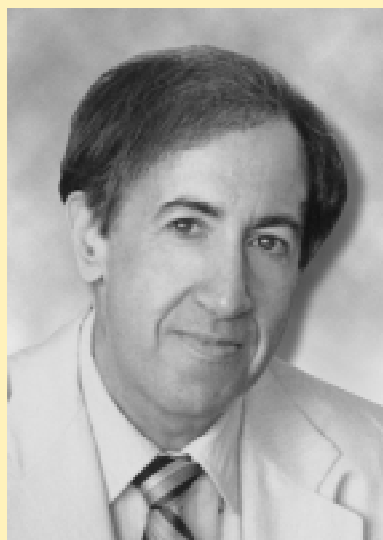
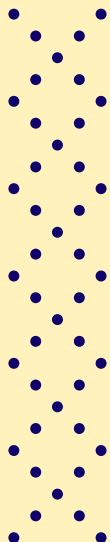


**EXCEPTIONAL SERVICE AWARD**  
*For Exploring Genomes*



**Charles DeLisi, Ph.D.**  
Boston University  
Boston, Massachusetts

After receiving a B.A. in physics from City College of New York and a Ph.D. in physics from New York University, Charles DeLisi held a postdoctoral appointment for 3 years at Yale University, where he worked on nucleic acid structure. For the next decade, he worked in cellular and systems-level immunology and membrane biophysics, first at Los Alamos National Laboratory and then, from 1977 to 1985, at the National Cancer Institute, where he was a Section Chief. From 1985 to 1987, he was Associate Director of Energy Research for Health and Environmental Research (later renamed Biological and Environmental Research) at DOE. After serving for 3 years as a professor and department chair at the Mount Sinai School of Medicine, in 1990 he joined Boston University, where he is now a professor and Dean of the College of Engineering.

Author of some 200 articles and books, Dr. DeLisi has served on a number of editorial and advisory boards. He holds four patents, with two others pending.

# **Charles DeLisi**

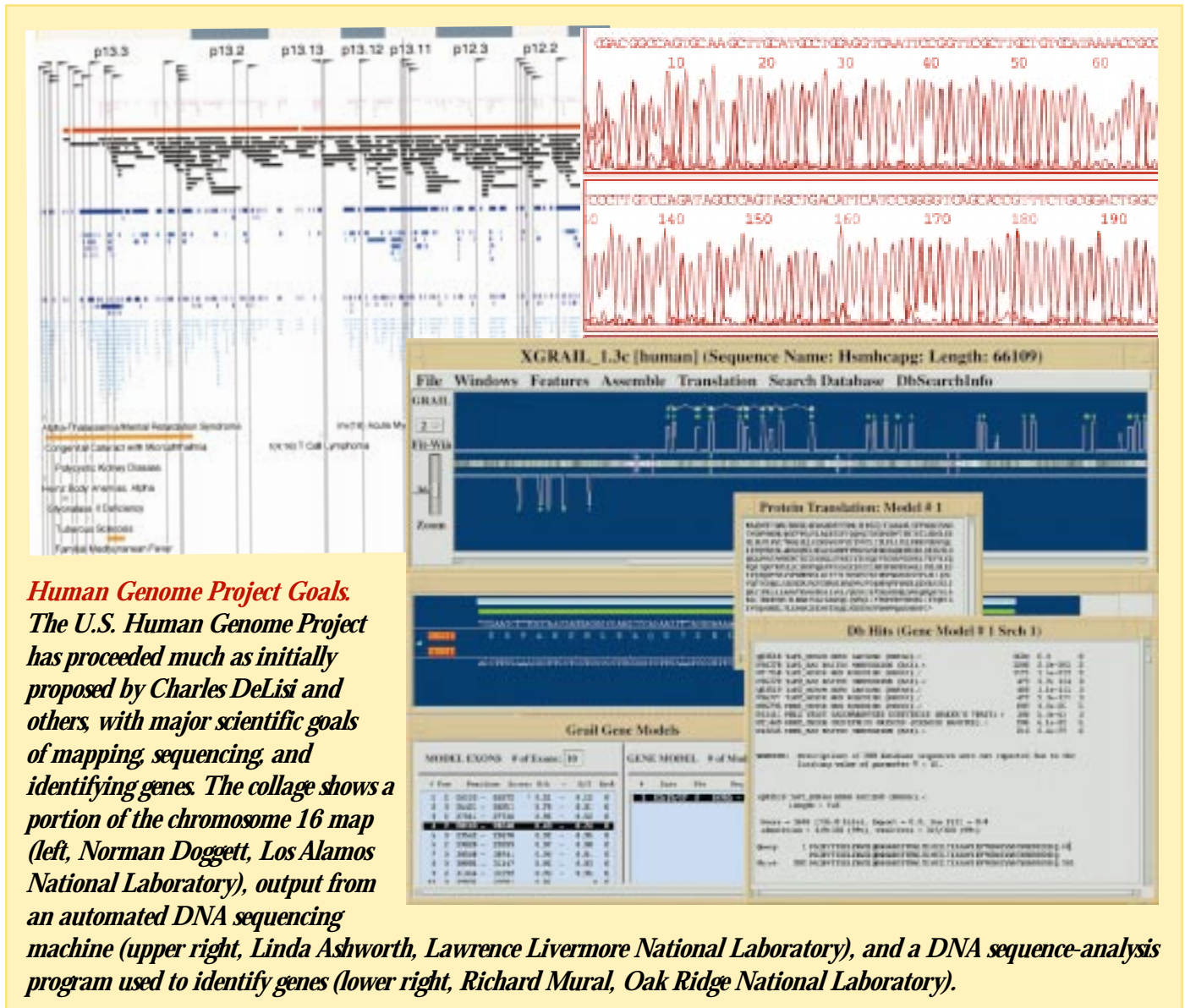
*“In recognition of the seminal role you played while Associate Director for Health and Environmental Research in proposing and initiating the Department’s, the nation’s, and the world’s first Human Genome Program in 1986.”*

## **Human Genome Program**

**C**harles DeLisi made the statement, “The Human Genome Program did not happen at the Department of Energy by accident. It happened at DOE because it could not have happened at another agency.”

By the early 1980s, he noted, the rate of DNA sequencing exceeded the rate at which the biochemical function of the encoded proteins could be determined. Sequencing rate no longer limited progress, as it had just a few years earlier. More interesting, even a conservative extrapolation indicated that the gap between data generation and conversion to knowledge would continue to widen rapidly. When Dr. DeLisi was working at the National Institutes of Health (NIH), the question of whether experimental progress was rapid enough to yield a complete human genome sequence in a current lifetime was discussed briefly on one or two occasions, but the NIH intramural atmosphere was not conducive to thinking about high-technology projects of the magnitude that would be required by such a venture.

In 1985 Dr. DeLisi was offered the pivotal opportunity of his career as head of DOE’s Office of Health and Environmental Research (OHER), where large, high-technology projects were commonplace. He was, therefore, in a receptive environment when he read the Office of Technology Assessment’s report on heritable mutations, which was based largely on the research of OHER investigators and which considered the possibility of full genomic sequencing.



Dr. Mortimer Mendelsohn, who was then Associate Director for Health and Environmental Research at Lawrence Livermore National Laboratory and chair of the OHER Health and Environmental Research Advisory Committee (HERAC), had already given some thought to a massive mapping and sequencing project. He provided the essential critical evaluation of what would be required. Continuous discussions with Dr. David Smith and Dr. Benjamin Barnhart of OHER helped sort out a number of political complexities and led to the first Santa Fe workshop, chaired by Dr. Mark Bitensky, then Life Sciences Director at Los Alamos National Laboratory.

Dr. Bitensky attracted the leading molecular biologists to Santa Fe, and, within a few weeks, he was

able to solicit written evaluations of the meeting from almost all of them. Those reports provided the basis for Dr. DeLisi's memos of May 1986 to Dr. Alvin Trivelpiece, then Director of the Office of Energy Research, proposing the project and outlining its scope. In retrospect, the recommendations by HERAC and workshop attendees were prescient: the project in broad outline has proceeded much as initially proposed and scheduled.

It was evident from the beginning that the genome project would substantially exacerbate the already-pressing ethical issues raised by genetic engineering. In 1987, shortly before Dr. DeLisi left DOE, he set aside 3% of its Human Genome Program funds for the ethical and legal studies that have become an important component of the project.