



Photo credit: Allison Colorado

# Feng Zhang

## CRISPR Gene Editing

U.S. PATENT NO. 8,697,359: CRISPR-Cas systems and methods for altering expression of gene products

**Inducted in 2026** Born: Oct. 22, 1981

Feng Zhang has invented transformative technologies to improve human health, including pioneering the use of engineered CRISPR-Cas9 systems for genome editing in human cells and harnessing CRISPR-Cas12 and Cas13 systems. He also has co-founded several companies to commercialize these technologies, including for diagnostic and therapeutic uses.



**Full Bio:** <https://www.invent.org/inductees/feng-zhang>

### Primary Connections:

- Massachusetts Institute of Technology: Professor of Neuroscience; McGovern Institute for Brain Research at MIT, Investigator, 2011-present
- Broad Institute of MIT and Harvard: Core Institute Member, 2011-present
- Howard Hughes Medical Institute: Investigator, 2020-present
- Editas Medicine (2013); Arbor Biotechnologies (2016); Beam Therapeutics (2017); Sherlock Biosciences (2018); Aera Therapeutics (2023); Moonwalk Biosciences (2024): Co-founder

### Education:

- Harvard University, A.B., Chemistry and Physics, 2004
- Stanford University, Ph.D., Chemistry, 2009

### Key Memberships/Awards:

- National Medal of Technology and Innovation, 2024
- Genetics Society of America: Edward Novitski Prize, 2021
- National Academy of Medicine: Member, 2021
- National Academy of Sciences: Richard Lounsbery Award, 2021
- Harvey Prize, 2018
- Albany Medical Center Prize, 2017
- Gairdner Foundation: International Award, 2016
- Tang Prize, 2016
- Jacob Heskell Gabbay Award in Biotechnology and Medicine, 2014

### Things You Should Know:

- Zhang was born in 1981 and moved to Des Moines, Iowa, when he was 11.
- Growing up, he enjoyed taking things apart to understand how they work.
- When he was in high school, he learned molecular biology techniques while volunteering at a gene therapy lab in a local hospital.
- While studying at Harvard University, he became interested in developing treatments for mental illnesses.
- As a graduate student at Stanford University, he helped develop optogenetics — a method of using light to control brain cells.
- In 2011, Zhang started his own lab at the Massachusetts Institute of Technology (MIT).
- In 2013, he published a groundbreaking paper in the journal *Science* first demonstrating the use of engineered CRISPR-Cas9 systems to edit the genomes in living mouse and human cells.
- He shares his CRISPR reagents with other researchers and trains scientists through his workshops, by hosting them in his lab and by participating in online research forums.
- Zhang is a trustee of the nonprofit organizations Society for Science & the Public, Center for Excellence in Education and the Museum of Science in Boston.