The Twenty-sixth

Jacob Bigeleisen Endowed Lecture

Presents

Dr. Jennifer A. Doudna

Investigator, Howard Hughes Medical Institute
Professor, Department of Molecular and Cell Biology
and Department of Chemistry,
University of California, Berkeley

"CRISPR Systems: Biology and Applications of Gene Editing"

Friday, April 6, 2018
Lecture starts at 3:00 p.m.
Frey Hall 102
Stony Brook University
Overflow location Frey Hall 104
Refreshments served at 4:30 p.m. in the Chemistry Building lobby
Hosted by: Department of Chemistry, Stony Brook University
Stony Brook, New York 11794-3400

Dr. Jennifer Doudna obtained a B.A. in Biochemistry from Pomona College and a Ph.D. in Biological Chemistry and Molecular Pharmacology from Harvard Medical School under Jack W. Szostak (who won the 2009 Nobel Prize for Physiology or Medicine). She joined Yale's Department of Molecular Biophysics and Biochemistry as an Assistant Professor in 1994. In 2002, she moved to the University of California, Berkeley, where she is an investigator with the Howard Hughes Medical Institute, a Professor of Biochemistry and Molecular Biology, Professor of Chemistry and holds the Li Ka Shing Chancellor's Chair in Biomedical and Health Sciences.

Jennifer Doudna's current research focuses on the mechanistic understanding of fundamental biological processes involving RNA molecules. Research in her lab focuses on three major areas: bacterial immunity via the CRISPR system, RNA interference, and translational control logic. They utilize diverse techniques including X-ray crystallography, high-throughput sequencing, biochemistry, molecular biology, and eukaryotic cell culture.

An internationally renowned professor of Chemistry and Molecular and Cell Biology at U.C. Berkeley, Doudna and her colleagues rocked the research world in 2012 by describing a simple way of editing the DNA of any organism using an RNA-guided protein found in bacteria. This technology, called CRISPR-Cas9, has opened the floodgates of possibility for human and non-human applications of gene editing, including assisting researchers in the fight against HIV, sickle cell disease, and muscular dystrophy. Jennifer Doudna is an Investigator with the Howard Hughes Medical Institute and a member of the National Academy of Sciences, the National Academy of Medicine, the National Academy of Inventors and the American Academy of Arts and Sciences. She is also a Foreign Member of the Royal Society, and has received many other honors including the Breakthrough Prize in Life Sciences, the Heineken Prize, the BBVA Foundation Frontiers of Knowledge Award and the Japan Prize. She is the co-author with Sam Sternberg of *A Crack in Creation*, a personal account of her research and the societal and ethical implications of gene editing.

The Jacob Bigeleisen lectures are supported by an endowment established by a circle of friends on the occasion of his 70th birthday. The purpose of the endowment is to enrich the educational program at Stony Brook through an annual lecture in chemistry by a scholar of international reputation. Jacob Bigeleisen, Distinguished Professor of Chemistry, retired in 1989 after eleven years as an active member of the Stony Brook faculty. Prior to coming to Stony Brook, he was Tracy Harris Professor and Chairman of the Chemistry Department at the University of Rochester. He was a member of the scientific staff of Brookhaven National Laboratory for twenty years before joining the Rochester faculty. During his long and distinguished career, he was the recipient of numerous awards and fellowships for his work in pure and applied isotope chemistry, and became a member of the National Academy of Sciences as well as a Fellow of the American Academy of Arts and Sciences.

Sponsored by
Jacob Bigeleisen Endowment Lecture Fund
and the Department of Chemistry.

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