Founded in 1890, Cold Spring Harbor Laboratory (CSHL) is a preeminent international research institution, achieving breakthroughs in molecular biology and genetics and enhancing scientific knowledge worldwide.

**RESEARCH**

United by the goal of alleviating major causes of human suffering, CSHL's 600 researchers and technicians focus on these areas:

- 50% Cancer
- 25% Neuroscience
- 17% Genomics & Quantitative Biology
- 8% Plant Biology

**FACTS & FIGURES**

- Home to eight Nobel laureates, including James D. Watson, co-discoverer of the DNA double helix
- National Cancer Institute-designated Cancer Center
- Test facility delivers drug candidates to biotech industry
- Incubator for more than 25 biotechnology start-ups
- Highest rating from Charity Navigator

Annual Operating Budget: $155 million
Endowment: $470 million
Research laboratories: 54
Postdoctoral fellows: 150
Graduate students: 100
Total employees & students: 1,100
Annual Meetings & Courses Attendees: 12,000
Annual DNA Learning Center Students: 32,000

**EDUCATION**

CSHL is recognized as a pioneer in science education, training professional scientists, students and teachers:

**Watson School of Biological Sciences**: trains the next generation of scientists through an innovative Ph.D. program that fully funds the doctoral research of each student.

**Meetings & Courses Program**: attracts 12,000 scientists annually from around the world to learn the latest technologies and share advances in biological research.

**Banbury Center**: a think-tank that convenes global experts to guide science and public policy.

**DNA Learning Center**: produces web-based multimedia tools, delivers hands-on learning experiences to 32,000 middle and high school students every year, and trains teachers; over 580,000 students have been taught since 1988.

**CSHL Press**: publishes scientific journals, books, and online resources including a preprint service, used by more than 2,000 academic, government, and corporate research institutions and hundreds of thousands of scientists worldwide.
125+ YEARS OF BREAKTHROUGHS

2016  FDA approves Spinraza™—a drug based on CSHL insights into alternative RNA splicing—used to treat spinal muscular atrophy (SMA), a childhood neurodegenerative disease.

2016  Clinical trial initiated on a PTP1B inhibitor for treatment of metastatic breast cancer

2015  FDA approves breast cancer drug that works on cyclin D-dependent kinase; based on CSHL insights into the role of cyclin D in cancer progression.

2014  Toolkit of plant gene variations is developed, allowing breeders to maximize yield of tomato and other crops.

2011  Drug target discovered for lethal form of Acute Myeloid Leukemia (AML).

2011  First genomic profiling of single cancer cells completed.

2007  Exome sequencing developed; the most common tool for identifying genetic mutations in disease.

2007  Link identified between spontaneous genetic mutations & autism.

2002  shRNA technology developed to switch on & off any gene in a cell.

1994  Process of genome replication recreated for first time in test tube.

1992  Damage to ends of chromosomes (telomeres) linked to cell aging.

1988  Cancer-causing genes shown to interact with cancer-suppressing genes, overriding signals that keep cell growth in check.

1982  First human cancer-causing “oncogene” identified.

1977  Discovery that genes can be discontinuous or “split” reveals RNA splicing mechanism, an essential process for editing & communicating genetic information.

1952  DNA revealed as genetic material in bacteriophage.

1951  “Jumping Genes” discovered in plants, proving that genomes are subject to rearrangement.

1945  Wartime penicillin production significantly increased by isolation of better strain of penicillium.

1933  Prolactin (a hormone for milk secretion) identified and purified.

1929  ACTH, a key hormone produced by the pituitary gland, is isolated, benefiting Addison disease patients suffering from insufficient steroid production.

1908  Modern agriculture revolutionized by discovery of hybrid vigor in corn.

$100 MILLION ANNUAL RESEARCH BUDGET

CANCER
Understanding fundamental cellular processes that are the basis of life, and how they go wrong in cancer. Improving diagnosis and treatments of all major cancers: brain, breast, colon, leukemia, lung, lymphoma, melanoma, ovarian, pancreatic, and prostate.

NEUROSCIENCE
Exploring the brain to identify the neural networks involved in sensory processing, cognition, and decision-making. Providing insight into disorders such as Alzheimer’s, autism, schizophrenia, bipolar and depression.

GENOMICS & QUANTITATIVE BIOLOGY
Using cutting-edge technology to read the genome of organisms, tumors, or even single cells. Developing innovative data analysis tools to develop disease diagnostics and therapeutics.

PLANT BIOLOGY
Investigating the mechanisms of plant development and genetics. Improving crop yields, increasing biodiversity, and developing biofuels.