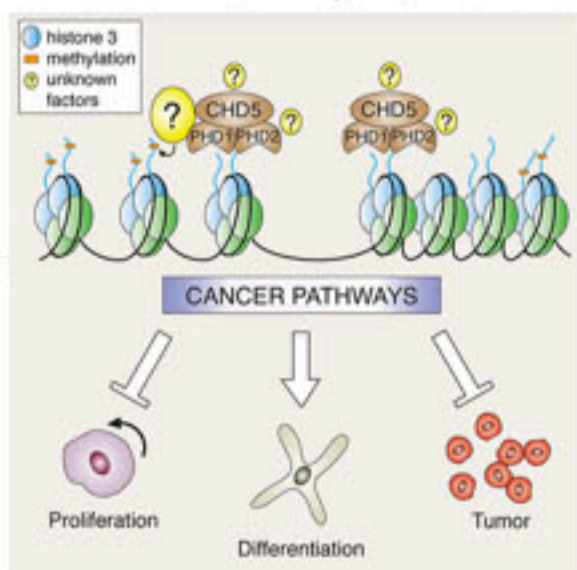
Watson concludes his paper with a call to researchers to consider a proposition he regards grossly underexplored: "Unless we can find ways of reducing antioxidant levels, late-stage cancer 10 years from now will be as incurable as it is today."

Mechanism of anti-tumor protein solved

How the master tumor-suppressor protein Chd5 exerts its effects has largely remained unknown, until now. Professor **Alea Mills**, who discovered Chd5 in 2007, and colleagues at CSHL have published results in *Cell Reports* that reveal its mechanism of action.

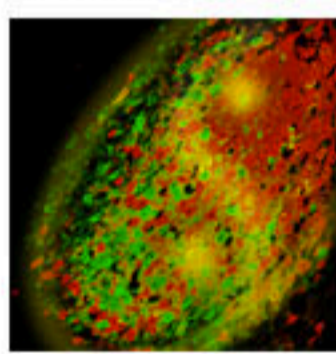
It turns out Chd5 binds to another protein that is important in keeping DNA organized in tightly or loosely packed bundles of chromatin, essentially keeping genes switched on or off depending on the tightness of the bundles. When Chd5 is mutated or missing, it cannot bind to its partner any more, altering patterns of gene expression. Given the profusion of cancer pathways that are affected by Chd5 in different cancer types, "figuring out the mechanics of how Chd5 works to prevent cancer can directly impact the treatment of a diverse array of human cancers," says Mills.

[See video here](#)



Cells that form part of brain's 'fear circuit' identified

Neuroscientists at CSHL have located cells that form part of the brain's process for storing fear memory and responses. In a new study published in *Nature Neuroscience*, Assistant Professor **Bo Li** and collaborator Professor **Josh Huang** show that these cells are located in a subdivision of a pair of structures called the amygdalae that lie deep in the mammalian brain.



They found that somatostatin-positive (SOM+) neurons were particularly important for this process. In studying these mechanisms the team's long-term goal is to understand changes that take place in fear-learning disorders such as post-traumatic stress disorder (PTSD).

Events raise funds & awareness for vital research at CSHL

The **Christina Renna Foundation** raised \$20,000 for pediatric cancer research at CSHL during its sixth annual Angel's Wish Gala on January 11, 2013. The funds will be used to support cancer research in the laboratory of CSHL Professor **Dr. Linda Van Aelst**. The Foundation was established in honor of Christina Renna, a Long Island teenager who died of soft tissue cancer in January 2007, and is dedicated to supporting children's cancer research.



The **3rd annual Chess Benefit at CSHL** brought 47 participants from the Long Island and NYC area to test their chess skills on the same grounds upon which world-class scientists test biological processes. Supported by NMS Management and assisted in its fruition by **LI Chess Mates** founder and head-coach, Grandmaster Gennady Sagalchik, the tournament took place on Sunday, January 13th and was held to raise awareness of autism and funds for research.

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