

# CRISPR CAS 9 NEW TECHNOLOGY

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## Abstract

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Gene editing is a technique in which you edit a bad gene. Editing means that you remove the bad gene from the DNA. Science is the path of progress in every field today. Such technology has come only recently. CRISPR CAS 9

The two women who created this technique have been awarded the Nobel Prize. The Nobel Prize was started in 1901. The Nobel Prize is given to people who do the best work in the field of science, literature and medicine. If we talk about how many people have received the Nobel Prize since 1901, then this award has been given to 930 men and 59 women. Alfred Nobel invented dynamite. It was invented in 1867.

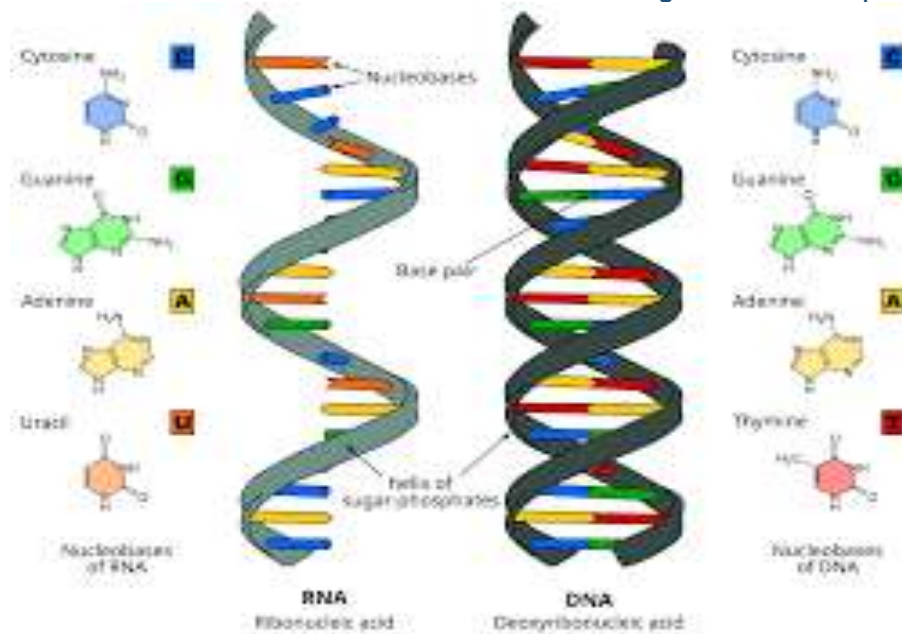


355 awards have been earned in his name. In 1867, he donated all his inheritance.

Dynamite is used to make rockets, break mountains and make bombs used in war.

## Introduction

DNA - DNA whose full form is deoxyribonucleic acid, we get it from our parents, that is, it is hereditary. DNA is found in the nucleus of the cell. Genes are found in DNA. DNA is a double structure and the genes found in it are duplicated in one place and duplicated in another place, that is, if you read DNA from backwards or from forward, they look the same.

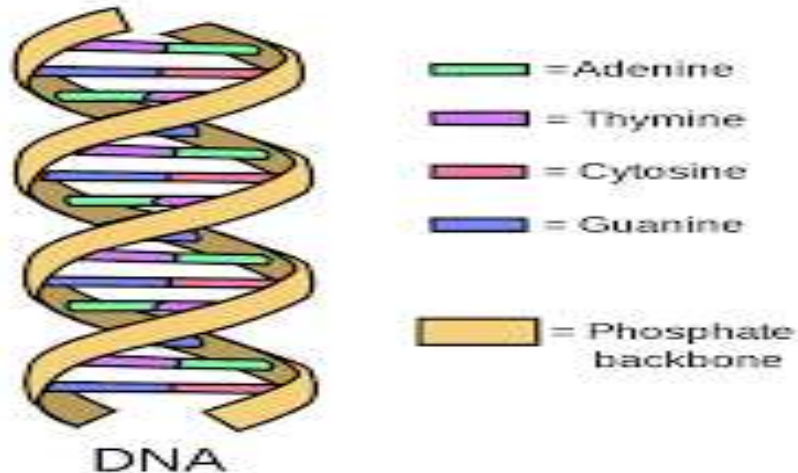


RNA - The full form of RNA is RNA nucleic acid. It is found in the cytoplasm or proteins.

Proteins are a chain of amino acids and provide energy to the body.

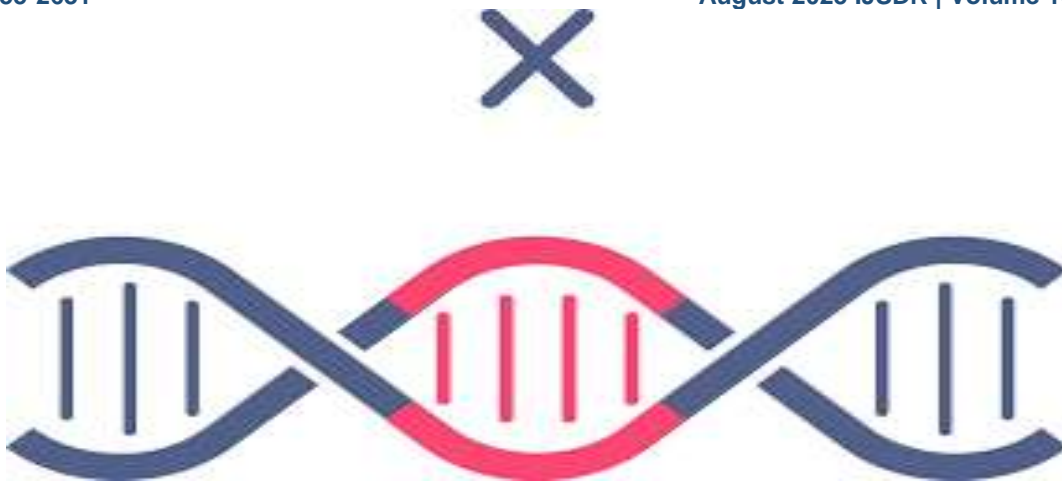
Gene -

Any trait in our body is responsible for it, that is, if someone's eye color is blue, then a gene is responsible for it.



Gene Editing - Gene editing means that you are making some changes in the DNA that is already produced, that is, you are not bringing any gene from outside into the DNA, you are editing the gene that is already available. CRISPR CAS 9 - The full name of CRISPR CAS 9 is Clustered Regularly Interspaced Short Palindromic Repeats. This technique is used for editing. How did this technique come in the field of science? Let's know about it.

The virus which is smaller than bacteria, and when it leaves some of its DNA in the body of the bacteria, then the DNA is used in the body of the bacteria, the DNA is used, the gene is adopted and keeps studying the DNA, that is, that virus is no longer a threat to it because it has taken the virus's DNA into its body. That means you are against the virus, its victory is secured. ISI is called CRISPR ISI is known as

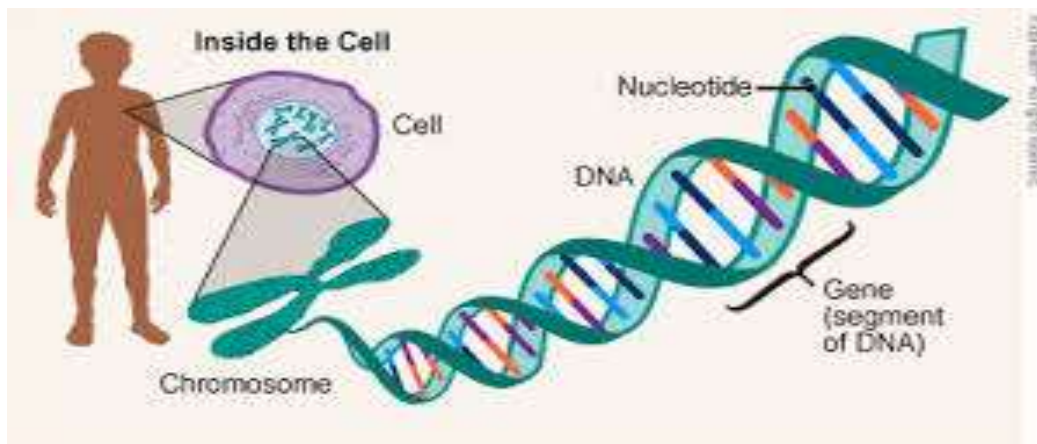


Cas9-It is a protein which is very helpful for editing. It is necessary to cut the bad genes.

Recently two varieties of rice have come which have been made by gene editing. Rice is known as Pusa 100, Pusa Dirt 1(Kamala). These varieties have been made by gene editing only. Samba Mahari and MTU1010. Two new varieties of rice have been made by gene editing which give more yield and those who need less water. The gene editing done in rice has been done due to two genes.

SDN1, SDN2 are there. SDN 1 means Site-Directed Nuclease1 which brings a small change. That is, if any organism has to disappear, then it is done with this technology. SDN2 is for repairing DNA. It works

A new variety of pigeon pea has been made using this technology, you can grow this variety at 45 degrees. This variety is ICPV 25444



What are the benefits of gene editing

Through gene editing, you can edit any specific gene very easily

It will take very little time to make any variety

Any disease can be prevented through this

To protect plants and animals from diseases like virus, their immunity can be improved

If AI is used in CASPER CAS 9 technology, then it can be a very good step. If we find out which gene is wrong in someone's gene, then AI will be an important step in the field of science

## Conclusion

If this technology is used in the field of science, then it is a great idea because the way it seems that the virus spoils the plant health, if it is edited by editing the gene, then it can be used to prevent it. If given the required time, this work will be completed in a very short time. Two women have been awarded the Nobel Prize for this technology: Emmanuelle Carpentier and Jennifer Doudna

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