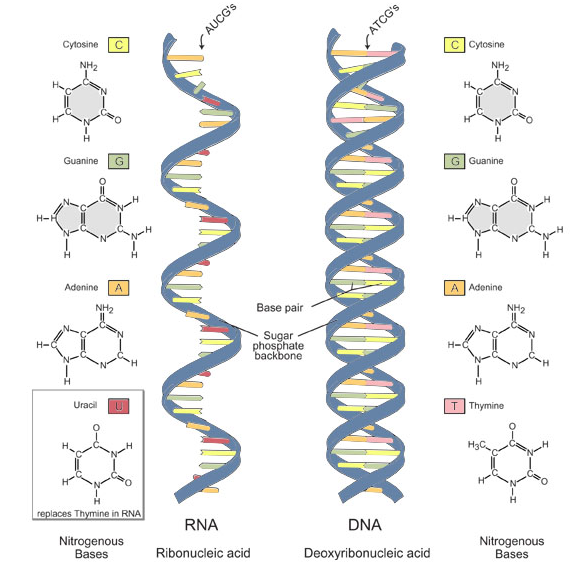
5:5 RNA

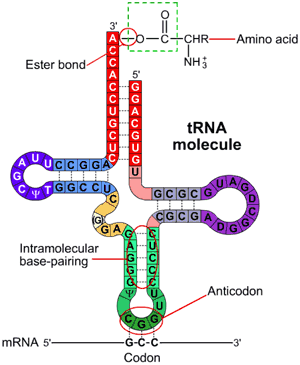
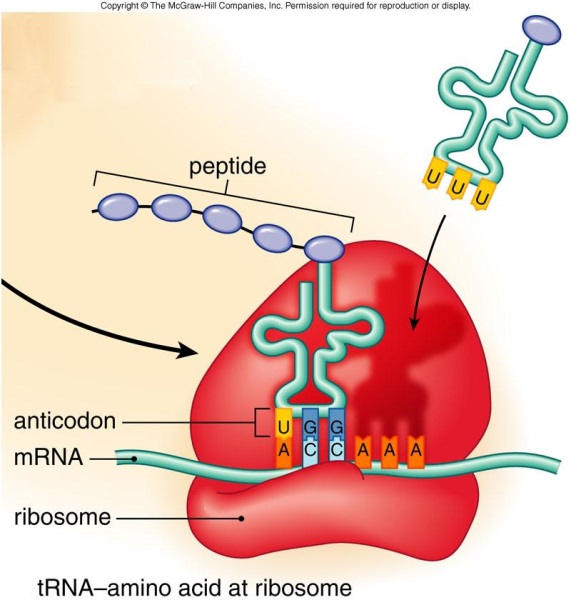
DNA always stays in the nucleus, but it must send the code for making proteins to the ribosomes in the cytoplasm.

RIBONUCLEIC ACID: near copy of DNA that carries the code (or instructions) for protein synthesis from the nucleus to the cytoplasm

## RNA differs from DNA

1. Ribose is the sugar in RNA, deoxyribose is the sugar in DNA.
2. RNA contains uracil where DNA contains thymine. In RNA uracil bonds to adenine.
3. RNA is a single strand of nucleotides, DNA is a double strand of nucleotides.

## Three Types of RNA

1. MESSENGER RNA: (mRNA) copies DNA’s code and carries the genetic information to the ribosomes to perform protein synthesis
   1. Long straight chain of 500-1000 nucleotides
   2. Made in the nucleus
   3. Copies DNA and leaves through nuclear pores
   4. Contains A, G, C, U (no T)
2. TRANSFER RNA: (tRNA) transfers amino acids to the ribosomes where proteins are synthesized
   1. Clover-leaf shape
   2. Single stranded molecule with attachment site at one end for an amino acid
   3. Opposite end has three nucleotide bases called ANTICODON: three nucleotides on the RNA that are complementary to the sequence of a codon in mRNA
3. RIBOSOMAL RNA: (rRNA) globular form of RNA that makes up ribosomes, along with protein
   1. Single strand 100-300 nucleotides long
   2. Made inside the nucleus
   3. Site of protein synthesis