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PROKARYOTIC V/S EUKARYOTIC TRANSLATION

BY

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ZOOLOGY: SEM- V, PAPER- C11T: MOLECULAR BIOLOGY, UNIT 4: TRANSLATION



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Difference between Prokaryotic and Eukaryotic Translation

Both Eukaryotic and Prokaryotic translations are involved in protein synthesis. However, the key difference between eukaryotic and prokaryotic translation is that eukaryotic translation and transcription is an asynchronous process whereas prokaryotic translation and transcription is a



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synchronous process. The table below gives the difference between Prokaryotic and Eukaryotic Translation:

Prokaryotic Translation	Eukaryotic Translation
Definition	
The translation & transcription process is synchronous	The translation and transcription process is discontinuous
mRNA	
Cytoplasm	Nucleus



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Cap initiation	
Cap-independent	Cap-dependent and Cap-independent
Performed by	
70S ribosomes	80S ribosomes
Stability of mRNA	
Unstable	Stable
Ribosomes	
30S & 50S = 70S	40S & 60S = 80S



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Lifespan of mRNA	
A few seconds to 2 minutes	A few hours to days
Occurrence	
No definite phase	G1 and G2 phase of the cell cycle
Process	
Fast	Slow
Release factor	
RF1, RF2	eRF
Initiation factors	



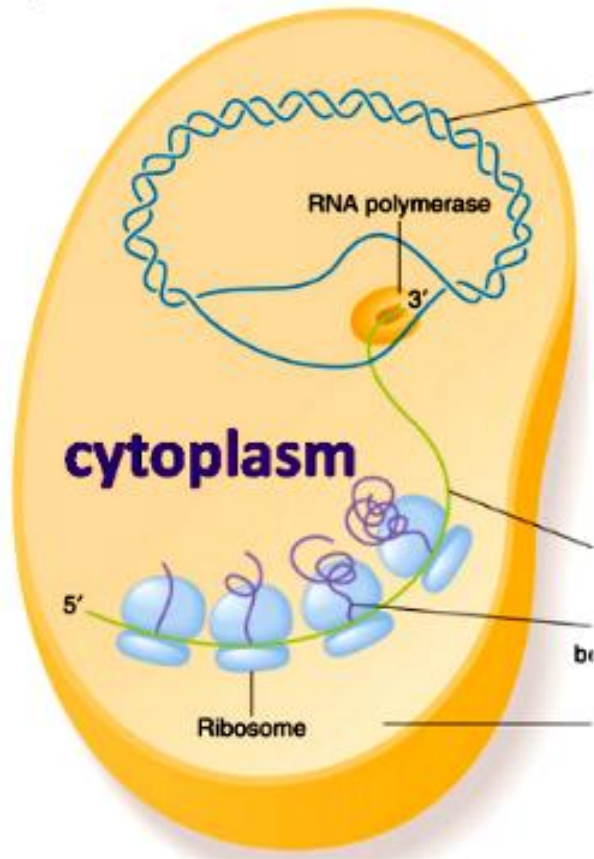
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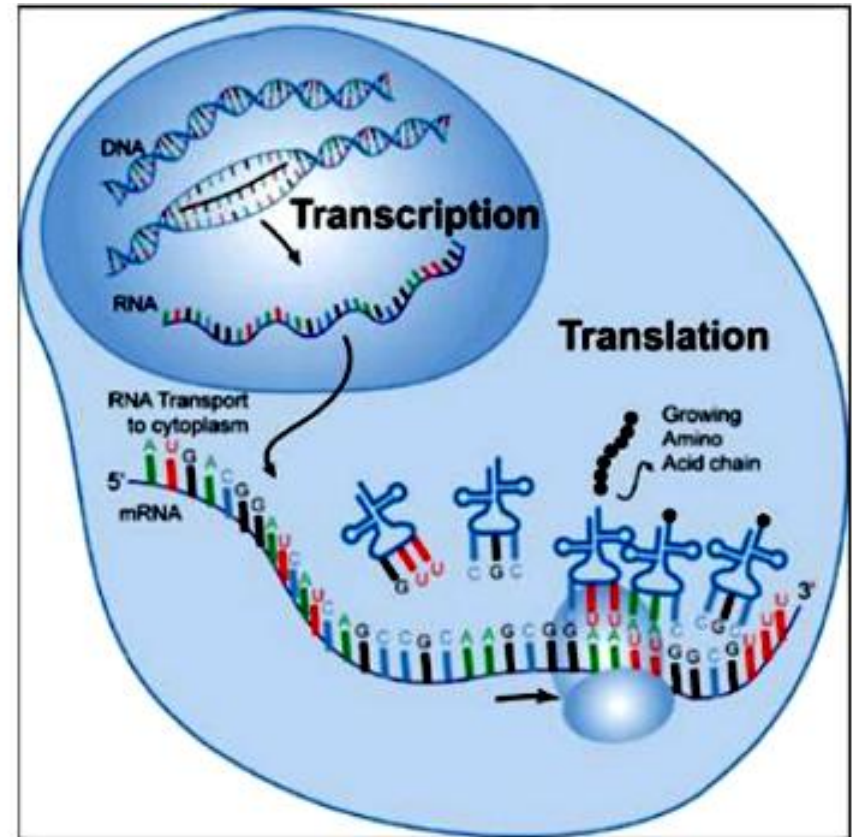
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THANK YOU

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