Prostate cancer discovery could improve diagnosis, treatment

Only 1% of the 250,000 American men diagnosed with prostate cancer this year will develop lethal, metastatic disease, with the rest of these diagnosed developing non-lethal cancer. CSHL Assistant Professor Loyd F. Friend and his team have taken a step forward toward being able to distinguish between these two groups by asking whether there are specific rules and conditions for prostate cancer to become lethal.

Their latest study in mouse models shows that prostate cancer outcome is dictated by the relationship between two genes, Pten and Phosphatase, which normally act as tumor suppressors but become mutated in cancer. The loss of these two genes and the "master tumor suppressor Sestrin is a hallmark feature of the majority of metastatic prostate cancers, the team says - in a future test to measure the activity levels of these genes might help determine whether a patient's cancer will turn metastatic.

A powerful new drug candidate for leukemia

Researchers led by CSHL Fellows Alex Lesho have used a new approach based on cutting-edge RNA interference (RNAi) technology to identify a novel potential treatment for acute myeloid leukemia (AML), which is currently incurable in 70% of those diagnosed with it. Having identified a promising drug target in AML, they have also successfully tested a candidate drug molecule in preclinical animal models. Currently in pharmaceutical development, the drug is expected to enter human trials within two years. The study appeared in Nature on August 3, 2011.

Chaperones keep communication lines open in plants

In plants and all other living things, development "is all about communication," according to CSHL Professor David Deyl. His previous work showed how individual plant cells communicate with one another through microscopic channels called plasmodesmata. In paper published in Science last week, his group showed how molecules called chaperones assist signaling processes by controlling their traffic channels. By doing so, the chaperones help plants maintain their populations of growth-regulating stem cells.

CSHL cancer research benefits from summer events on LI

Long Island's summer brings walkers, runners and other fitness enthusiasts burned calories this summer for a great cause -- to raise funds for cancer research and provide a boost to CSHL researchers on the hunt for better tools to diagnose and treat cancer. Funds raised by The Long Island 2 Day Walk will go toward Assistant Professor Mikhail Kotliarov's work in identifying new therapeutic targets in breast cancer. Assistant Professor Rafaela Sobol, who is working to identify the basis of drug resistance in non-small cell lung cancer, will receive funds raised by Swim Across America, in which she was also a participant.

CSHL 2010 Annual Report Yearbook now online

The CSHL 2010 Annual Report Yearbook is also now online. Download your copy today for a comprehensive look through the research advances led by all of the 46 laboratories at CSHL, the accomplishments of CSHL's diverse educational divisions including the DNA Learning Center, CSHL Press, and the Meetings and Courses program; and CSHL's Board. Also within are memories of CSHL Trustee Charles E. Harris III and George W. Cullers Jr., former president of the CSHL Association, who were honored, respectively, by CSHL's President Bruce Stillman and Dr. James D. Watson.