TRANSCRIPTION IN EUKARYOTES

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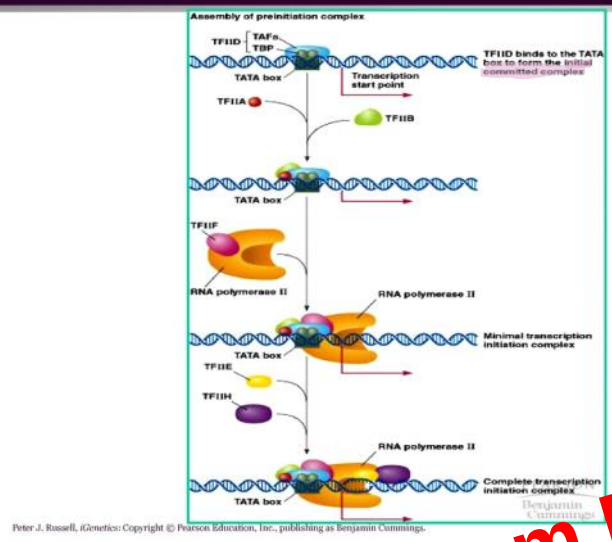
- Initiation
  - Involves assembly of RNA pol II + general transcription factor (GTF).
  - RNA pol cannot directly bind to DNA.
  - 1st GTF bind; then recruits RNA pol enz.

- Assembly of transcription initiation machinery

Fig. 5.7 Assembly of the transcription initiation machinery



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- Nomenclature of transcription factor
  - TFIID: TF- Transcription factor
    II- works with RNA pol II
    D- order of discovery.

-D-A-B-F-E-H (sequence of transcription factor assembely)

- D: TBP- TATA binding ptn.
  + } TFIID:TATA box= ICC
  TAF- TATA ass. Factors.
- A+B :ICC
- F:RNA pol II:ICC= MTIC
- E , H =PIC
  Helicase….
  Unwind promoter DNA….and transcription Ready to begin…

- Structure and production of eukaryotic mRNAs

- Mature biologically active mRNA= 5 'UTR + ptn coding seq. + 3'UTR

Leader sequence — specifies aa seq of ptn during translation — trailer sequence

Bac. transcription	Eu. transcription
Simplear process	complex
RNA pol I	RNA pol I- nucleolus RNA pol II- nucleoplasm RNA pol III---//---
R. Pol residue in cytosol	as
Specific terminator seq.	X specific terminator seq.
RNA pol can directly binds To DNA	X NOT
Coupled transc.-transla.	separate
Polycistronic-mRNA	monocistronic

Fig. 5.8 General structure of mRNA found in both prokaryotic and eukaryotic cells