Foreword

Multiple events converged in the 1800s to prompt the establishment of a center for research and education in Cold Spring Harbor. The discovery of terrestrial oil in the United States and the growth of the oil industry during the last half of the 19th century ensured the demise of the whale oil industry, long a mainstay of Cold Spring Harbor enterprises, leaving the western shore of the harbor somewhat of a ghost town, with "industry" buildings and houses that needed repurposing. The establishment of teaching laboratories such as the Marine Biological Laboratory at Woods Hole in Massachusetts in 1888 and the Biological Laboratory at Cold Spring Harbor in 1890 provided the scientifically curious with rich marine environments to study, assisted by improvements in microscope lenses that allowed visualization of organisms and cells at higher resolution than was previously possible. Thanks to the foresight and generosity of the Jones family, particularly John Devine Jones who provided the land and rudimentary structures for investigation until a laboratory could be purpose-built, the Biological Laboratory at Cold Spring Harbor prospered because of its proximity to densely populated areas including New York City. At both Woods Hole and Cold Spring Harbor, developmental biology and the comparative anatomy of organisms were prominent in the first course offerings, leading eventually to a focus of research on embryology that lasted at Woods Hole for more than a century.

But research and education at Cold Spring Harbor took a dramatically different direction. Major insights into quantitative genetics were published in 1900 that were, in fact, rediscoveries of the laws of inheritance worked out by the Austrian monk Gregor Mendel some 34 years

before. The director of the Biological Laboratory at the time was Charles Davenport, a Harvard-trained biologist and later eugenicist. His vision of merging Darwinian ideas on natural selection and evolution with Mendel's analysis of quantitative traits created the first institution in the United States to focus solely on the new field of genetics. Within a very short period, experiments on corn would revolutionize genetics and agriculture and set the stage for Cold Spring Harbor Laboratory to play an important role in both research and education for the next century and beyond, a truly exciting time in the history of science.

As the 125th anniversary of Cold Spring Harbor Laboratory approached, I began discussions with John Inglis, Executive Director of the Cold Spring Harbor Laboratory Press, and Jan Witkowski, Executive Director of the Laboratory's Banbury Center, about the publication of a history of the institution. John's portfolio as a publisher included monographs on the history of science and biographies of major contributors. It was immediately obvious that Jan should write the history. In addition to spearheading the influential Banbury Conferences, Jan has written articles and books on the history of science, particularly in genetics, a field in which he worked prior to his appointment at Banbury in 1987. Moreover, because of the major efforts of Mila Pollock, Executive Director of our Library and Archives, the Laboratory has a collection of original photographs and materials that would prove to be a valuable resource. The result is a compelling book that tells a remarkable story of how an institution evolved and the substantial roles people here have played in the development of the biological sciences for well more than a century.

What was once a whaling factory and part of an adjacent "Gold Coast" estate now houses, together with five nearby sites, a large and vibrant biological and biomedical research and education institution. Events that helped shape the future of the biological sciences happened within a collection of architecturally eclectic buildings on the shores of a long, deep harbor that at one time hosted casinos, hotels, commerce,

and shipbuilding. In the 20th century, Cold Spring Harbor Laboratory contributed major discoveries in genetics, made possible the purification and characterization of important hormones, and nurtured the field of molecular biology, all of which changed society in many ways. Because Cold Spring Harbor has long been a place for the gathering for scientists at courses and meetings, discussions at this institution helped shape new initiatives such as the Human Genome Project and the Innocence Project, an amazing program that has saved the lives of those sentenced to death for crimes they did not commit. Many Nobel Laureates have worked at Cold Spring Harbor or have benefited from the now vast scientific course offerings that are taught here. Perhaps uniquely, many young scientists, including myself, have early in their careers presented their data to peers and luminaries in their field at Cold Spring Harbor conferences, including the long-running Cold Spring Harbor Symposium on Quantitative Biology. More recently, programs at the DNA Learning Center for middle and high school students, taught both locally and internationally, have influenced new generations of scientists and, just as importantly, informed the general public of the dramatic advances in genetics and molecular medicine that are impacting everyone's lives.

The story of Cold Spring Harbor Laboratory is also one of dynamic change, of leaders whose vision gave the institution influence far beyond these shores. The recruitment by Milislav Demerec of important scientists such as Barbara McClintock, Evelyn Witkin, Max Delbrück, and Salvador Luria to Cold Spring Harbor in the 1940s changed the field of genetics and influenced generations of later investigators. Jim Watson's rebuilding of the laboratory infrastructure, expansion of its programs, and initiation of a new research direction set the stage for the many roles this institution now plays in U.S. and world science.

The modern Cold Spring Harbor Laboratory has a recognizable culture of collaboration, vitality, and innovation that keeps evolving. As we look toward the next period of research and education, it is imperative

to keep lessons from the past ingrained in our minds. The large number of visitors to Cold Spring Harbor each year helps create an intellectual environment that is hard to reproduce elsewhere. The lack of tenure permits the institution a healthy turnover of faculty that allows retention of the very best while enabling recruitment of younger scientists with new ideas that will change the direction of science. The rather flat organization and the presence of talented and dedicated administrative and facilities staff allow scientists to pursue their interests unencumbered by administrative burdens that plague investigators elsewhere. These characteristics of the current Cold Spring Harbor Laboratory reflect the influence of its past leaders and their deep understanding of its culture. This book captures much of what makes Cold Spring Harbor unique and should be a blueprint for the next 125 years.

Molecular biology, now such a powerful and influential endeavor, is helping address many of society's challenges, including the management of health, agriculture, and the environment. But there is still much to do and much to discover. The concentration of Cold Spring Harbor Laboratory's science on cancer, neuroscience, and plant biology and its increasing collaboration with clinical centers positions the institution to continue to tackle important human problems. I anticipate that Cold Spring Harbor Laboratory will develop technologies and ideas for providing food to an ever-increasing world population and addressing neurological and other disorders of an aging population. Genetics will continue to be part of the institution's DNA but a resurgence of research on metabolism, nutrition, and physiology will be needed to help us understand how organisms use their inherited genes to maximize their quality of life. The events and discoveries of the past will continue to shape our future.

Bruce Stillman
President
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