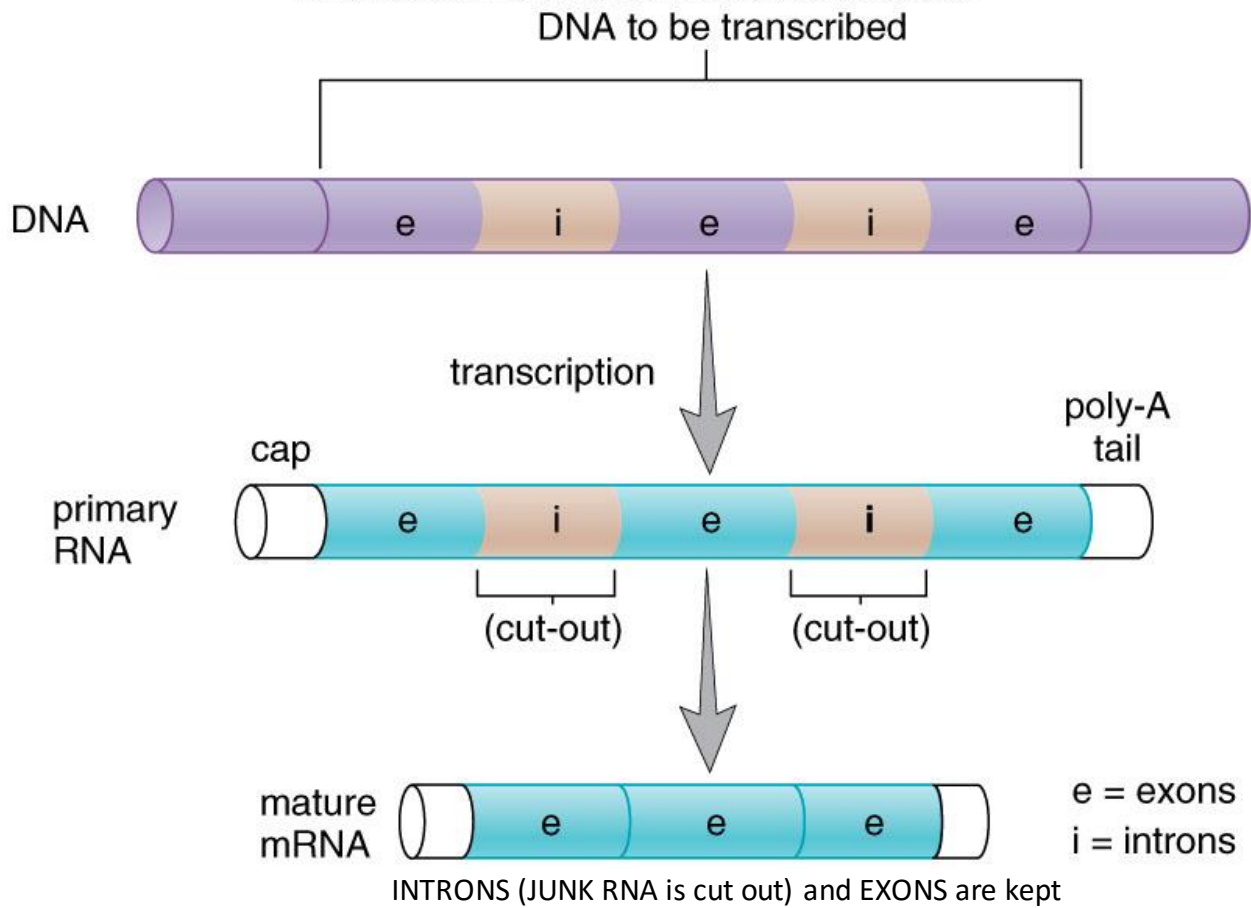
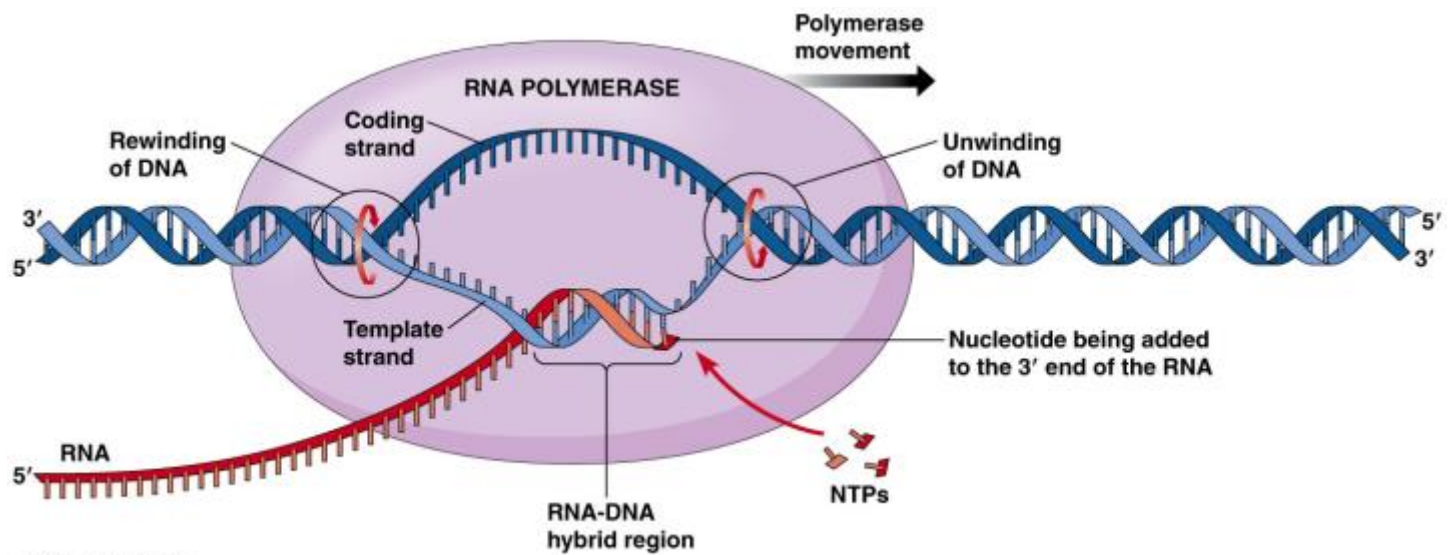


# Transcription

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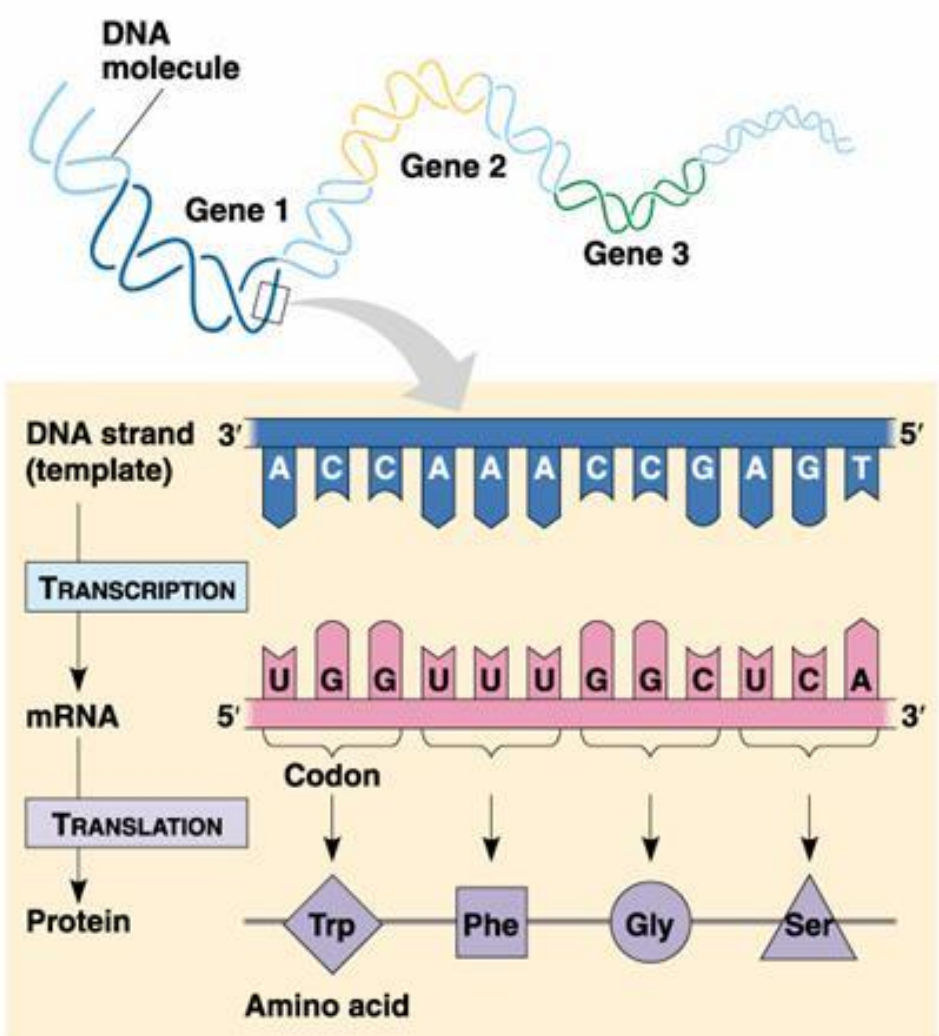


## TRANSCRIPTION PROCESS



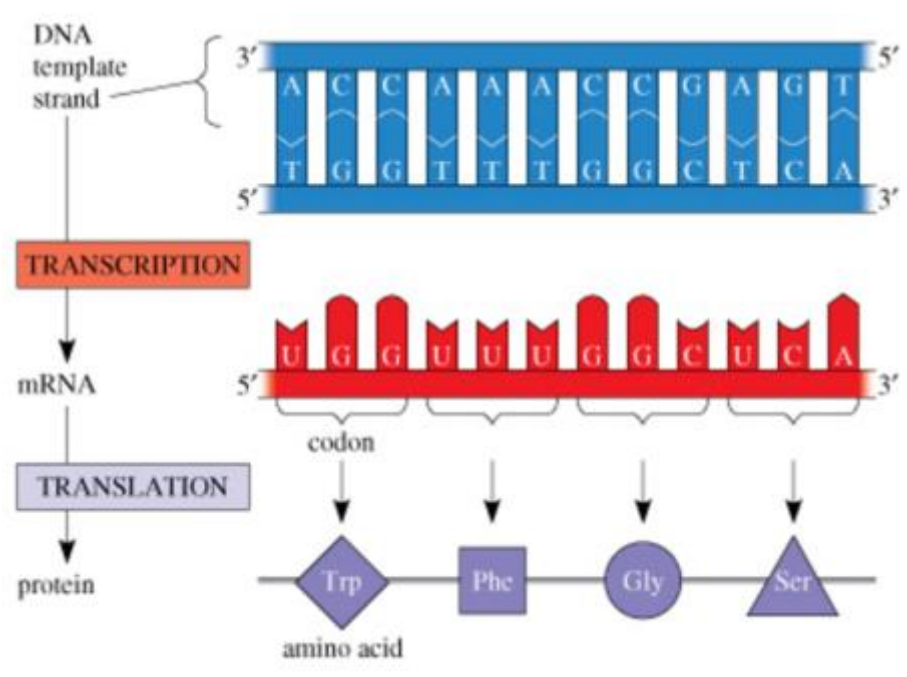
First Base	Second Base				Third Base
	U	C	A	G	
U	UUU phenylalanine	UCU serine	UAU tyrosine	UGU cysteine	U
	UUC phenylalanine	UCC serine	UAC tyrosine	UGC cysteine	C
	UUA leucine	UCA serine	UAA <i>stop</i>	UGA <i>stop</i>	A
	UUG leucine	UCG serine	UAG <i>stop</i>	UGG tryptophan	G
C	CUU leucine	CCU proline	CAU histidine	CGU arginine	U
	CUC leucine	CCC proline	CAC histidine	CGC arginine	C
	CUA leucine	CCA proline	CAA glutamine	CGA arginine	A
	CUG leucine	CCG proline	CAG glutamine	CGG arginine	G
A	AUU isoleucine	ACU threonine	AAU asparagine	AGU serine	U
	AUC isoleucine	ACC threonine	AAC asparagine	AGC serine	C
	AUA isoleucine	ACA threonine	AAA lysine	AGA arginine	A
	AUG ( <i>start</i> ) methionine	ACG threonine	AAG lysine	AGG arginine	G
G	GUU valine	GCU alanine	GAU aspartate	GGU glycine	U
	GUC valine	GCC alanine	GAC aspartate	GGC glycine	C
	GUA valine	GCA alanine	GAA glutamate	GGA glycine	A
	GUG valine	GCG alanine	GAG glutamate	GGG glycine	G

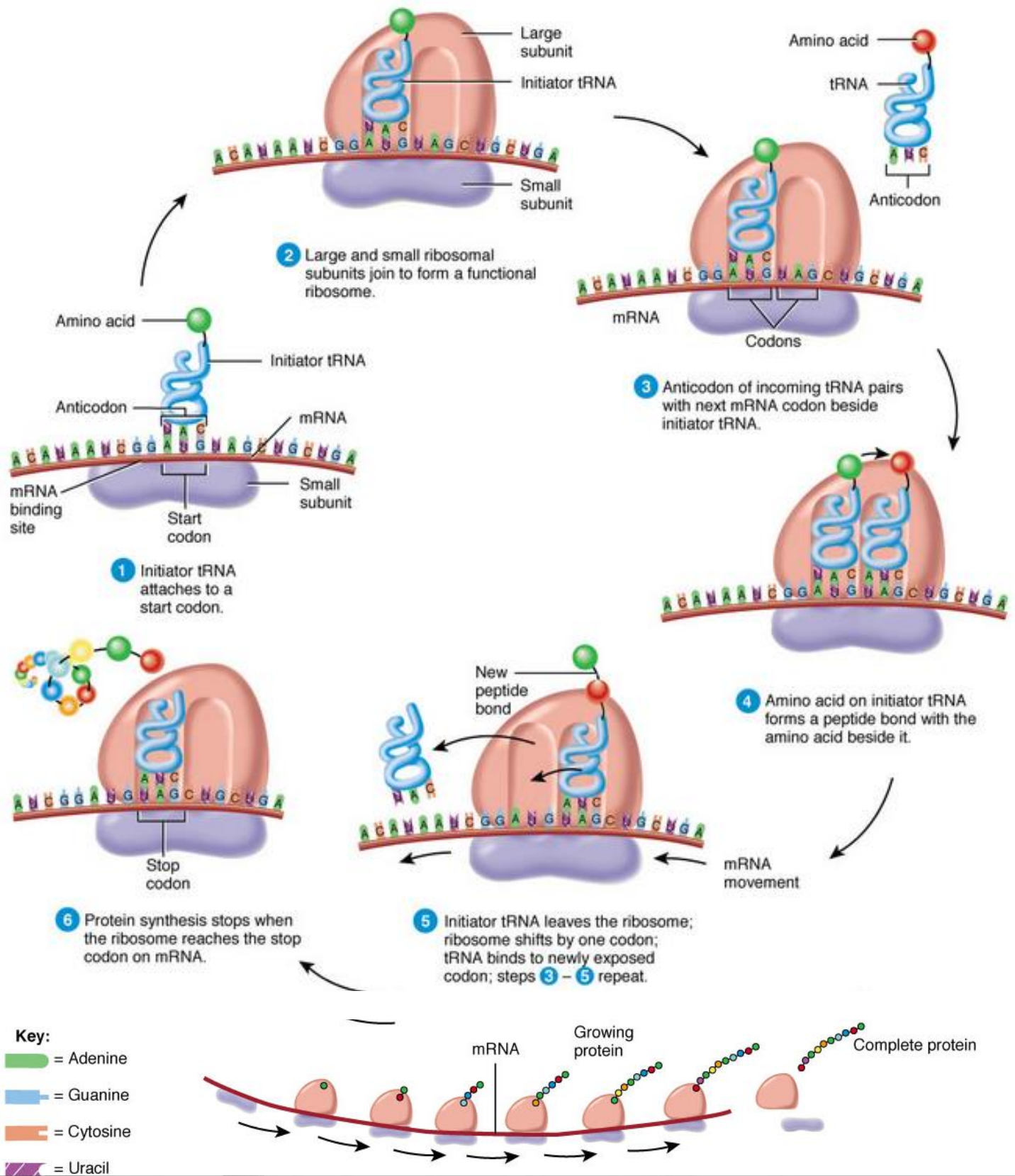
CODON CHART



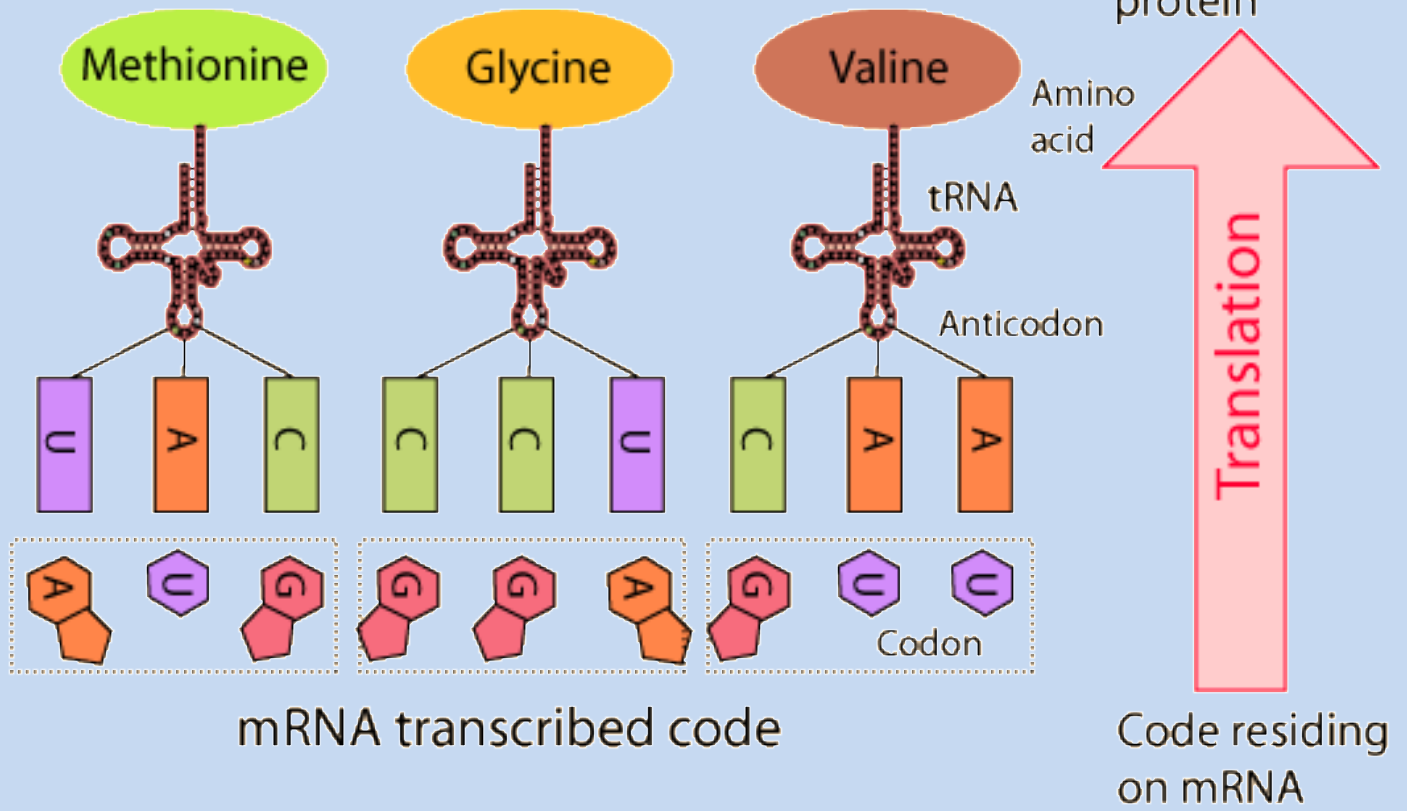
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PROCESS OF Transcription and Translation





Amino acids corresponding to the codons are added to the growing protein chain.



**Transcription**

1. One DNA strand serves as a template.

2. mRNA is processed before leaving the nucleus.

3. mRNA moves into cytoplasm and becomes associated with ribosomes.

e = exons  
i = introns

DNA

primary mRNA

mature mRNA

3'

mRNA

large and small ribosomal subunits

amino acids

4. tRNAs with anticodons carry amino acids to mRNA.

**Translation**

peptide

U G G

thr

lys

tRNA

U U U  
anticodon

6. Peptide will be transferred to the tRNA-amino acid at the second binding site, and the tRNA at the first binding site will depart; ribosome then moves forward.

5'

G G G

U G G  
A C C

U U U  
A A A

G U A

codon

5. Anticodon-codon complementary base pairing occurs.

ribosome

