Section 12.3

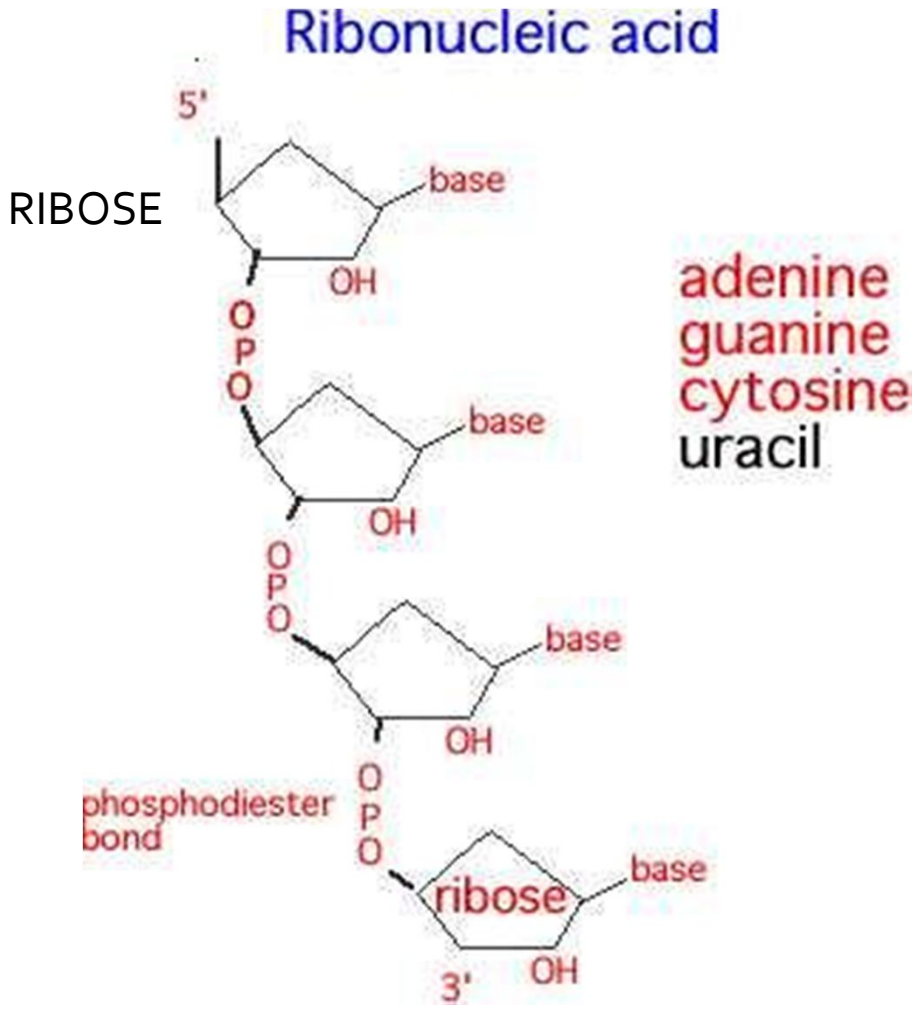
DNA, RNA and Protein

Central Dogma

- How does DNA code for proteins?
  - Proteins are building blocks for cells and enzymes
- Scientists believe that genes are expressed by:
  - DNA to RNA to protein
- **Central Dogma:**
  - **DNA codes for RNA**
  - **RNA guides the making or proteins**

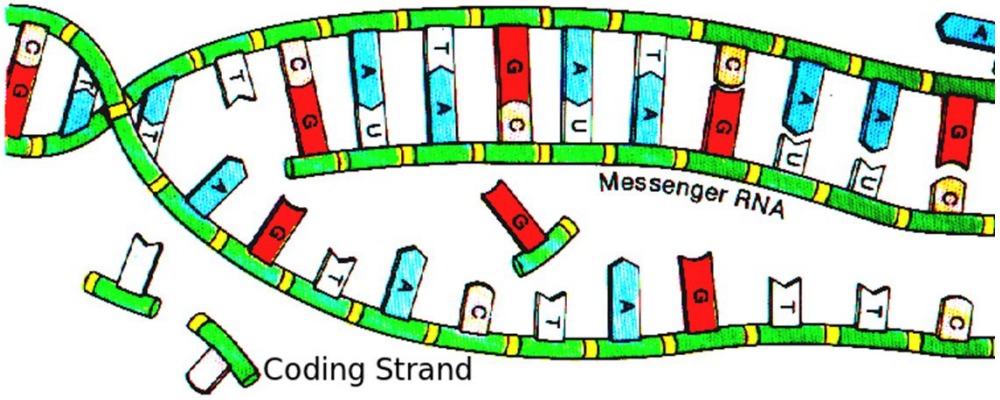
RNA

- Contains the sugar ribose
- Contains the base URACIL instead of thymine (U not T)
- Three types:
  - Messenger RNA (mRNA)
  - Transfer RNA (tRNA)
  - Ribosomal RNA (rRNA)

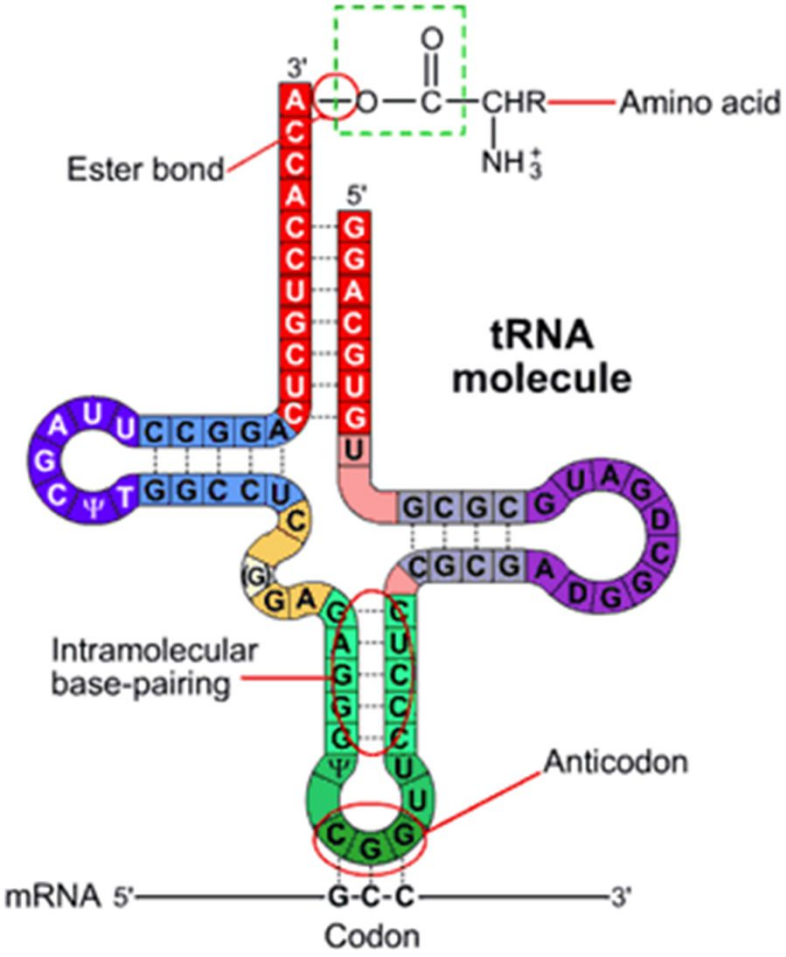


mRNA

- Messenger RNA
  - mRNA
  - Long strands of RNA
  - Complementary to one strand of DNA
  - Travel from nucleus to ribosome
  - Direct the making of a specific protein



tRNA



- Transfer RNA
  - tRNA
  - Smaller segments of RNA
  - Transport amino acids to the ribosome
  - Amino acids link together to form proteins (YOU!!)

rRNA

- Ribosomal RNA
  - rRNA
  - Works with proteins to make ribosomes
  - Found in the cytoplasm