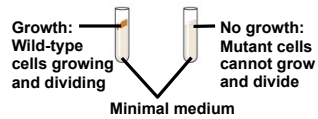


EXPERIMENT



RESULTS

Classes of *Neurospora crassa*

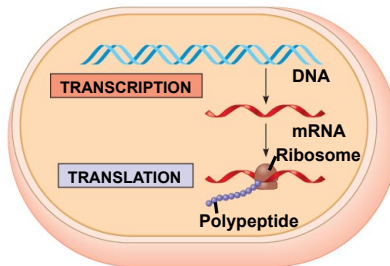
	Wild type	Class I mutants	Class II mutants	Class III mutants
Minimal medium (MM) (control)				
MM + ornithine				
MM + citrulline				
MM + arginine (control)				

CONCLUSION

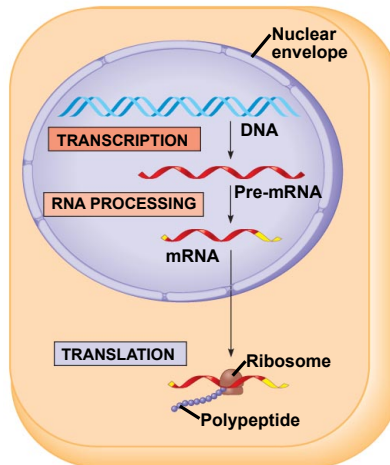
	Wild type	Class I mutants (mutation in gene A)	Class II mutants (mutation in gene B)	Class III mutants (mutation in gene C)
Gene A →	Precursor Enzyme A	Precursor Enzyme A	Precursor Enzyme A	Precursor Enzyme A
Gene B →	Ornithine Enzyme B	Ornithine Enzyme B	Ornithine Enzyme B	Ornithine Enzyme B
Gene C →	Citrulline Enzyme C	Citrulline Enzyme C	Citrulline Enzyme C	Citrulline Enzyme C
	Arginine	Arginine	Arginine	Arginine

Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

1



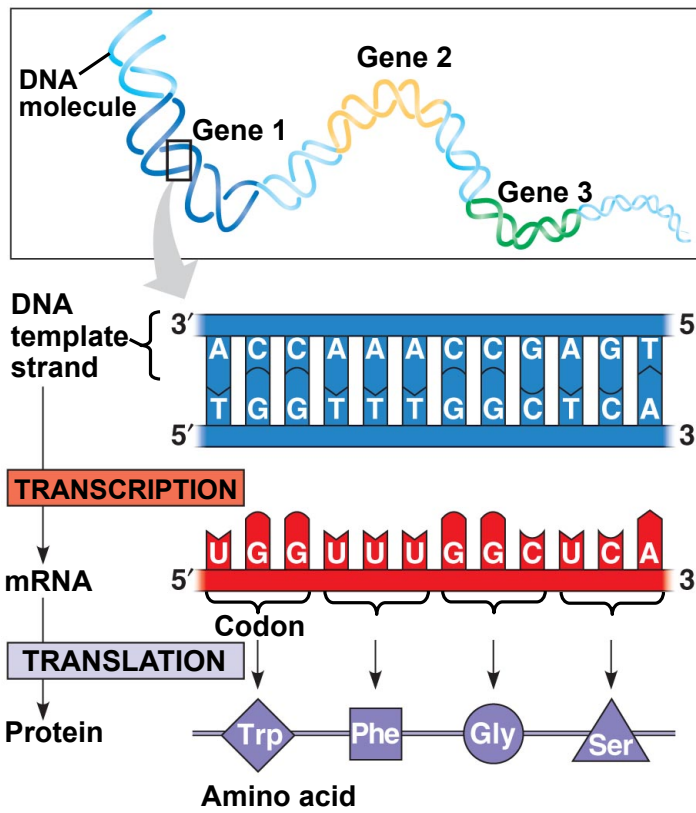
(a) Bacterial cell



(b) Eukaryotic cell

Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

2



Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

3

		Second mRNA base				
		U	C	A	G	
First mRNA base (5' end of codon)	U	UUU Phe UUC Phe UUA Leu UUG Leu	UCU Ser UCC Ser UCA Ser UCG Ser	UAU Tyr UAC Tyr UAA Stop UAG Stop	UGU Cys UGC Cys UGA Stop UGG Trp	U C A G
	C	CUU Leu CUC Leu CUA Leu CUG Leu	CCU Pro CCC Pro CCA Pro CCG Pro	CAU His CAC His CAA Gln CAG Gln	CGU Arg CGC Arg CGA Arg CGG Arg	U C A G
	A	AUU Ile AUC Ile AUA Ile AUG Met or start	ACU Thr ACC Thr ACA Thr ACG Thr	AAU Asn AAC Asn AAA Lys AAG Lys	AGU Ser AGC Ser AGA Arg AGG Arg	U C A G
	G	GUU Val GUC Val GUA Val GUG Val	GCU Ala GCC Ala GCA Ala GCG Ala	GAU Asp GAC Asp GAA Glu GAG Glu	GGU Gly GGC Gly GGA Gly GGG Gly	U C A G

Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

4



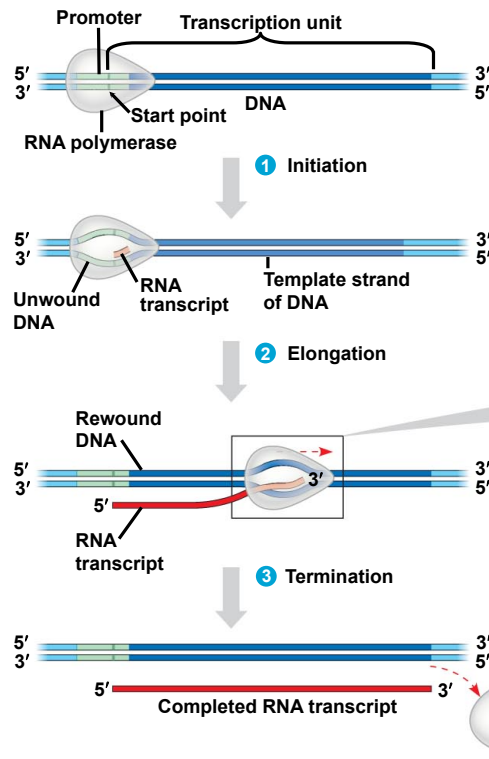
(a) Tobacco plant expressing a firefly gene

Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

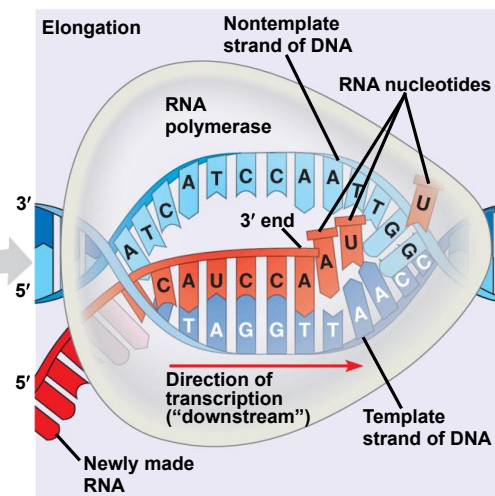


(b) Pig expressing a jellyfish gene

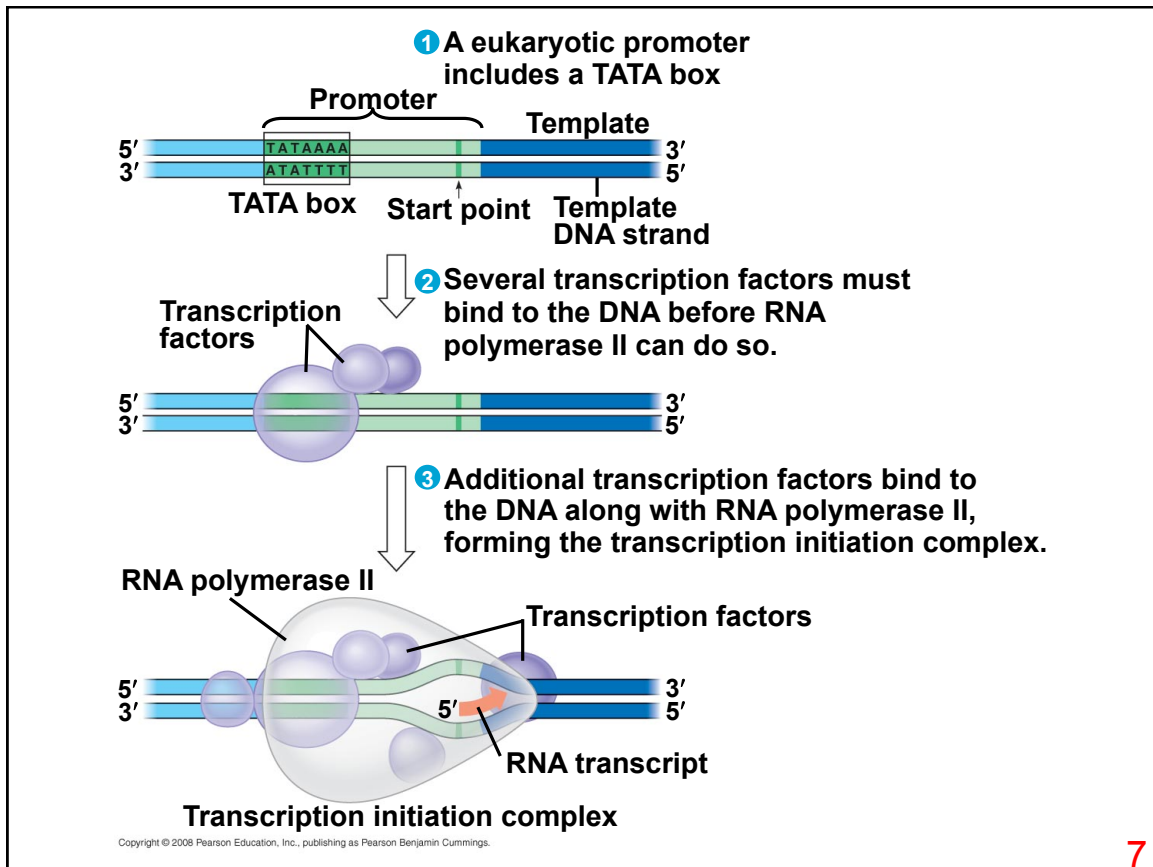
5



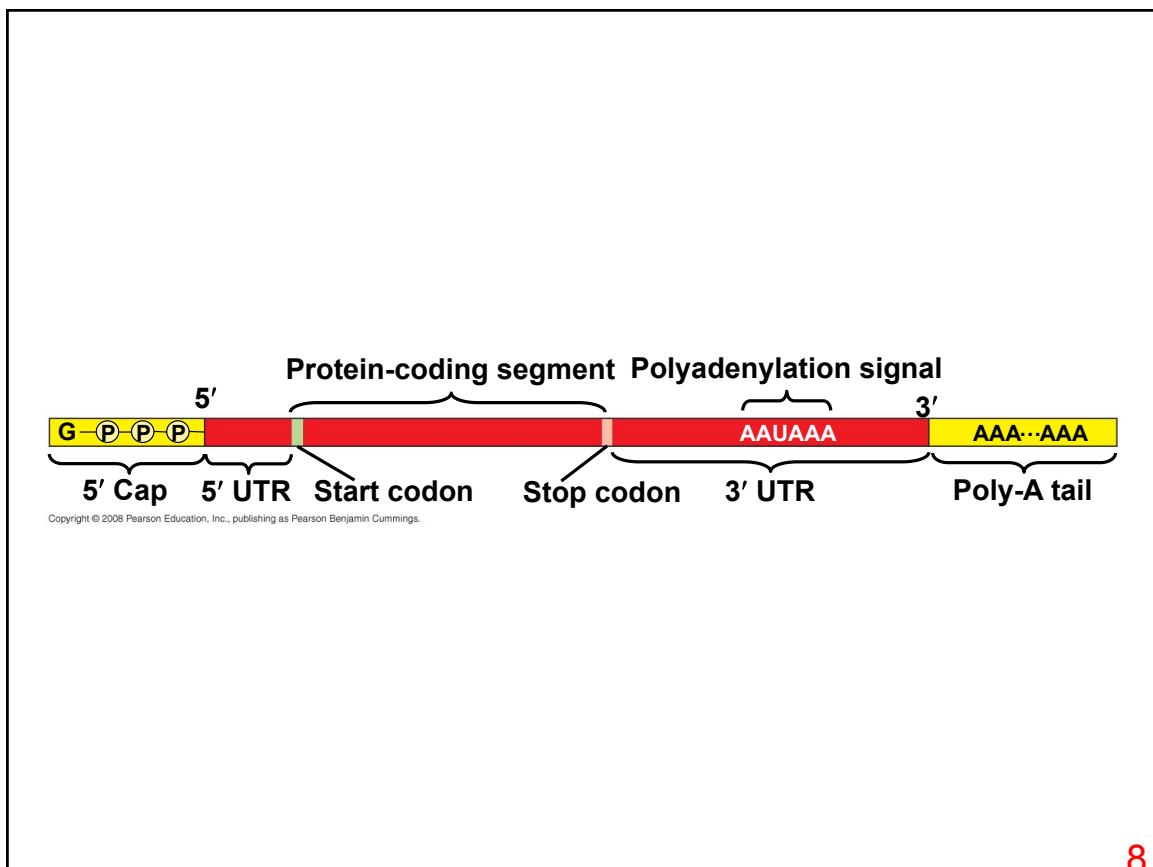
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.



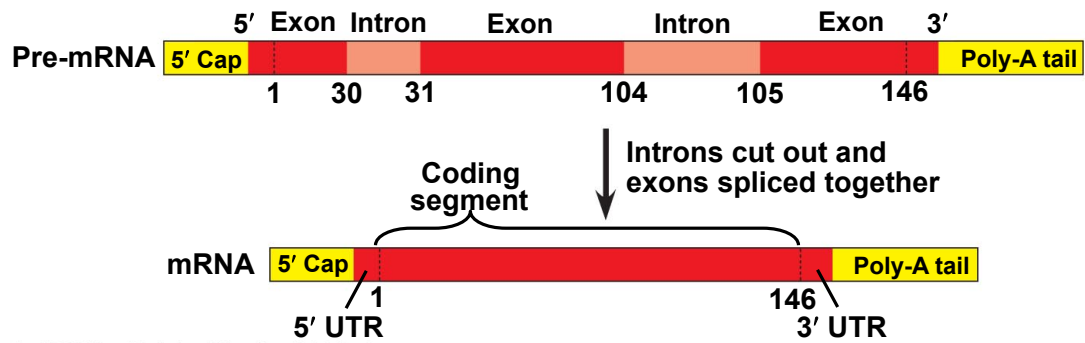
6



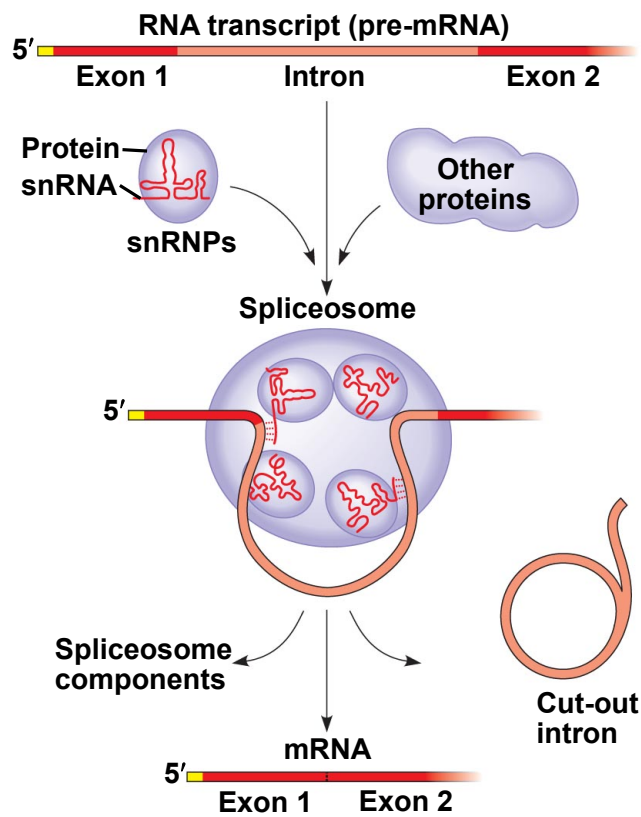
7



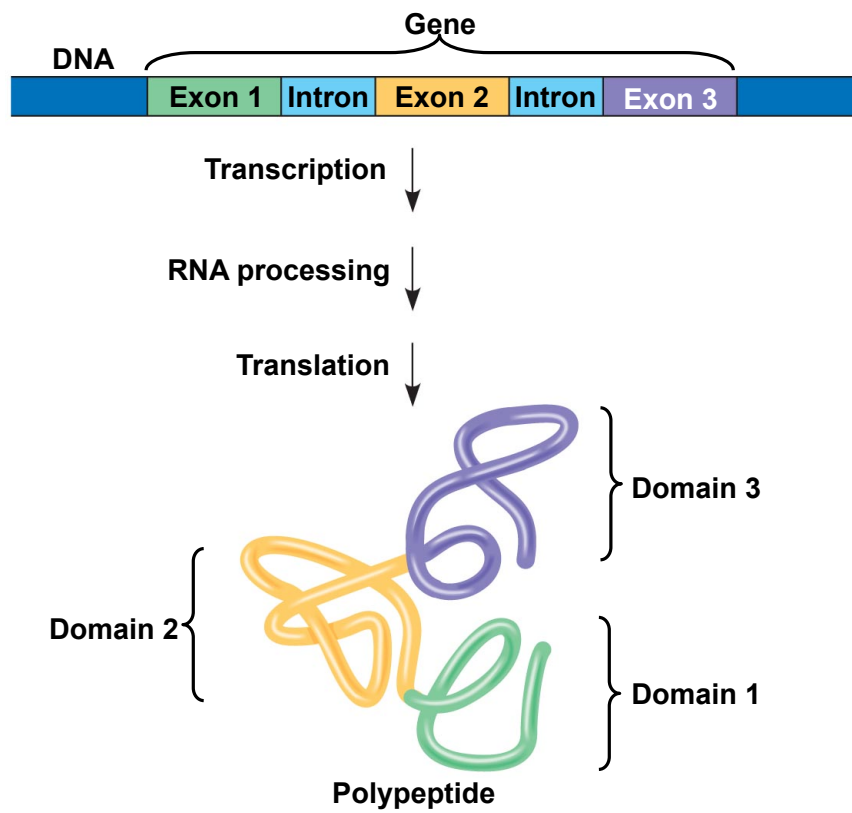
8



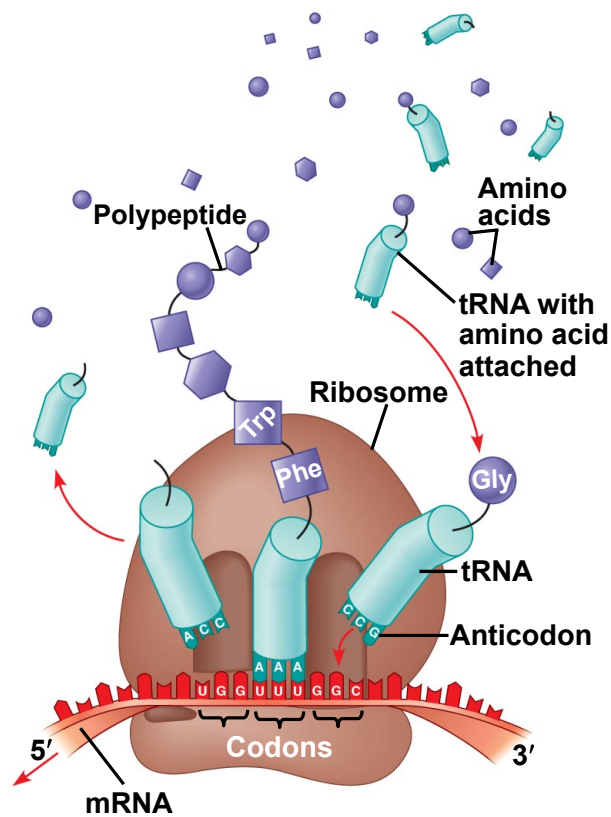
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.



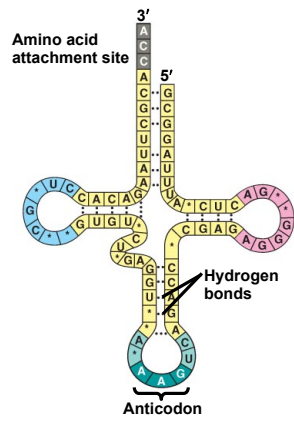
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.



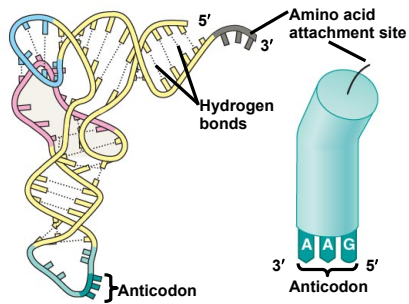
11



12



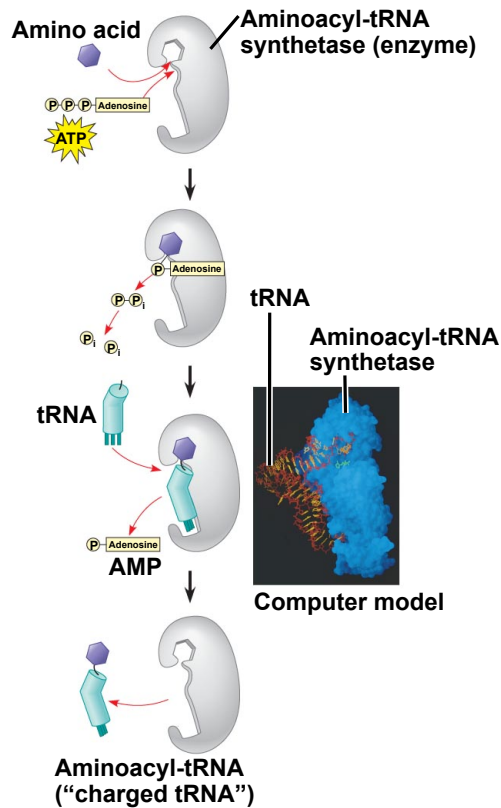
(a) Two-dimensional structure



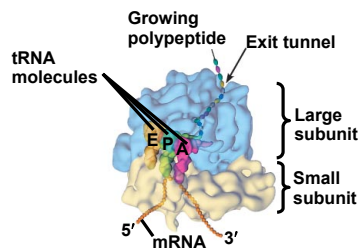
(b) Three-dimensional structure

(c) Symbol used in this book

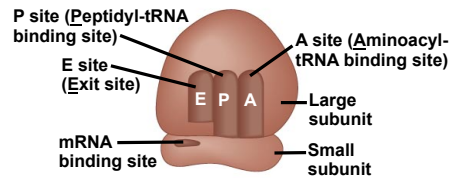
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.



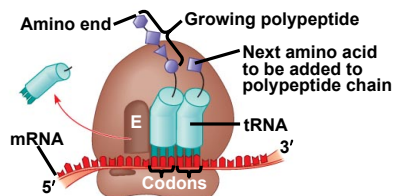
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.



(a) Computer model of functioning ribosome



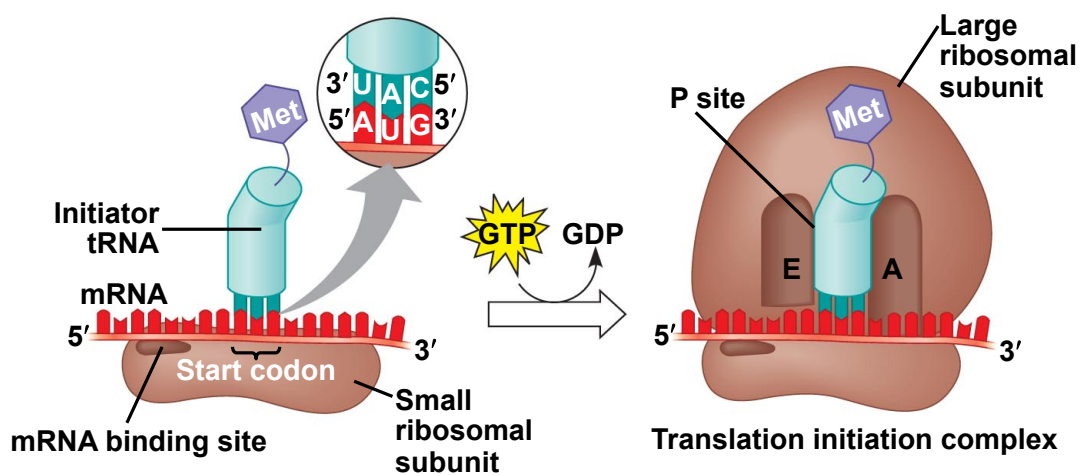
(b) Schematic model showing binding sites



(c) Schematic model with mRNA and tRNA

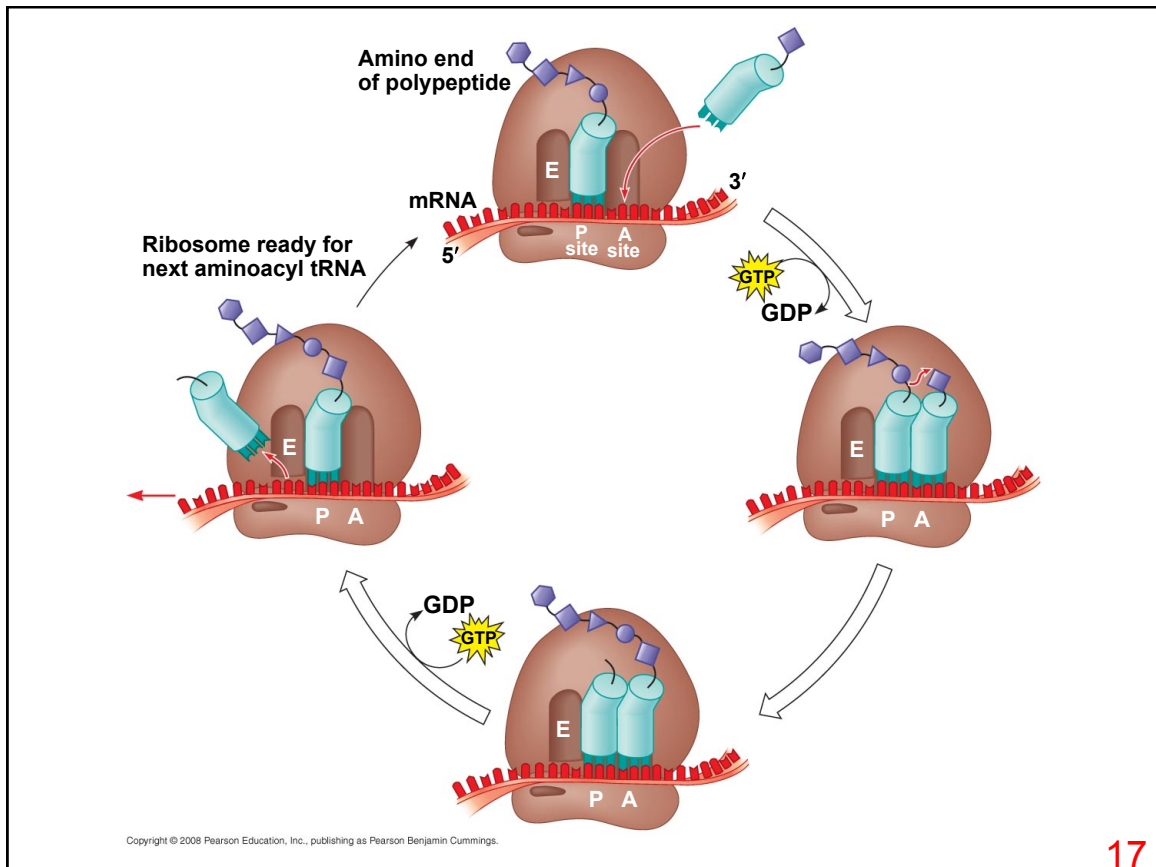
Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

15

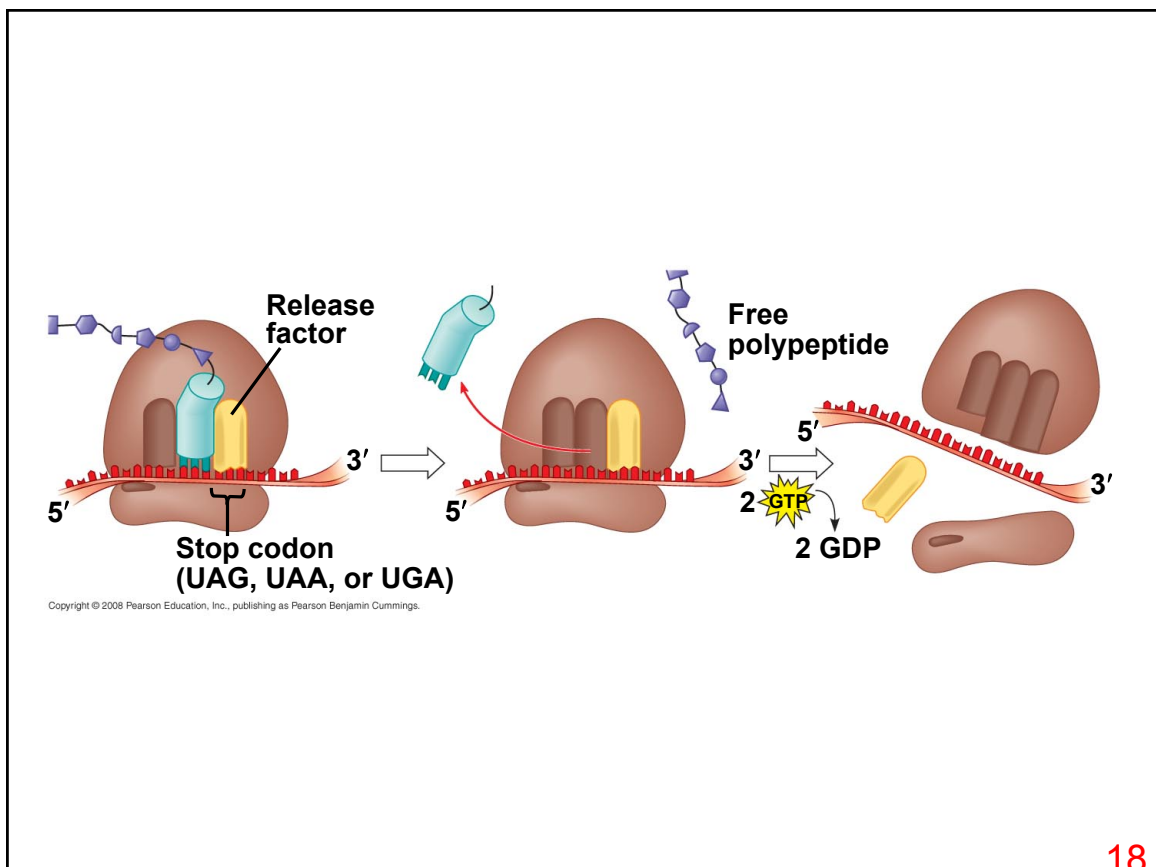


Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

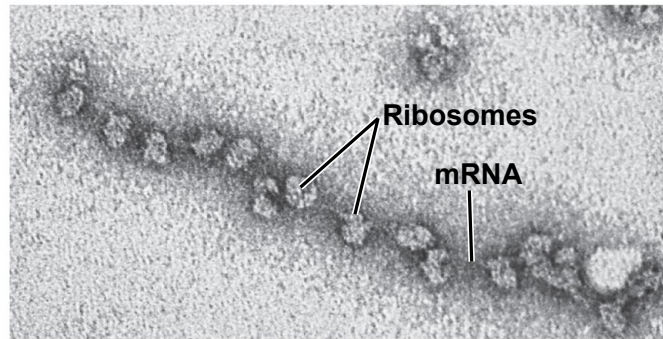
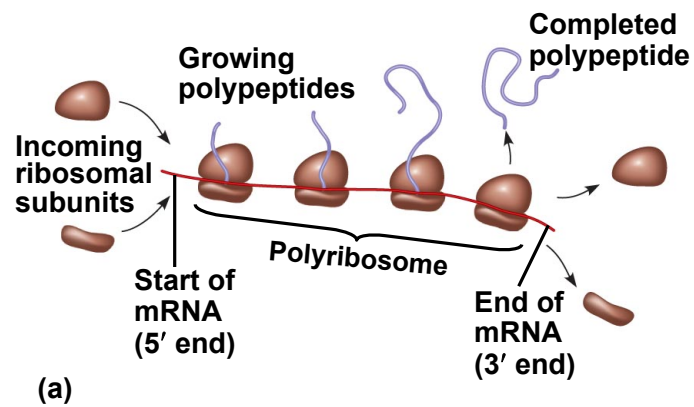
16



17

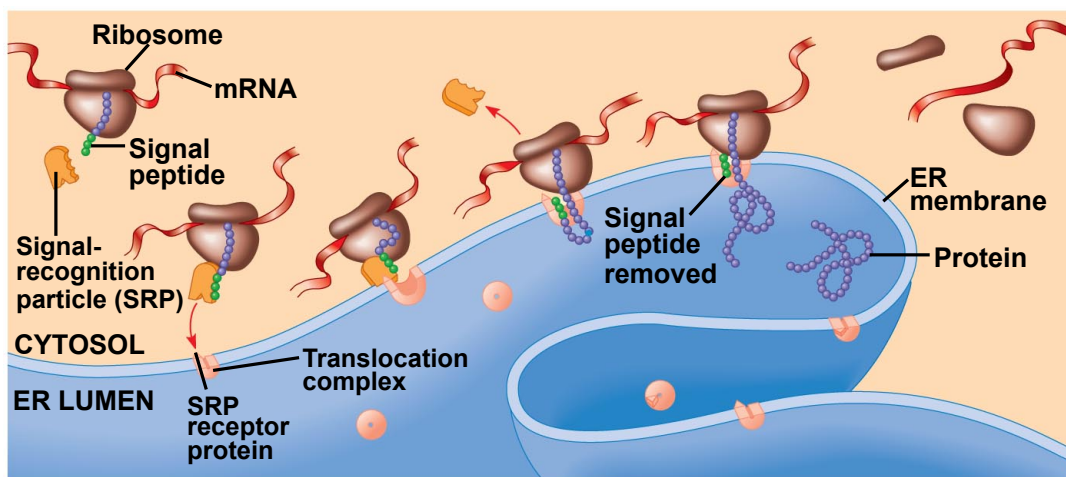


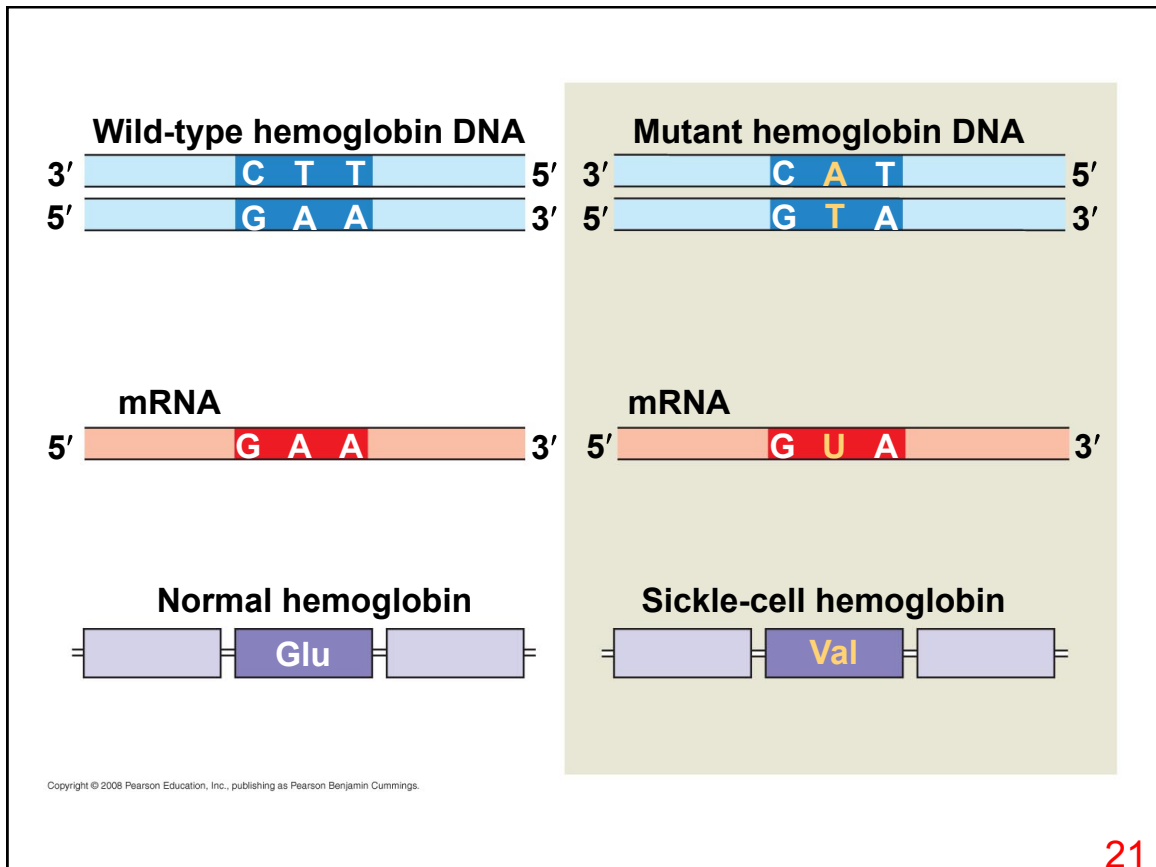
18



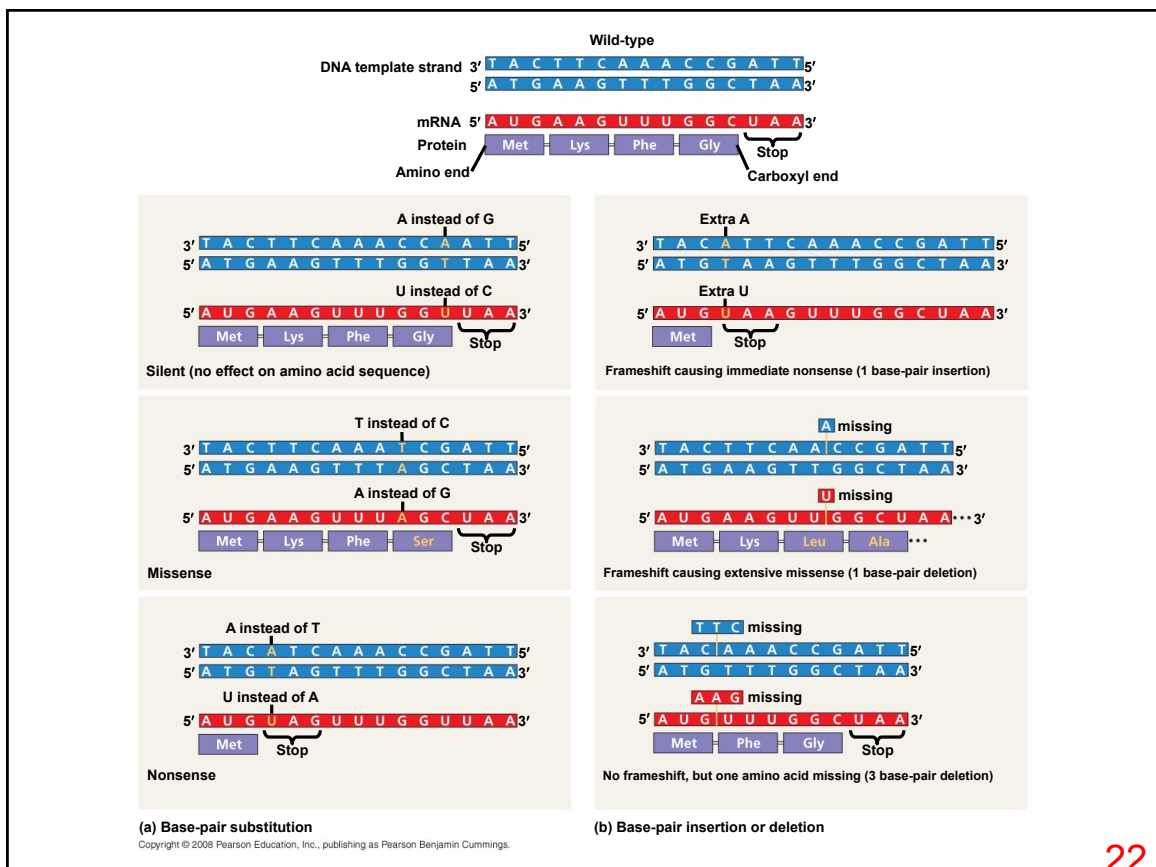
0.1 μm

Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

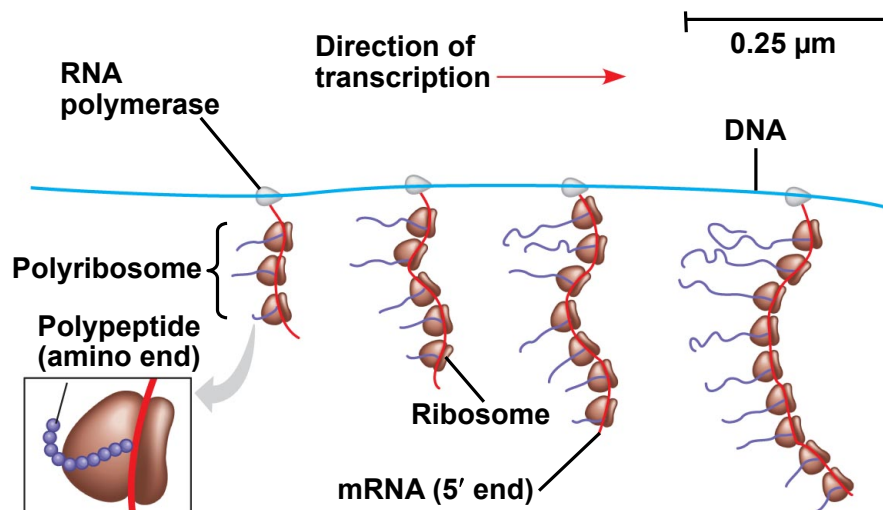
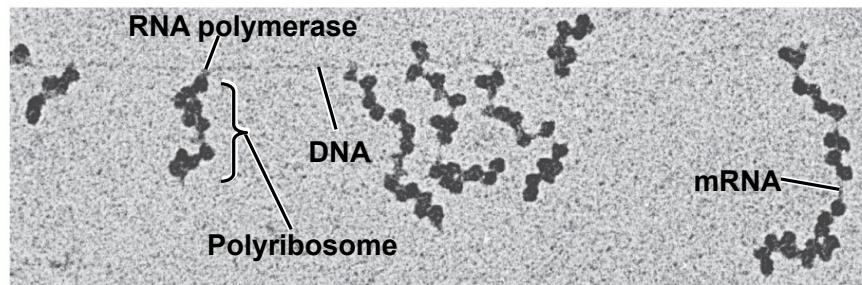




21

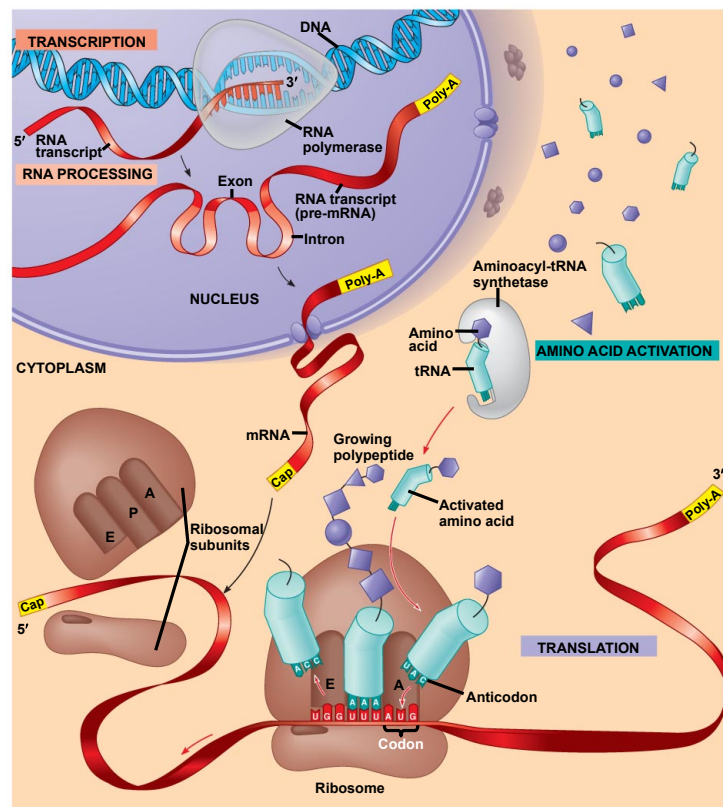


22



Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

23



Copyright © 2008 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

24