



# CRISPR



## The Last Piece of the Genetic Puzzle



CRISPR/Cas9 are sequences of DNA and proteins<sup>1</sup> that can work to fix genes that cause disease<sup>2</sup>



CRISPR/Cas9 can cut out disease-causing parts of a gene<sup>3</sup>



CRISPR/Cas9 can bind to DNA and prevent genes that cause disease from being expressed<sup>4</sup>

They can also insert new genes into DNA.<sup>5</sup>

NEW

## CRISPR/Cas9 could be the key to unlocking the cure for many genetic diseases



### Treatment of HIV/AIDs

HIV targets our T helper immune cells and inserts its own DNA into ours<sup>6</sup>



CRISPR/Cas9 has been shown to cut and mutate the viral DNA so that it cannot infect other cells<sup>7</sup>

### Treatment of Cancer

In cancer cells, tumor suppressor genes are mutated<sup>8</sup>



CRISPR/Cas9 has been shown to activate the gene that fights tumor formation in bladder cancer<sup>8</sup>



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