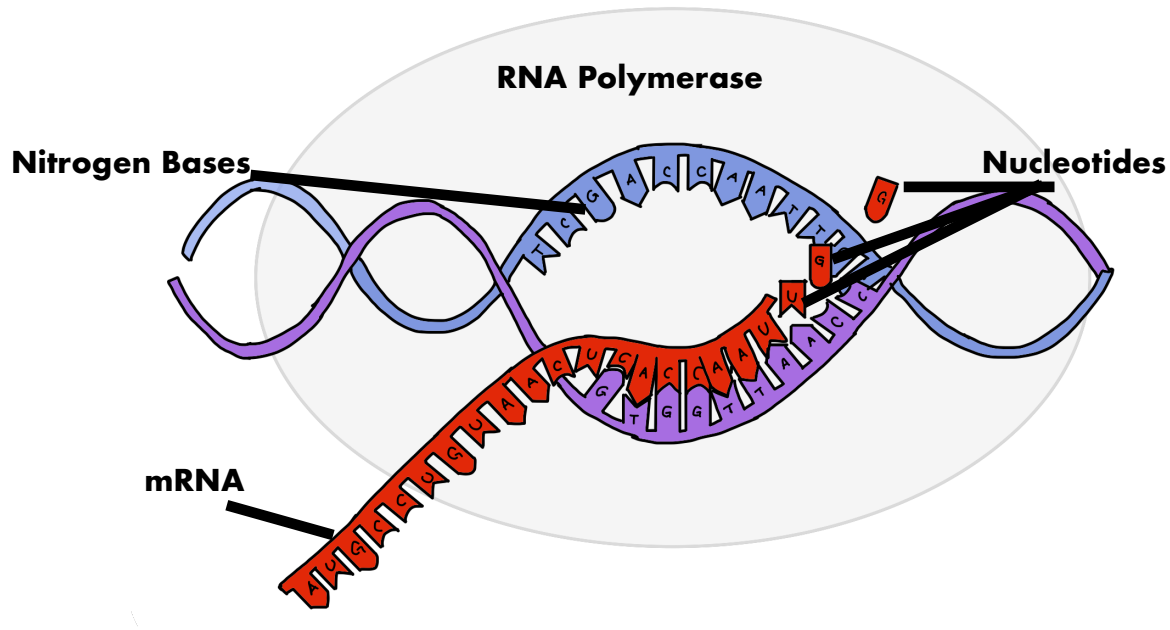
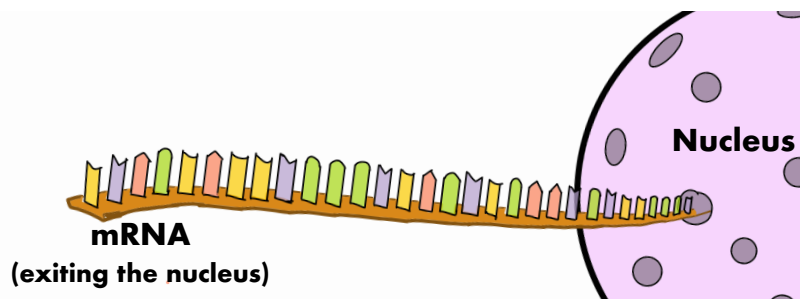


# The Process of Protein Synthesis

Protein Synthesis is a whole process of new proteins being made. It goes through two main steps: transcription and translation. In transcription, a piece of the the original is *transcribed* into a certain type of RNA. The DNA unzips to make copies of one side. In translation, the mRNA begins to be *translated* into a code for the golgi apparatus to read and fold into proteins.

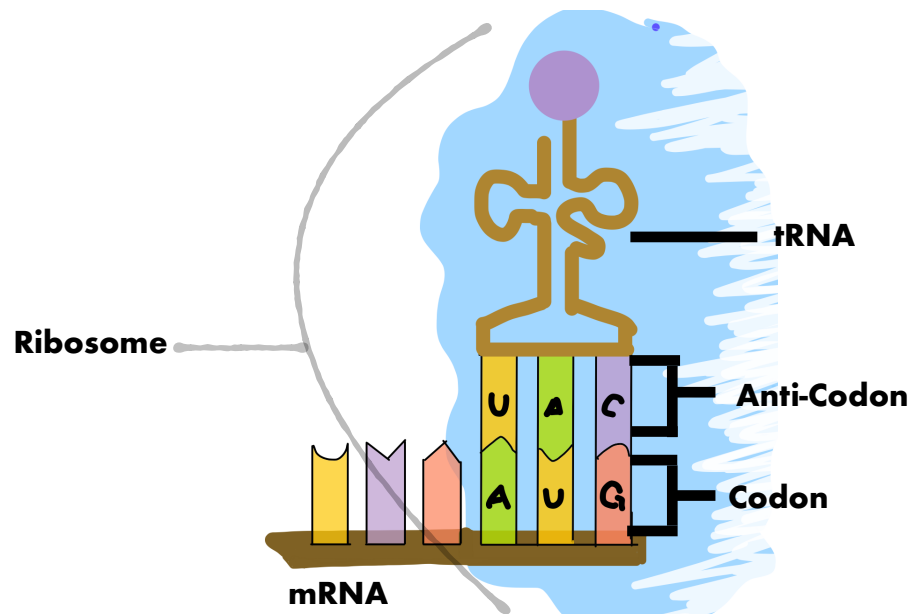


Transcription is the first major process in protein synthesis. The RNA polymerase unzips the original DNA and uses one of the strands to copy off of to build messenger RNA, AKA, mRNA. mRNA is identical to the original strand, but in place of T (thymine) it contains U (uracil). Once the polymerase is finished making a strand of mRNA, the strand/s exit the nucleus and goes out into the cytoplasm, and to a ribosome, thus beginning the process of translation.



In translation this is where the mRNA becomes processed into a chain of amino acids. The ribosomes read the mRNA and then gets what it needs to use to finish making the protein: amino

acids. Amino acids are brought to them by tRNA, which is transfer RNA. Now, on the mRNA there are amino acids that come in trios of nucleotides in sequence called "codons". Each tRNA carries an



anti-codon which fits like a puzzle to a specific codon on the mRNA. After fitting all the codons in with anti-codons, the end product is a chain of amino acids ready to be folded into actual proteins in the golgi apparatus.

## References

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