**From Transcription → to Translation → to Proteins**

* Transcription – synthesis of RNA from DNA template
	+ in the nucleus
	+ DNA code converted into complimentary RNA code
	+ 1st step in protein synthesis
	+ mRNA produced from DNA
	+ bases – A, C, G and U (instead of T)
	+ 3-base segments = “triplets”
		- triplets – mRNA “codons”
		- determine which amino acids are used to synthesize the protein
		- 64 codons
			* some code for specific amino acids
			* the rest are “stop” or “start” codons
* Translation – synthesis of a protein from mRNA template
	+ in the ribosome
	+ mRNA code converted into amino acid sequence – “polypeptide”
	+ multiple amino acid sequences = protein
		- tRNA has complimentary “anticodons”
		- anticodons bind with the mRNA codons
		- enables tRNA to transport correct amino acids to ribosomes
		- amino acids – building blocks of proteins
	+ Ribosomes interpret mRNA codon information
	+ tRNA aligns appropriate amino acids to build a complex protein
	+ Protein synthesis stops when the ribosome encounters a stop codon

