

was part of the first wave of scientists brought into the Institute as it expanded its research programs beyond a small group of universities. His name is pronounced “TEE-jen” and among colleagues he goes by the nickname “Tij.”

Tjian was born in Hong Kong, the youngest of nine children. His family fled China before the Communist Revolution and, after living in South America for a number of years, eventually settled in New Jersey. Known as a voracious consumer of scientific information and data, Tjian famously talked his way into the biochemistry laboratory of the late Daniel Koshland as a Berkeley undergraduate—even though he had never taken a course in the subject.

Tjian went on to receive a bachelor’s degree in biochemistry from Berkeley in 1971 and a Ph.D. from Harvard University in 1976. After completing a postdoctoral fellowship at the Cold Spring Harbor Laboratory with James Watson, he joined the Berkeley faculty in 1979.

At Berkeley, Tjian has assumed a variety of leadership roles, including spearheading a major campus initiative to support and implement new paradigms for bioscience teaching and research. He serves as director of the Berkeley Stem Cell Center and as faculty director of the Li Ka Shing Center for Biomedical and Health Sciences. He is a member of the National Academy of Sciences and has received many awards honoring his scientific contributions, including the Alfred P. Sloan Prize from the General Motors Cancer Research Foundation and the Louisa Gross Horwitz Prize from Columbia University. He was named California Scientist of the Year in 1994.

“Research is ultimately my biggest passion,” Tjian told *The Washington Post*. “The leadership of an institution like the Hughes, whose primary mission is to make sure that really great research

continues to be supported, means that the person at the top has to have a really good, deep understanding of what research is.”

Understanding how genes work is one of the great achievements of modern biology and Tjian’s contributions to this body of knowledge have been significant and pioneering. He studies the biochemical steps involved in controlling how genes are turned on and off, key steps in the process of decoding the human genome. He discovered proteins called transcription factors that bind to specific sections of DNA and play a critical role in controlling how genetic information is transcribed and translated into the thousands of biomolecules that keep cells, tissues, and organisms alive.

Tjian’s laboratory has illuminated the relationship between disruptions in the process of transcription and human diseases such

“This is the most interesting job for a scientist in the nation – if not the world – because of its impact on research in the life sciences. ”

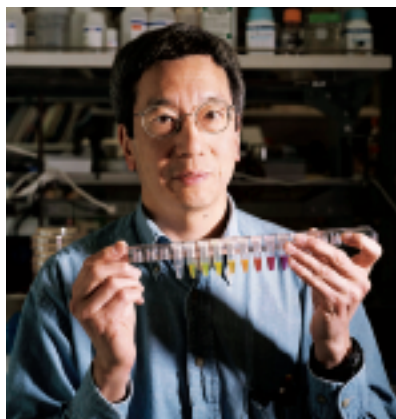
ROBERT TJIAN

as cancer, diabetes, and Huntington’s. More recently, he has begun studying how transcription factors control the differentiation of embryonic stem cells into muscle, liver, and neurons.

Tjian will continue some laboratory research at the nearby Janelia Farm Research Campus and at Berkeley while serving as HHMI’s president at its headquarters in Chevy Chase, Maryland. He already collaborates with a small team of visiting scientists at Janelia Farm on a project to develop approaches that will allow them to image biochemical activities in single living cells.

Tjian and his wife, Claudia, an attorney, have two daughters. ■

## ROGER TSIEN WINS NOBEL PRIZE IN CHEMISTRY



The Royal Swedish Academy of Sciences announced, on October 8, that the 2008 Nobel Prize in Chemistry is awarded to HHMI investigator Roger Y. Tsien, Osamu Shimomura of the Marine Biological Laboratory, and Martin Chalfie of Columbia University. The prize honors the scientists for “the discovery and development of the green fluorescent protein, GFP.”

The scientists’ work has transformed GFP, a glowing jellyfish protein, into an essential tool of bioscience. Using DNA technology, researchers can connect GFP to otherwise invisible proteins and watch the movements, positions, and interactions of the tagged molecules.

In the 1990s, Tsien, who is at the University of California, San Diego, obtained the cloned GFP gene from Doug Prasher and reengineered its protein product to emit colors ranging from blue to yellow. Since then, he has expanded the palette of fluorescent proteins, adding hues including tangerine, banana, and honeydew. He has also developed a way to monitor the interactions of proteins tagged with different colors.