


My female scientist research

Jennifer Doudna
(American biochemist)

In the fields of molecular biology and genetics, a genome is all genetic material of an organism. It consists of DNA or RNA or RNA viruses. The genome includes both the genes (the coding regions) and the noncoding DNA, as well as mitochondrial.

Jennifer was born on the 19th February 1964 in Washington, D.C., United States.

Jennifer is known for her pioneering work in CRISPR gene editing, for which she was awarded the 2020 Nobel Prize in Chemistry along with Emmanuelle Charpentier.



In 2012, Jennifer Doudna and Emmanuelle Charpentier were the first to propose that CRISPR-Cas9 (enzymes from bacteria that control microbial immunity) could be used for programmable editing of genomes, which is now considered one of the most significant discoveries in the history of biology.

CRISPR technology is a simple yet powerful tool for editing genomes. It allows researchers to easily alter DNA sequences and modify gene function. Its many potential applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops. However, its promise also raises ethical concerns.

Genome engineering in humans was an inevitable result of rapid advances in genetic engineering technologies. However, little was known about its safety, and its use to edit human DNA renewed ethical concerns, particularly about whether genetic engineering technologies should be used to modify nondisease traits, such as intelligence. In early 2015 Jennifer Doudna organized an effort that called for a moratorium on human genome editing, and in April of that year she and colleagues laid out a framework for immediate actions to safeguard the genomes of human embryos against modification. Despite the precautionary effort, however, in April 2015 Chinese scientists reported having altered human embryo genomes via CRISPR-Cas9.

♥ Miss Harvey

💬 Miss Harvey Well presented information :)

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