

A Lab like no other

“We are willing to
take risks
on young scientists”

Chief Operating Officer

“Every person and
every discovery **matters**”

Nobel laureate

“I help **make**
discoveries”

Senior Mechanic, Facilities

“All are **family** here”

Blackford Bar Barista

On any summer afternoon, you can expect to find Blackford lawn teeming with people. The familiar sight offers a glimpse into the soul of an institution that has stood at the center of Biology for 125 years. Laboratory grounds crew and facilities staff intermingle with graduate students and Nobel prize-winning scientists from around the globe. Snippets of conversations can be heard as you walk across the grass, but to a visitor, it would be hard to know if the speaker is president of the Lab or an editor at the CSHL Press. The Lab has a unique culture of equality

that pervades every facet of campus life. It is characterized by youthfulness and energy, and infused with a deep sense of history and purpose.

The Lab stands “at the crossroads of Biology,” a place for researchers from around the world to meet and discuss their latest results and share excitement about developments in their fields. Over the decades, casual interactions—over coffee or a beer, or on the volleyball courts, or at a picnic on the beach—have led to unexpected and



Informality not only spurs scientific collaboration, it also breeds fun. At any moment, there are usually a half-dozen employee bands regularly playing gigs on campus or at local pubs.

even historic scientific collaborations. It is a culture that has emerged not accidentally but as a result of shared values placed on passion, excellence, competitiveness and equality.

“A buzz”

For longtime CSHL Director Jim Watson (now Chancellor Emeritus), two keys to success in science are open discussion and collaboration. So he kept the Lab free of the formal departments that divide up the efforts of scientists at nearly all other academic institutions. The absence of departmental silos has paid dividends in fostering interaction.

“There is an energy here, a buzz, that I’ve never felt anywhere else. The Lab is one of the most interactive places in the world,” says CSHL Director of Research David L. Spector. It affects the way people do science. It brings researchers together from different areas: neuroscientists and plant scientists sharing equipment, geneticists and quantitative biologists collaborating on projects that might never have existed but for a chance conversation. “We have some of the most unexpected scientific pairings, which provide an opening for transformative science,” says Spector.



Chris Hammell, an assistant professor, studies developmental timing in the model organism *C. elegans*. One might wonder what this tiny roundworm has to offer those who study human neuropsychiatric disorders. Yet Hammell has recently entered into a productive collaboration with Professor Dick McCombie to identify some of the genes involved in schizophrenia.

“We were sitting at dinner and Dick was talking about how his genomic studies have generated a long list of candidate genes that may be responsible for mental disorders like schizophrenia,” Hammell recalls. But testing each gene to see if it affected neuronal function was a hurdle. “It was suddenly obvious—Dick and I realized we

Meetings + Research

CSHL’s unique formula

Scientists from around the globe are drawn to the Lab to discuss their latest—often unpublished—discoveries. For a snapshot, take a look at a year in numbers:

WHAT



WHO

BEYOND the SCIENCE



could use worms to screen these gene candidates to see if they affect neural function in the worm.” For McCombie, the advantages are clear. “To test each gene in mice would take years and the cost would be tremendous. We can do this in worms in about two weeks at the cost of less than \$10 per gene.”

Cooperation extends not only laterally, across specialties, but vertically, among researchers just starting out and more experienced colleagues. When Carol Greider (now on the faculty at Johns Hopkins) came to Cold Spring Harbor Laboratory in 1988, she was professionally young—“little” in her own words. She came here as a Fellow, a kind of junior faculty position that bypasses the traditional postdoctoral training period. No one knew that in 21 years Greider would win a Nobel Prize. And yet, “everybody at the Lab wanted to help me out. We were all equals, working toward the same goal: making discoveries that would change the face of science.”

“We are all Cold Spring Harbor Laboratory”

The highly interactive and collaborative nature of the Lab stems from a deep sense of community, which is shared as much by support personnel as scientists. “We are all a team,” says Glen DiMaria, Senior HVAC Mechanic in CSHL Facilities. “I am a part of it all. I help make discoveries happen.” These thoughts resonate throughout the Lab. As CSHL President and CEO Bruce Stillman points out, “We are all here for the same reason. We are all Cold Spring Harbor Laboratory.”

It is a feeling that affects the way people work. Postdocs and graduate students in labs everywhere will routinely spend the evening at lab benches. Less common is something seen often at CSHL: the willingness of technicians and other staff to stay and work alongside them. “My day at CSHL doesn’t end at 5 o’clock,” DiMaria says, speaking for many others. The camaraderie that has developed takes tangible form in the many musical bands organized spontaneously over the years. DiMaria’s current band consists of a professor, a graduate student, a lab technician, and a member of the grounds crew.

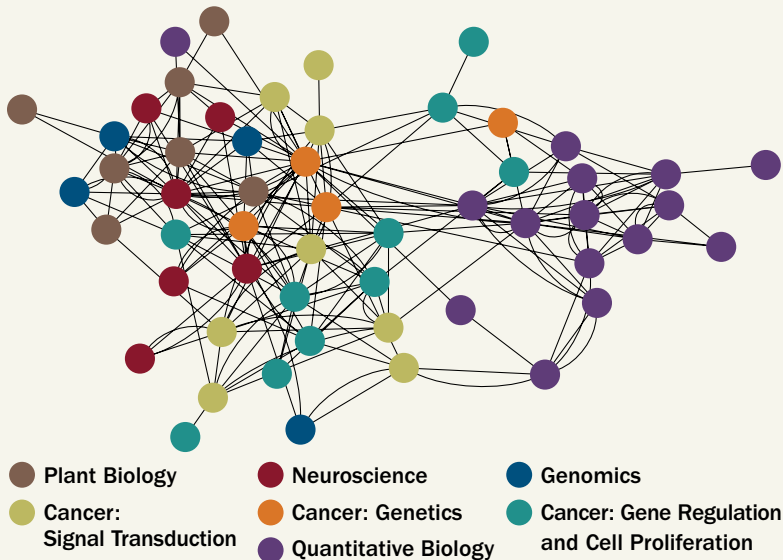
The annual volleyball tournament is another example of how shared work brings together people from every part of the Lab. Here, competition is expressed in a “sporting”



Teams competing in the annual volleyball leagues mix and match over 100 people from all corners of the Lab. The team in action here includes Professor Adrian Krainer, Karen Orzel from Development and Jessica Toner from Human Resources.

Connecting the dots

Collaboration within and across fields is a hallmark of CSHL scientific culture. Inspired by neuroscientists working to build a “connectome” of the brain, we came up with a map showing the connections between CSHL faculty. Each dot represents a principal investigator, and each line between them an active project. We see a complex web of interrelationships—and how frequently scientists from different disciplines work together.



passion to crush one's opponents and be crowned victors for the year. These are bragging rights that Carol Greider says she and her team, the Beta Blockers, still remember more than 20 years after their victory.

The Lab's central hub of activity is undoubtedly Blackford Hall. Beneath the dining hall you can find the Blackford Bar, a coffee shop and lunch destination by day and a pub by night. Look around the room and you will see a microcosm of the CSHL world. Postdocs mingle with the Development team, while members of one of the campus bands discuss their latest set. Professors talk about upcoming collaborations and graduate students fret about their career paths.

At the center

The bar isn't just for CSHL employees. It is also a gathering place for the Lab's many scientific visitors. Each year more than 10,000 scientists from around the world converge on CSHL to participate in the Meetings & Courses Program. “The Lab is unique for its singular focus on Biology, from all perspectives,” says David Stewart, Executive Director

of Meetings & Courses. “Nowhere else in the world do you find first-rate research alongside meetings, education, and publishing. This multifaceted approach keeps CSHL in the hearts and minds of scientists around the world.”

The constant multinational, multiethnic influx and exchange of people infuses the Lab with a vibrant and infectious energy. When someone arrives for a course, they often work harder than they do “back home,” committed to learning a sophisticated new technology in a compressed period of a few days or weeks. Nine CSHL Course students have gone on to win Nobel Prizes. In 1995 Rod MacKinnon, then a Harvard professor, came for the X-ray crystallography course. Three years later, he solved his Nobel Prize-winning structure using the techniques he learned.

Like everything else at CSHL, scientific meetings have a distinctly informal atmosphere. Young biologists come not just to learn, but also to meet and socialize with others in their field. Their elders attend because of the strong sense of community built around the Meetings. “It is a sense of responsibility, a desire to support the next generation of science—simply by listening to talks and engaging at poster sessions,” says John Inglis, Executive Director of the CSHL Press.

Delbrück's example

CSHL is a self-consciously historic place. Both junior and veteran faculty appreciate the community they have joined. “This is a place where ‘good’ has never been good enough,” says Inglis. “We know that we are all inheritors of a grand tradition, one that we wish to carry on.”

Where did this unique culture come from? Many say it originated with Jim Watson, but he is always quick to defer. “Everything came from Max Delbrück,” he insists. “Stuffiness or protocol had no place in his life. He never was ‘Professor Delbrück’ or ‘Dr. Delbrück.’ We wanted a culture of equality. Informality gave us all the chance to do our best, and to dream that later we might find out the ultimate of answers.”

To Watson, it was simple: “You didn't have to be a faculty member to have a great idea.” Thus the Laboratory has never had a tenure system for faculty, has had little hierarchy, and very little bureaucracy. Says veteran CSHL Board Member Ed Travaglini, “Here at the Lab, brilliant people have had a chance to do their work in an unfettered way. The administration is willing to take risks, to support new ideas. This is how great science gets done.”

Jaclyn Jansen