



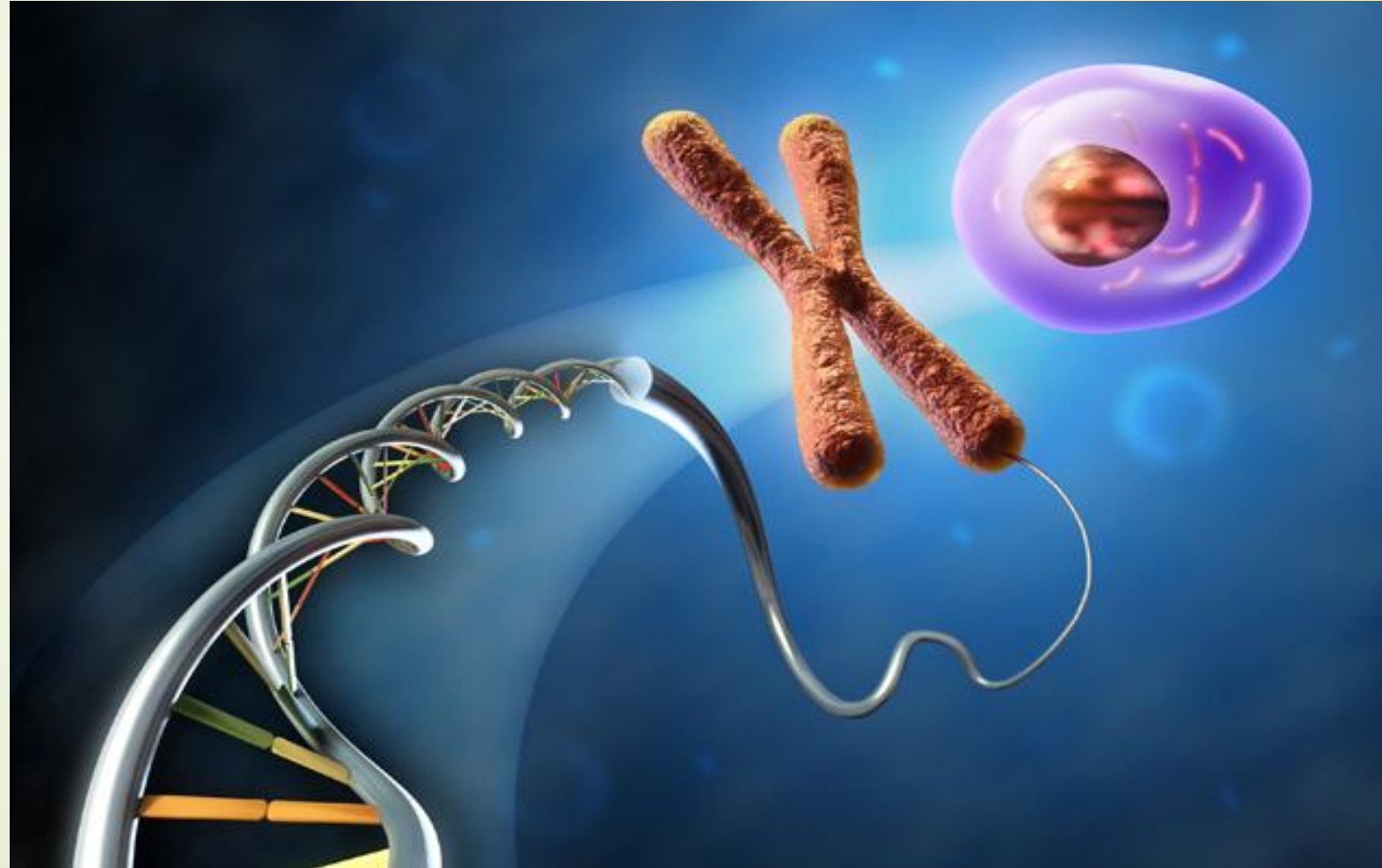
UNIT -3



GENE EXPRESSION

By

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What is a gene and where it is present?



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- Gene is a unit of genetic information.
 - It is a part of DNA that code for particular protein.
 - It is the basic physical and functional unit of hereditary.
 - The term gene was coined by Johannsen in the year 1909.
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CONCEPT OF GENE :

Gene is the..

1. **Unit of function :**

Control the inheritance of one character termed as cistron.

One gene-one character – (G.J Mendel 1866)

2. **Unit of recombination :**

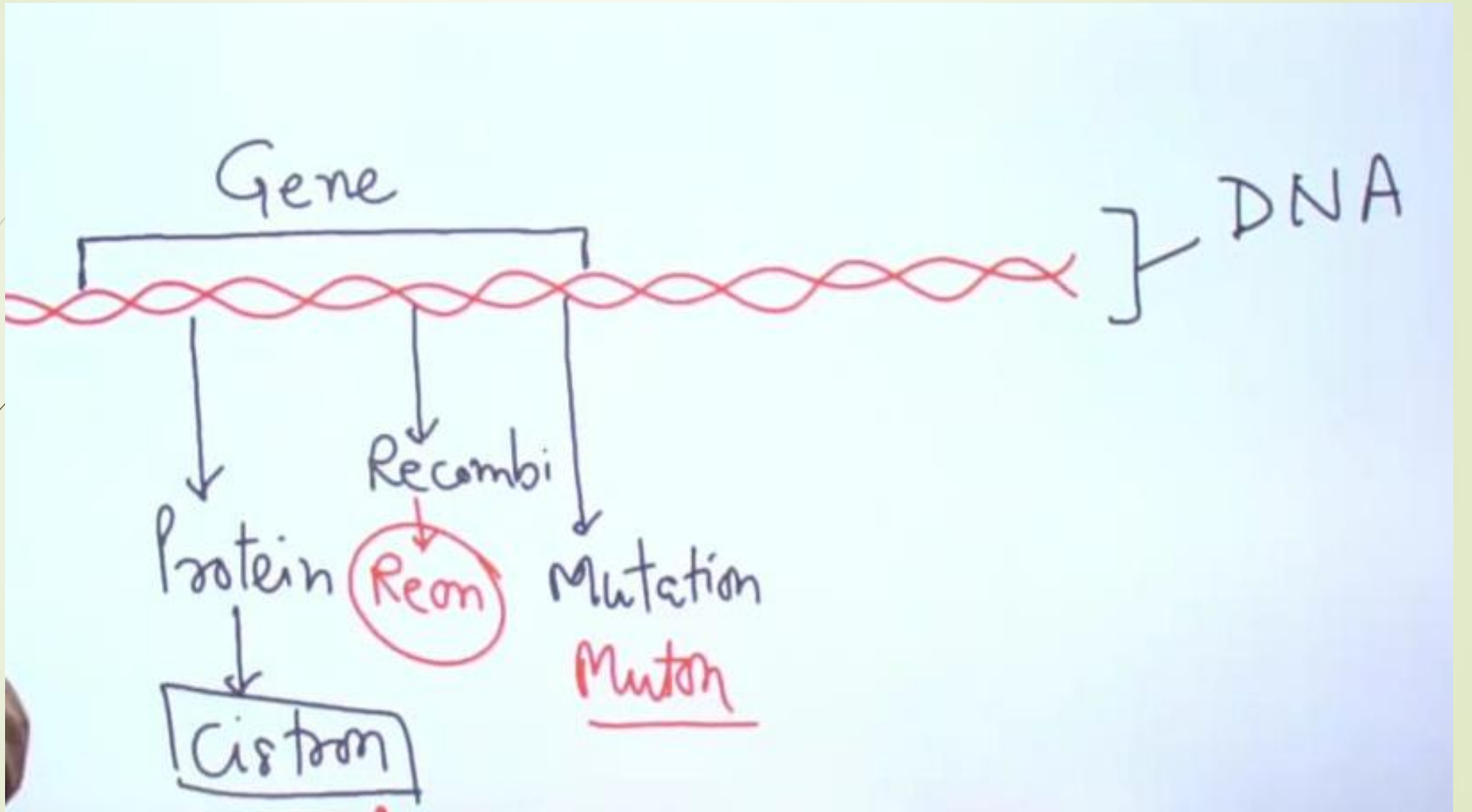
Indivisible by recombination.

Recombination occurs between the genes not within the genes called recon.

3. **Unit of mutation :**


Smallest unit capable of mutation.

Single gene have multiple sites for mutation called muton.





CISTRON

- The part of DNA specifying a single polypeptide chain is termed as cistron.
 - A cistron is 100 nucleotide length to 30,000 nucleotides.
 - It is responsible to transmit characters from one generation to other as a unit of transmission.
 - It can be called as transmitter of genetic information.
 - Also called unit of heredity.
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RECON

- The smallest segment of DNA capable of being separated and exchange with other chromosome is called recon.
- A recon consists of not more than two pairs of nucleotides.



MUTON

- Muton is the smallest unit of genetic material which when changed or mutated produce a phenotypic trait.
 - Muton is delimited to a single nucleotide.
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THANK YOU

➤ ANY QUERIES..???