

DNA

DNA double helix structure allows it

Stability

Simple Replication pattern

RNA

Ribonucleic Acids

Transfer genetic information from DNA to the Ribosomes

Ribosomes are bodies Protein Factories

Read RNA to make Polypeptides (Proteins)

GENES

A Gene is a sequence of **DNA Bases**

Genes code for a Polypeptide or RNA

Order of Bases in a Gene

Determines order of Amino Acids In a Polypeptide

One Gene - One Polypeptide

A given gene has a very precise linear sequence that codes for the linear sequence of amino acids in one polypeptide molecule

Glossary

Polypeptide

When two or more amino acids join together

Gene - Polypeptide

Base sequence of a DNA molecule

Has a direct relationship to

The Amino Acid Sequence

Or Primary structure of a Polypeptide

Note:

Primary structure determines higher order structure which determines biological activity

Transcription

How RNA molecules are synthesized

Uses DNA as a Template

One DNA strand is the template for RNA

2 Strands are called

Template Strand **Non-Template Strand**

RNA synthesized on template strand

Successive addition of **Complementary Base Pairs**

Only short regions corresponding to genes are copied into RNA

They comes to a end at a termination sequence

Newly sythasised RNA leaves the DNA

DNA Helix reforms

Transcription Compete

Structure of RNA

Ribose Sugar

Phosphate Group

Base

Bases are : **A, U, C, G**

Note:

DNA makes RNA makes a Polypeptide

Steps in the Information Flow

Transcription

of DNA makes RNA

Translation

of RNA makes Polypeptides

Transcription

The DNA base sequence is transcribed or copied

This makes a RNA molecule

RNA is a **Intermediate**

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