

THE
Flexner
DISCOVERY
LECTURE SERIES

JENNIFER A. DOUDNA, Ph.D.

CRISPR BIOLOGY:
FROM FOUNDATIONAL TO TRANSLATIONAL SCIENCE

JANUARY 8, 2015
4:00 P.M.
208 LIGHT HALL

THE
Flexner
DISCOVERY
LECTURE SERIES

Upcoming Discovery Lecture:

MARK E. FRISSE, M.D., M.S., M.B.A.
Vanderbilt University School of Medicine

January 22, 2015
208 Light Hall / 4:00 P.M.

SPONSORED BY:
DEPARTMENT OF BIOCHEMISTRY,
VANDERBILT INSTITUTE OF CHEMICAL BIOLOGY
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CRISPR BIOLOGY: FROM FOUNDATIONAL TO TRANSLATIONAL SCIENCE

Bacteria have evolved elegant systems for protecting their genomes from invasive elements using enzymes and RNAs that detect and destroy foreign nucleic acids. I will describe our research on CRISPR systems in bacteria, which led to the discovery of a dual RNA-guided DNA cleaving enzyme called Cas9. By understanding the molecular mechanism of this enzyme, we were able to show how it could be harnessed for site-specific genome engineering in animals and plants. I will describe the process of discovery and invention that has enabled the CRISPR-Cas9 system to emerge as a revolutionary technology, underscoring the role of basic research as an engine of innovation and tool development.



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Jennifer Doudna is Professor and Li Ka Shing Chancellor's Chair in Biomedical Science at UC Berkeley. Her research seeks to understand how RNA molecules control the expression of genetic information. She is a Howard Hughes Medical Institute investigator and a member of the National Academy of Sciences, the American Academy of Arts and Sciences and the Institute of Medicine. She is a recipient of numerous awards including the NSF Waterman Award, the FNIH Lurie Prize, the Paul Janssen Award and the 2015 Breakthrough Prize in Life Sciences.
