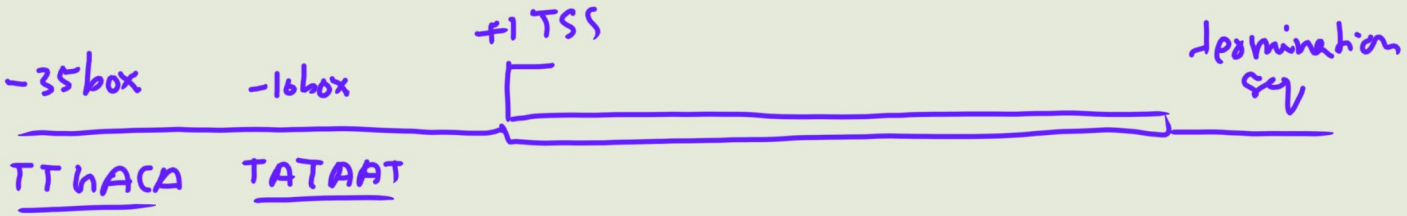
Prokaryotic Transcription



Core promoter.

σ^{70}

RNA pol- $\alpha^2\beta\beta'\omega\sigma$ → Recognizes the promoter.

σ^{54} → Nitrogen assimilation.

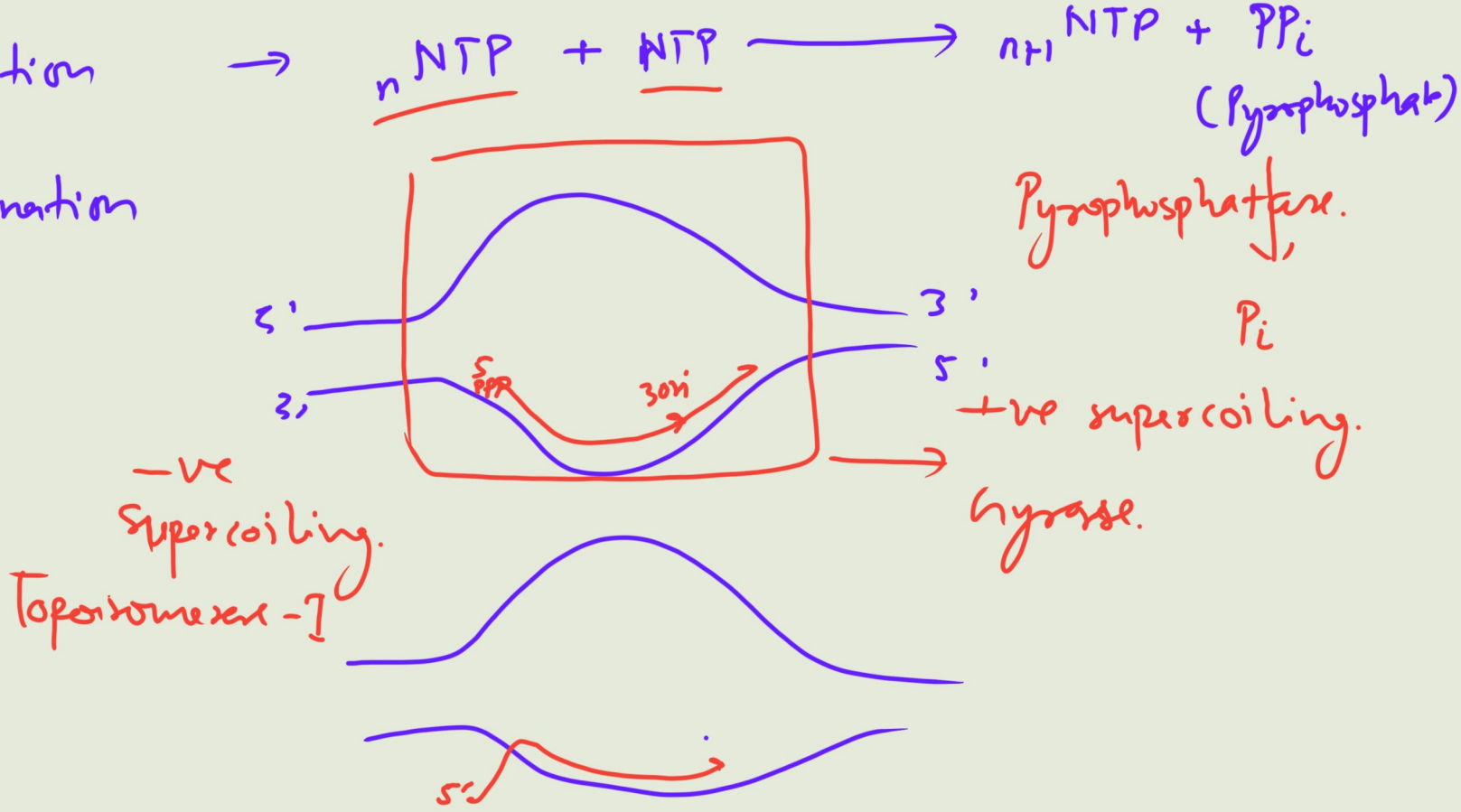
σ^{38} → Oxidative & Osmotic stress

σ^{32} → Heat shock protein

1- Initiation

2- Elongation

3- Termination



Termination

i) Intrinsic (Rho independent) →

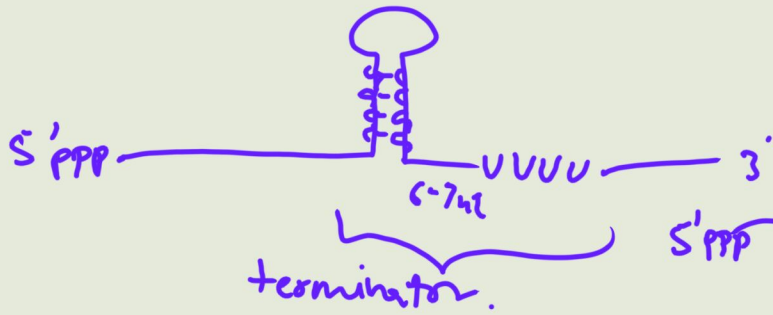
ii) Extrinsic (Rho dependent)

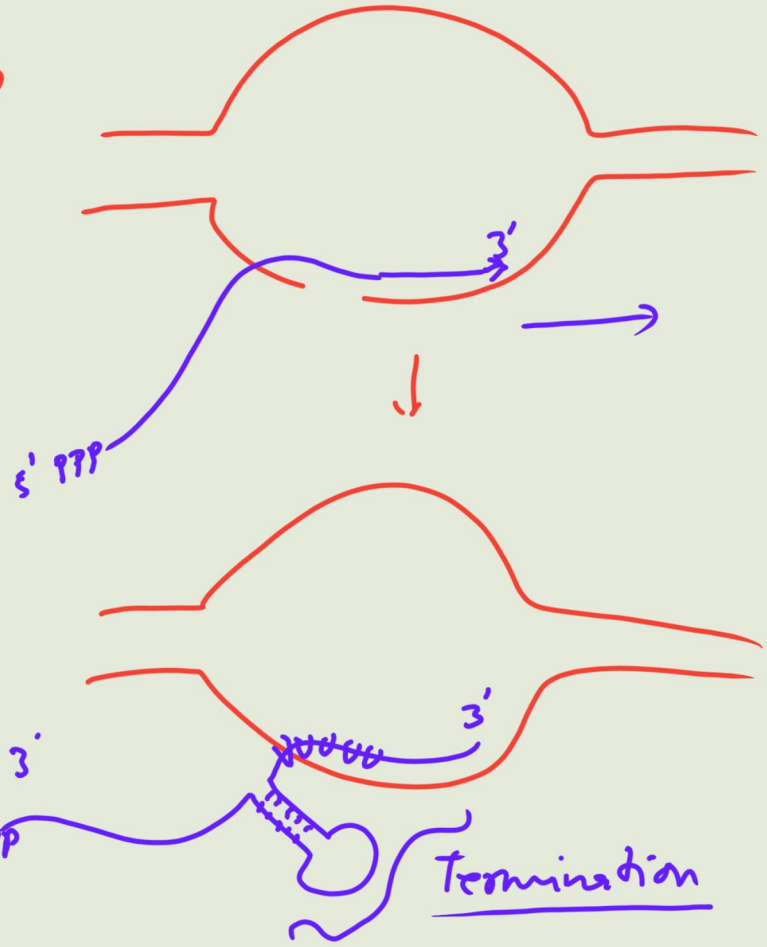
↓

hexameric protein

↓

helicase.



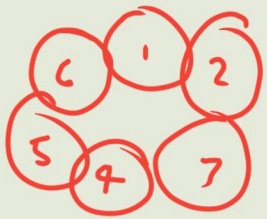


11) Extension

↳ Rho dependent →

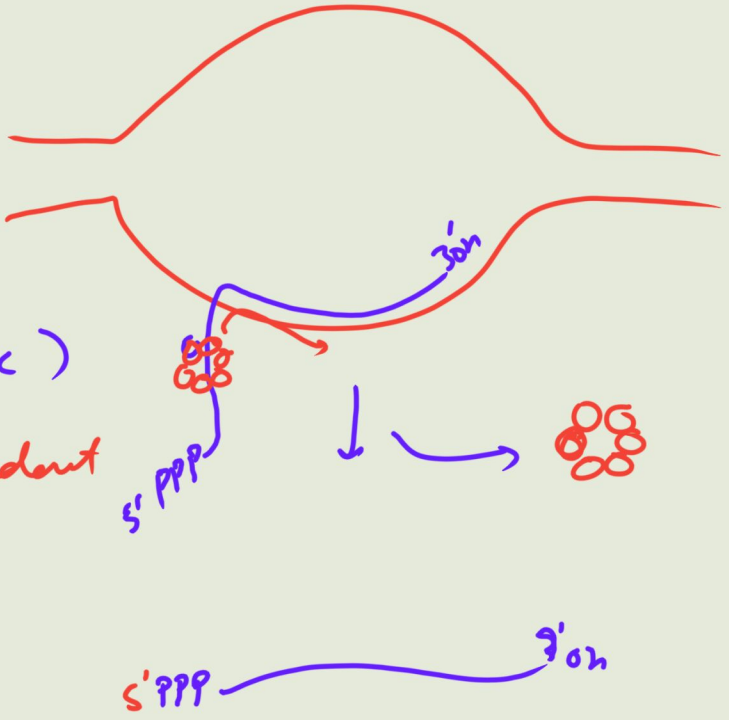
↳ Rho protein

↳ 6 subunit (hexameric)



→ helicase

ATP dependent



Eukaryotic RNA pol-

i) RNA pol-I — 5.8S rRNA, 18S, 28S rRNA

ii) RNA pol-II — mRNA, snRNA, mi-RNA.

iii) RNA pol-III — t-RNA, 5S rRNA, U6 snRNA, HI RNA

U6 snRNA → U_1 U_2

HI RNA → Ribozymes

iv) RNA pol IV → siRNA biogenesis.

v) RNA pol-V → RNA directed DNA methylation.