

What is crispr?

Business



What does it stand for? Before we get into the specific parts of this gene-editing tool, let's understand the name. CRISPR is an acronym that stands for, Clustered Regularly Interspaced Palindromic Repeats. Now, what does that even mean? Simply put it, it is how CRISPR works.

It “sees” or, senses that there is a mutation in the repeated DNA. This is what makes it so revolutionary, it can find out what to remove. It acts as a pair of microscopic scissors by using a chemical reaction. What is needed for it to work? A couple of things are needed before it can work. You first require a specific protein called CAS9, this is what allows CRISPR to cut out damaged DNA.

CAS9 isn't very special on its own, it is just protein. However once you insert the RNA sequence into the CAS9, the outcome is just unimaginable. The RNA sequence helps find the mutated DNA in the cell. The RNA sequence is the same as the other, healthy, DNA. When the CAS9 mix senses the mutated strip of DNA, it cuts it out.

It is quite simple if you think about it. Right now doctors are able to eliminate many genetic and hereditary diseases. However, they can only find the ones they have samples of. Without the RNA it can't find the mutated strip of DNA. It'll just be going off of luck. The Future of CRISPR While CRISPR is fairly new in the eyes of science, it already has people wondering where it could go.

There is a future in CRISPR that could play a role in all parts of our lives. From what we eat, to our unborn children's' health, to even our own. This technological advancement can lead to designer babies, and, believe it or

not, it isn't as far-fetched as it sounds. While parents are checking for gene mutations in their children, there is nothing stopping them from making their children have blue eyes. GMO foods are a now, slightly more, common thing in society.

Some people disagree with the practice, claiming they'd rather eat all natural produce. However, with CRISPR, GMO crops will be easily accessible. Why not make strawberries more red, or make them larger? The possibilities are endless, and people cannot stop, progress, change, and the future. This is what CRISPR can do. The Limitations and Constraints Even with great technology, there can be limitations that can only be solved through money and government support. Currently, it has a decent amount of both.

However, this is what keeps CRISPR as an idea of the future, not something we could do now. The base technology has already been established by scientists, but time is required. We need the ever expanding globalization of the world to quicken. We need samples of different kinds of diseases that will help the CAS9 figure out what to cut out. For example, if we don't have a sample GSA (Genetic Sample A), we, in theory can't treat it with CRISPR. Why, you may ask? Well, the CAS9 won't know what to look for.

It will end up treating everything the same, there'll be nothing telling the CAS9 that the mutated DNA is any different. How it Will Work CRISPR can lead humanity into the future. It can improve all parts of life for millions of people, but it needs to become mainstream, especially healthwise. It can't become another toy for the elite to use on themselves. It should become

incorporated into healthcare, that way diseases can be eliminated. Another important factor is money, CRISPR needs to be cheap, it's as simple as that.

Europe and North America might be able to afford CRISPR, but what if a major crop disease ravages places similar to Senegal, Yemen, and Malawi. It would benefit them more, but it would also be nearly impossible for them to get the right tools, due to cost.