A promising new approach to treat HER2-positive breast cancer

About 1 in 8 women will be diagnosed with breast cancer in their lifetime. For nearly 25% of these women, the cancer will be HER2 positive, a particularly aggressive form of breast cancer that develops resistance even to targeted treatments, like Herceptin, within a year.

This month, a team led by Professor Nick Tonks made a discovery that they hope will lead to the development of a powerful new way of treating HER2-positive breast cancer. The team found that a protein called PTP1B plays a critical role in the development of these tumors, and is a promising drug target. Later this year, early-stage human trials will begin for one such drug, called Tropodisomy, in collaboration with clinicians at the Memorial Sloan Kettering Cancer Center of NorthShore-LIJ. Find out more.

Dealing with stress: to cope or to quit?

We all deal with stress differently. Many learn to adapt, but about 20% of us will become depressed. New research led by Associate Professor Bo Li provides a major insight into the neuronal basis of depression. Li and his team have identified specific neurons in the brain that determine how a mouse responds to stress—whether with resilience or defeat. What's more, this discovery helps explain how certain types of experimental treatment for depression—deep brain stimulation—works, and suggests it can be even more effectively targeted. Find out more.

Male infertility: it's all about the package

Infertility is generally thought of as a woman's problem, but more than 3 million U.S. men also experience it. This month, a team led by Professor Atea Mills described a key event during sperm development that is essential for male fertility. They found that action of a protein called Chd1 is essential in enabling the vast amount of DNA in a full genome to fit within the minuscule sperm cell. Find out more.

Big Data meets DNA: Free Public Lecture

Biotechnology is in the middle of an incredible transition, driven by the ever-increasing speed and falling cost of sequencing DNA. The new technologies that make this possible are used to study the genetics of diseases like cancer and autism, to probe the natural world, and develop more robust crops and vaccines. Find out what's coming in the next 10 years and beyond at a free public lecture by Assistant Professor Mike Schatz. Mark your calendars: Wednesday, June 18, 7 pm. Find out more and RSVP today.

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Stay Connected

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Upcoming Events

LIDAY Walk for Breast Cancer Saturday, June 7

Science Weekends Tours Saturday, June 14 & 28

21st Annual Golf Tournament Tuesday, June 17

Public Lecture: BIG DATA - How biological data science can improve our health, foods and energy Wednesday, June 18

Public Lecture: Understanding Autism Spectrum Disorder - focus on the facts Tuesday, June 24

2014 DNAi: Summer Camp Registration now open

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Founded in 1969, Cold Spring Harbor Laboratory (CSHL) has shaped contemporary biomedical research and education with programs in cancer research, neuroscience, plant biology, and quantitative biology. CSHL is ranked number one in the world by Thomson Reuters for the impact of its research in molecular biology and genetics. CSHL’s multidisciplinary scientific community is made up of 600 researchers and technicians strong and its Meetings & Courses program trains more than 12,000 scientists from around the world each year to its Long Island campus and its China center. For more information, visit cshl.org.