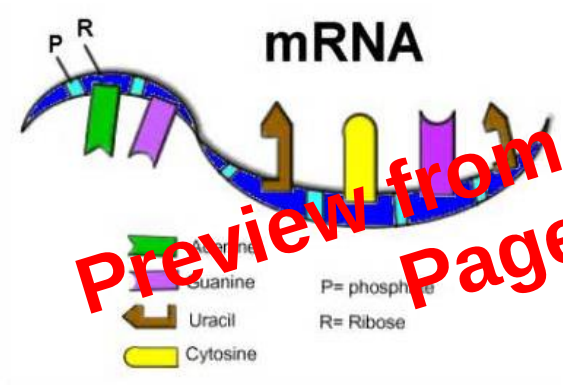
There are two types of RNA. One is called messenger RNA, or otherwise known as mRNA. mRNA is formed in the nucleus of the cell. It is there to rewrite the sequence of bases of a section of DNA. This process is called transcription. mRNA carries the code for forming a specific protein from the nucleus to the ribosomes in the cytoplasm. Therefore it acts as a messenger. Messenger RNA allows the genetic coding in DNA. mRNA is always singly stranded. It contains bases Adenine, Guanine, Cytosine and Uracil. There is random coiling in messenger RNA and there is no specific base pairing.

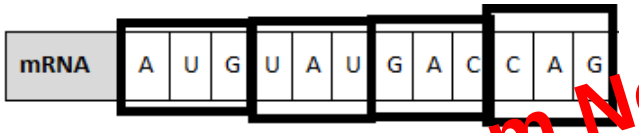


tRNA

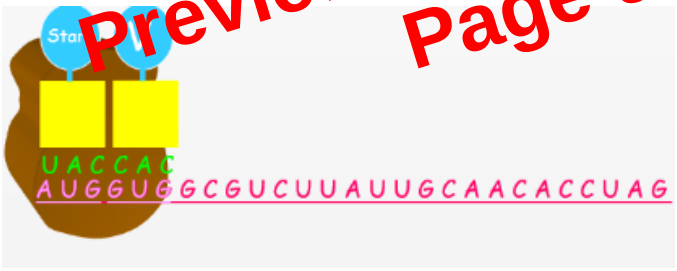
The second type of RNA is called transfer RNA, or otherwise known as tRNA. This is found in the cytoplasm. tRNA picks up specific amino acids from the cytoplasm and then brings them into the surface of a ribosome. This is where they can be joined together in specific order to make a specific protein. This is called translation.

There are many steps to translation:

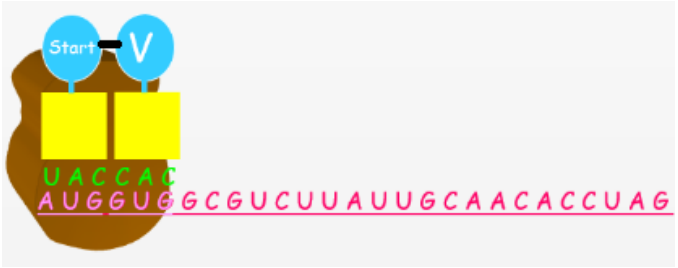
1. The RNA strand leaves the nucleus through a nuclear pore and then enters the cytoplasm and attaches itself to a ribosome.
2. The ribosome carries out the process of translation. It reads bases in groups of three. These are called codons. Each codon has a complementary transfer RNA (anticodon), which carries a specific amino acid.



3. The anticodon of the tRNA binds to the first codon. The second tRNA binds to the next codon.



4. The amino acid on the first tRNA (this is the start of the sequence) is joined to the the amino acid on the second tRNA (V) by a peptide bond. This requires an ATP and an enzyme.



5. The first tRNA is released by the ribosomes.