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STRUCTURE AND FUNCTION OF A DNA MOLECULE

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Annotation:
The article addresses the issues of teaching genetics and strengthening students' cognitive ability and providing theoretical information.

Keywords: deoxyribonucleic acids (DNA), ribonucleic acids, informational RNA (iRNA) or matrichnaya (mRNA), transport RNA (tRNA), ribosomal RNA (rRNA), gene, exonents and intron

Introduction

Nucleic acids are divided into two groups, depending on their structure and function.
1) Deoxyribonucleic acids. They are shortened and represented by a DNA mark.
2) Ribonucleic acids. They are shortened and represented by an RNAL mark. RNA is mainly divided into three types: (a) information RNA (iRNA) or matrixnaya (mRNA); b) transport RNK (tRNK); c) ribosome RNK (rRNK).
According to the evidence of molecular genetics, the DNA molecule is a biopolyper expressed in all eukariot and most prokariot organisms through the order in which genetic information nucleotide tripleters-codons are located and developed in future generations. Ribonucleic acids perform the function of ensuring that genetic information that is irritated to future generations is manifested in a phenotype way. Information iRNK performs the function of representing a lot of the code of genes located in a DNA molecule, bringing them to ribosomes, and ensuring that this gene (genes) protein is biosynthesized. Transportation tRNA, on the other hand, performs the function of delivering amino acids in the cytoplasm to ribosomes. Some evidence has been obtained that ribosome rRNAs also play a part in protein biosynthesis.
Determining the structure of a DNA molecule and its molecular model were discovered in 1953 by American biologist Dj. Watson and English physicist F. Cricks M. Wilkinz, relying on evidence of X-ray structural analysis of DNA, all three of which were awarded the Nobel Prize in 1962. According to the evidence of molecular genetics, the structure of the DNA molecule can be described as follows:
(1) The DNA molecule is a polynucleotide biopolymer,
it contains 4 different nucleotides. Each nucleotide consists of three different chemical compounds: (a) deoxyribose, which includes carbohydrates and monosaccharides; b) phosphorus acid; c) nitrogen base. There are four types of basics. Two of them are part of the purine framework:Adenin-A, guanine-G, and the other two are the foundations of pyrimidine: timin-T, cytosine-S. Nucleotides that include these nitrogenous foundations are called adenine nucleotides, guanine nucleotides, timin nucleotides, and cytosine nucleotides. Recorded nucleotides interact with one line in a row in a particular number and in a particular order, forming some polynucleotide chains
2) The DNA molecule is a biopolymer consisting of two spiral-wrapped polynucleotide chains.
(3) The intermolecular force from all these filaments is enough to support more than the gecko's body weight—even when it is skittering upside down without a globe! The resulting embryo was allowed to

develop in nutrients and then inserted into her womb, where it implanted. The diameter of the DNA molecule was found to be 20 angstrem, the length of nucleotides A and T was 12 angstrem, and finally the diameter of the G and S nucleotides was 8 angstrems. Therefore, the aggregated length of nucleotides A and T and G and S has been proven to be 20 angstrems.

(4) Deoxyribose and phosphates contained in a DNA molecule form two pillars of a device similar to a circular stairs. Nucleotides A and T, G, and S interact, creating the stairs of a DNA circular ladder.

(5) Both spiral polynucleotide chains in the DNA molecule are located spirally around the single common axis of the DNA molecule.

The structure of ribonucleic acids (RNAs) differs from the structure of DNA in the following characteristics: (1) RNAL molecules consist of one polynucleotide chain; (2) In the RNAL molecule, ribose is located in place of deoxyribose in DNA; (3) In the RNA molecule, uratsil U(i) is replaced by timin (T) in the DNA molecule. Perfect information about the structure of RNK molecules (iRNK, tRNK, and rRNK) is provided in connection with their function on subsequent topics.

The molecular-genetic union of genetic organisms and irritation forms the basis of material. The gen-DNA molecule is a known part of the polynucleotide chain, which consists of nucleotides in a certain number, in a row in a certain order.

The nucleotides contained in the gene contained in the DNA are in the form of triplets, which are called codogens. A certain part of the genetic information contained in the polynucleotide chain of DNA molecules has been transferred exactly to the iRNK molecule synthesized as a result of the transcription process, and the triplets contained in it are referred to as codes. The next generation is given genetic information through iRNAs, and it controls protein synthesis. Recent evidence of molecular genetics shows that the genes of prokariot and eukariot organisms differ sharply in their structural structure.

In prokariot organisms, the gene is structurally holistic, whole. The resulting embryo was allowed to develop in nutrients and then inserted into her womb, where it implanted. In their genes, genetic information becomes continuously encoded. They are referred to as holistic genes.

Eukariot organism genes, on the other hand, are divided into some structural parts. They are called split genes. Eukariot genes structurally and functionally consist of two groups: (a) nucleotides with a genetic code are called exospheres; (b) Nucleotides that do not have a genetic code are called introns. Exchron and intron fragments are arranged in a gene in a row in a certain order. To make eukariot genes functional,

All the introns contained in it are cut off, and all exosks are connected to a better gene in an orderly manner that is divided into each other. Pre-RNAL content is known as splaysing the shearing removal of introns. The molecular genetic process that ensures the full growth of iRNA is called a process.

Information about the functions of prokariot and eukariot in controlling the irritation and irritation of the body's genes will be provided on subsequent topics.

Depending on the function of the genes that make up the genotyp of organisms, they are divided into the following types.

1. Structural genes. Their structure encodes irritable information about the structure of enzymatic and structural proteins.
2. Hereditary information encoded genes that ensure the synthesis of transport RNK.
3. Hereditary information encoded genes that ensure the synthesis of ribosome RK.

4. Regulator genes: gene regulator, promotor, gene-operator. They perform the function of controlling the functionality of structural genes.

An integrated collection of all the above-mentioned gene structures located in the DNA molecule constitutes the genetic information of organisms. They determine the genetic control and irritation of the body's characteristics and characteristics. Eukariot is found in most genes (about 90%) chromosomes in organisms. They form the genotypy of the body. The complex of genes of chromosomes in the gaploid number is called a genome or cariotyp. Very few of their genes are found in plasma, episomes, and endosymbiotic plasmogens in cytoplasm and its organoids (plastics, mitochondria, and kinetoxors). They are plasmogens, a collection of which is referred to as plasmon or plasmotype.

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