

How the accidental discovery of CRISPR led to most powerful gene editing tool yet

When Jennifer Doudna and Emmanuelle Charpentier discovered the most powerful DNA editing technology we know of, CRISPR-Cas9 — something MIT Technology Review [described as](#) “the biggest biotech discovery of the century” — they weren’t looking for a world-transforming DNA editing tool.

Doudna tells Business Insider that they were studying the system that bacteria use to defend themselves against viruses, something that might be considered basic research, science pursued just for the sake of greater understanding.

They noticed that the system bacteria use to shut down viruses had an uncanny way of targeting specific sections of virus DNA — and that, with the correct programming, this system could seek out any section of DNA and slice it up. Not only that, if accompanied by other coding material, this process could also replace one section of DNA with a new section of DNA.

They realized they’d found an incredibly precise tool.

We’ve had gene-editing technology for decades, but now “we’re basically able to have a molecular scalpel for genomes,” says Doudna, a biologist at the University of California at Berkeley. “All the technologies in the past were sort of like sledgehammers.”

In the hands of genetic engineers, having an accurate way to edit genomes composed of millions of letters is incredibly exciting.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [The researchers behind ‘the biggest biotech discovery of the century’ found it by accident](#)