Mavzu: Replikatsiya, transkripsiya va translyatsiya

Ma’ruzachi: k. f. n., dots. L.S.Kamolov

Reja

1.Translyatsiya.

2.Ribosomalar oqsil sintezining joyi ekanligi.

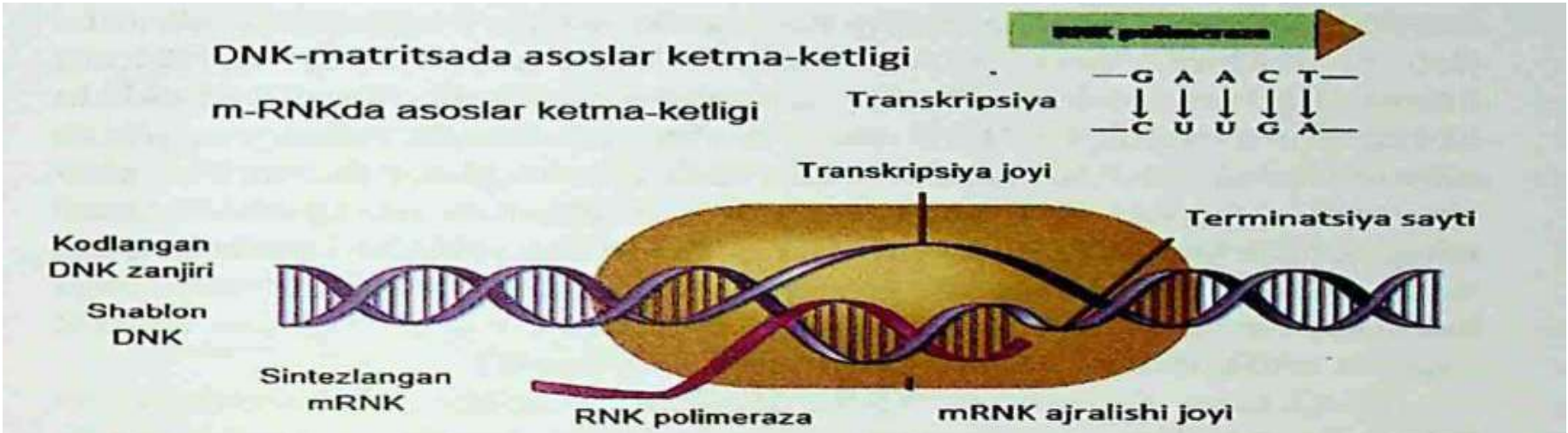
3.Aminoatsetil t.RNK-sintetazalar.

4.Translyatsiyaning oqsil omillari.

5.Nukleoproteidlarning o‘z-o‘zida yig‘ilishi, tuzilishi va funsiyalari.

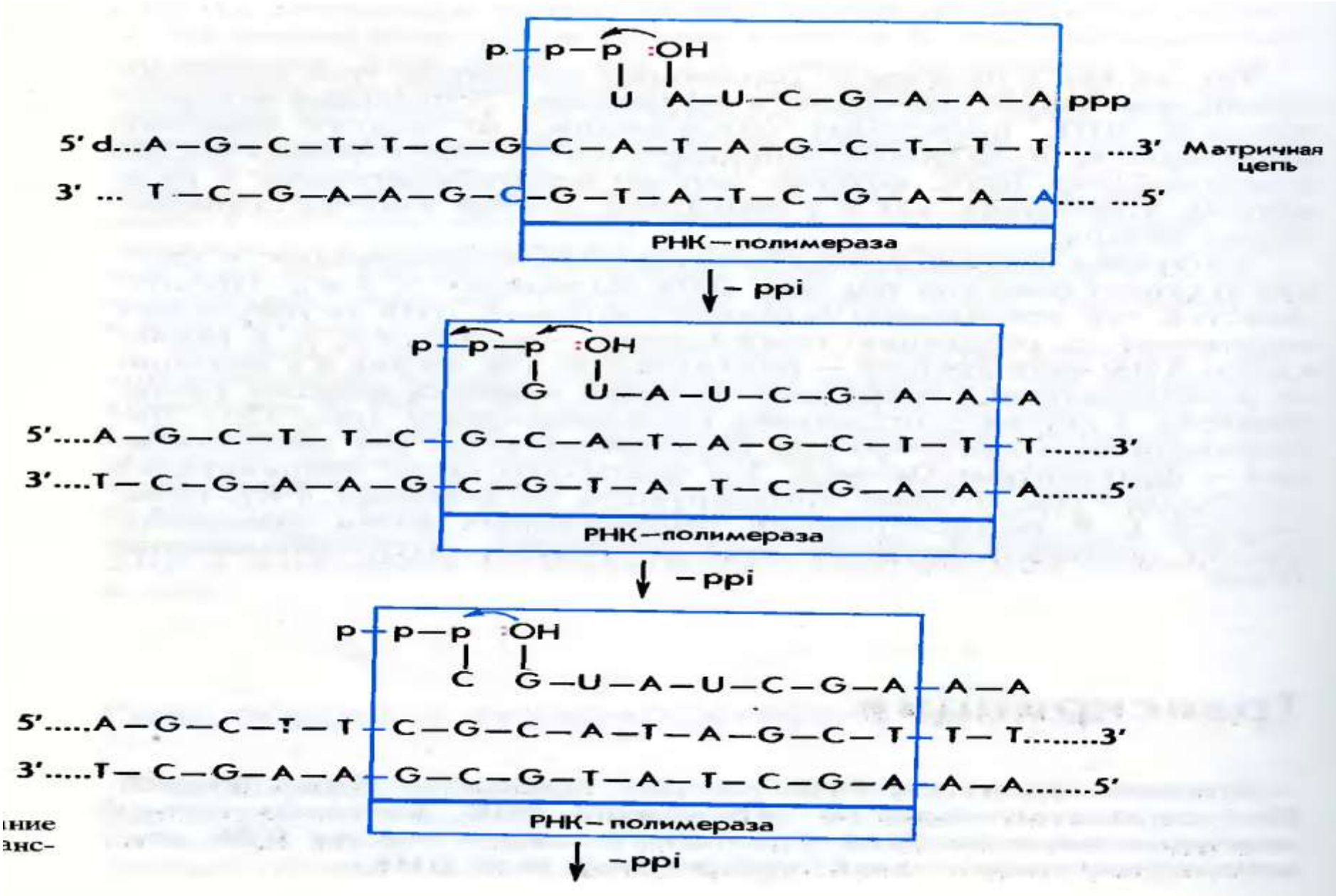
Transkripsiya

Transkripsiya gen saqlovchi DNK molekulasida zanjiming bir qismi yechilib nusxa olishga tayyor bo‘lishidan boshlanadi. DNKning mazkur ajralgan qismi ichida RNK-polimeraza fermenti zanjirdan birini mRNK sinlezi uchun matritsa sifatida qo‘llaydi. Shuningdek, DNK sintezidagi kabi S (sitozin) G(guanin) bilan komplementar ravishda bog‘lanadi, lckin mRNKda U(uratsil) A(adenin) bilan juft hosil qiladi. RNK-polim- erazalar DNK matritsa zanjiri bo‘ylab harakatlanib asoslar o‘rtasi- da bog‘ hosil bolishini ta’minlaydi. RNK-polimeraza terminatsiya joyiga yetganda, transkripsiya yakunlanadi va yangi mRNK ajratilib yuboriladi. DNKning uzilgan qismi o‘zining qo‘sh spiralli tuzilishi- ga qaytadi. *Transport RNK (tRNK)* RNK molekulalarining umumiy hiso- bidan eng kami bo‘lib, mRNKda saqlanuvchi genetik axborotni o‘qib, ma’lum bir aminokislotani ribosomaga oqsil sintezi uchun olib keladi. Faqat tRNKgina oqsillar uchun genetik axborotni oqsil- lar aminokislotalariga tasljiiy oladi.

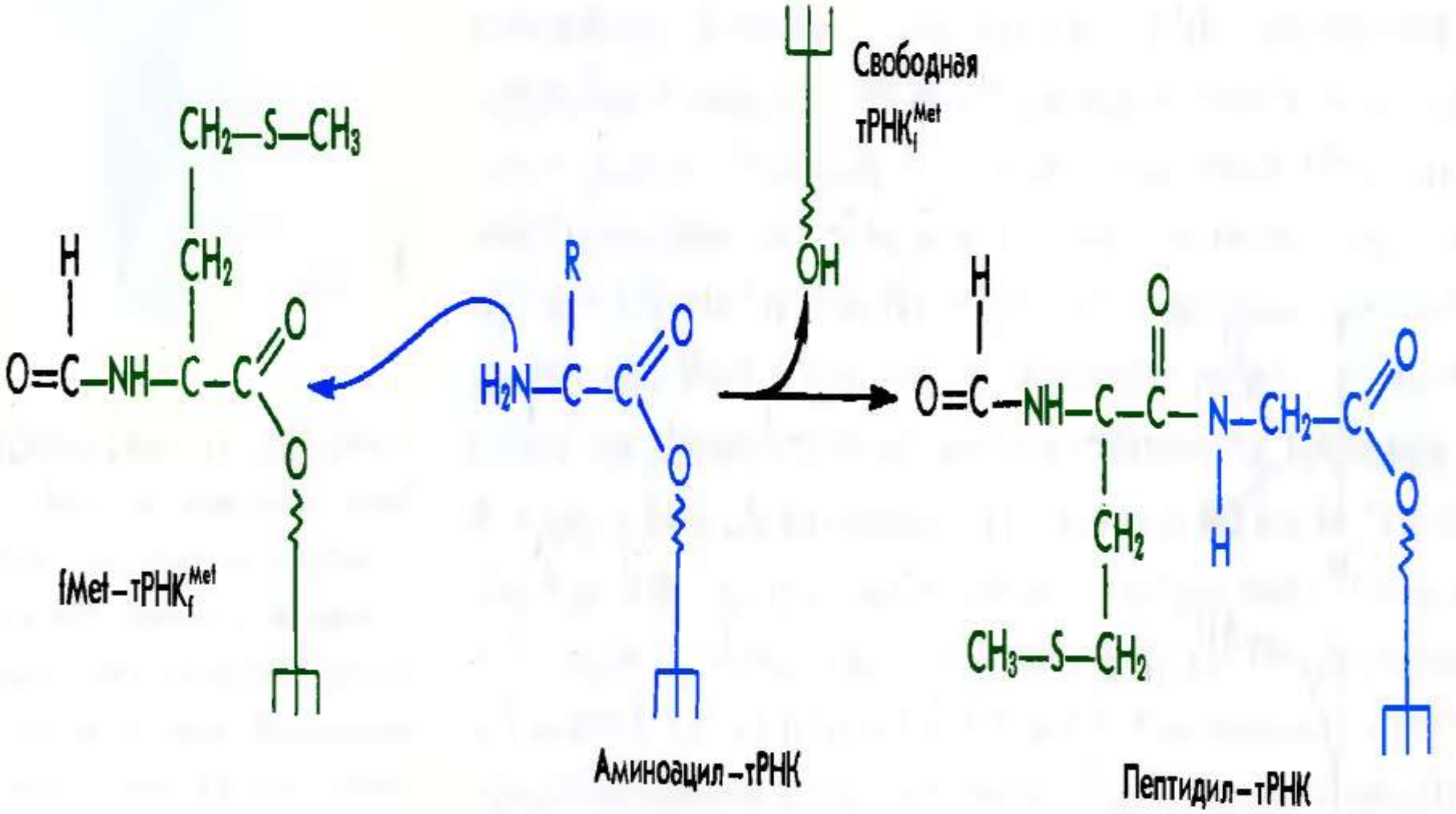


15.7-rasm. **DNK transkripsiyasida RNK-polimeraza DNKning bitta zanjirini matritsa sifatida, ikkinchisini shablon sifatida ishlatadi**

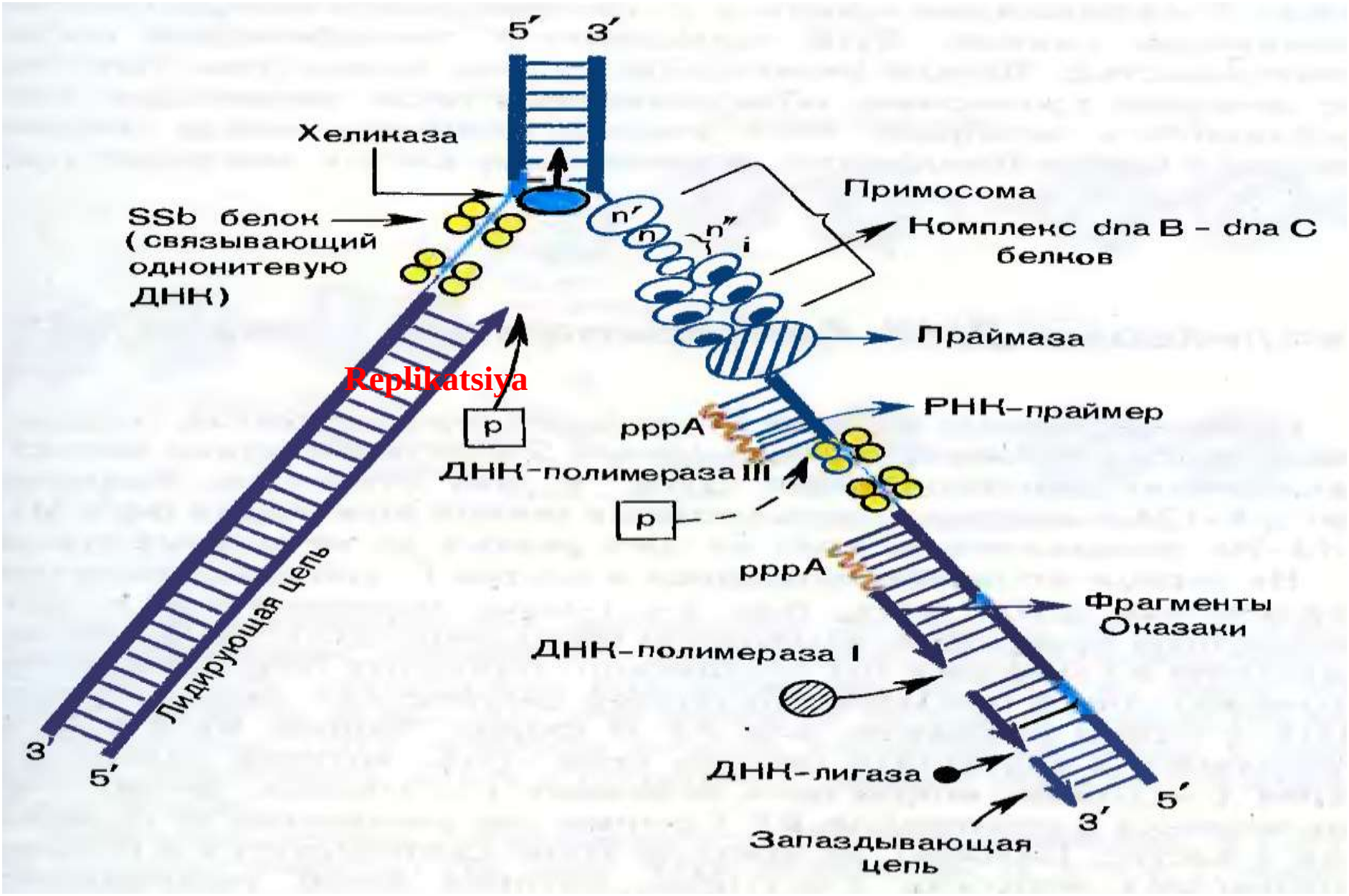
Transkripsiya



Birlamchi peptid bog‘ini sintezi



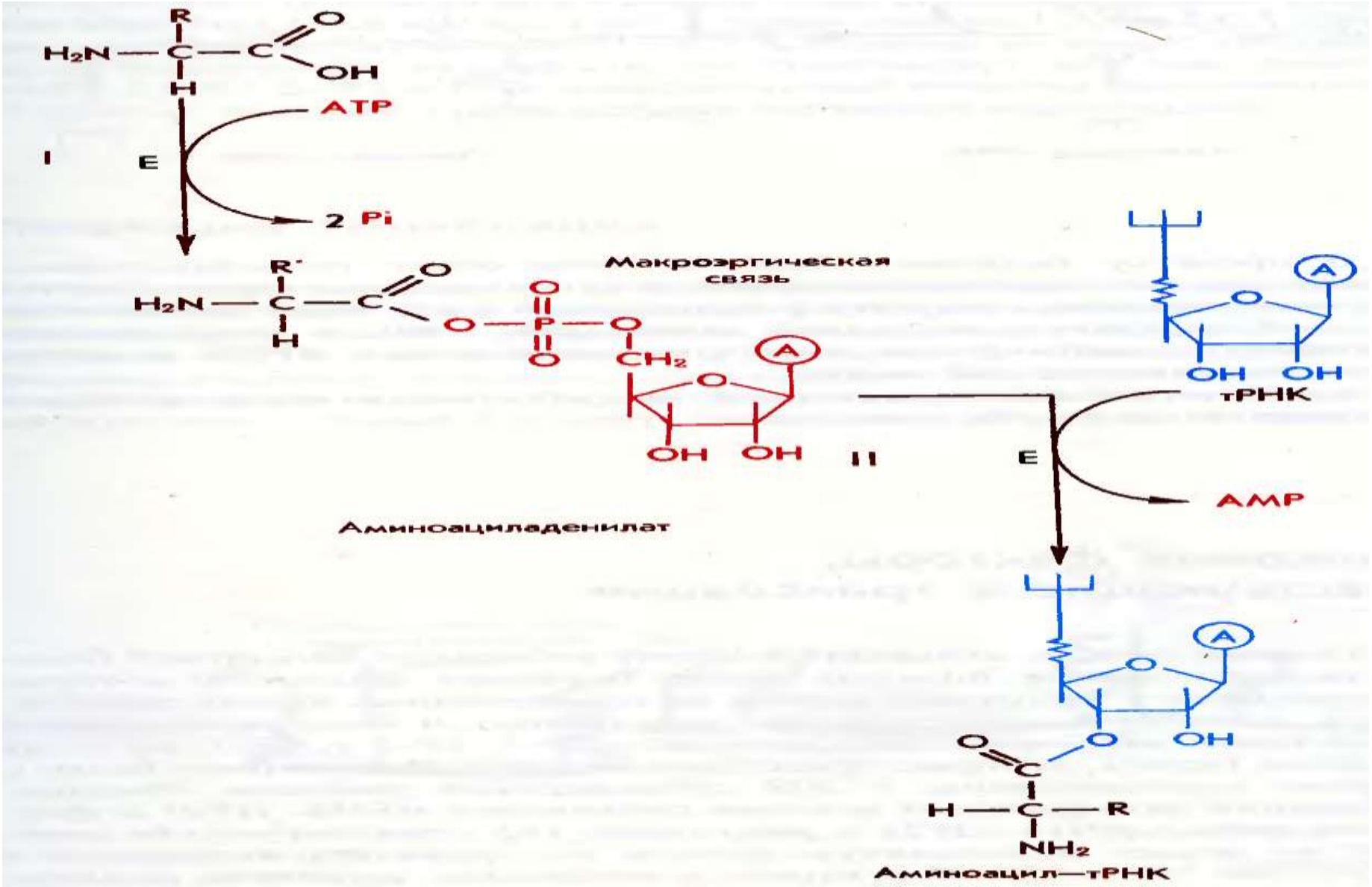
Replikatsiya



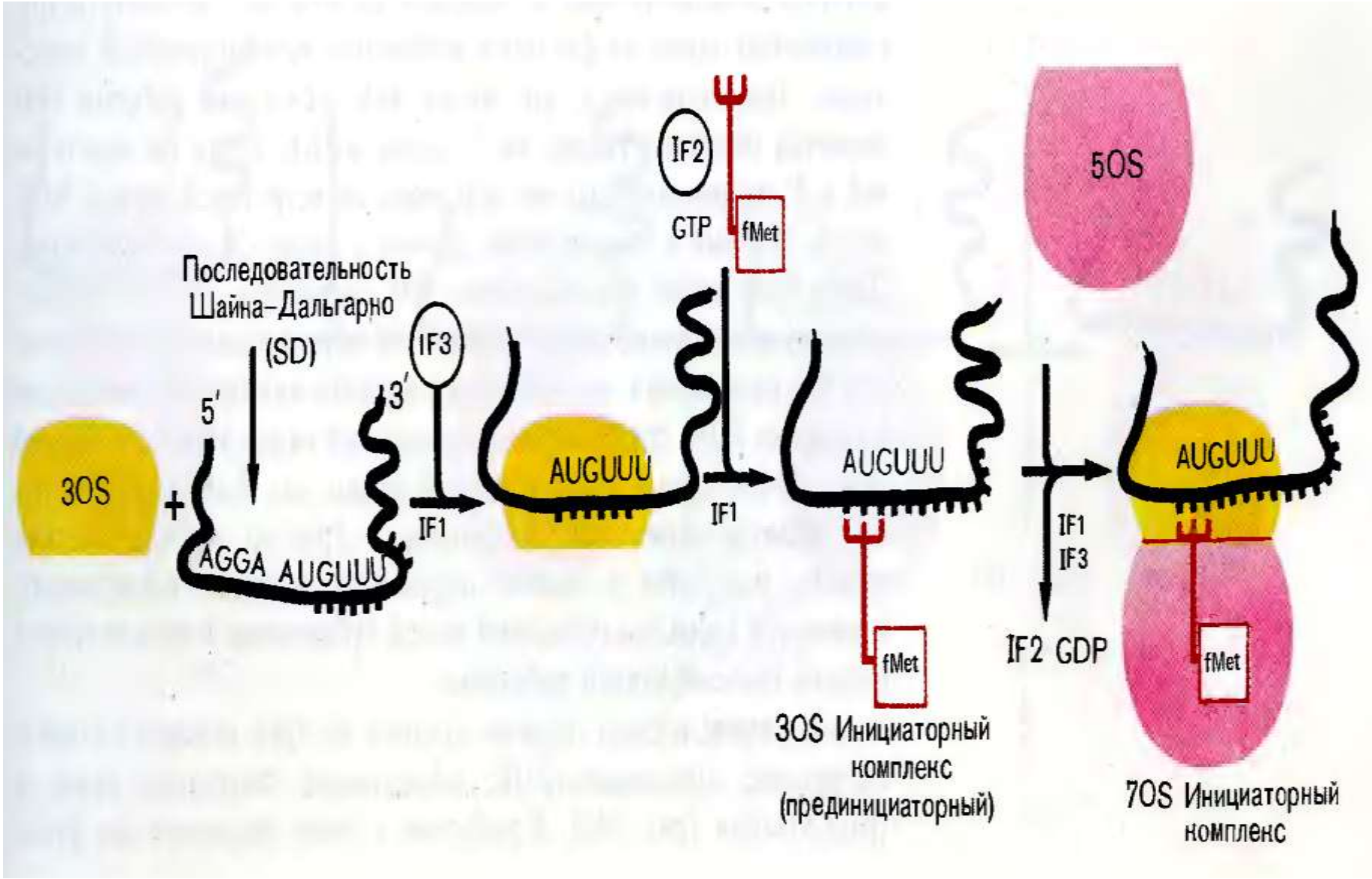
Genetik kod

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

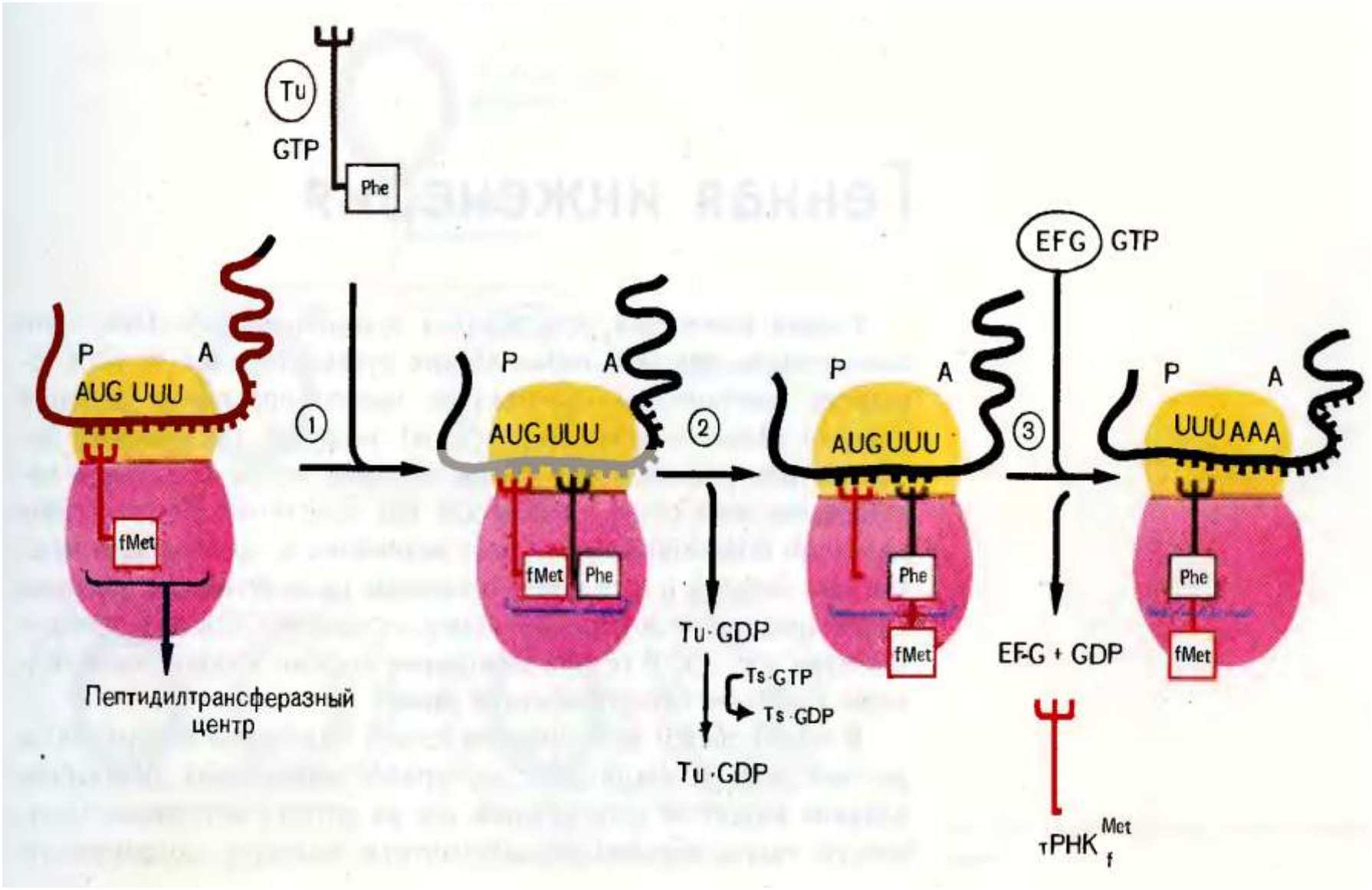
Aminokislotalarning aktivlash: tRNK va aminoatsil-tRNK-sintetazlar



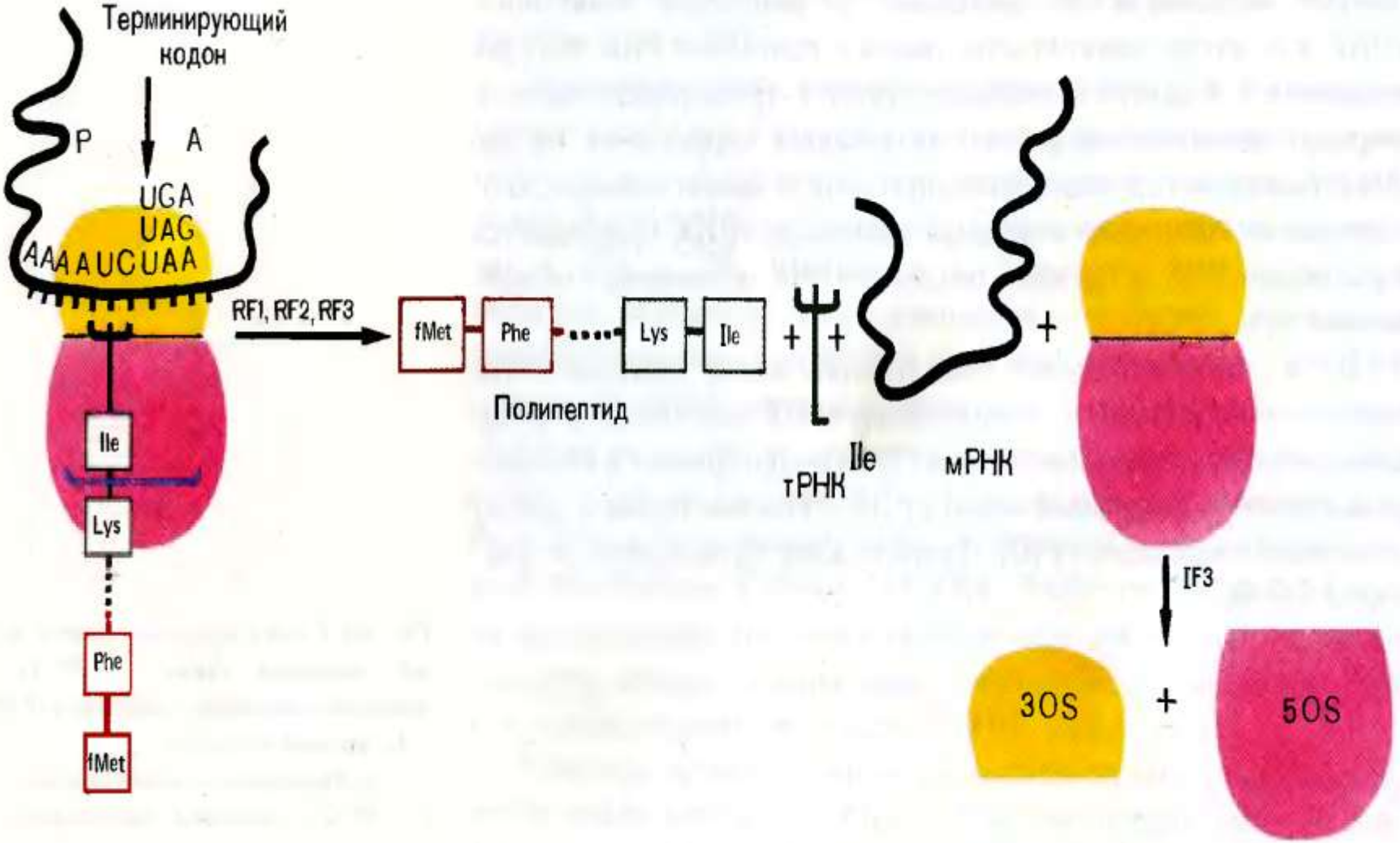
Initsiatsiya translyatsiya



Elongatsiya translyatsiya



Terminatsiya translyatsiya



E’TIBORINGIZ UCHUN RAHMAT!